Chatham County – Savannah Comprehensive Plan

Community Assessment Report

MPC Review Draft

December, 2005

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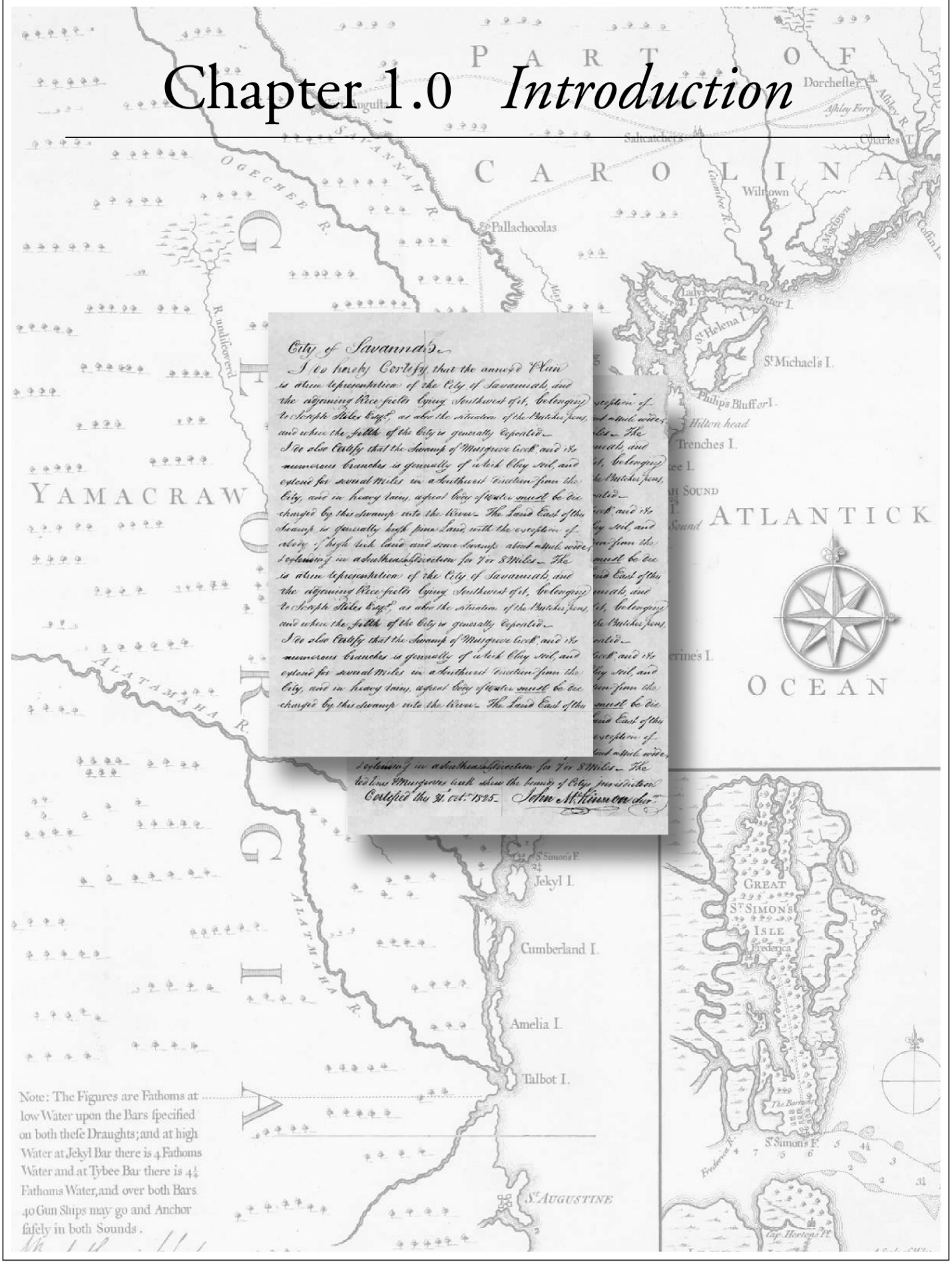
Chapter 1.0 *Introduction*



City of Savannah

I do hereby Certify that the annexed Plan is a true representation of the City of Savannah, and the adjoining Rice fields lying Southwest of it, belonging to Josiah Tattnall Esqr. as also the situation of the Bluffs, and where the filth of the City is generally deposited.

I do also Certify that the Swamp of Musgrove Creek and its numerous branches is generally of a thick clay soil, and extend for several Miles in a Southwest direction from the City, and in heavy rains, a great body of water must be discharged by this Swamp into the River. The Land East of this Swamp is generally high pine Land, with the exception of a very few high tide Lands and some Swamps about a Mile wide, extending in a Southeast direction for 7 or 8 Miles. The

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extending in a Southeast direction for 7 or 8 Miles. The red lines of Musgroves Creek shew the limits of City pre-emption.

Certified this 21st Oct. 1825. John M'Kinnon Surr.

1.1 Tricentennial Plan

The Chatham County – Savannah Metropolitan Planning Commission launched an update of City and County comprehensive plans and zoning ordinances in February, 2002.[1] The update process was named the Tricentennial Plan when a planning horizon of 2033 was established. The City and original County were founded by James Oglethorpe in 1733.

The Chatham County – Savannah Tricentennial Plan consists primarily of two major documents that shape growth and development in the City and the unincorporated area[2]:

- *Unified Comprehensive Plan*
- *Unified Zoning Ordinance*

The Comprehensive Plan, prepared under new Department of Community Affairs standards that went into effect on May 1, 2005, consists of three components:

- *Community Participation Plan*
- *Community Assessment*
- *Community Agenda*

Since the initial draft Comprehensive Plan was prepared under earlier standards, it retains some of the characteristics of that effort, while adapting to the new standards to the greatest extent possible. In a meeting with the Department of Community Affairs and the Coastal Georgia Regional Development Center on September 8, 2005 a general understanding was reached on proceeding in this manner.[3]

Several other planning documents serve as building blocks for the Tricentennial Plan:

- *Downtown Savannah Master Plan*[4]
- *Islands Area Community Plan*
- *Southeast Chatham County Community Plan*
- *Mid-City Land Use and Zoning Plan*
- *Westside Land Use and Zoning Plan*

The MPC was designated as the Executive Committee to manage the Tricentennial Plan process. A Steering Committee was established to ensure broad-based participation and advocacy, and a Technical Committee was established to secure the involvement of local planning, development, design, and environmental professionals.

The Tricentennial Plan is scheduled for completion in two phases, with most work to be completed in the first phase:

- *Phase I (2002-2006). Comprehensive Plan; Zoning Ordinance Framework*
- *Phase II (2006-2008). Zoning Ordinance; Service Delivery Strategy Update*

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[1] Chatham County Commission and Savannah City Council approved the update program following a series of workshops in 2001. The work program is documented in a document entitled *Comprehensive Planning and Zoning Update Program: Program Manual*, dated February, 2002.

[2] Seven other municipalities in Chatham County maintain separate comprehensive plans and zoning ordinances. These include the cities and towns of: Bloomingdale, Garden City, Pooler, Port Wentworth, Thunderbolt, Tybee Island, and Vernonburg.

[3] The understanding was formalized in a letter dated September 21, 2005 from James Frederick, Director, Office of Planning and Quality Growth.

[4] The Downtown Master Plan project is being coordinated by Savannah Development and Renewal Authority in conjunction with the Tricentennial Plan.

1.2 Unified Comprehensive Plan and Zoning Ordinance

The Steering Committee and Technical Committee endorsed the concept of a unified City-County Comprehensive Plan as well as a unified Zoning Ordinance. This plan therefore encompasses both the unincorporated area of Chatham County and the City of Savannah. The plan and its implementation program differentiate between the City and County where necessary for programmatic or policy purposes.

In drafting the plan, the Steering Committee assumed primary responsibility for policy recommendations. They drafted initial goals, objectives, and strategies which were finalized in January, 2005. These were further refined during the public participation process.

The Technical Committee assumed primary responsibility for zoning ordinance recommendations, consistent with Steering Committee policy recommendations. Technical recommendations were finalized by the committee in December, 2004. The committee proposed a unified zoning ordinance for the City and County, while recognizing that the two jurisdictions may later want to separate the ordinances. The Technical Committee also recommended working toward a unified development code that would include zoning and all other development regulations. This task was recommended for completion by 2008.

Joint meetings between the two committees and a liaison provided for coordination of policy (i.e., comprehensive plan) and technical (i.e., zoning) recommendations.

1.3 Land Use and Zoning

The Chapter on Land Use in the Community Assessment contains an in-depth discussion and analysis of land use patterns and community character, establishing a basis for new zoning. Policies underlying new zoning are in the Community Agenda. A separate document entitled "A Framework and Implementation Plan for New Zoning" relating land use and zoning will be completed in 2006.

1.4 Scope and Phasing of the Comprehensive Plan Update

The Comprehensive Plan was largely drafted in substance during the advisory committee and public participation phases occurring between 2003 and 2005. The preparation and adoption of documents ultimately constituting the Tricentennial Plan will occur in phases from 2005 through 2008, as shown at right.

2005 DOCUMENTS
Community Participation Plan
Community Assessment
2006 DOCUMENTS
Community Agenda
Policy Framework for New Zoning
Downtown Master Plan
Draft Zoning Ordinance
2007 DOCUMENTS
Zoning Ordinance (Adopted)
2008 DOCUMENTS
Service Delivery Strategy
Unified Development Code

The Comprehensive Plan update followed the requirements of the Rules of the Department of Community Affairs, Chapter 110-12-1, Minimum Standards and Procedures for Local Comprehensive Planning, effective January 1, 2004, with modifications to conform to the greatest extent possible to the amendments to Chapter 110 adopted in May, 2005.

1.5 Community Assessment

The Community Assessment is the "scoping" phase of the 2005 Comprehensive Plan Update. It is an objective assessment of qualitative and quantitative information about the city and unincorporated areas of the county. Georgia Department of Community Affairs standards anticipate this document to be prepared without direct public participation. Having been drafted prior to adoption of the current standards, this document differs in that it was substantially advanced through advisory committees and general public participation.

The Community Assessment provides a list of potential issues and opportunities present in the city and county based on three years of scoping and analysis. The document also presents an analysis of the existing land use patterns and identifies geographic areas with unique characteristics or development issues that will require special attention during the planning process. The Community Assessment is intended to present a basis of information that will serve as the foundation for the second part of the plan, the Community Agenda.

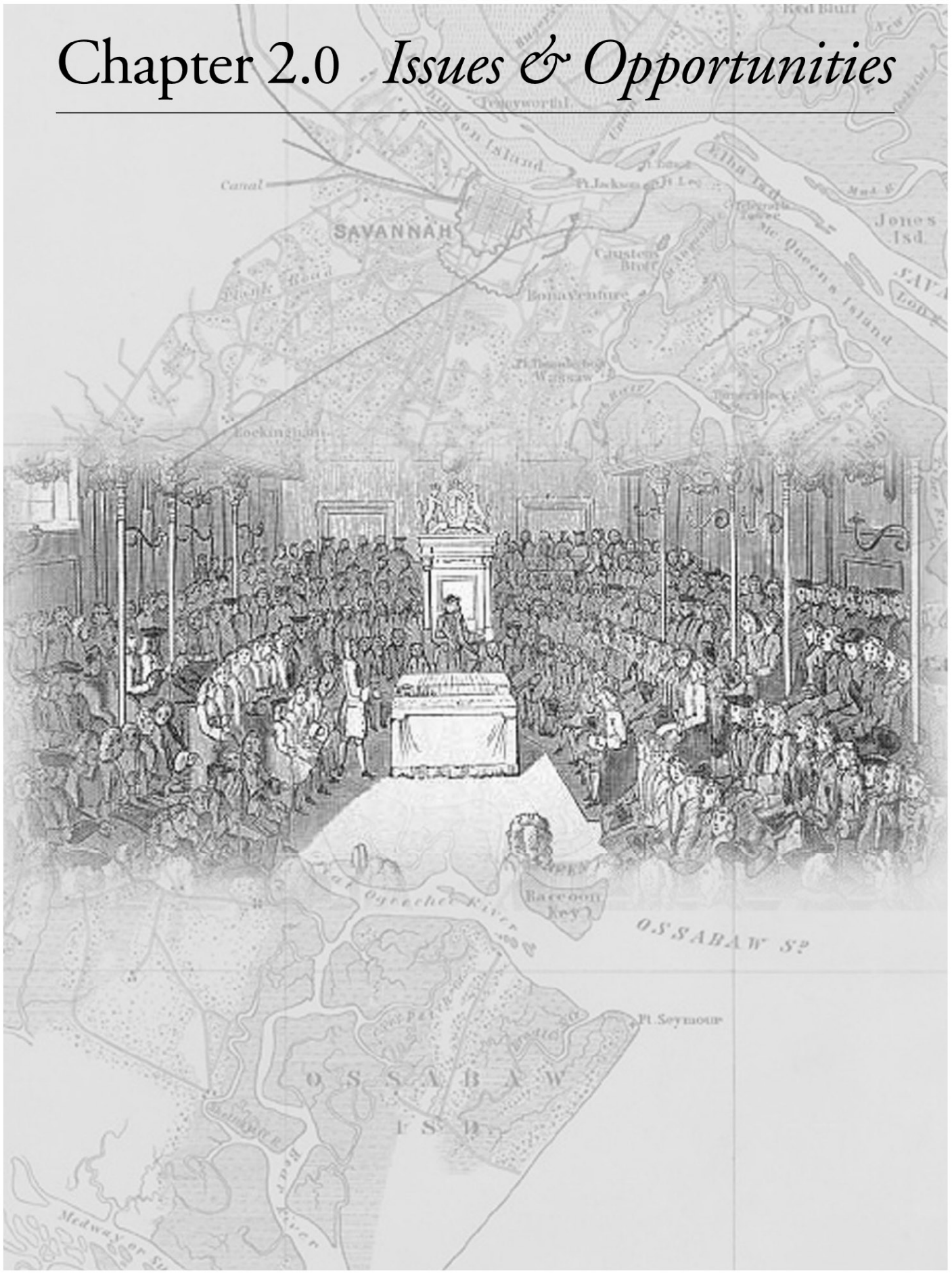
The information presented in the Community Assessment should not be considered finalized, as, for the most part, the various community stakeholders were not highly involved in its development. Instead, this information is meant to generate discussion for preparation of the Community Agenda. In addition to the comprehensive Community Assessment, an Executive Summary presenting the results in a concise easily understood format is available for review by the decision-makers and general public to aid in the subsequent development of the Community Agenda.

1.6 Community Profile

Chatham County is located on the southeast coast of Georgia. Comprising the state's northernmost coastal area, at the mouth of the Savannah River, Chatham County includes the site on which General James Edward Oglethorpe landed in 1733 to establish the Georgia Colony. There are eight municipalities within the County: Savannah (county seat), Bloomingdale, Garden City, Pooler, Port Wentworth, Thunderbolt, Tybee Island and Vernonburg. The 2000 Census reported a county population of 232,048 residents.

The name Savannah was chosen by Oglethorpe and the Trustees for the Establishment of the Colony of Georgia in America. Oglethorpe and the Trustees devised an elaborate plan for the town based on wards of approximately 10 acres with squares at the center. Savannah's National Historic Landmark District and eight other historic districts encompass an area of 3.3 square miles with more than 6,000 architecturally significant buildings. Savannah has a vibrant and diverse economy that is especially strong in areas of trade, services, and tourism. The 2000 Census reported a population of 131,510 persons in the City of Savannah.

Chapter 2.0 *Issues & Opportunities*



2.1 INTRODUCTION

There are a number of significant issues facing the City of Savannah and unincorporated areas of the county. The purpose of this chapter is to provide a list of potential issues and opportunities that may warrant further study during the planning process. This list may be modified and revised through subsequent public participation sessions. A final, locally agreed upon list of issues and opportunities the city and county intends to address during the 2005 – 2033 planning period will be included in the Community Agenda produced at the conclusion of the planning process.

The potential issues and opportunities are categorized by the seven elements of the Community Assessment.

2.2 Demographics

- The changing racial structure of the county may present the need for more diverse retail and services in the city.
- The low-income level of city residents may necessitate additional publicly supported programs, which could impose a burden on the tax base.

2.3 Land Use

- The need for the Comprehensive Plan to address modernization, restructuring, and streamlining of the zoning ordinances.
- The need for a Land Use Plan and development regulations that foster infill development and neighborhood revitalization.
- The need for mixed-use development standards with "good neighbor standards" to protect both residential and commercial interests.
- The need for neighborhood-based design guidelines to reinforce neighborhood identity and to protect the established character of areas that may otherwise be threatened by inappropriate new and infill development.
- The need for an updated Land Use Plan that employs character area assessment rather that generic land use categories.
- The need to expand the City's successful streetscape improvement programs.
- The need to expand pedestrian- and transit-friendly urban environments.
- The need for more public involvement in the community planning and development review process.
- The need for consistency between land use and zoning.
- The need to reinforce downtown Savannah as the economic, cultural, and governmental hub for the region.
- The need to coordinate development in the downtown area through a Downtown Master Plan.
- The need for connectivity, compatibility, and reciprocity (mutual reinforcement) of development in downtown expansion areas with established downtown development patterns.
- The need for a Future Land Use map that matches existing conditions on the ground.

- The need for a Land Use Plan and development regulations that foster a greater range of development options, such as town center, planned unit developments, cluster development, and neotraditional development.
- The need to re-evaluate existing protection of fragile resources such as hammocks, marshes, and wetlands.
- The need to anticipate new forms of development in high growth areas such as West Chatham County.
- The need to promote affordable housing in all areas by removing development barriers and providing appropriate incentives.

2.4 Economic Development

- The need for better and higher workforce education and training.
- Safe and economically vibrant neighborhoods and commercial centers.
- Economic development programs to support existing small businesses, particularly minority and women-owned businesses.
- The reduction of red tape in the development process.
- Transportation infrastructure that supports economic growth countywide.
- Reduction in poverty.
- The need for a wide range of substantial employment opportunities accessible to traditional neighborhoods and low and moderate income wage earners.
- The continued viability of Hunter Army Airfield.
- The continued support of knowledge-based businesses.
- Long-term infrastructure plans that guide, direct, and support development in West Chatham communities.
- Recruitment of international businesses.

2.5 Housing

- Stable communities for all types of homeowners.
- Affordable housing for all levels of incomes.
- Adequate housing for people with special needs, such as disabled, elderly, and homeless people.
- Safe, quality housing in all neighborhoods.
- The need for mixed use development (residential and commercial).
- Equal housing opportunities for economically diverse neighborhoods.
- Zoning deficiencies in first ring suburbs that adversely affect residential neighborhood redevelopment.
- New Urbanist development and conservation subdivisions.
- Correlation of resources between housing, transportation, and land use.

2.6 Historic & Cultural Resources

- Preserving culturally and historically significant buildings within the city and unincorporated county.

- Public policies that protect historic resources.
- The need for appropriate materials and rehabilitation techniques to conserve energy.
- Rehab of affordable housing.
- Design guidelines for all historic neighborhoods.
- Maintenance regulations for historic areas.
- The need for adequate funding to protect cultural and historic resources.
- Conservation districts in unique neighborhoods that are not yet eligible for National Register Historic District status.

2.7 Natural Resources

- The need for development standards that protect and preserve natural resources.
- Coastal resources such as barrier islands and endangered species need to be protected.
- Ensure the protection of open space and conservation areas.
- Continued protection of both surface freshwater and groundwater resources.
- The protection of marsh buffers and hammocks with the use of development standards.
- Ensure the protection and preservation of the existing trees and plants.
- A stormwater utility to ensure continuing effective management and treatment.
- Saltwater intrusion into the Floridan Aquifer system needs to be addressed to ensure the protection of the coastal area's groundwater source.
- Natural resource sites in need of protection require identification and then protection through a number of means: possible acquisition using SPLOST funds, zoning, conservation easements, donation, etc.
- Stormwater best management practices (BMPs) such as Low Impact Development (LID) strategies that reduce stormwater runoff need to be accepted and implemented to lessen the environmental impacts.
- The 2001 Environmental Overlay District adopted by Chatham County is in need of updating.
- Public policy regulating lighting practices and fixtures.

2.8 Transportation

- The need for an efficient multi-modal transportation system.
- The need for increased compatibility between transportation infrastructure and land use.
- Preserving the integrity of pre-automobile land use patterns while providing modern infrastructure.
- Establishing a Pedestrian Transit Priority Area to ensure that areas of Savannah that pre-date automobiles are able to maintain their pedestrian orientation.
- Meeting the off-street parking needs of Downtown Savannah to help ensure its continued economic and cultural vitality.

- Providing linear trails and bicycle facilities for both transportation and recreational purposes.
- As the city grows, planning for additional public transportation services, including train or streetcar service linking the downtown expansion areas to the Central Business District.
- The development of a regional public transportation system to serve adjacent counties, including counties in South Carolina.
- Applying *context-sensitive design* principles to new or expanded infrastructure projects.
- Observing the guidelines set forth in the CUTS Amenities Package when building new roads or improving existing roads.
- Applying *environmental justice* principles to new or expanded infrastructure projects to avoid splitting or damaging neighborhoods for large scale highway and drainage projects.
- Reducing automobile dependency through the promotion of public transit and construction/rehabilitation of walkable neighborhoods.
- Enhancing road connectivity and reducing traffic congestion by providing multiple routes to major destinations.

2.9 Community Facilities & Services

- Some public buildings have inadequate space for fulfilling all government functions.
- The uneven or damaged sidewalks in some neighborhoods pose safety issues for residents.
- There is the potential for development of additional parks, recreation facilities and community gathering spaces.
- There are numerous undeveloped/vacant sites in town that could be used to accommodate facility needs.
- Improved delivery of neighborhood services.
- Regional utility systems.
- Recreational programs for the community.
- Special programs for women, elderly, and handicapped citizens.
- Correlation between transportation and community facilities.

2.10 Intergovernmental Coordination

- The county and city does not access or make adequate use of the numerous state and federal economic development agencies and resources that could be used to the area's advantage.

These issues and others are all addressed in the following chapters, though not numbered as provided in this introduction. This list of issues and opportunities was developed after the community visioning forums and is included here to ensure that all community concerns are addressed in the Community Assessment.

Chapter 3.0 *Community Indicators*

As James Oglethorpe and others did in 1733, residents today are coming together to create a new vision of their future. Some are talking about building a "healthy city" while others are promoting the idea of sustainable communities.

However, all are concerned with maintaining or improving the "quality of life" in Chatham County and the City of Savannah.

Their main purpose is to ensure that the next generation inherits a healthy, vital place to live. They want to set goals and priorities so they may take actions that will build a vital community now and into the future.

They also want to measure their progress toward their vision of a better tomorrow, to ensure that their efforts result in positive changes. "Community Indicators" are measuring systems, designed to provide citizens with clear and honest information about past trends and current realities, and assist them in steering their communities on their desired course.

Indicators can point a community toward specific initiatives or policy changes that will have a real effect on quality of life. That impact is then reflected in the indicator designed to measure it, and the positive feedback inspires the community to continue striving for a better tomorrow.

3.1 Introduction

The Community Indicators Chapter of the Tricentennial Plan provides a vehicle to understand and address community issues from a holistic and outcomes-oriented perspective. Community Indicators are useful, within the context of a comprehensive plan, both as a planning tool, based on a community's vision, and as an evaluation tool to measure progress on steps taken toward improvement.

The process of developing and tracking community indicators can bring many different sectors of the community together, foster new alliances and relationships, provide all citizens with a better compass for understanding community problems and assets, and be used to drive community change.

3.2 History and Background

The use of indicators at a community level is increasing rapidly. In many cases, communities themselves, rather than regional or state government entities, are at the leading edge of this work. As communities and local governments become more concerned about quality-of-life issues, community indicators have become a widely used tool to measure the status of the quality of life and progress being made toward improving it. These communities are seeing the value of using carefully chosen measures that reflect their core concerns, including those having to do with transportation and education. They embrace a much broader concept of accountability for long-term results, holding both traditional programs and a variety of other community actors, including ordinary citizens, responsible for measurable progress toward well-being, as they define it.

In 1997, the Georgia General Assembly passed House Bill 491 calling upon the Department of Community Affairs (DCA) to publish community indicators for all local governments with annual expenditures greater than $250,000. The statute calls for DCA to annually publish the indicators based on data received through its local government finance and local government operations surveys as well as other data that might describe and assist local taxpayers and local policy makers in understanding and evaluating local government services and operations.

Community Indicators or a unique and unprecedented effort on the part of state and local governments to find meaningful ways to measure the quality of life in individual communities. Currently, over 200 communities around the country—from Anchorage, Alaska, to Jacksonville, Florida—have developed sets of indicators that illuminate long-term trends of economics, education, housing, and environmental quality.

3.2.1 What are Community Indicators?

Community indicators reflect the status of the quality of life in a community. They measure important aspects of the community that, if improved, would benefit the community. Community indicators provide information about both the status of the community and the well-being of its citizens. Their usefulness is maximized when they are

both directly tied to public-policy and budget decision making and when the community feels a sense of ownership of the indicators through direct citizen involvement with them.

Indicators that are meaningful (provide valuable information) and useful (provide guidance toward community improvement) usually reflect a combination of idealism (what the community would like to measure) and pragmatism (what the community is able to measure). Taken as a set, community indicators provide a roadmap for the community, showing where it has been, where it is now, and what critical areas need attention if it is to arrive where it wants to go. By tracking these indicators, citizens in the community become better informed and are able to work together to improve the community.

3.2.2 Criteria for Indicators

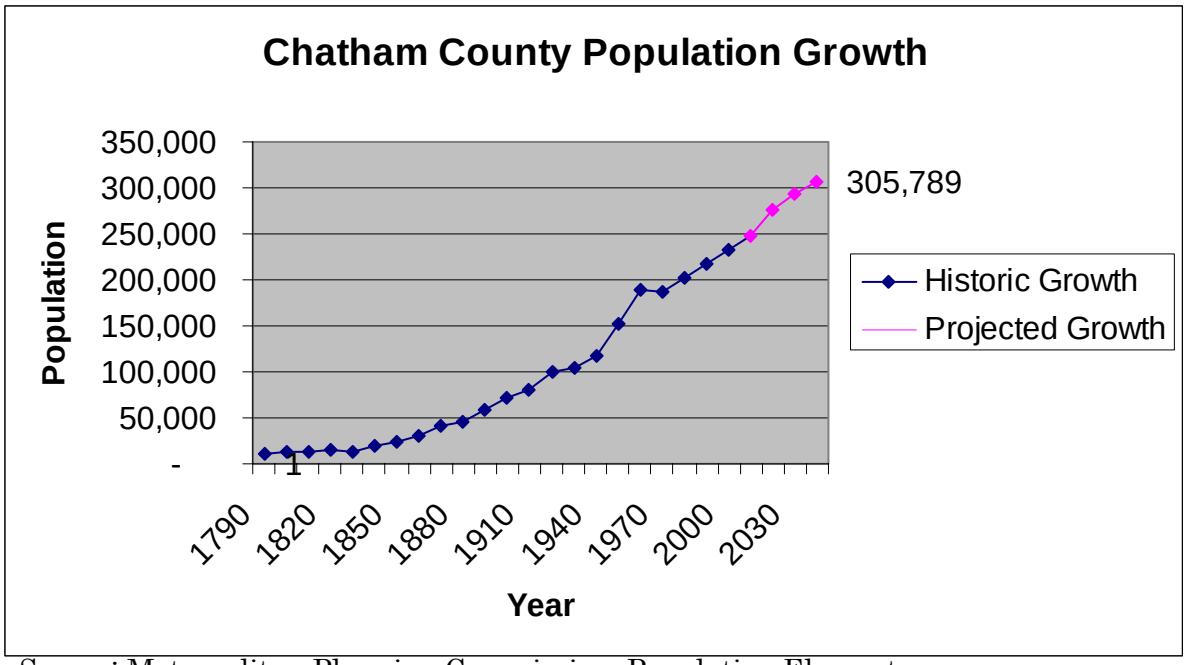
Good indicators are objective measurements that reflect how a community is doing. They reveal whether key community attributes are going up or down; forward or backward; getting better, worse, or staying the same. The selection criteria used to select the indicators used in this element include:

- Reflect the fundamental factors of the community's vision.
- Can be easily understood by the citizens in the community.
- Are statistically measurable on a frequent basis.
- Measure outcomes, rather than inputs.
- Relevant to public policy and budget decision-making.
- Reflect data that is both reliable and available over the long-term.
- Measures aspects of the economy, transportation, education, health and human services, public safety, housing, environment, and civic engagement.

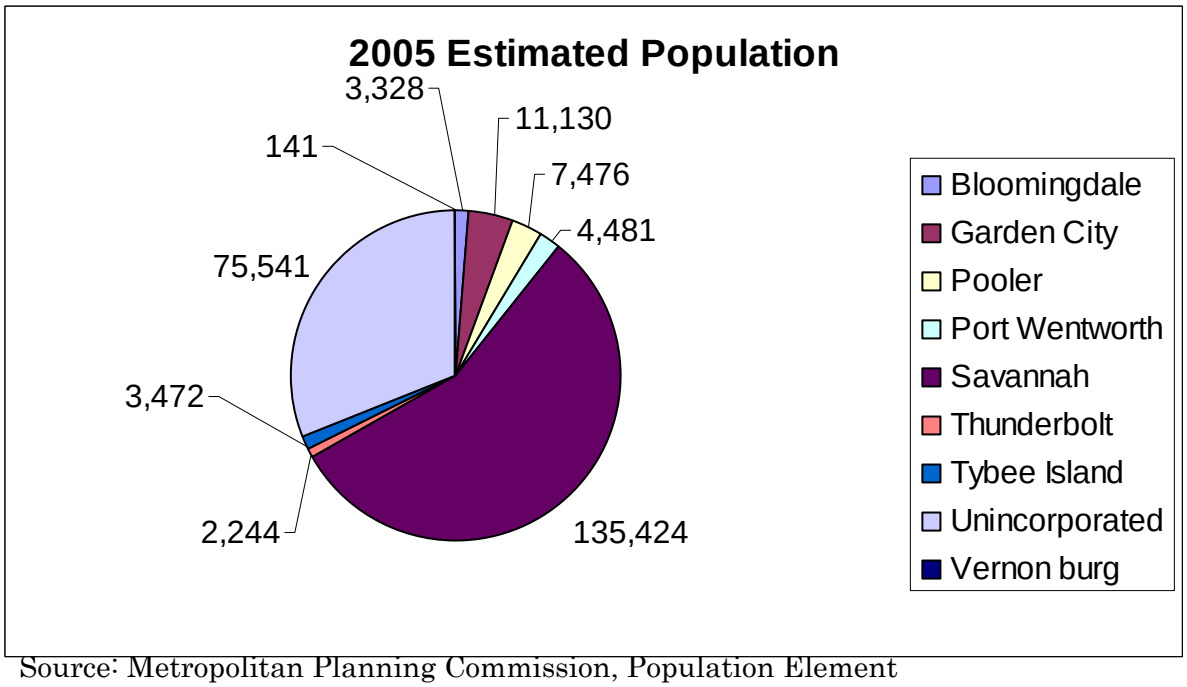
3.3 Inventory of Community Indicators

An inventory of community indicators attempts to present a more accurate picture of the quality of life in the City of Savannah and Chatham County. The following inventory identifies several indicators that can be invaluable tools for addressing key challenges and concerns of local government officials. They help to raise public awareness, inspire hands-on action, and bring about change. When done well, indicators illuminate linkages among economic development, the environment, housing, education, public safety, and social issues. They present vital information in a format that is easy to understand.

3.3.1 Demographic Indicators



Source: Metropolitan Planning Commission, Population Element



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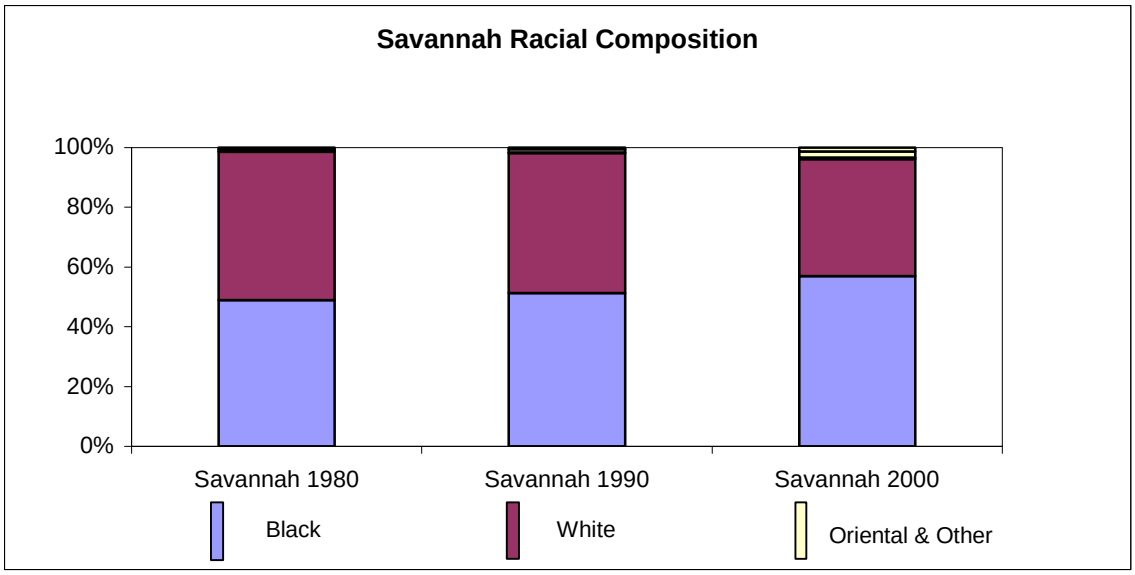

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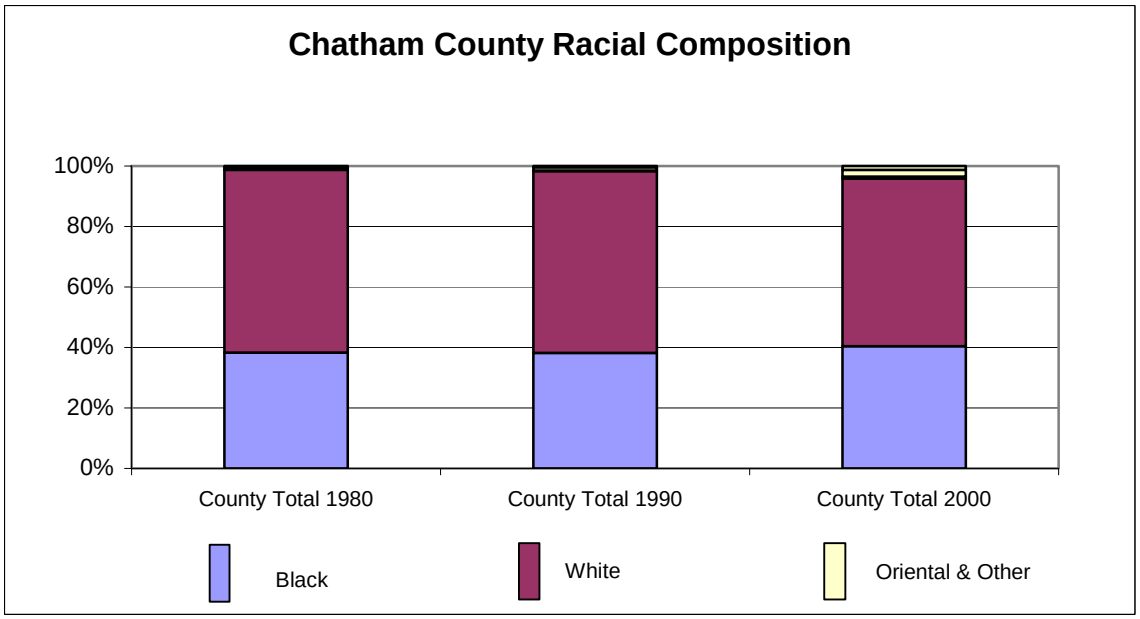
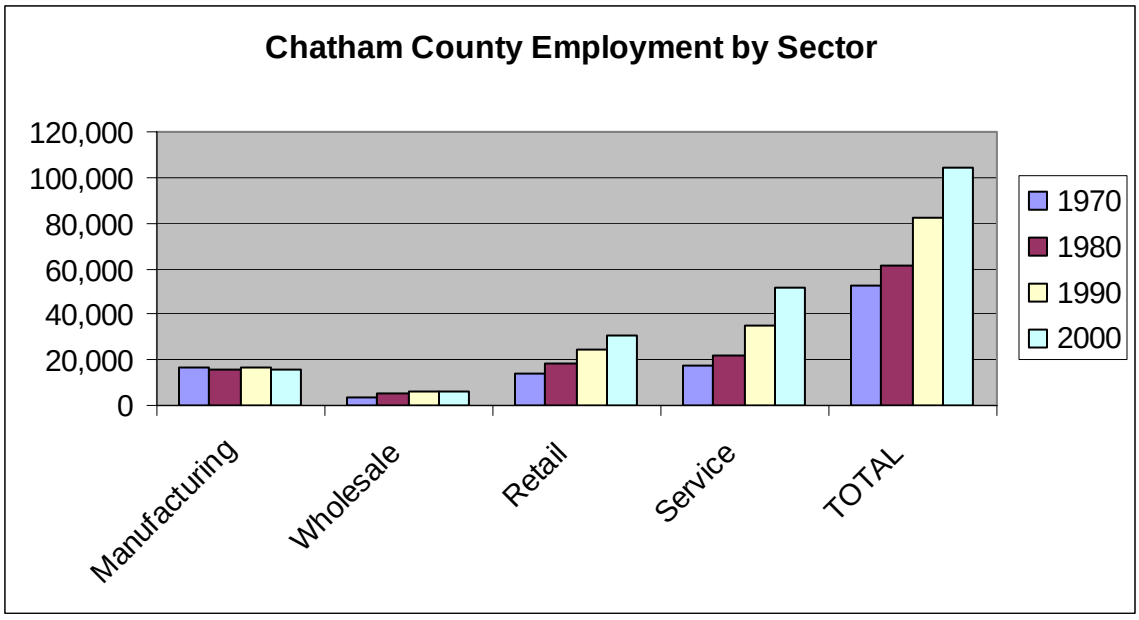
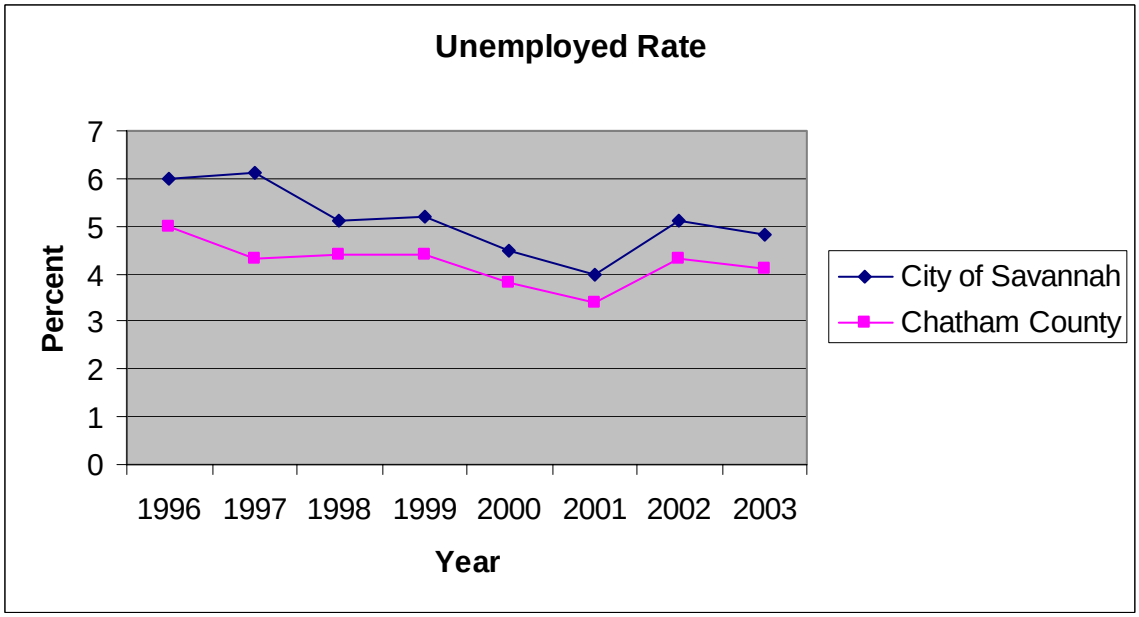


Source: Metropolitan Planning Commission, Population Element

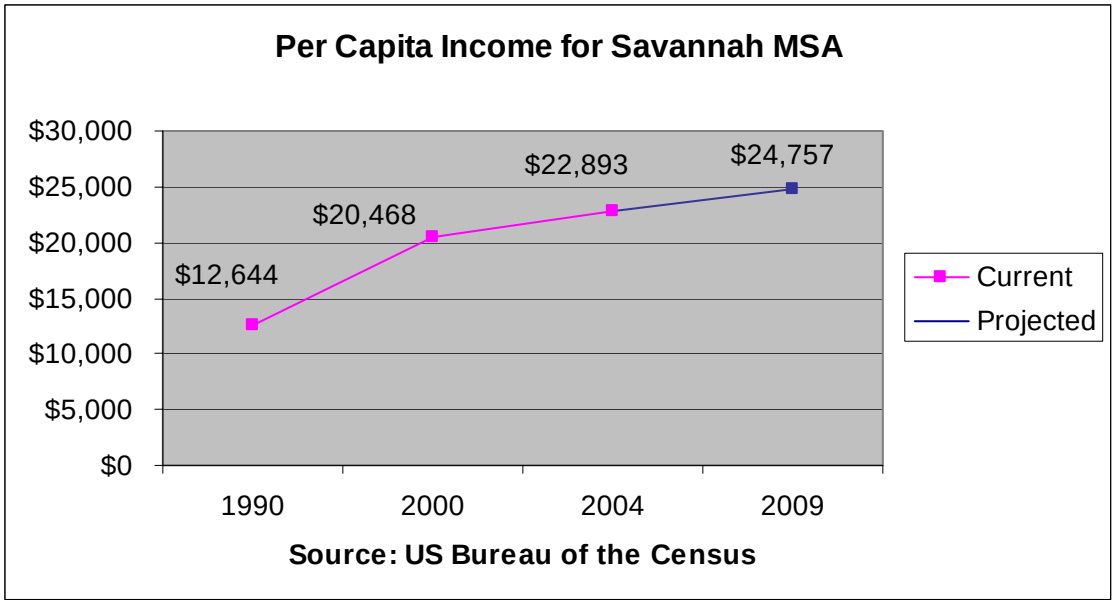
3.3.2 Economic Indicators



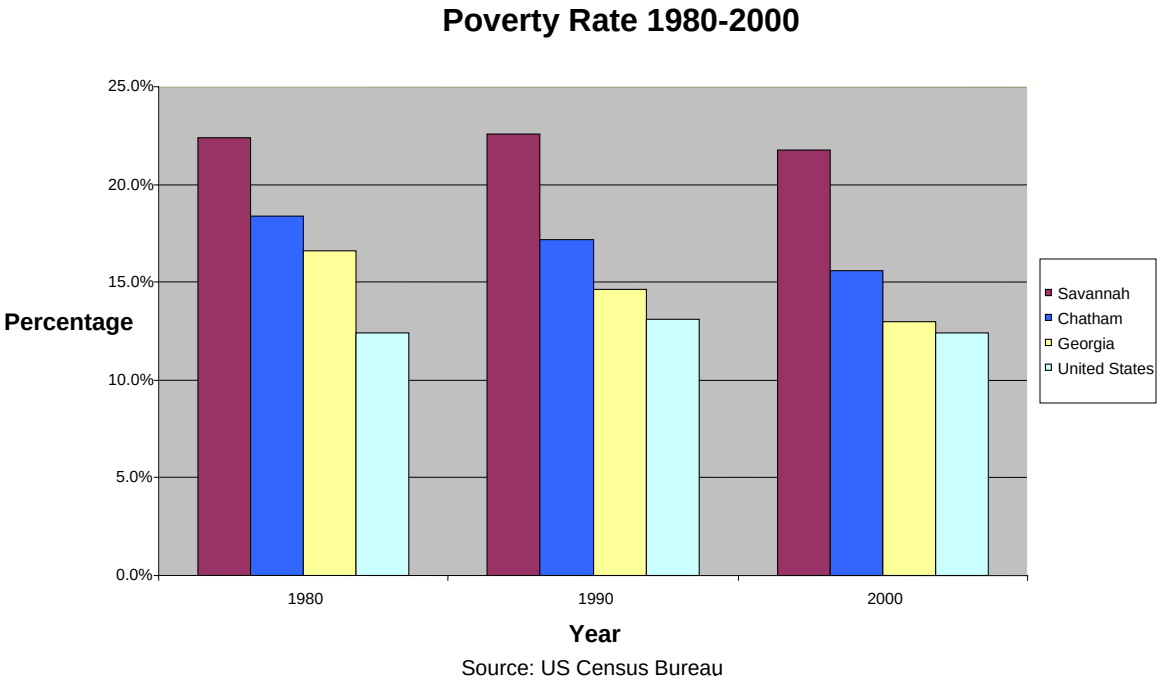
Source: Metropolitan Planning Commission, Economic Development Element



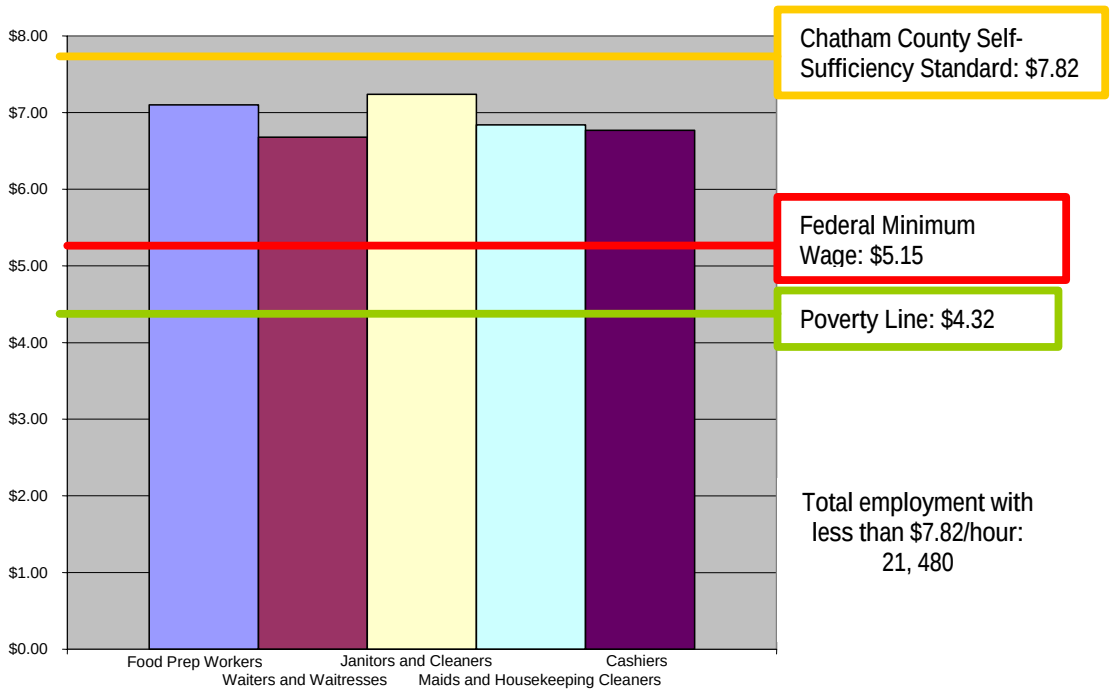
Source: Metropolitan Planning Commission, Economic Development Element



Source: Savannah Economic Development Authority



Source: US Census Bureau

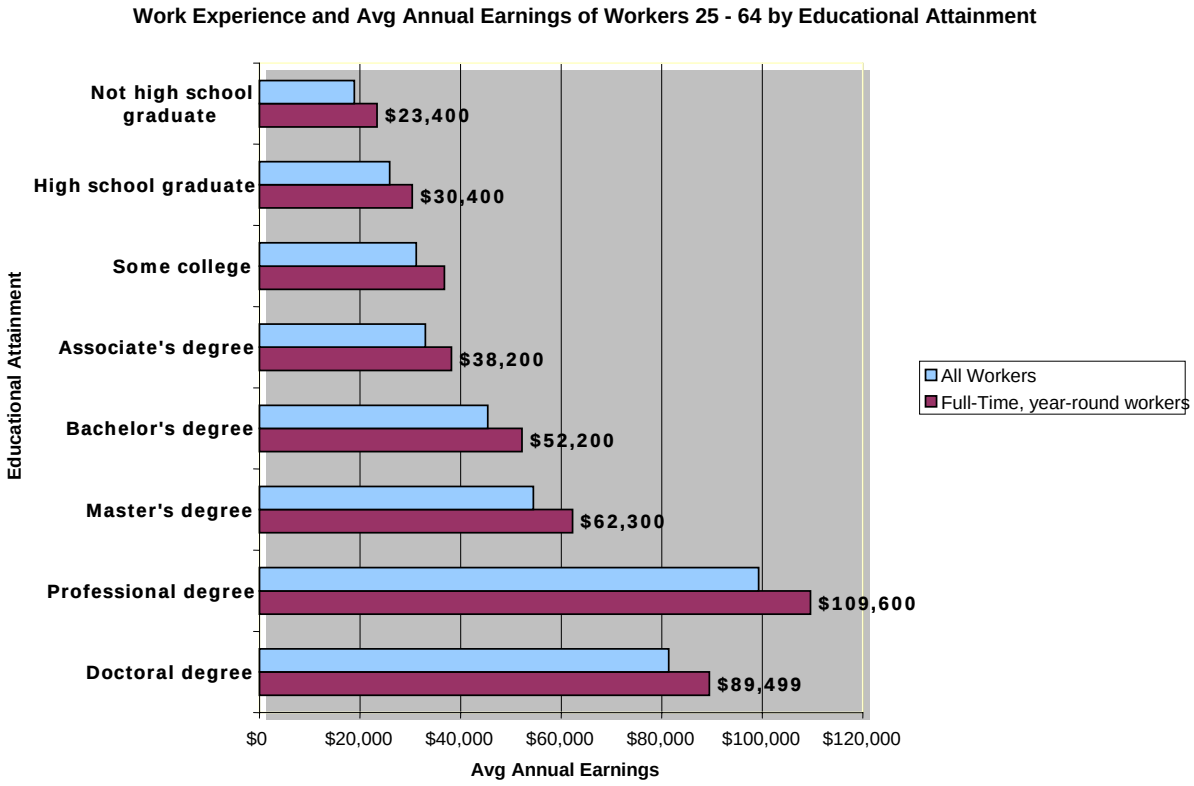


Source: Anti-Poverty Taskforce Report

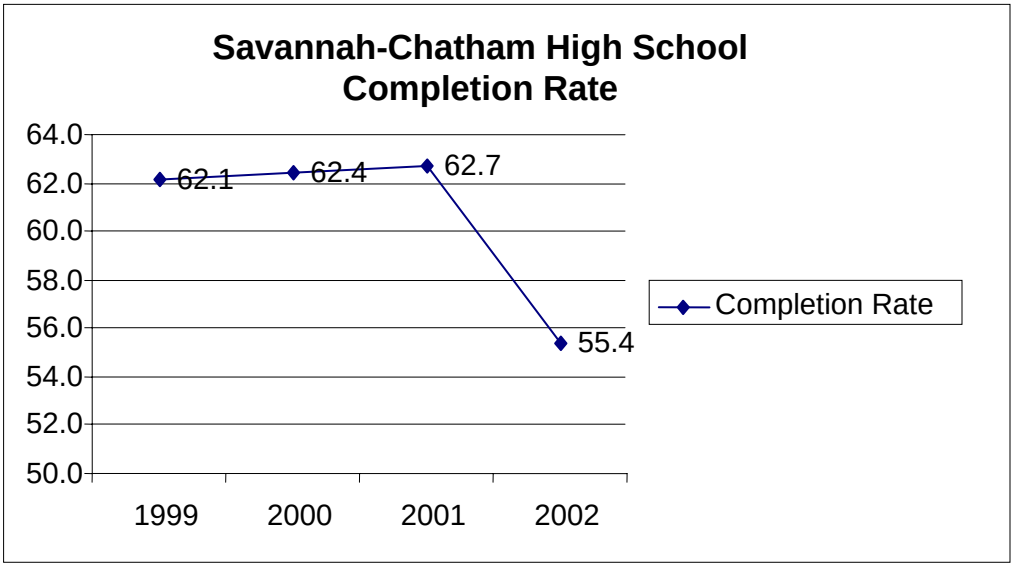
3.3.3 Educational Indicators

Chatham Area	Percent Distribution by Age					
	% of Total	18-24	25-34	35-44	45-64	65+
Not High School Graduate	20.7%	24.8%	13.2%	15.5%	17.6%	38.8%
High School Graduate	29.4%	31.7%	27.5%	30.6%	30.5%	26.0%
Some college / Associate degree	29.0%	36.5%	33.0%	30.9%	27.3%	17.9%
Bachelor's degree	14.2%	6.5%	21.0%	15.6%	14.2%	10.8%
Graduate / Professional degree	6.7%	0.5%	5.2%	7.3%	14.2%	6.4%
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Note: Totals are based on the portion of the labor force between ages 18 – 65+.
Source: US Census Bureau, Census 2000.

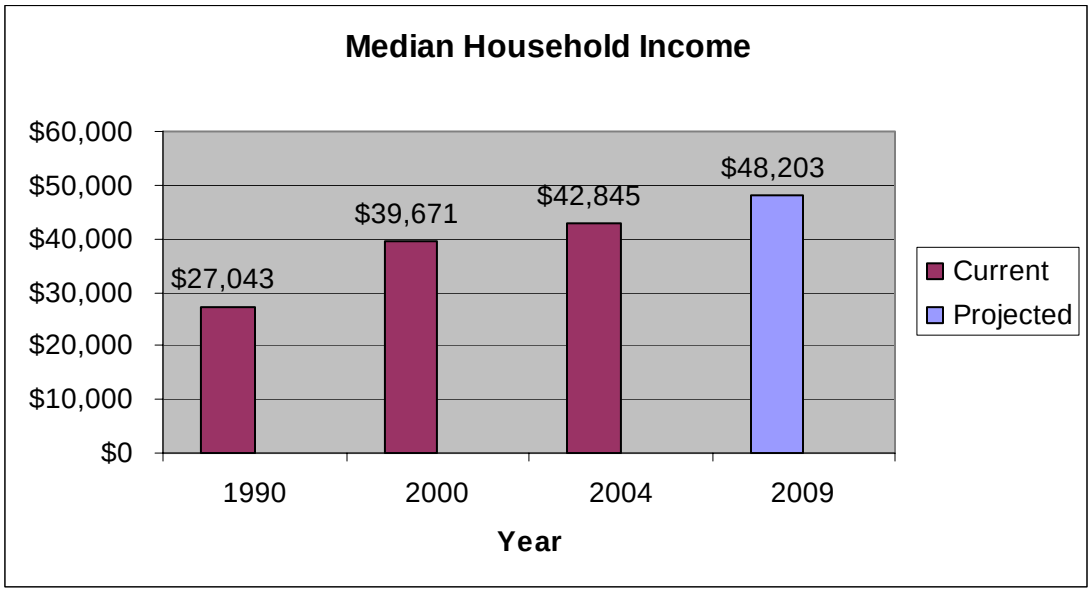


Source: US Census Bureau, Current Population Surveys, March 1998, 1999 and 2000.

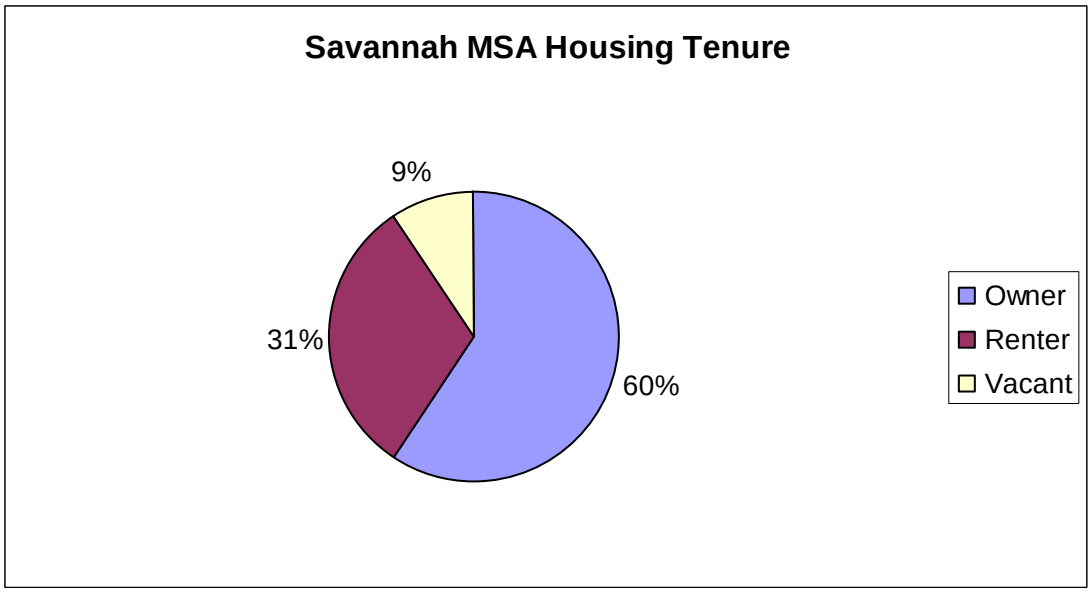


Source: Georgia Department of Education. 2004.

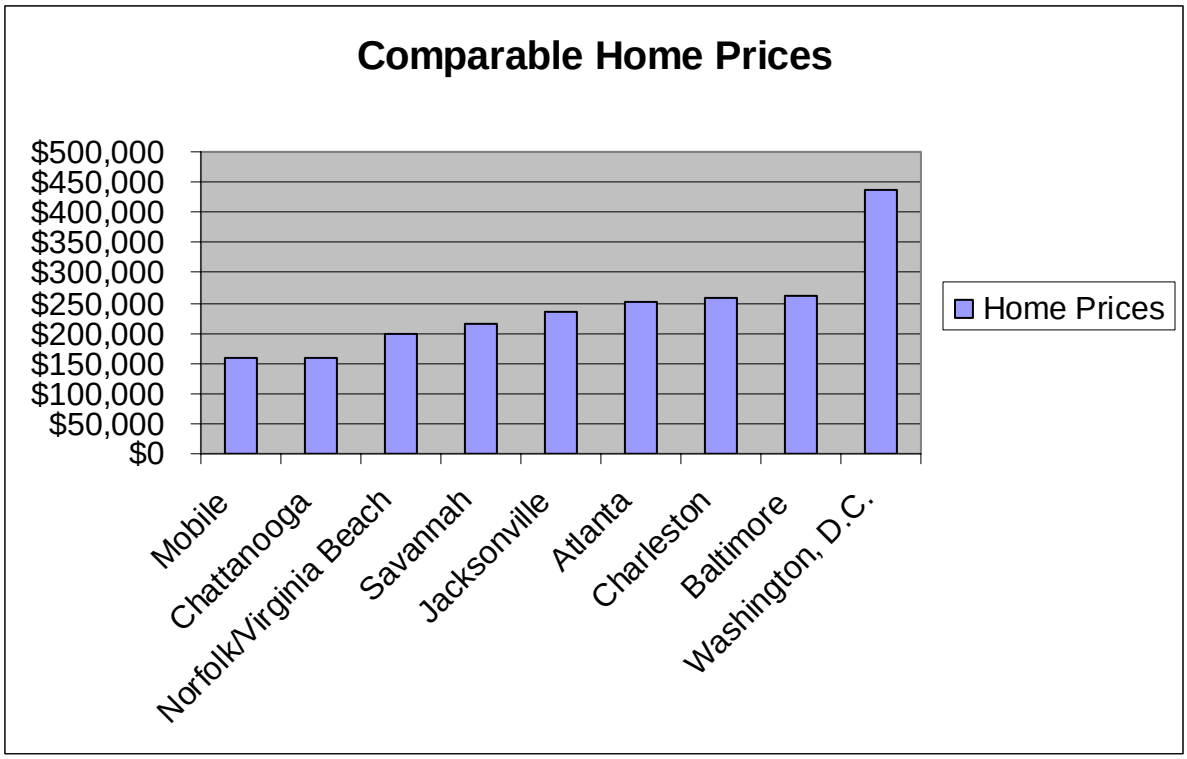
3.3.4 Housing Indicators



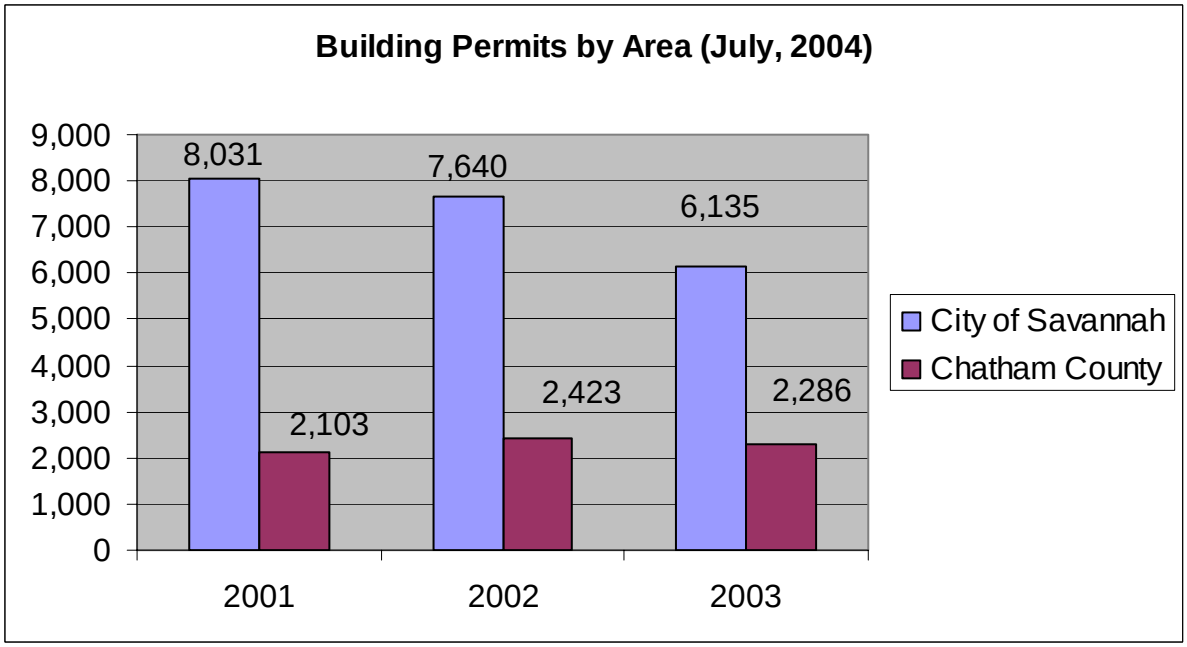
Source: US Bureau of the Census, DemographicsNow 6.0



Source: US Bureau of the Census, DemographicsNow 6.0 (2004)

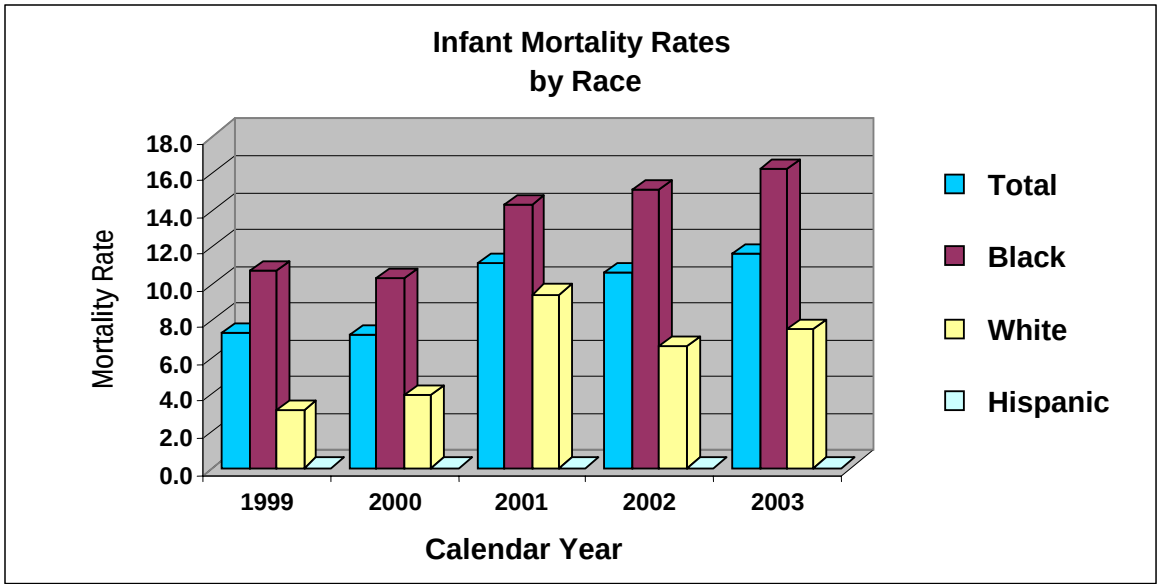


Source: Coldwell Banker, 2004 Judy Nease Realty

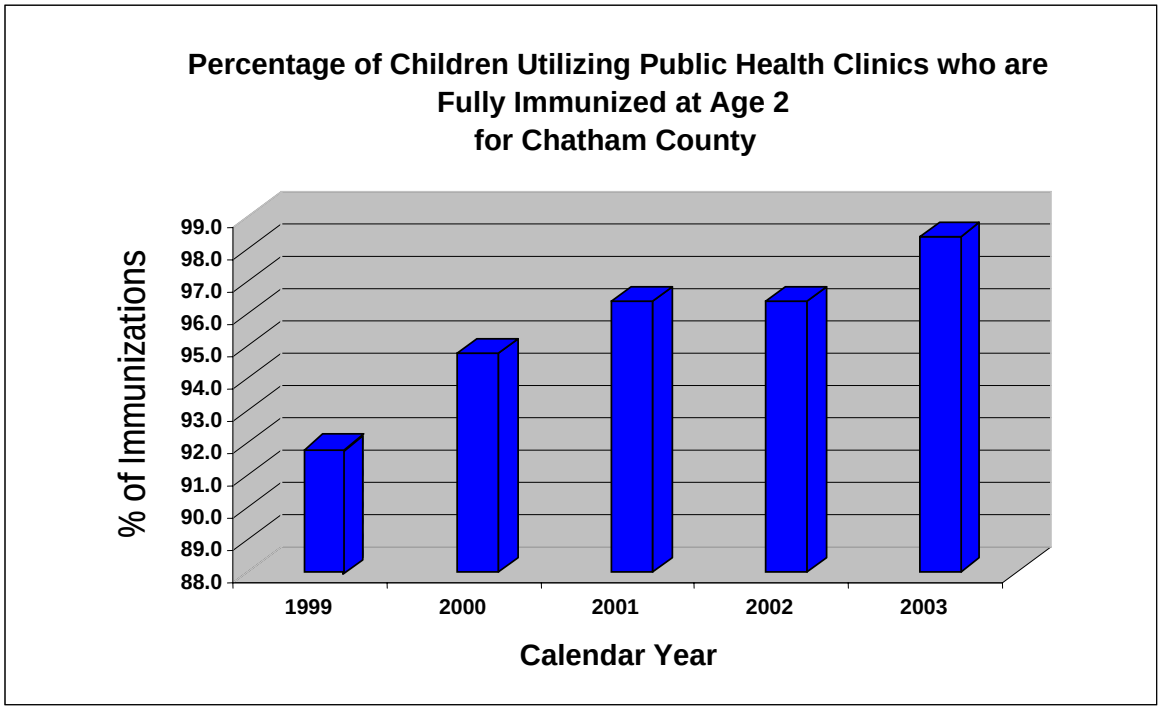


Source: Savannah/Chatham County Inspections Department

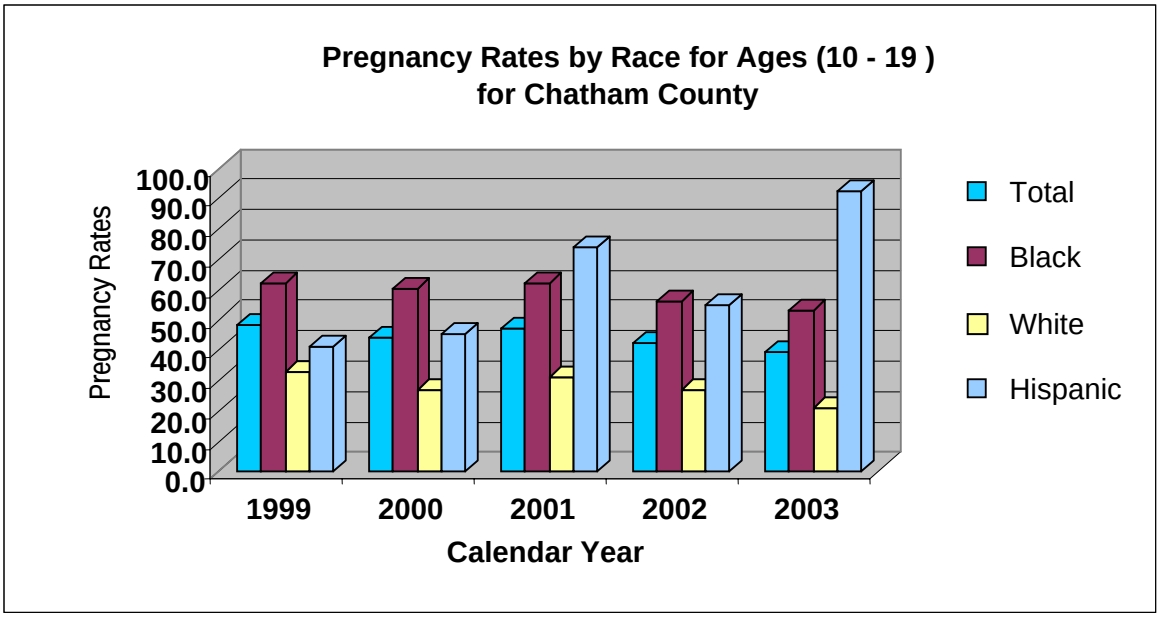
3.3.5 Health Indicators



*Note: Infant Mortality Rate is defined as (Total Infant Deaths/Total Infant Births) X 1000
Source: Chatham County Health Department, 2004

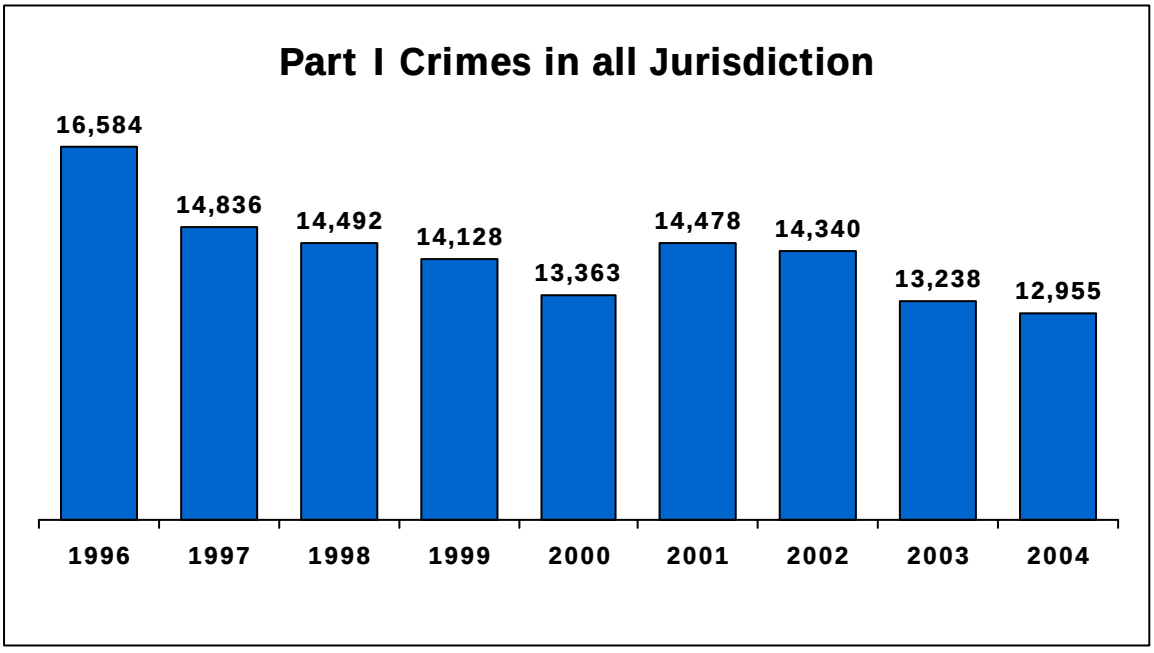


Source: Chatham County Health Department, 2004

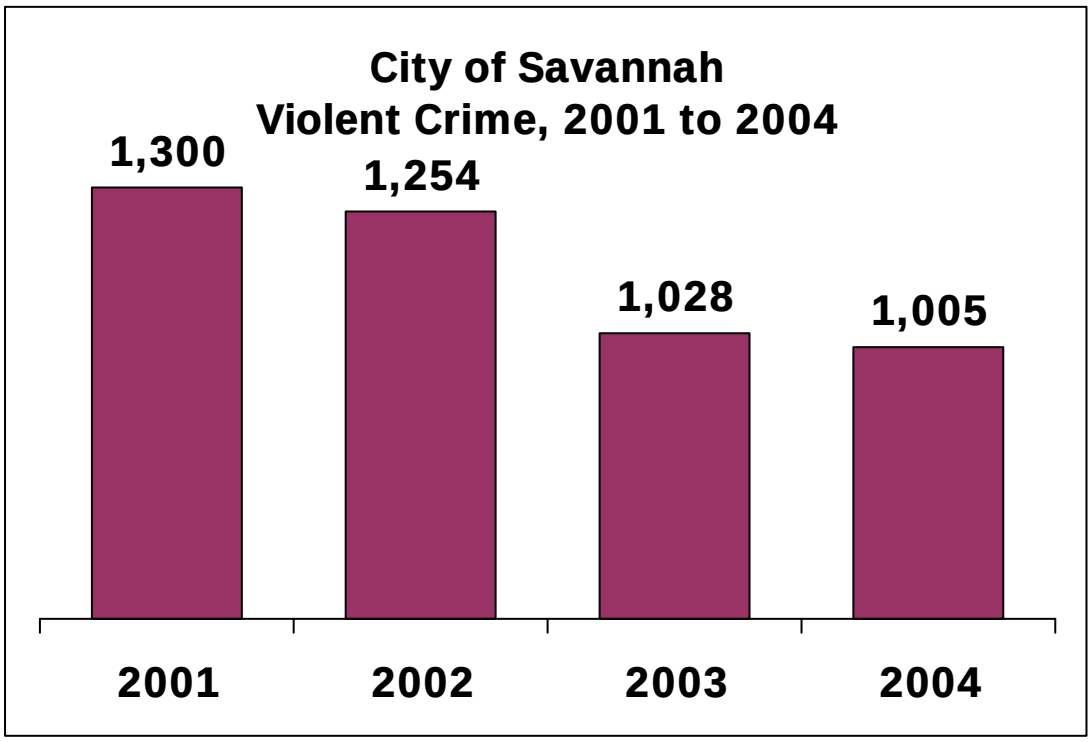


Source: Chatham County Health Department, 2004

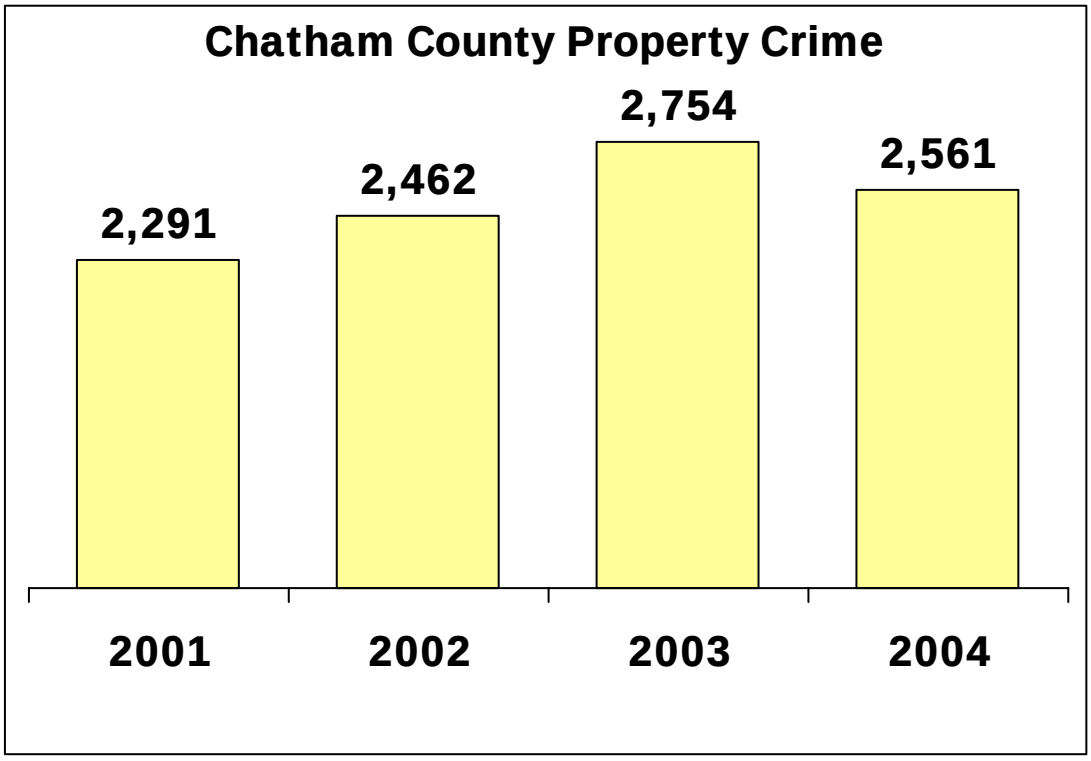
3.3.6 Public Safety Indicators



*Part I Crimes: Violent Felony Crimes
Source: Savannah-Chatham Metropolitan Police Department



Source: Savannah-Chatham Metropolitan Police Department



Source: Savannah-Chatham Metropolitan Police Department

Chapter 4.0 *Demographics*

When James Oglethorpe arrived in 1733 with 120 colonists, the bluff that was to become Savannah was inhabited by a small band of Yamacraw Indians led by an elderly chief, Tomochichi.[1] *Oglethorpe concluded peace with Tomochichi, and within a year, the colony had grown to 400 people. In ten years, the population was 1,800. The population continued to grow steadily. In 1790, there were 10,769 people living in the colony. By 1820 when yellow fever wiped out one-tenth of the City's population, the total population was 14,737. Between 1820 and 1830, the population declined as a result of the yellow fever epidemic.*

Between 1940 and 1950 the growth rate was 28 percent. This is attributable to the shipyard and port activity during World War II. The growth rate during the following decade, 1950 to 1960, was 24 percent and reflects the beginning of national migration to southern states. Between 1970 and 2000, the rate of growth has remained relatively constant at 7 percent. If historic development patterns and growth rates of the last 30 years remain relatively constant over the next 30 years, Chatham County will reach its maximum population of 334,000 at the end of 2033, three hundred years after General Oglethorpe founded Savannah.

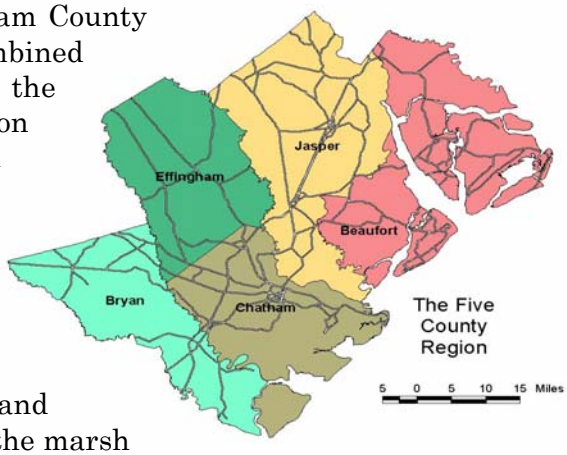
[1] *"The Dawn of Oglethorpe's Georgia" John E. Worth: Lost Worlds.org*

4.1 Introduction

The population growth of Chatham County from 1790 to 2000 has been relatively consistent. The county's stable growth has insulated the area from the perils of "boom and bust" development that have wreaked havoc with the planning efforts of many communities. Chatham County has a long tradition of planning, and the community is adamant about maintaining its historic character and natural resources while welcoming new residents, many of whom become the strongest advocates of local planning.

4.2 Regional Population

Chatham County is the largest county in a five county region that includes Bryan and Effingham Counties in Georgia and Jasper and Beaufort Counties in South Carolina. Historically, the population of Chatham County has been more than double the size of the combined populations of the other four counties. However, the availability of air conditioning and the implementation of mosquito control in the 1950s and 1960s resulted in the potential to develop low-lying areas that were formerly considered uninhabitable.



One of the first to understand the significance of climate and mosquito control was Charles Fraser, a young man whose family owned timberland on Hilton Head Island. He built a golf course on the property and developed residential lots around the fairways and on the marsh and estuaries. The surprising success of Sea Pines Plantation, accessed only by a two-lane swing toll bridge that was not completed until 1956, resulted in a rapid succession of similar residential developments on the South Carolina and Georgia coasts. Within fifty years, retirees maneuvered golf carts among lush fairways where formerly pines and palmettos had barely survived. Native islanders, many of them descended from slaves who had cultivated prized long-staple cotton on coastal plantations, faded away and took with them their language, Gullah, and a culture rooted in Africa and sustained by shrimp and oysters and collard greens that thrived in the sandy soil.

Largely as a result of the Sea Pines development prototype, the population of Beaufort County increased from 44,000 in 1960 to 120,000 in 2000. The impact of the prototype on Chatham County was no less dramatic. Skidaway Island, virtually uninhabited in 1960, had six golf courses and a population of 7,000 in 2000. The escalating value of water-, marsh- and beach-front property resulted in intense development of the Wilmington Island area and Tybee Island in the 1980s and 1990s.

Rising property values and an influx of new residents to the formerly mosquito-infested islands in Chatham and Beaufort Counties resulted in the development of more affordable,

rural bedroom communities in Bryan, Effingham, and Jasper counties. By 2000, the population of the four outlying counties almost equaled the population of Chatham County.

At the same time the islands were developing, restoration of historic properties in downtown Savannah and the adoption of an innovative ordinance to preserve and enhance its historic character established Savannah as a leader in historic preservation. The influx of tourists and new residents to downtown Savannah and of retirees to golf course communities surrounding Savannah, combined with the development of bedroom communities in surrounding counties, established Chatham County as a center for service and commerce. Moreover, while the decline in manufacturing adversely affected the rest of the country, in Chatham County the downturn was tempered by an increase in imports through the Port of Savannah. As industrial employment dropped and industrial facilities were shut down, expanded warehouses and transportation facilities were built to handle the increased port tonnage.

Another important factor in regional growth was the evolving role of the U.S. Military. Fort Stewart in Bryan and Liberty Counties, Hunter Army Airfield in Chatham County, and the Georgia Ports Authority are components of a unique transportation complex. A large infantry base connected to a major military airfield and to a deepwater port by direct rail and limited-access highways is replicated in few locations in the world. The combination of three transportation modes makes Fort Stewart-Hunter an essential component in the movement of men and material in the era of rapid deployment of troops to global destinations. The Paris Island Marine Corps Training Base and Marine Corps Air Station in Beaufort complement the region's military installations.

The net effect of regional development on the population of Chatham County and Savannah can be considered in four broad categories.

- The manufacturing economy has been replaced by the service economy. The service economy includes health and medical facilities, retail, hospitality, and business services such as insurance, banking, and advertising that are large enough to serve a population double the size of the population of the county.

- Approximately 25 percent of the population of Chatham County at any given time is not included in any official population count. The uncounted population includes commuters who live in surrounding counties but who work and trade in Chatham County; second-home owners who spend only part of the year in the county; students at local universities which attract state, national, and international students; military personnel who are stationed in the region temporarily; and tourists.

- Immigration from other parts of the country accounts for approximately 50 percent of the annual growth of Chatham County. Because many of these immigrants are retirees, the population tends to be older and more affluent than in other areas. The income of retirees has been characterized as a "clean industry" that has helped to

replace the paper mills and lumber yards that were once the backbone of the Chatham County economy.

- The transportation system in the five county region is the most important single factor that will affect the quality of life and continued economic health of the region. The fragile natural and historic environment is the engine that drives development and at the same time is most threatened by development. Developing an efficient transportation system that emphasizes moving people rather than vehicles is the most critical challenge facing the region.

4.3 Chatham County Population

4.3.1 Population Overview

Chatham County includes eight municipalities and the unincorporated area. In 1980, the population of the City of Savannah was approximately 2.5 times the combined population of the other municipalities and unincorporated county. By the year 2000, this factor was less than 1.5. Many of the same conditions that influenced regional growth affected the growth of the non-urbanized areas of the county. The most significant factor was the development of the islands east of Savannah. Although the municipalities in West Chatham County experienced double digit growth between 1990 and 2000, much of this growth was the result of annexations of land formerly in the unincorporated area. But in spite of the loss by annexation of almost 9,000 acres in West Chatham County, the population of the unincorporated area doubled between 1980 and 2000. Most of this growth was located on Wilmington, Whitemarsh, Talahi, and Skidaway Islands.

Table 4.1. Population Growth: Chatham County Municipalities

Municipality	1980	1990	2000	2000 ADJUSTED	PERCENT GROWTH 1980 - 90	PERCENT GROWTH 1990 - 00
Bloomingdale	2,246	2,634	2,665	2,720	17.3	1.2
Garden City	9,095	10,537	11,289	10,291	15.6	7.1
Pooler	2,826	5,240	6,239	6,214	85.4	19.1
Port Wentworth	5,488	3,923	3,276	3,277	- 28.5	- 18.7
Savannah	142,095	137,173	131,510	132,985	- 3.5	- 4.1
Thunderbolt	2,635	2,756	2,340	2,236	4.6	-15.1
Tybee Island	2,433	2,827	3,392	3,392	16.2	20
Unincorporated	34,945	51,718	71,200	71,094	48	37.7
Vernonburg	70	135	138	138	92.9	2.2
Chatham County	201,833	216,945	232,050	232,347	7.5	7.0

Source: U.S. Census Bureau. Chatham County population adjusted by the U.S. Census in 2004.

The median household income for Chatham County is $46,125, it ranges from a low of $29,038 in Savannah to a high of $153,670 in Vernonburg. The per capita income is $21,152, it ranges from a low of $14,139 in Garden City to a high of $49,391 in Vernonburg.

4.3.2 Racial Composition of Chatham County

In 1980, 38 percent of the population of Chatham County was black, and 89 percent of the black population lived in the City of Savannah. By 2000, 41 percent of the population of Chatham County was black, but only 80 percent of that population lived in the City of Savannah. This is in spite of the fact that the City's black population grew by 9.6 percent over that period while the City's white population declined by 25.5 percent. The black population increased more rapidly both numerically and percentage-wise than the white population in both the City and County from 1980 to 2000. Based on the Census 2050 projections, the 2050 racial composition of Chatham County will be 48 percent black, 40 percent white, 8 percent Asian, and 4 percent other.

The Hispanic population increased from 1.1 percent of the County population in 1980 to 4 percent in 2000. Based on the Census 2050 projections, 24.4 percent of the population of Chatham County will be Hispanic in 2050.

It is important to note that the Hispanic population is difficult to quantify because Hispanics are not a separate racial category. Some Hispanics report themselves as black and some as white and some as both or other. The difficulty of quantifying population based on race will become more difficult in the future as the mixed-race population resists defining itself as either one race or another. Some demographers predict that by 2050, the census will consider entries according to race as optional.

Table 4.2. Racial Composition of Chatham County in 2000

	BLACK	WHITE	AM IND/ ESKIMO	ASIAN/ PACIFIC ISLANDER	OTHER	RACIAL TOTAL[1]	POPULATION TOTAL	HIS-PANIC[2]
Bloomingdale	168	2,434	16	12	35	2,665	2,665	33
Garden City	6,292	4,602	124	179	385	11,582	11,289	675
Pooler	526	5,561	51	171	50	6,359	6,239	77
Port Wentworth	474	2,730	24	44	29	3,301	3,276	101
Savannah	75,953	52,295	779	2,686	1,714	133,427	131,510	2,938
Thunderbolt	776	1,384	9	188	23	2,380	2,340	33
Tybee Island	68	3,278	30	33	10	3,419	3,392	43
Vernonburg	-	134	-	4	-	138	138	-
Unincorp.	10,983	58,091	363	1,901	749	72,087	71,200	5,403
TOTAL	95,240	130,509	1,396	5,218	2,995	235,358	232,049	9,303

[1] The racial total may not agree with the population total because some individuals report more than one race and others report no race.
[2] Hispanics may be of any race, and are included in other racial groups.

4.4 City of Savannah Population

While the population of the county grew, the population of Savannah declined at the rate of approximately four percent per decade between 1980 and 2000. Ironically, the two most

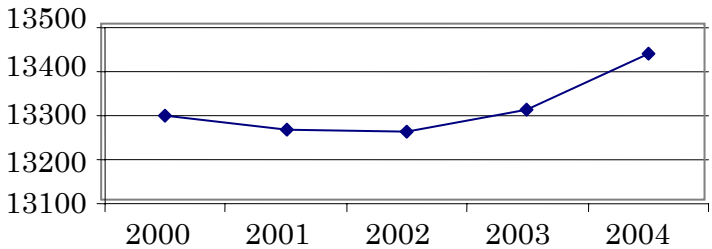
significant factors responsible for the decline appear to be the result of improving conditions within the city.

First, a three percent population decline in typical census blocks in downtown Savannah was accompanied by a 27 percent increase in the number of housing units in the same area. This indicates an influx of single homeowners, couples with no children, and second home buyers who lived in other parts of the country and were therefore not reflected in the census count. This phenomenon has been experienced in other areas of the country where the urban revitalization has been characterized by an increase in the number of households but a decline in the number of persons per household.

Second, much of the population decline was in traditionally black neighborhoods. This decline was accompanied by an increase of the black population in suburban neighborhoods in the city and in new neighborhoods in the county. An analysis of the average household income and average home value within the traditional black neighborhoods suggests that the migration was the result of the increasing affluence of blacks who were able to afford larger, more modern homes than were available in their old neighborhoods.

Based on the number of building permits issued in Savannah, the population decline in the city appears to have reached its lowest point in 2002. The continued decline between 2001 and 2002 reflects demolition permits issued in the Cuyler-Brownsville and Garden Homes neighborhoods. The increase in 2003 reflects new permits issued in those areas. The significant growth in 2004 reflects redevelopment in the older Savannah neighborhoods and construction in newly annexed areas.

Figure 4-1 City of Savannah Population
(Hundreds of Residents)



Source: Chatham County-Savannah Metropolitan Planning Commission

4.5 Future Population

4.5.1 Methods of Prediction

There are several methods of predicting future population. One method is to review the historic natural population change (births minus deaths) and add (or subtract) the number of people moving into or out of the area and assume that the same, constant number will be

added each year in the future. This appears to be the method used by Woods and Poole Economics (Figure 4.2).

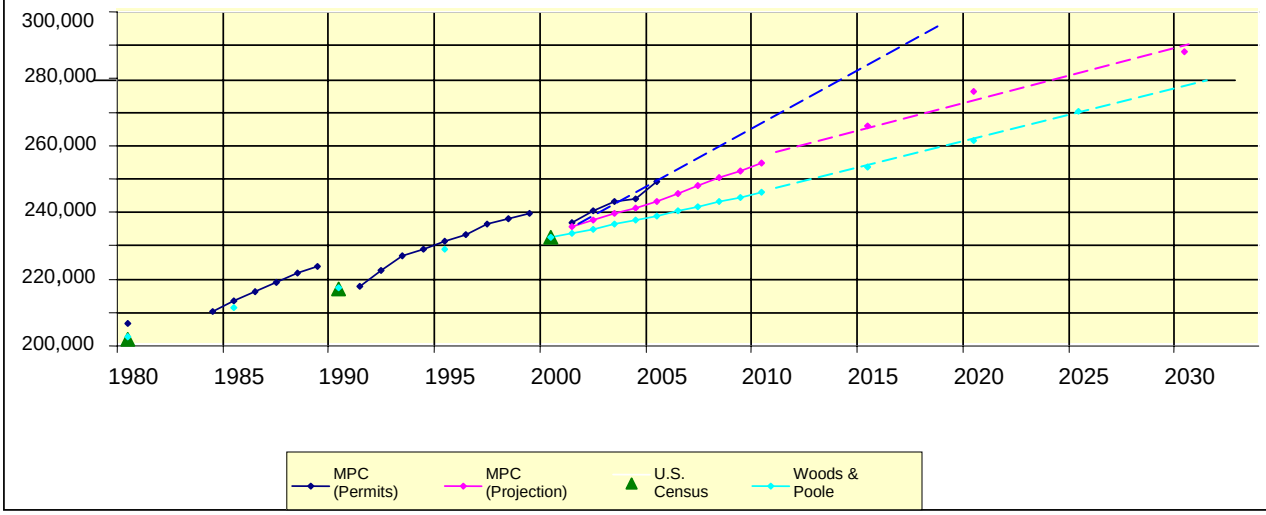
Another method is to review the historic population growth according to the decennial census and assume that the population will grow at that same rate over the planning period. This is the method used in the MPC Projection (Figure 4.2).

The MPC has developed a method of estimating population growth each year based on the number of residential building permits issued during the year. This is represented by the MPC Permits line in Figure 4.2. The population estimated according to this method is recalibrated every ten years when the actual census count is published.

Although the decennial census is considered the most accurate estimation of population, a well-documented problem with the census is that marginal and minority populations are generally undercounted. In Chatham County, the undercount is exacerbated by the number of students, military, second-home owners, and retirees who are full or part time residents but who may not report their primary residence in Chatham County.

Estimating the population based on the number of building permits is useful in planning for roads and utilities because a residential dwelling unit represents the potential for population regardless of the occupant's official residence. The lag between the time the building permit is issued and the time the house is fully occupied can be calculated by comparing the difference between the lines representing MPC Permits and the MPC Projections. The time lag averages between 4 and 5 years according to the data in Chatham County.

Figure 4-2
Chatham County Growth Rate 1980 - 2033



4.5.2 Distribution

Most of the population growth in the next 25 years is expected to be in the western areas of the County. Stable neighborhoods in the City and County will experience very little growth, and the population of many of the built-out neighborhoods will show a decline. The decline, however, is not attributable to people moving out of the neighborhood but to a decline in the number of people living in a household.

In 1960, the average household size in Chatham County was 3.47 people. In 2000, the average had decreased to 2.58. The national household average size in 2000 was 2.67 and in the south region (Maryland to Texas) household size was 2.64. The smaller household size in Chatham County reflects the number of retirees who have moved into the area. This trend is expected to continue as the area becomes attractive to retirees as an alternative to other areas in the sunbelt which have become congested. In 2030, the household size in Chatham County is expected to be 2.38.

Table 4.3. Population Projections: Municipalities in Chatham County

	2005	2006	2007	2008	2009	2010	2015	2020	2030
Bloomingdale	3,328	3,448	3,559	3,680	3,801	3,910	4,486	5,040	6,095
Garden City	11,130	11,293	11,460	11,613	11,784	11,944	12,727	13,481	14,912
Pooler	7,476	7,732	7,979	8,225	8,462	8,707	9,914	11,080	12,314
Port Wentworth	4,481	4,717	4,965	5,200	5,428	5,665	6,802	7,912	10,029
Savannah	135,424	135,983	136,514	137,049	137,550	138,109	140,634	143,002	144,625
Thunderbolt	2,244	2,244	2,247	2,250	2,249	2,254	2,260	2,266	2,270
Tybee Island	3,472	3,488	3,505	3,516	3,534	3,549	3,619	3,686	3,692
Unincorporated	75,541	76,557	77,555	78,521	79,482	80,442	85,202	89,752	93,908
Vernonburg	141	143	145	145	147	146	149	154	161
TOTAL	243,237	245,605	247,929	250,199	252,437	254,726	265,793	276,373	288,006

Source: Chatham County-Savannah Metropolitan Planning Commission

4.6 Assessment

4.6.1 Total Population

The modest growth of Chatham County masks a decline in the populations of Port Wentworth, Savannah, and Thunderbolt that is offset by growth rates in the other municipalities and unincorporated area that are consistent with, and in some cases far exceed, the State and national averages. Table 4.4 shows the population changes within the municipalities in Chatham County.

Table 4.4. Municipal Population Growth					
	Population			Percent Change	
Municipality	1980	1990	2000	1980 - 1990	1990 - 2000
Bloomingdale	2,246	2,634	2,665	17.30	1.20
Garden City	9,095	10,537	11,289	15.60	7.10
Pooler	2,826	5,240	6,239	85.40	19.10
Port Wentworth	5,488	3,923	3,276	-28.50	-16.50
Savannah	142,095	137,173	131,510	-3.50	-4.10
Thunderbolt	2,635	2,756	2,340	4.60	-15.10
Tybee Island	2,433	2,827	3,392	16.20	20.00
Unincorporated	34,945	51,716	71,200	48.00	37.70
Vernonburg	70	135	138	92.90	2.20

a. Historic Population

The population growth of Chatham County from 1790 to 2000 has been relatively consistent. It is expected to remain consistent throughout the planning period.

Figure 4-3 Historic Population Growth

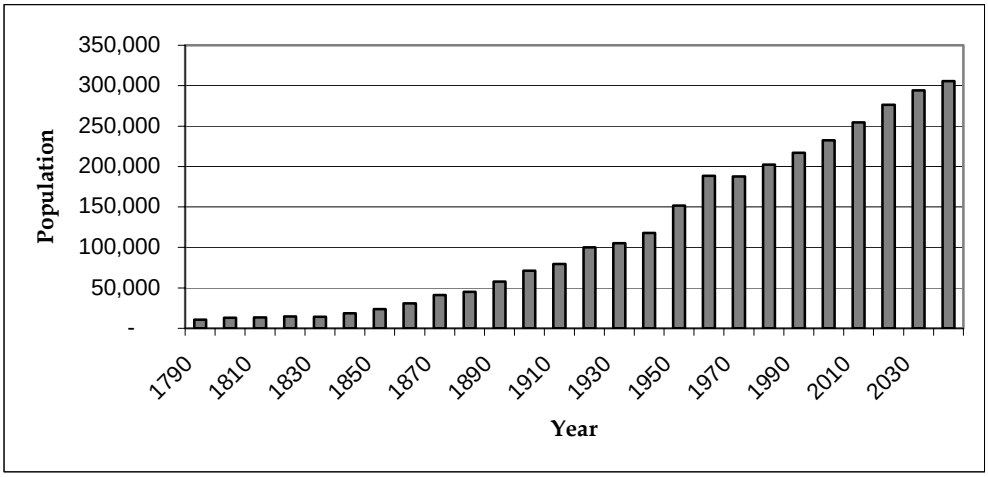


Table 4.5. Historic Population Growth			
YEAR	POPULATION	YEAR	POPULATION
1790	10,769	1920	100,032
1800	12,946	1930	105,431
1810	13,540	1940	117,970
1820	14,737	1950	151,481
1830	14,127	1960	188,299
1840	18,801	1970	187,816
1850	23,901	1980	202,226
1860	31,043	1990	216,935
1870	41,279	2000	232,347
1880	45,023	2010	254,726
1890	57,740	2020	276,373
1900	71,239	2030	294,028
1910	79,690	2033	305,789

b. Recent and Current Population

The population and growth characteristics of Chatham County, compared with the Coastal Region, the State of Georgia, and the United States are shown in Table 4.6.

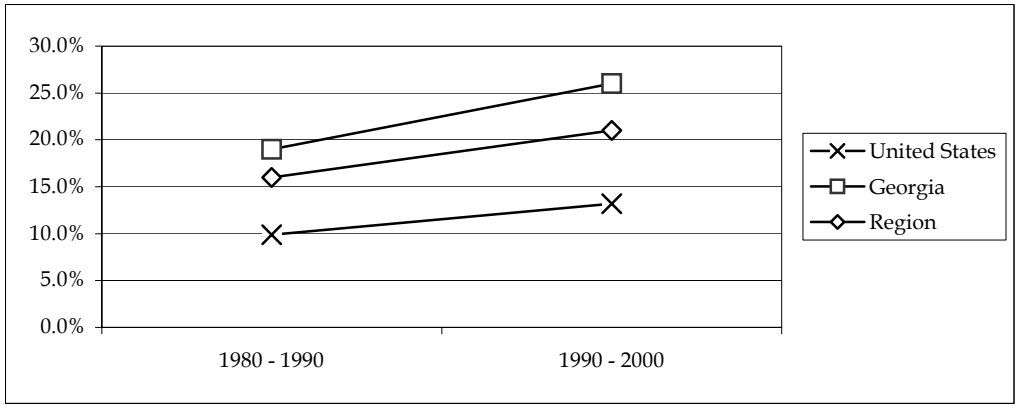
Table 4.6. U.S., Georgia, and Regional Population 1980 - 2000					
	1980	1990	2000	PERCENT GROWTH 1980-1990	PERCENT GROWTH 1990 - 2000
United States	226,542,199	248,709,873	281,421,906	9.9	13.2
Georgia	5,457,566	6,475,216	8,186,453	19	26
Region	310,206	359,981	434,914	16	21
Chatham	201,833	216,943	232,347	7.5	7.0
Bryan	10,175	15,438	23,417	52	52
Effingham	18,327	25,687	37,535	40	46
Jasper	14,507	15,487	20,678	6.8	3.4
Beaufort	65,364	86,425	120,937	32.2	40

*Source: U.S. Census Bureau. Chatham County population adjusted by the U.S. Census in 2004.

While the growth in the region over the past 20 years exceeded the national average, it is less than the average growth in Georgia over the same period. However, the Atlanta MSA (Metropolitan Statistical Area) accounts for 68 percent of the growth in the entire State of Georgia. The growth rate in the Savannah MSA (not including Jasper and Beaufort

Counties which are in South Carolina) was 11.8 percent from 1980 to 1990 and 13.5 percent from 1990 to 2000, fourth out of the seven MSAs in Georgia.[1]

Figure 4-4 Percent Population Growth in the Nation, Region, and State



There are seven municipalities in Chatham County: Bloomingdale, Garden City, Pooler, Port Wentworth, Savannah, Thunderbolt, Tybee Island, and Vernonburg. The political boundaries of the municipalities are fluid due to annexation. Bloomingdale, Garden City, Pooler, Port Wentworth, and Savannah have annexed land between 1990 and 2000 so that comparisons between the populations and other characteristics of these municipalities using decennial census data are difficult to interpret.

Table 4.7. Annexations in Acres between 1990 and 2000

BLOOMINGDALE	GARDEN CITY	POOLER	SAVANNAH
2,841 acres	2,192 acres	5,864 acres	7,787 acres

Source: Metropolitan Planning Commission

The 1993 Comprehensive Plan included all of the municipalities as well as unincorporated Chatham County. The area covered by this Comprehensive Plan Update includes only the City of Savannah and unincorporated Chatham County.

The population and growth characteristics of the municipalities within Chatham County are shown in Table 4.8.

[1] *Economic Yearbook for Georgia MSAs,* Seilig Center, Terry College of Business, University of Georgia, December 2002.

Table 4.8. Population Growth: Chatham County Municipalities						
	1980	1990	2000	2000 ADJUSTED	PERCENT CHANGE 1980 - 90	PERCENT CHANGE 1990 - 00
Bloomingdale	2,246	2,634	2,665	2,720	17.3	1.2
Garden City	9,095	10,537	11,289	10,291	15.6	7.1
Pooler	2,826	5,240	6,239	6,214	85.4	19.1
Port Wentworth	5,488	3,923	3,276	3,277	- 28.5	- 18.7
Savannah	142,095	137,173	131,510	132,985	- 3.5	- 4.1
Thunderbolt	2,635	2,756	2,340	2,236	4.6	-15.1
Tybee Island	2,433	2,827	3,392	3,392	16.2	20
Unincorporated	34,945	51,718	71,200	71,094	48	37.7
Vernonburg	70	135	138	138	92.9	2.2
Chatham County	201,833	216,945	232,050	232,347	7.5	7.0

Source: U.S. Census Bureau. Chatham County population adjusted by the U.S. Census in 2004.

c. Seasonal Population

Based upon the number of housing units the owners listed in the 2000 census as "For seasonal, recreational, or occasional use," the seasonal population is estimated below. The average persons per household in Chatham County was 2.58 in 2000.

Table 4.9. Seasonal/Recreational Population	
Savannah	500
Tybee Island	1,750
Other Municipalities	140
Unincorporated County	380
Chatham County Total	2,770

Source: U. S. Census Bureau

d. Other Populations

Chatham County is an employment center for the region. There are approximately 127,000 jobs in Chatham County. Approximately 28,500 of these jobs are filled by residents who live outside of Chatham County.[1]

Additionally, approximately 10.6 million overnight visitors stayed in Chatham County in 2000. This a daily average population increase of 29,000. Many of these visitors came to the downtown Landmark Historic District.[2]

[1] Census Transportation Planning Package; Georgia Department of Labor
[2] *2002 Economic Trends and 2003 Forecast,* Savannah Area Chamber of Commerce

The combination of seasonal, employee, and visitor population represents an increase in population of approximately 60,000, or 26 percent of the total population of the County.

e. Projected Population

The projected population for the nation, the state and the region is shown in Table 4.10.

Table 4.10. Projected Population: U.S., Georgia, and Region

	2005	2015	2025
United States	287,716,000[1]	312,268,000[1]	337,815,000[1]
Georgia	8,413,000[1]	9,200,000[1]	9,869,000[1]
Chatham	239,044[2]	253,420[2]	270,160[2]
Bryan	27,623[2]	35,854[2]	44,383[2]
Effingham	40,963[2]	47,526[2]	54,459[2]
Beaufort	132,710[3]	161,090[3]	189,680[3]
Jasper	22,160[3]	26,070[3]	28,060[3]
Region Total	462,500	523,960	586,742

[1] U.S. Census
[2] Woods & Poole Economics, Inc.
[3] South Carolina State Budget and Control Board – Office of Research & Statistics

Population projections for the municipalities in Chatham County are based upon historic countywide growth rates of 0.7%. It is assumed that development will follow historic patterns.

Table 4.11. Projected Population: Chatham County Municipalities

	2005	2006	2007	2008	2009	2010	2015	2020	2030
Bloomingdale	3,328	3,448	3,559	3,680	3,801	3,910	4,486	5,040	6,095
Garden City	11,130	11,293	11,460	11,613	11,784	11,944	12,727	13,481	14,912
Pooler	7,476	7,732	7,979	8,225	8,462	8,707	9,914	11,080	12,314
Port Wentworth	4,481	4,717	4,965	5,200	5,428	5,665	6,802	7,912	10,029
Savannah	135,424	135,983	136,514	137,049	137,550	138,109	140,634	143,002	144,625
Thunderbolt	2,244	2,244	2,247	2,250	2,249	2,254	2,260	2,266	2,270
Tybee Island	3,472	3,488	3,505	3,516	3,534	3,549	3,619	3,686	3,692
Unincorporated	75,541	76,557	77,555	78,521	79,482	80,442	85,202	89,752	93,908
Vernon burg	141	143	145	145	147	146	149	154	161
TOTAL	243,237	245,605	247,929	250,199	252,437	254,726	265,793	276,373	288,006

Source: Metropolitan Planning Commission

The MPC population projection for Chatham County exceeds the Woods and Poole projection. According to the number of demolition and building permits issued in Chatham County between 2000 and 2003, the January 1, 2004, population of Chatham County is 243,246. This exceeds the Woods and Poole population projection for 2005 by 1.75 percent. The MPC projection is statistically equal to the MPC estimate. In both cases, it should be noted that the population is growing faster than indicated by the projections, i.e. the population is reaching the projected population a year early.

Figure 4-5
2000-2030 Projected Population Change by TAZ

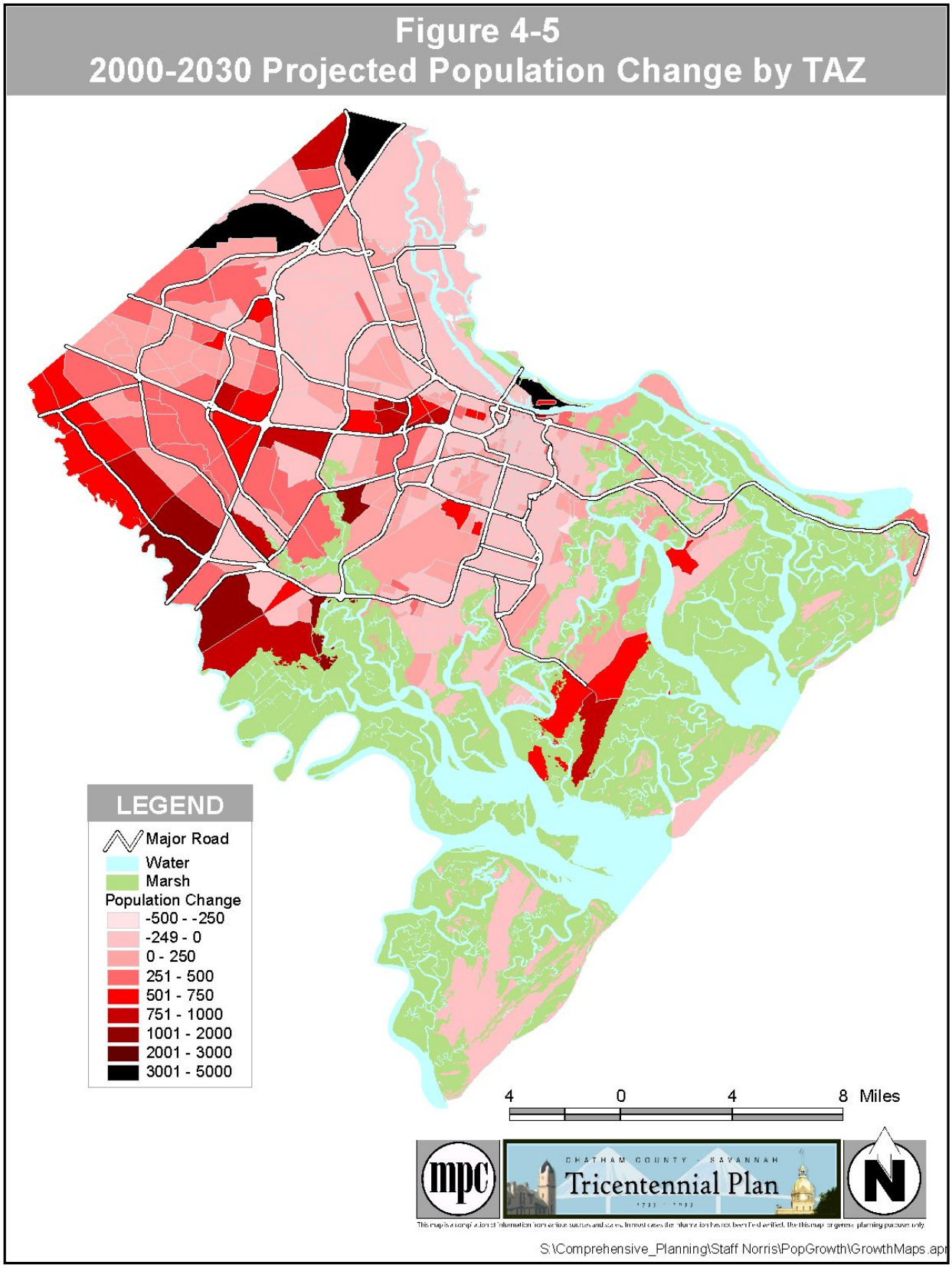
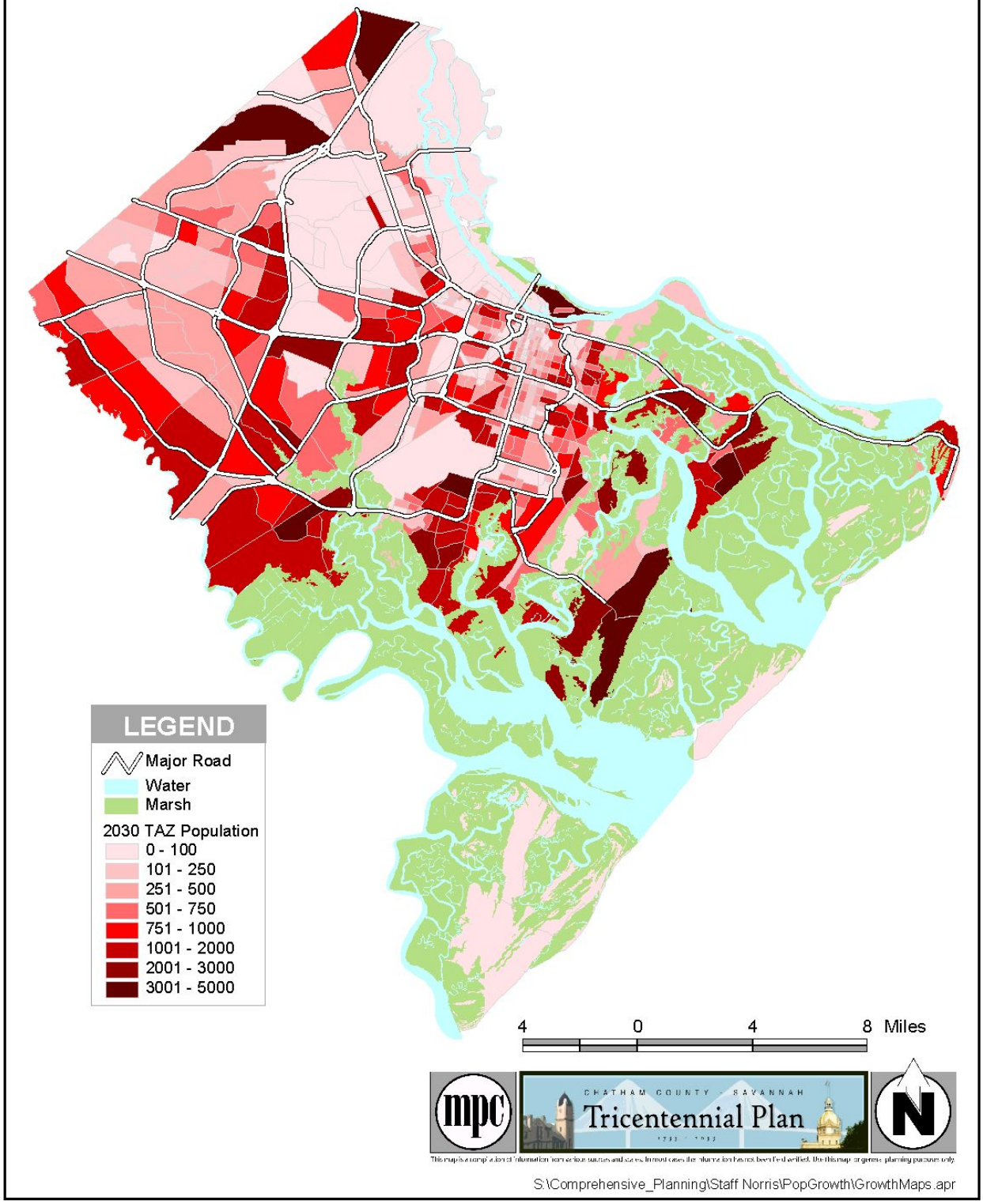


Figure 4-6
Projected 2030 Population by TAZ



4.6.2 Age Distribution

a. Historic and Current Age Distribution

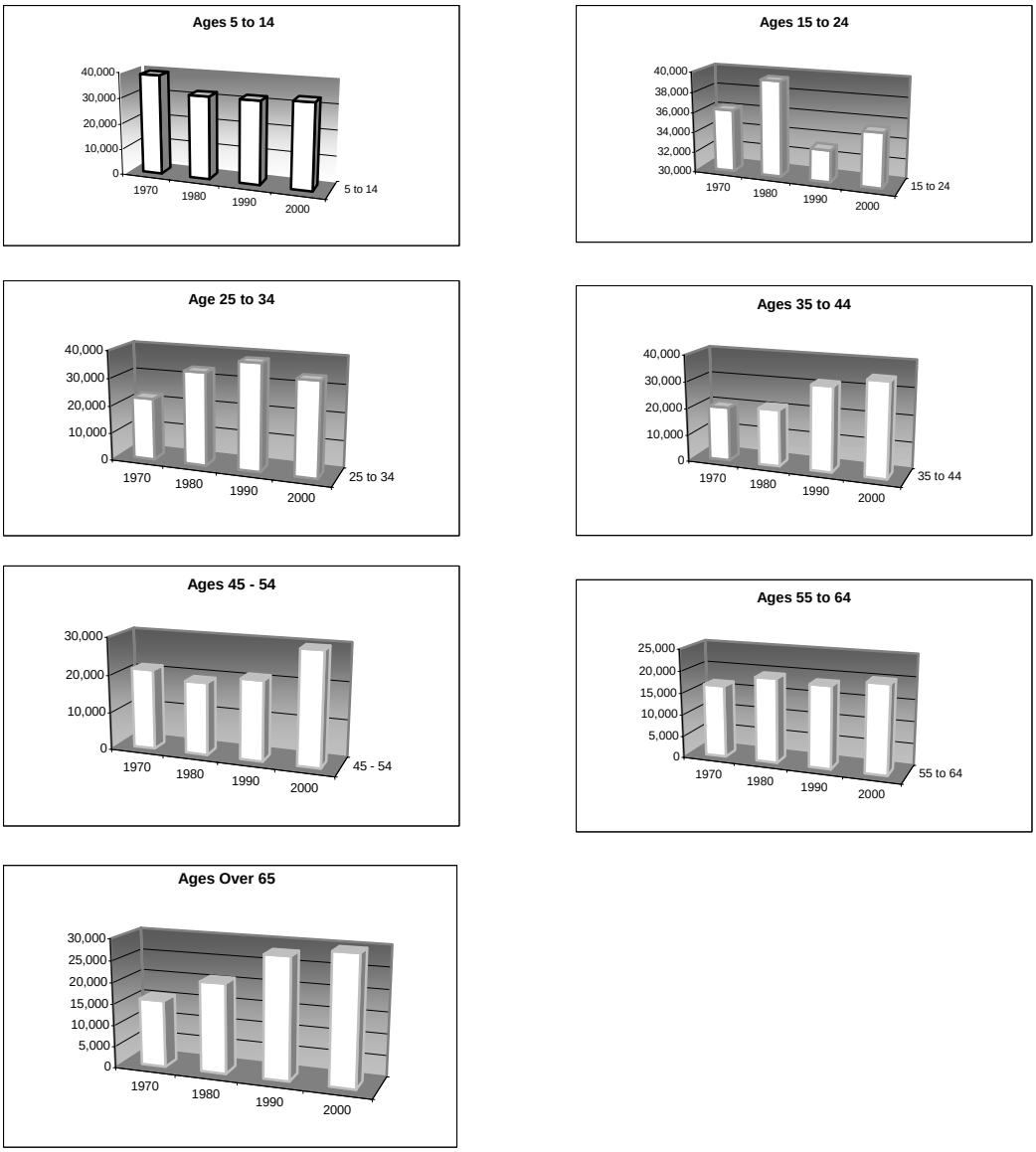
The historic and current age distribution of the population in Chatham County is shown in Table 4.12.

Table 4.12. Historic and Current Age Distribution

AGE	1970	1980	1990	2000
<5	16,684	16,546	17,284	15,663
5 to 14	38,761	32,151	32,073	33,073
15 to 24	36,180	39,421	33,157	35,347
25 to 34	22,479	33,556	38,225	33,768
35 to 44	20,259	21,168	31,402	34,712
45 - 54	21,314	19,175	21,039	29,678
55 to 64	16,531	19,233	18,644	20,037
Over 65	15,608	20,866	28,089	29,770
TOTAL	187,816	202,116	219,913	232,048

Source: 1993 Chatham County Comprehensive Plan and Census 2000 (uncorrected)

Figure 4-7 Historic and Current Age Distribution



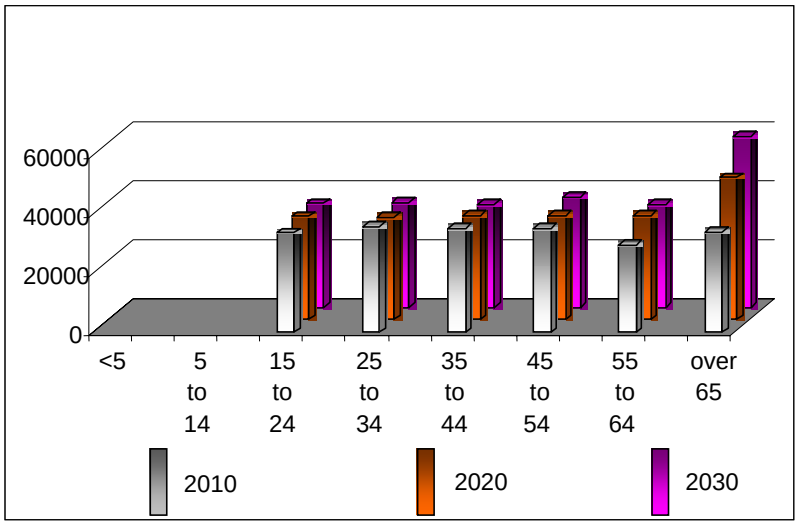
b. Projected Age Distribution

The projected age distribution of the population in Chatham County is shown in Table 4.13.

Table 4.13. Projected Age Distribution

AGE	2010	2020	2030
<5	17,219	17,442	17,514
5 to 14	34,008	34,911	35,141
15 to 24	33,666	35,056	35,221
25 to 34	35,959	34,690	35,354
35 to 44	35,318	35,370	34,949
45 - 54	35,318	35,370	37,340
55 to 64	29,466	35,494	34,789
Over 65	33,772	48,040	57,698
TOTAL	254,726	276,373	288,006

Figure 4-8 Projected Age Distribution



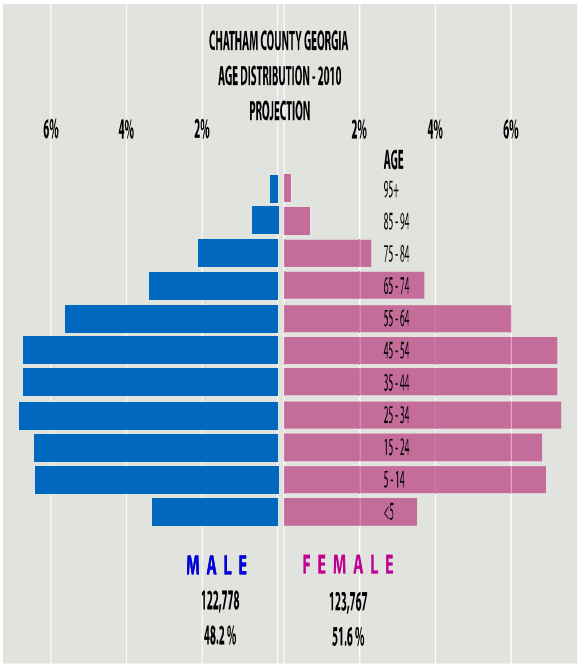
c. Projected Age Distribution By Gender

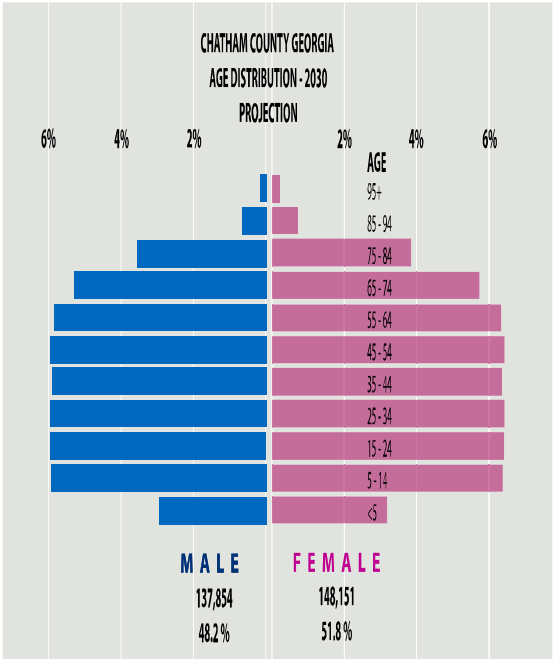
The following figures and tables and population pyramids reflect the proportion of males to females, but they have not been adjusted to reflect the longevity of females.

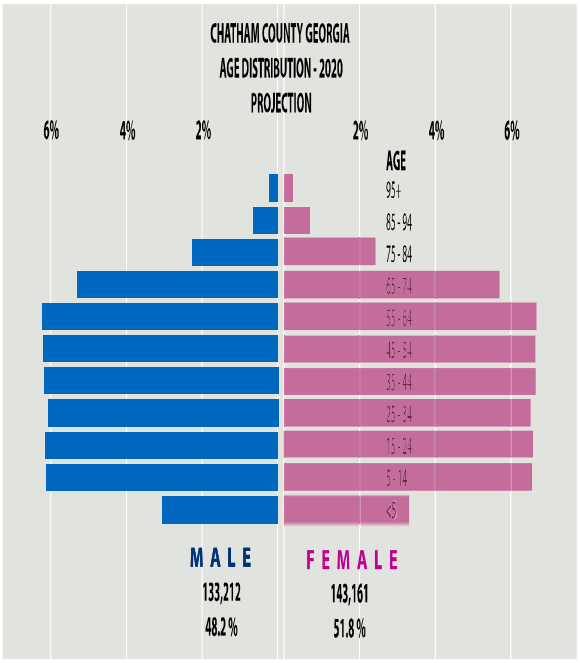
Table 4.14. Projected Population by Gender

AGE	2010 TOTAL POP.	MALE	PER CENT	FEMALE	PER CENT	2020 TOTAL POP.	MALE	PER CENT	FEMALE	PER CENT	2030 TOTAL POP.	MALE	PER CENT	FEMALE	PER CENT
<5	17,219	8,300	3.3	8,919	3.5	17,442	8,407	3.04	9,035	3.27	17,514	8,442	2.95	9,072	3.17
5 to 14	34,008	16,392	6.4	17,616	6.9	34,911	16,827	6.09	18,084	6.54	35,141	16,938	5.92	18,203	6.36
15 to 24	33,666	16,227	6.4	17,439	6.8	35,056	16,897	6.11	18,159	6.57	35,221	16,977	5.94	18,244	6.38
25 to 34	35,959	17,332	6.8	18,627	7.3	34,690	16,721	6.05	17,969	6.5	35,354	17,041	5.96	18,313	6.40
35 to 44	35,318	17,023	6.7	18,295	7.2	35,370	17,048	6.17	18,322	6.63	34,949	16,845	5.89	18,104	6.33
45 - 54	35,318	17,023	6.7	18,295	7.2	35,370	17,048	6.17	18,322	6.63	35,340	17,034	5.96	18,306	6.40
55 to 64	29,466	14,203	5.6	15,264	6.0	35,494	17,108	6.19	18,386	6.65	34,789	16,768	5.86	18,021	6.30
65 - 74	17,977	8,665	3.4	9,312	3.7	30,283	14,596	5.28	15,687	5.68	31,468	15,168	5.30	16,300	5.70
75 - 84	11,154	5,376	2.1	5,778	2.3	12,894	6,215	2.25	6,679	2.42	21,153	10,196	3.56	10,957	3.83
85 - 94	3,442	1,659	0.7	1,783	0.7	3,653	1,761	0.64	1,892	0.68	3,981	1,919	0.67	2,062	0.72
95+	1,198	577	0.2	621	0.2	1,210	583	0.21	627	0.23	1,095	528	0.18	567	0.20
Total	254,726	122,778	48.2	123,767	51.6	276,373	133,212	48.2	143,161	51.8	286005	137,854	48.2	148,151	51.8

Figure 4-9 Future Population Pyramids







4.6.3 Racial Composition

a. Historic and Current Racial Composition

Table 4.15. Historic and Current Racial Composition - 1980

1980	BLACK	WHITE	AM IND/ ESKIMO	ASIAN/ PACIFIC ISLANDER	OTHER	RACIAL TOTAL[1]	POPULATION TOTAL	HISPANIC[2]
Bloomingdale	109	1,744	-	-	2	1,855	2,246	7
Garden City	1,920	4,914	1	38	22	6,895	9,095	60
Pooler	1	2,515	3	10	14	2,543	2,826	10
Port Wentworth	272	3,648	3	16	8	3,947	5,488	31
Savannah	69,241	70,219	140	1,050	740	141,390	142,095	1,775
Thunderbolt	725	1,430	-	4	6	2,165	2,635	7
Tybee Island	49	2,145	14	26	6	2,240	2,433	26
Vernonburg	-	70	-	-	-	70	70	-
Unincorporated	5,079	35,452	76	276	130	41,013	34,945	361
TOTAL	77,396	122,137	237	1,420	928	202,118	201,833	2,277

[1]The racial total may not agree with the population total because some individuals report more than one race and others report no race.
[2]Hispanics may be of any race, and are included in other racial groups.

Table 4.16. Historic and Current Racial Composition -1990

1990	BLACK	WHITE	AM IND/ ESKIMO	ASIAN/ PACIFIC ISLANDER	OTHER	RACIAL TOTAL[1]	POPULATION TOTAL	HISPANIC[2]
Bloomingdale	96	2,157	1	16	1	2,271	2,634	8
Garden City	2,525	4,803	18	26	38	7,410	10,537	55
Pooler	117	4,292	15	22	7	4,453	5,240	21
Port Wentworth	667	3,313	9	13	10	4,012	3,923	37
Savannah	72,100	65,847	276	1,617	698	140,538	137,173	1,998
Thunderbolt	1,497	1,286	10	26	2	2,821	2,756	11
Tybee Island	44	2,751	20	23	4	2,842	2,827	41
Vernonburg	-	143	-	-	-	143	143	-
Unincorporated	7,101	47,501	118	645	162	55,527	51,718	653
TOTAL	84,147	132,093	467	2,388	922	220,017	216,951	2,824

[1]The racial total may not agree with the population total because some individuals report more than one race and others report no race.
[2]Hispanics may be of any race, and are included in other racial groups.

Table 4.17. Historic and Current Racial Composition - 2000								
2000	BLACK	WHITE	AM IND/ ESKIMO	ASIAN/ PACIFIC ISLANDER	OTHER	RACIAL TOTAL[1]	POPULATION TOTAL	HISPANIC[2]
Bloomingdale	168	2,434	16	12	35	2,665	2,665	33
Garden City	6,292	4,602	124	179	385	11,582	11,289	675
Pooler	526	5,561	51	171	50	6,359	6,239	77
Port Wentworth	474	2,730	24	44	29	3,301	3,276	101
Savannah	75,953	52,295	779	2,686	1,714	133,427	131,510	2,938
Thunderbolt	776	1,384	9	188	23	2,380	2,340	33
Tybee Island	68	3,278	30	33	10	3,419	3,392	43
Vernonburg	-	134	-	4	-	138	138	-
Unincorporated	10,983	58,091	363	1,901	749	72,087	71,200	5,403
TOTAL	95,240	130,509	1,396	5,218	2,995	235,358	232,049	9,303

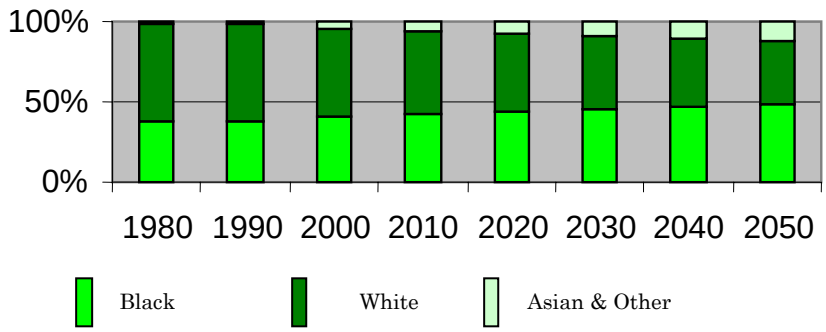
[1]The racial total may not agree with the population total because some individuals report more than one race and others report no race.
[2]Hispanics may be of any race, and are included in other racial groups.

b. Projected Racial Composition of Chatham County

Table 4.18. Historic and Projected Racial Composition of Chatham County (Percent of Total)					
CHATHAM COUNTY TOTAL	BLACK	WHITE	AM. IND/ ESKIMO	ASIAN /PACIFIC ISLANDER	OTHER
1980	38.3	60.4	0.1	0.7	0.5
1990	38.2	60.0	0.2	1.1	0.4
2000	40.5	55.5	0.6	2.2	1.3
2010	42.0	52.0	0.7	3.6	1.6
2020	43.5	48.0	0.8	4.8	1.8
2030	45.0	46.0	1.0	5.8	2.0
2040	46.5	43.0	1.0	6.9	2.5
2050	48.0	40.0	1.0	8.0	3.0

Source: U.S. Census 2050 projections for the racial composition of the United States.

Figure 4-10 Projected Racial Composition of Chatham County



c. Historic and Current Hispanic Population

The historic and current Hispanic population in Chatham County is shown in Table 4.19.

Table 4.19. Historic and Current Hispanic Population in Chatham County

Hispanic Population	1980	1990	2000
Bloomingdale	7	8	33
Garden City	60	55	675
Pooler	10	21	77
Port Wentworth	31	37	101
Savannah	1,775	1,998	2,938
Thunderbolt	7	11	33
Tybee Island	26	41	43
Vernonburg	0	0	0
Unincorporated	361	653	5,403
TOTAL	2,277	2,824	9,303

d. Projected Hispanic Population of Chatham County

The projected Hispanic population of Chatham Country is based upon the U.S. Census 2000 and Census 2050 projections for the Hispanic population of the United States.

Figure 4-11 Historic and Projected Hispanic Population of Chatham County

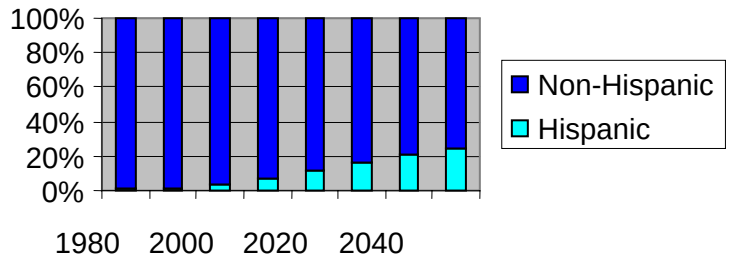


Table 4.20. Projected Hispanic Population (Percent of Total)							
1980	1990	2000	2010	2020	2030	2040	2050
1.13	1.28	4.01	7.5	12	16.5	20.5	24.4

Source: Census 2000 and U.S. Census Projection for 2050

4.6.4 Income

a. Current and Historic Per Capita and Household Income

The current and historic per capita and household income (in year 2000 dollars) for Chatham County, the State of Georgia and the United States is shown in Table 4.21.

Table 4.21. Historic and Current Per Capita and Household Income					
PER CAPITA INCOME (2000 $)	1980	1985	1990	1995	2000
United States	16,893	18,459	20,025	21,169	22,313
Georgia	15,185	17,058	18,930	20,398	21,865
Chatham County	15,145	16,588	18,030	19,591	21,863
HOUSEHOLD INCOME (2000 $)					
United States	39,189	40,464	41,739	42,573	43,406
Georgia	35,657	37,980	40,302	42,433	43,653
Chatham County	33,781	35,455	37,108	38,065	39,021

Source: US Census Bureau

b. Current Distribution of Households by Income Groupings

The current national, state, and regional distribution of households by income groupings and median and per capita income in 1999 dollars is shown in Table 4.22.

Table 4.22. Current Distribution of Household Income – Nation – State - County							
	UNITED STATES	GEORGIA	CHATHAM COUNTY	BRYAN COUNTY	EFFING-HAM CO.	JASPER COUNTY	BEAUFORT COUNTY
Total Households	105,539,122	3,007,678	89,863	8,089	13,128	7,025	45,518
<$10,000.	10,067,027	304,816	11,088	742	961	1,161	3,148
$10,000 - 14,999.	6,657,228	176,059	6,647	498	612	583	2,194
$15,000 - 24,999	13,536,965	369,279	12,977	857	1,591	1,202	5,019
$25,000 - 34,999	13,519,242	378,689	11,191	914	1,522	898	5,831
$35,000 - 49,999	17,446,272	502,961	15,040	1,103	2,495	1,181	7,929
$50,000 - 74,999	20,540,604	593,203	15,322	1,814	3,249	1,225	9,395
$75,000 - 99,999	10,799,245	311,651	8,223	1,142	1,537	388	4,920
$100,000-149,999	8,147,826	234,093	5,322	716	878	246	3,952
$150,000-199,999	2,322,038	66,084	1,507	199	168	74	1,365
> $200,000	2,502,675	70,843	2,546	104	115	67	1,765
Median Household$	41,944	42,433	37,752	48,345	46,505	30,727	46,992
Per Capita $	21,587	21,154	21,152	19,794	18,873	14,161	24,377

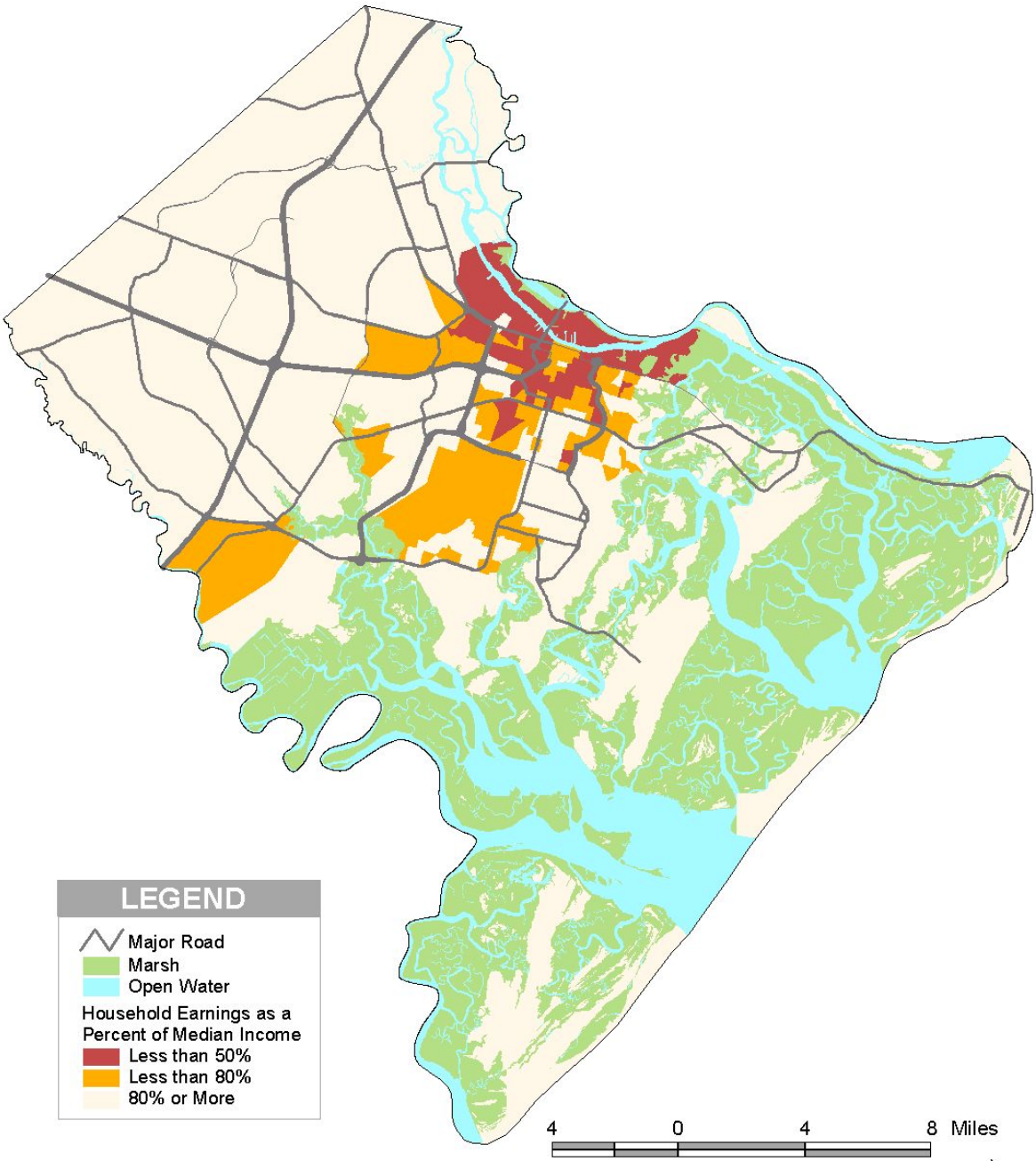
Source: U.S. Census 2000 (1999 dollars)

The current countywide distribution of households by income groupings and median and per capita income in 1999 dollars is shown in Table 4.23.

Table 4.23. Current Distribution of Household Income – Municipalities								
	BLOOMING-DALE	GARDEN CITY	POOLER	PORT WENT WORTH	SAVANNAH	THUNDER BOLT	TYBEE ISLAND	VERNON-BURG
Total Households	982	3,929	2,246	1,286	51,378	1,041	1,579	43
<$10,000	74	469	119	89	8,842	100	121	0
$10,000 - 14,999	55	336	137	56	4,794	78	96	0
$15,000 - 24,999	120	724	241	231	8,815	152	243	0
$25,000 - 34,999	161	710	173	142	6,956	175	119	0
$35,000 - 49,999	140	656	537	267	8,359	180	216	7
$50,000 - 74,999	234	685	510	264	7,241	189	366	7
$75,000 - 99,999	109	205	290	168	3,399	94	157	0
$100,000-149,999	52	121	207	53	1,678	54	136	7
$150,000-199,999	6	8	0	7	448	5	43	5
>$200,000	31	15	32	9	846	14	82	17
Median Household$	44,300	29,718	47,202	42,241	29,038	35,824	49,741	153,670
Per Capita $	21,771	14,139	19,759	19,919	16,921	22,592	32,406	49,391

Source: U.S. Census 2000 (1999 dollars)

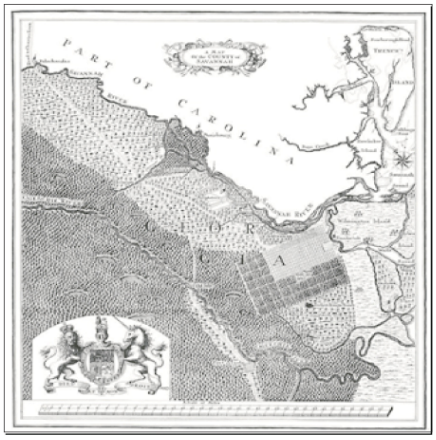
Figure 4-12
Household Earnings as a Percent of Median Income*



*Chatham County's 2000 Median Household Income was $37,752.

Chapter 5.0 *Land Use*

The plan for Savannah devised by James Edward Oglethorpe and close associates was both a town plan and a regional plan. It encompassed a 70 square mile area that extended ten miles east to west and seven miles southward from the town. The plan may have been drawn up in London to extend 14 miles from east to west, but was interrupted by low topography. The 1735 map shown below is the only existing documentation showing the full extent of the 70 square mile grid laid out by Oglethorpe.



Oglethorpe selected the site for the town in January, 1733 as the first group of colonists awaited word nearby in Beaufort, South Carolina. The colonists were brought to the site in February, 1733. By the end of the year fortifications were in place and 50 houses had been built. The population of Savannah stood at 259 persons, with another 200 strategically located in outlying areas.

The Oglethorpe Plan, as it has come to be called, consisted of four components: a square mile area laid out for the town and commons; a three square mile area on either side of the town laid out for five-acre garden lots; a 24 square mile area beyond the town and gardens laid out for larger 45-acres farm lots; and a 42 square mile area beyond the farm lots laid out for villages, each to occupy a square mile.

Physical constraints such as wetlands and soil conditions prevented the plan from being built out as a perfect grid of square mile units. Nevertheless, the grid system put in place in 1733 remains etched on the landscape, over the centuries having influenced development patterns and the network of roads and other infrastructure in Savannah and Chatham County.

5.1 Introduction

The Tricentennial Plan encompasses the update of the City and County Comprehensive Plans as well as City and County Zoning Ordinances. For that reason, the Land Use Chapter is expanded beyond that which is normally required for a comprehensive plan. In addition, unique attributes in both the City and the County require replacement of conventional land use categories with more character-based categories, consistent with the approach encouraged by the Department of Community Affairs in new Minimum Standards that became effective in May, 2005. One of those unique attributes is the extensive area within the City of Savannah that sustains a fine-grained mixed use development pattern. A second unique attribute is the extensive estuarine lowland area that is both environmentally sensitive and physically vulnerable to storm surge and flooding. Each of these areas required careful assessment and planning to protect physical and environmental resources and chart future growth and stewardship.

In addition to expanding the *Community Assessment* report to document the need for an update of local zoning ordinances, the issue of zoning is addressed in two other reports. The *Community Agenda*, as the policy component of the Comprehensive Plan, contains extensive policies with regard to zoning; and, the *Framework and Implementation Plan for New Zoning* contains a detailed description of land use patterns, the new land use framework, and the relationship between land use and zoning.

The *existing land use* analysis in the Community Assessment report uses conventional land use categories, whereas the future land use analysis in this document and in the Community Agenda uses a character-based land use system. See section 5.3 for further discussion of these systems.

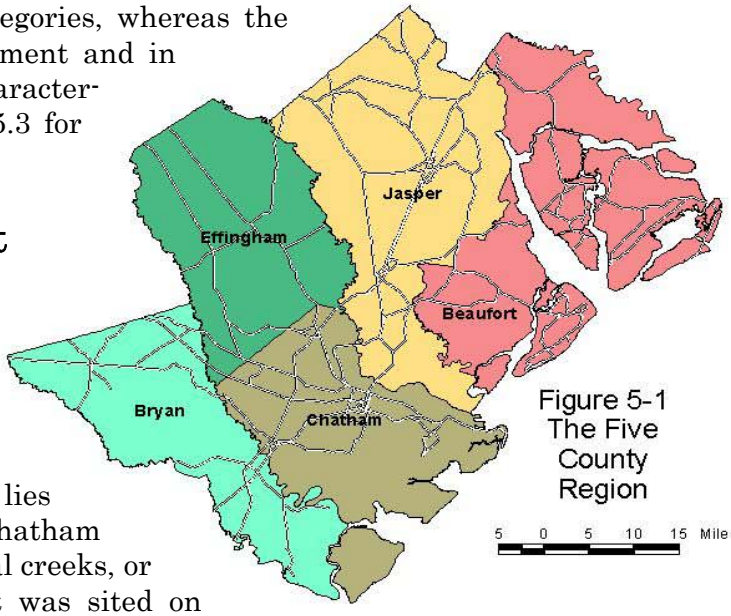


Figure 5-1
The Five County Region

5.2 Regional Development

5.2.1 Physical Context

Chatham County is the northernmost county on the Georgia Coast, lying between the Savannah and Ogeechee rivers. The Lowcountry of South Carolina lies immediately to the North. Much of Chatham County is comprised of open water, tidal creeks, or estuarine marsh. Early development was sited on coastal ridges and bluffs.[1] Most modern development, however, has occurred on barrier islands, back barrier islands, and lowlands vulnerable to flooding, including hurricane inundation. Current development densities are shown in Table 5.1.

[1] Excluding landfills, only three small areas exceed 40 feet in elevation; they are found in downtown Savannah, at the Savannah International Airport, and at Hunter Army Airfield.

The coastal ecosystem and human habitat within it are relatively fragile, thus making it essential to accurately inventory existing conditions. An accurate inventory serves as a basis for sound land use planning and resource management.

Chatham County is comprised of 522 square miles of land, marsh and water. Of this total, 43 percent is open water, creeks and tidal marsh; 24 percent is developed or developing; 20 percent is agricultural or undeveloped land; and, 13 percent is protected greenspace. Table 5.2 contains detailed information on land use in Chatham County.[2] Much of the remaining undeveloped land is poorly drained and not suitable for on-lot wastewater disposal (see Natural Resources Chapter). Expansion of private or public water and sewer service would increase development potential in such areas.

Upland areas are interspersed with forested and vegetated isolated wetlands which are not currently protected and frequently filled for development. The Natural Resources Chapter offers strategies to preserve some of these assets for their natural drainage, filtering, and ecological benefits (see Chapter 9).

5.2.2 Regional Growth

Chatham County is the most urbanized and populous county in the 200 mile coastal area between Charleston, South Carolina and Jacksonville, Florida. It serves as an economic, cultural, and governmental hub, as well as an international focal point for trade, for a five county, bi-state region.

The region has grown at the rate of two percent per year over the past 10 years. Growth is expected to continue at or above this level slightly as the attractiveness of the region to retirees and second home residents increases. Economic growth in the region is also expected to remain strong, supporting forecasts for continued population growth at or above the current level.

Bryan and Effingham counties more than doubled their populations between 1980 and 2000. Their growth has been spurred in part by suburbanization as the Chatham County workforce expands into the larger region.

In South Carolina, Beaufort and Jasper counties have also experienced high growth rates. Beaufort County was the most rapidly growing county in the state for the 1980-2000 period. Growth in these counties thus far is due less to suburbanization and more to in-migration. Growth in Jasper County began accelerating in 2004 and 2005 to meet a growing demand for affordable housing, regional commercial centers, and industrial parks.

Within Chatham County, high growth rates were experienced during the 1980s and 1990s in unincorporated areas to the east of Savannah. As those areas approached build-out, growth moved to the western areas of the county. Unincorporated Chatham County and the municipalities of Bloomingdale, Garden City, Pooler, and Port Wentworth experienced

[2] The calculation of remaining developable land was obtained through GIS analysis, which identified uplands areas without existing development, roads, airports, canals, golf courses, dedicated lands and other limitations on future development.

an increasing share of area growth. The City of Savannah, with its capacity to supply drinking water, annexed nearly 8,000 acres of unincorporated west Chatham County in 2004 and 2005.

The City of Savannah has preserved the role of its vibrant downtown as the nucleus of regional activity. The city's historic downtown and urban neighborhoods are an exceptional example of colonial-era town planning that survived the centuries and thrives today. For that reason, Savannah maintains a high quality pedestrian environment and may be the nation's most walkable city.

Areas lying to the east of the city are extensively developed, and further development is limited by physical as well as zoning constraints. Areas lying to the west of the city are largely vestiges of farms and large-scale silviculture,[3] and are currently undergoing rapid development.

Transportation facilities strongly influence growth and land use patterns in the county. These facilities include the Port of Savannah, Savannah International Airport, road and rail networks serving extensive industrial districts associated with airport and seaport functions, Hunter Army Airfield, and Interstates 16 and 95.

5.3 Existing Land Use

The Chatham County Existing Land Use Map is based on recent County tax records supplemented by extensive field research. Where multiple uses are found on a single parcel, the dominant land use has been mapped. Conventional land use categories are used to describe existing land use patterns, whereas a character-based classification system is used in discussing and planning future land use. The reason for this "paradigm shift" is to accommodate a thorough, parcel-based inventory of existing land uses, while accommodating an areawide assessment of future land use. It should be noted that both land use systems are mapped at the parcel level; however, future land use also builds aggregate patterns.

Table 5.2 compares land use in unincorporated Chatham County, the City of Savannah, and the seven other municipalities in aggregate.[4] The character of each of these areas varies greatly as a result of the distinctly different land use patterns.

The City of Savannah is highly urbanized with exceptionally large areas of mixed use development. Except for the western airport area, the city is largely built-out and growing chiefly through annexation. However, urban neighborhoods that have declined in population and former industrial lands represent an opportunity for internal growth in the form of infill redevelopment.

[3] Silviculture is the management of forests for the production of timber and other wood products.
[4] The Chatham County – Savannah Comprehensive Plan is prepared by the Metropolitan Planning Commission for the unincorporated area of the county and the City of Savannah. The seven municipalities each prepare separate comprehensive plans. For more information on this see Chapter 1, Introduction.

The other seven municipalities in Chatham County maintain separate planning programs, however the Existing Land Use map shows land use in those areas based on County Tax Assessor property records. Table 5.2 provides a comparison of agricultural and other developable acreage. The seven municipalities contain 29,164 developable acres, compared to 25,651 in West Chatham County, 2,252 in East Chatham County, and 8,916 in the City of Savannah. This municipal acreage constitutes 44 percent of developable area in the county. Nearly all of the development potential lies in the three westernmost municipalities of Bloomingdale, Pooler, and Port Wentworth. Figures 5.3-a and 5.3-b graphically summarized the data in Table 5.2.

East Chatham is developed at low and medium densities and its character is strongly influenced by its setting amid marshes and tidal creeks.[5] West Chatham contains a high proportion of agricultural, forested, and otherwise undeveloped area. As the City of Savannah and unincorporated East Chatham have built out, West Chatham has emerged as a high growth area.

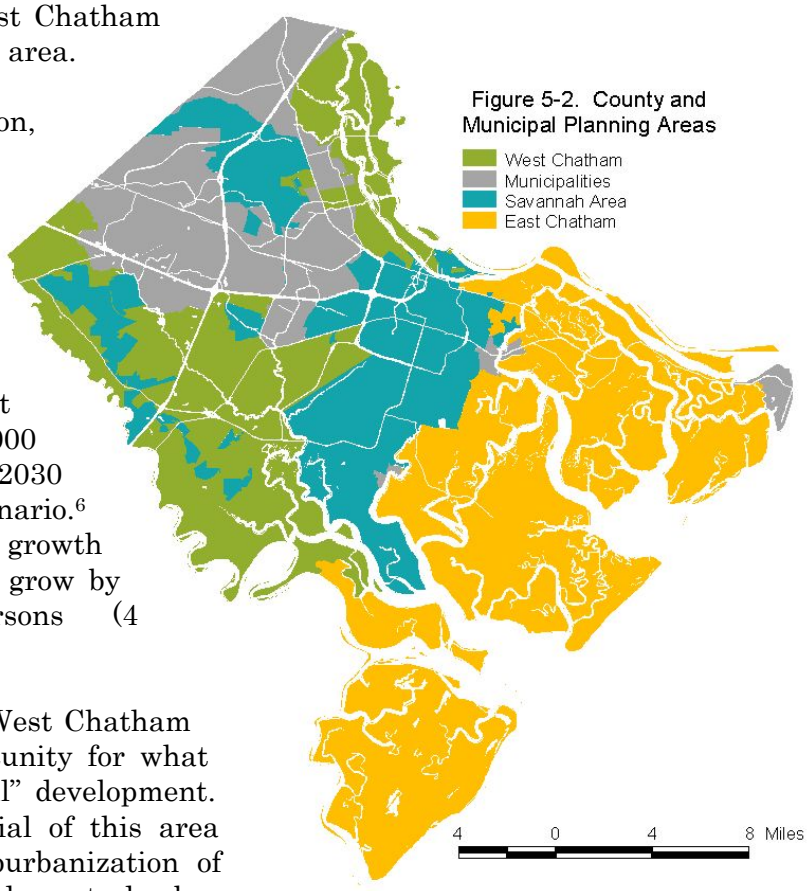


Figure 5-2. County and Municipal Planning Areas

The West Chatham population, including municipalities, is projected to increase by 45,000 persons (73 percent) by 2030 (see Chapter 4, Demographics). In contrast, East Chatham is near build-out and not expected to add more than 8,000 persons (15 percent) by 2030 under the highest growth scenario.[6] Under a more probable growth scenario, East Chatham will grow by approximately 2,000 persons (4 percent).

The potential for growth in West Chatham County represents an opportunity for what can be termed "regional infill" development. Fulfilling the growth potential of this area may help to slow rapid suburbanization of outlying counties, and thus help control urban sprawl.

[5] This contributes to what some residents refer to as a "semi-rural character" (see the *Islands Area Community Plan* and the *Southeast Chatham County Community Plan*).

[6] A population increase of 8,000 persons constitutes a near build-out scenario under current zoning. This higher growth rate was anticipated in the *Islands Area Community Plan* and the *Southeast Chatham County Community Plan*. However, recent trends show West Chatham absorbing more of the county's growth.

5.3.1 Growth and Population Density

County population densities for 2000 and 2030 shown in Table 5.1 were obtained by dividing the 2000 census figures and 2030 projections for each area by the parcel acreage for the area (using parcel acreage eliminates most marsh and open water from the calculation).

By 2030, the significantly greater population density in unincorporated West Chatham County and in other municipalities (in particular, Bloomingdale, Pooler, and Port Wentworth) will be coupled with a change in character from rural and semi-rural to suburban. This change is illustrated in Figures 5.4-a and 5.4-b. The change of character can be difficult for communities. Measures enacted by the Islands and Southeast Chatham communities through the Environmental Overlay District have been effective in preserving community character without slowing growth.[7] Unincorporated West Chatham County and West Chatham municipalities will need to consider new approaches to zoning if they are to preserve elements of rural and semi-rural character as they grow. See Section 5.4 for additional discussion of community character resulting from successive eras of growth.

Table 5.1. Current And Projected Population Density By Area

AREA	ACREAGE	2004 POPULATION	2030 POPULATION	2004 DENSITY	2030 DENSITY
East Chatham County	39,569	48,690	54,767	1.2	1.4
West Chatham County	59,063	22,404	47,689	0.4	0.8
City of Savannah	43,991	132,985	144,625	3.0	3.3
Other Municipalities	48,395	28,268	40,925	0.6	0.8
COUNTYWIDE	191,070	232,347	288,006	1.2	1.5

[7] The Environmental Overlay District increased marsh setback and buffer standards, added new marshfront massing and building height standards, and established a number of protective standards for historic and scenic corridors.

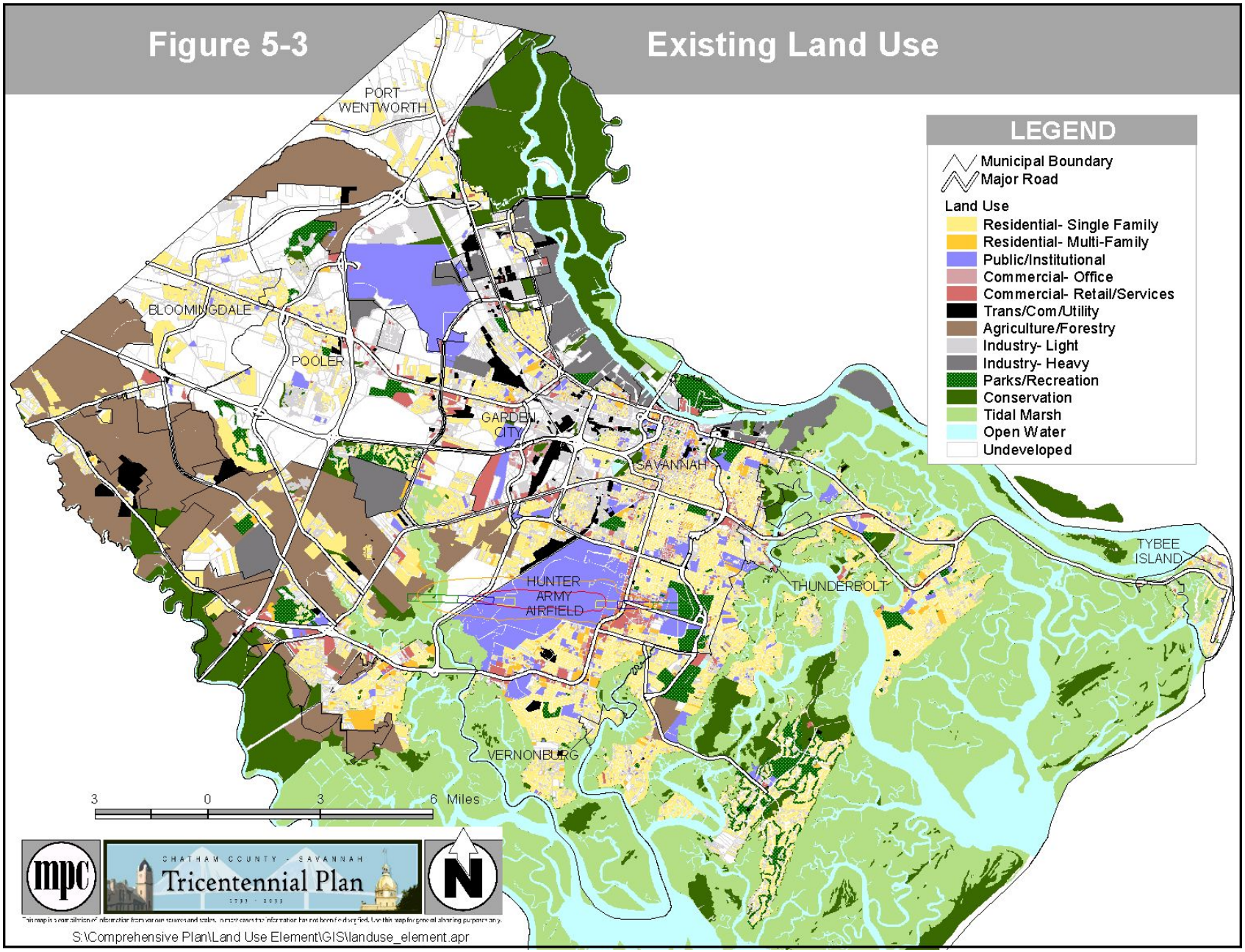


Figure 5-3
Existing Land Use
PORT WENTWORTH
BLOOMINGDALE
POOLER
GARDEN CITY
SAVANNAH
TYBEE ISLAND
THUNDERBOLT
HUNTER ARMY AIRFIELD
VERNONBURG
LEGEND
Municipal Boundary
Major Road
Land Use
Residential- Single Family
Residential- Multi-Family
Public/Institutional
Commercial- Office
Commercial- Retail/Services
Trans/Com/Utility
Agriculture/Forestry
Industry- Light
Industry- Heavy
Parks/Recreation
Conservation
Tidal Marsh
Open Water
Undeveloped
3 0 3 6 Miles
mpc
CHATHAM COUNTY - SAVANNAH
Tricentennial Plan
N
S:\Comprehensive Plan\Land Use Element\GIS\landuse_element.apr

Table 5.2. Existing Land Use by Area[8]

LAND USE	UNINCORPORATED CHATHAM COUNTY						MUNICIPALITIES				COUNTY TOTAL	
	East Chatham		West Chatham		Subtotal		Savannah		Other[9]			
	Acres	Col. %	Acres	Col. %	Acres	Col. %	Acres	Col. %	Acres	Col. %	Acres	Col. %
Residential-Single Family[10]	8,282	5.3	6,041	7.9	14,323	7.9	6,858	13.1	8,575	17.1	29,757	8.9
Residential-Multi-Family	395	0.3	657	0.9	1,052	0.9	1,436	2.7	185	0.4	2,673	0.8
Public/Institutional	800	0.5	395	0.5	1,195	0.5	10,413	19.9	1,019	2.0	12,626	3.8
Commercial-Office	33	0.0	27	0.0	60	0.0	445	0.9	93	0.2	599	0.2
Commercial-Retail	259	0.2	705	0.9	965	0.9	2,300	4.4	1,340	2.7	4,604	1.4
Trans/Com/Utilities	134	0.1	1,216	1.6	1,351	1.6	1,088	2.1	844	1.7	3,283	1.0
Agriculture/Forestry	315	0.2	20,925	27.4	21,241	27.4	3,746	7.2	0	0.0	24,987	7.5
Industry-Light	63	0.0	464	0.6	527	0.6	1,634	3.1	861	1.7	3,022	0.9
Industry-Heavy	1,458	0.9	3,523	4.6	4,981	4.6	1,169	2.2	584	1.2	6,734	2.0
Recreation-Active	2,038	1.3	876	1.1	2,914	1.1	1,819	3.5	784	1.6	5,517	1.7
Greenspace[11]	22,458	14.4	18,103	23.7	40,562	23.7	1,411	2.7	557	1.1	42,530	12.7
Right-of-Way	1,397	0.9	1,405	1.8	2,802	1.8	6,502	12.4	4,389	8.8	13,692	4.1
Tidal Marsh	73,817	47.5	11,848	15.5	85,666	15.5	5,824	11.1	1,216	2.4	92,705	27.7
Open Water	42,054	27.1	5,469	7.2	47,523	7.2	2,505	4.8	420	0.8	50,448	15.1
Undeveloped Land/Other	1,937	1.2	4,726	6.2	6,663	6.2	5,170	9.9	29,164	58.3	40,996	12.3
TOTAL	155,441	100.0	76,382	100.0	231,823	100.0	52,320	100.0	50,032	100.0	334,174	100.0

[8] Table accurate through 2004; update with recent annexations by municipalities to be completed at year end for 2005.
[9] This Comprehensive Plan covers unincorporated Chatham County and the City of Savannah. The seven other municipalities maintain separate planning programs.
[10] The Residential-Single Family land use category includes both single family detached and single family attached dwelling unit acreage.
[11] The Greenspace land use category includes permanently protected conservation and passive recreation acreage.

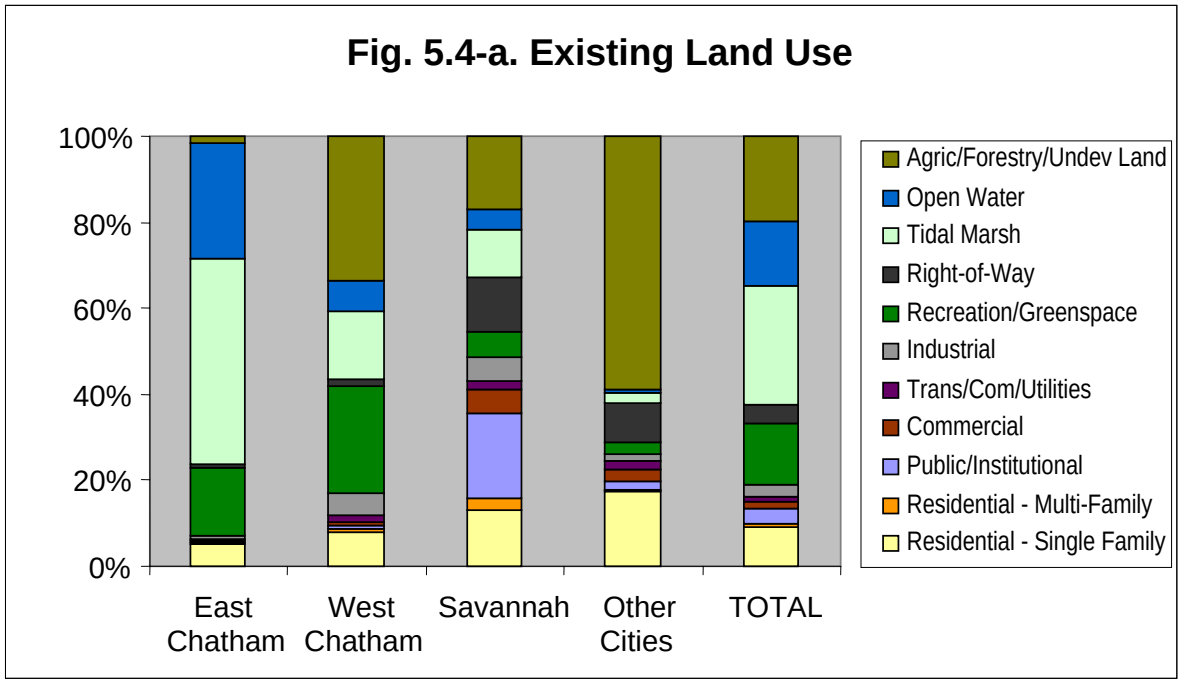


Fig. 5.4-a. Existing Land Use
100%
80%
60%
40%
20%
0%
East Chatham
West Chatham
Savannah
Other Cities
TOTAL
Agric/Forestry/Undev Land
Open Water
Tidal Marsh
Right-of-Way
Recreation/Greenspace
Industrial
Trans/Com/Utilities
Commercial
Public/Institutional
Residential - Multi-Family
Residential - Single Family

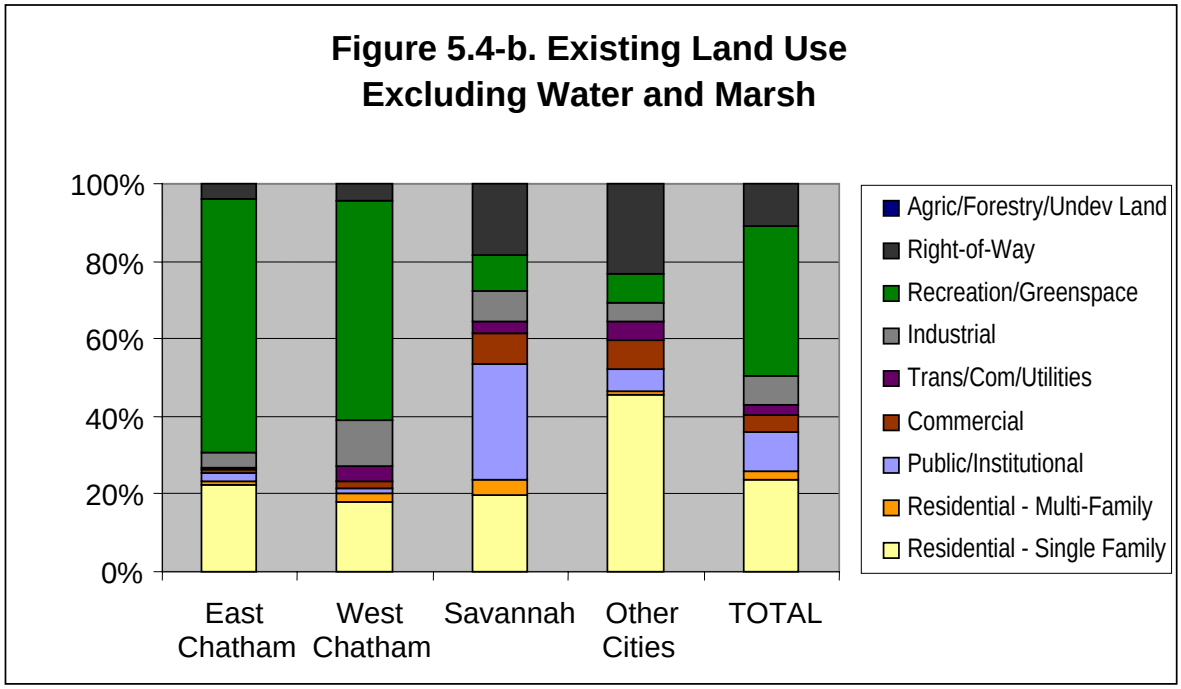


Figure 5.4-b. Existing Land Use
Excluding Water and Marsh
100%
80%
60%
40%
20%
0%
East Chatham
West Chatham
Savannah
Other Cities
TOTAL
Agric/Forestry/Undev Land
Right-of-Way
Recreation/Greenspace
Industrial
Trans/Com/Utilities
Commercial
Public/Institutional
Residential - Multi-Family
Residential - Single Family

5.4 Historical Development Patterns

The city's original development patterns, established by James Oglethorpe in 1733, have been remarkably resilient and adaptable. For that reason, Savannah enjoys international recognition as a planned city with an enduring legacy. This section describes the Planned Town era established by Oglethorpe and four subsequent eras that further shaped Savannah and Chatham County by reinforcing, redefining, or replacing the Oglethorpe Plan. Each new era is associated with innovations in transportation. Some eras are also associated with national economic expansion and post-war recovery. Figure 5.8 and Table 5.3 summarize the characteristics of each of these periods of expansion.

5.4.1 The Planned Town Era (1733-1869)

James Edward Oglethorpe (1696-1785) and close associates devised a plan for Savannah and the Georgia Colony that was meant to address deep-rooted social and economic ills of England in the early 1700s. The Oglethorpe Plan proved to be forward thinking for its time and far reaching in its impact.

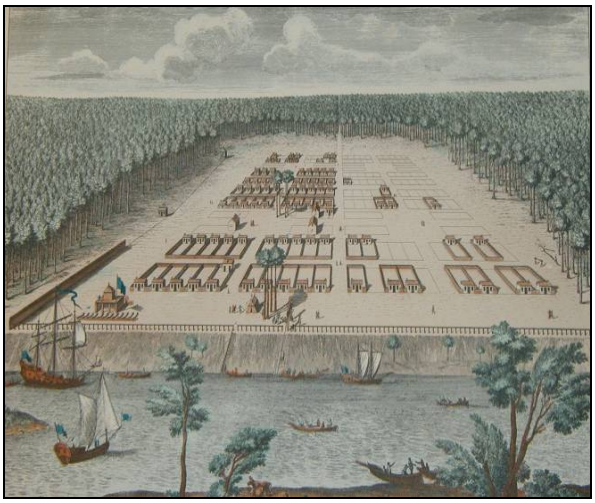


Figure 5.5. Peter Gordon's 1734 Map

As a Member of Parliament, Oglethorpe was a reformer who sought relief for imprisoned debtors, unemployed people, and the masses living in overcrowded, unsanitary conditions. After successfully advocating legal reforms to address these problems, he turned his attention to developing the new Georgia Colony, named for King George II, as a model society built on principles of "Agrarian Equality." The new colony would be free of slavery and the greed associated with it; it would accept religious dissenters; it would provide gardens and farm plots for its citizens to feed themselves and earn a living; it would be free of vice and illness arising from consumption of rum; and it would be physically designed to prevent the overcrowded, unsanitary conditions found in London.

Even though the Georgia Colony sought to ban slavery within its territory, Oglethorpe was able to marshal support for the colony from Carolina plantation owners and English merchants who benefited from the lucrative plantation system. While these interests would have preferred to expand the plantation system into the new colony, they needed Oglethorpe's energy and leadership to create a buffer colony protecting them from the Spanish in Florida and the French to the west.

Walkable Communities

Town planners have found that people are willing to walk a quarter to a half a mile from home to a variety of destinations in a safe pedestrian environment. Modern downtown Savannah, which has walking distances within that range, is recognized as a model walkable community. Growth of colonial Savannah was limited to an area of less than one square mile because people walked to most destinations. The farthest walking distance in the city remained less than one mile until streetcars provided greater mobility.

Figure 5-6-a (above) illustrates the regional plan for Savannah as it may have been conceived in London by the Trustees prior to Oglethorpe's arrival in the Georgia Colony. This conceptualization is extrapolated from the DeBrahm map of 1735 and other sources.

Figure 5-6-b (below) illustrates the layout of the 5-acre gardens lots in the regional plan.

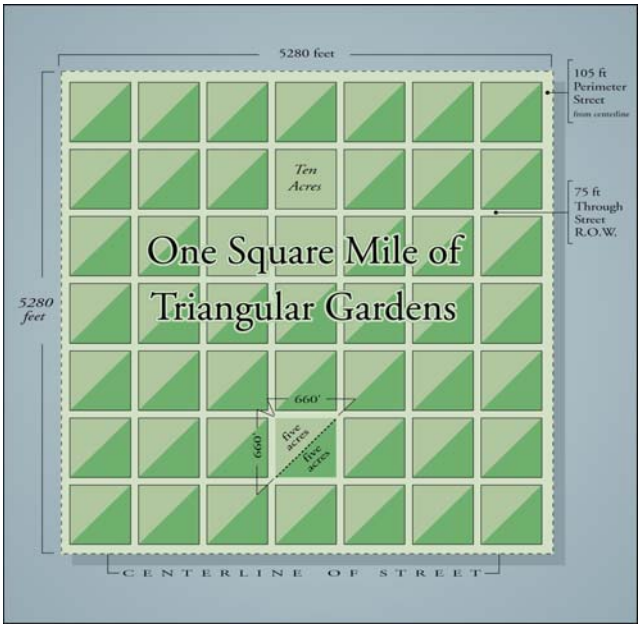


Figure 5-6-c (below) illustrates the layout of the 45-acre farm lots in the regional plan.

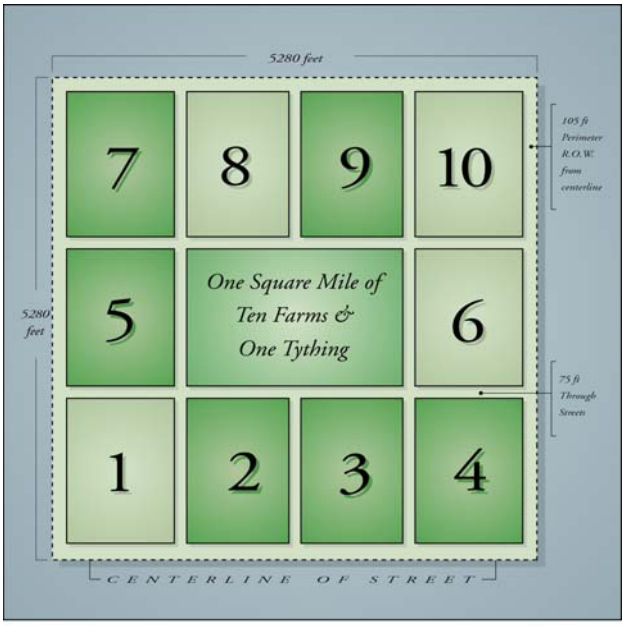
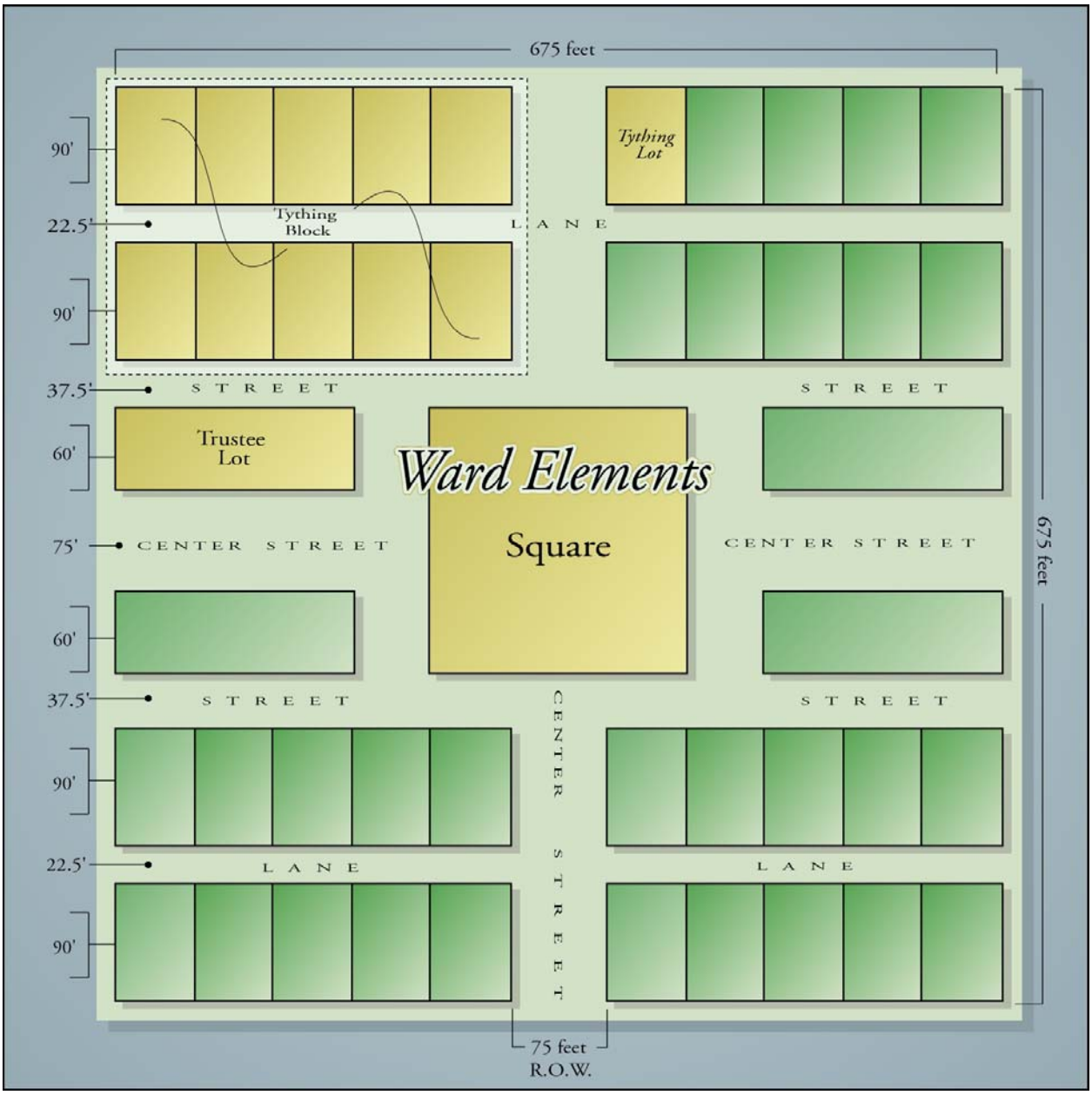


Figure 5-7. Ward Structure in the Oglethorpe Plan



The first six wards in Savannah were laid out by Oglethorpe. Each was identical, except for Johnson Square in Darby Ward, which was wider that the others by 120 feet. Eighteen additional wards were developed in Savannah following the Oglethorpe model with minor variations. Today, 21 wards remain substantially intact.

Oglethorpe's model colony was founded in Savannah on February 12, 1733, when he arrived at the high bluff on the Savannah River, 18 miles inland from the Atlantic Ocean, with 114 settlers. He immediately negotiated a right to develop the new town of Savannah and surrounding region with Tomochichi, chief of the nearby Creek village. A year later the town had developed its first four wards and was operating both socially and economically in accordance with Oglethorpe's plan. Peter Gordon, the colony's magistrate, reported to the Trustees on the status of development of Savannah as of March 29, 1734 with the drawing in Figure 5.5, which showed the layout of the first four wards. Oglethorpe eventually laid out a total of six wards, which established the model that directed growth for well over a century.

The physical plan for Savannah synthesized by Oglethorpe and the Trustees consisted of a complex hierarchy of elements, illustrated in Figures 5-6 (a-c) and 5-7: wards, consisting of 10 lots, four tythings, four trust lots, and a central square; the town, consisting of wards and a town common; gardens, arrayed within a grid on either side of the town; farms, arrayed in square mile units dedicated to each tything in town; villages, each a uniform square mile in size; and 500 acre land grants beyond the villages. Each of these elements was meticulously formulated to be the physical infrastructure for the Trustees' system of Agrarian Equality.

By 1856, Savannah had grown to 24 wards, the ultimate number laid out in accordance with the Oglethorpe Plan. Wards retained the basic configuration established by Oglethorpe in the first six wards, consistently organized with central squares, trust lots, and tithing lots. By providing within each 10.5 acre ward a 1.7 acre civic square, approached at the center by wide streets, the effect was to create a compact yet uncrowded town.[12]

Walkability within the town was essential in an era when most households traveled to every destination on foot. Residents of Savannah during this time walked to obtain goods and services, walked to work, and walked to see friends and family. Even wealthier households owning horses and carriages found it more convenient to take most trips on foot.

Because people walked to most destinations, the town ceased to expand when it reached a size of about one square mile. It then grew inward through subdivision of lots. The original 60-foot tything lots were subdivided into 20 and 30-foot lots, which became the norm by the end of the era.

Trade in heavy goods during the colonial period was primarily water-borne, and thus larger cities were situated at or close to points where rivers met natural harbors. Most crops were brought to market on rafts and barges and either sold for local consumption or shipped elsewhere on sailing vessels. The infrastructure created by trade also supported inter-city travel, and more people traveled by sea or on rivers than on land for non-local trips until the mid-1800s.

[12] Squares within the original six wards were 315 feet east to west and 240 feet north to south, except for Johnson Square, which was 435 feet east to west. These dimensions do not include street right-of-way, which later became more prominent.

For these reasons, cities were compact focal points for trade, local commerce, and other human activity. The Oglethorpe Plan served the needs of this era extremely well. It was not until railroads and streetcars became prominent modes of transportation that new growth patterns emerged.

5.4.2 The Streetcar Era (1869-1920)

Savannah's Streetcar Era began in 1869 when the Savannah, Skidaway, and Seaboard Railway Company established steam rail (known as "street railroad") service to Thunderbolt, Isle of Hope, and other communities. Later that year the railroad began operating horse drawn streetcars within the city.

The city's Victorian District was the first area that grew rapidly as a result of new accessibility created by streetcars. It was a transitional area with growth patterns closely resembling those of the Town Plan. Later Streetcar Era development produced different patterns. Lots were much larger and had more yard area. Neighborhoods of this era were not within easy walking distance to downtown and as a consequence commercial uses appeared on corner lots adjacent to residential blocks.

Dr. James J. Waring (1829-1888) pioneered the expansion of the city limits to encompass the first Streetcar Suburbs. In 1866, he acquired and developed a tract on the southern perimeter of the city, which became Waring Ward in 1870 when it was annexed into the city.[13] Waring continued the street grid pattern consistent with the Town Plan. However, he departed from the lot development pattern by requiring 20 foot setbacks for new construction.[14]

Other developers, both black and white, followed Waring in developing the area. These early streetcar suburbs otherwise shared many characteristics with the Town Plan. Lots were the same size or only slightly wider. Free-standing houses covered 50 percent or more of the lot. Many blocks were developed with row houses.

In 1890, electric streetcars were put in service and soon had an enormous impact on the growth of the city. Steam powered trains had already stimulated growth in outlying communities. The electric streetcars stimulated growth in areas adjacent to the city, which resulted in rapid expansion of the city limits. The population of the city increased by 93 percent between 1890 and 1920, the streetcar heyday, while the population of the entire county increased by 73 percent.

As streetcar lines expanded, so did the city. The current Thomas Square Streetcar Historic District, immediately south of the Victorian District developed between 1890 and 1920. Development patterns changed even more during this period. Lot sizes increased to an average of nearly 4000 square feet, double the size of those in the National Landmark District. The public realm shrank, and landscaping was largely confined to private yards. The ward structure changed to one comprised solely of rectangular blocks.

[13] Reiter, Beth L., Victorian District Building Survey and Evaluation, prepared for The City of Savannah, September 1980, p. 6.
[14] Reiter, Beth L., p. 7.

The streetcar suburbs became the city's "first ring" suburbs—the first concentric ring of growth to form around the original town that had remained much the same size for a century and a half. The second ring resulted from the introduction of the automobile in the early twentieth century.

While street railroads and streetcars continued to operate until 1946, their impact on growth patterns diminished in the 1920s when automobile sales increased dramatically. During the depression, use of streetcars decreased and most of the system was dismantled.[15]

5.4.3 Early Automobile Era (1920-1946)

While automobiles were introduced late in the nineteenth century, their impact on development patterns was not felt until the 1920s. By then automobiles were being mass produced at prices many households could afford, credit was available, gasoline supplies increased, and roads had been improved.[16] By the mid-1920s most Americans believed that automobiles were a necessity of life and no longer a luxury.[17]

Greater mobility offered by the automobile stimulated a second ring of suburban growth, which again resulted in larger lots averaging 6000 square feet. Houses sat farther back on their lots, and garages and carports were common features. Multi-family uses were integrated into neighborhoods, but less frequently than in the downtown district. Residential areas also contained less commercial development as automobile owners drove greater distances for goods and services.

The public realm gained greater recognition during this era, in part due to the City Beautiful Movement. There was a prevalent belief that beauty in the public realm would inspire citizens to assume greater social responsibility. This belief resulted in grander buildings, attractive boulevards, more parks (some resembling ward squares), and design innovations such as the Chatham Crescent subdivision.

Automobiles and the 1920s

The decade of the 1920s was known as "The New Era" and the "Roaring 20s." The period brought unrivaled prosperity to the United States. Having recovered quickly from World War I, the country reinvented itself. A fundamental change was the greater use of automobiles, sales of which reached 1.4 million in 1921 and climbed to 4.5 million by 1929. The stock market crash of 1929 ended the era of prosperity, and the same level of automobile ownership was not attained until after World War II.

The Early Automobile Era was the last period during which the City of Savannah expanded by wards. With greater mobility came greater automobile dependence. After World War II automobiles became essential to most households. The inseparability of households and automobiles provided developers with far more opportunities to develop beyond the urban fringe.

5.4.4 Modern Automobile Era (1946-Present)

In 1946 the last streetcars were taken out of service in Chatham County. Busses had already established their dominance among transit riders. At the same time, automobile

[15] D'Alonza, Mary Beth, Streetcars of Chatham County, Arcadia Publishing, Charleston, 1999.
[16] Brian Trumbore, StocksandNews.com
[17] Lynd, Robert and Helen, Middletown, 1929 (sociologists studied the effects of industrialization on values and customs in Muncie, Indiana in 1924-25)

dependence was commonplace and essential for travel to work, accessing goods and services, and visiting friends and relatives. With the war over, family formation occurred rapidly and gave rise to the Baby Boom, which demographers define as beginning in 1946.

Post World War II prosperity spurred a second great economic expansion much like that of the 1920s. However, several factors combined to produce a much greater geographic expansion of American cities. Two factors most often cited are low interest loan guarantees by the Federal Housing Administration and increased funding of suburban road construction by the Federal Highway Administration. In addition to these two potent forces, attitudes had changed. The City Beautiful and Garden Cities movements increased awareness of the value of greenspace and openness in urban design. Modernist architecture took these tenets and added large building envelopes. Planners then implemented these concepts in the suburbs.

Suburbs formed rapidly, subdivision after subdivision, giving rise to new demand for commercial districts. Suburban shopping centers became commonplace in the 1950s, and malls arrived in almost every American city in the 1960s. Oglethorpe Mall opened in Savannah in 1969.

New development patterns differed greatly from those of earlier eras. Lots again increased in size, averaging near 10,000 square feet. Subdivisions, having replaced wards as a unit of growth, were larger in area and uniformly residential, almost always single family detached homes. Commercial districts were also larger and distinctly separate from residential areas. The public realm was re-oriented from its earlier presence throughout the city to become recreational destinations in the form of community and regional parks.

5.4.5 Amenity Community Era (Present-Future)

A new era of reduced automobile dependence and increasing mobility options is slowly emerging and producing alternative forms of development, including neo-traditional development, conservation subdivisions, high-amenity communities, interchange-oriented communities[18], and town centers. Combinations and reformulations of these types of development will likely create new land use patterns distinctly different from earlier suburban patterns. Decreased dependence on the automobile is a characteristic of each of these new forms of development. While the change is modest at present, it has the potential to expand as consumers are presented with more options for walking, bicycling, and transit as well as shorter automobile trips to obtain goods and services.

While quality schools and personal safety considerations remain strong market forces, market studies reveal that buyer sophistication is increasing. Many home buyers are seeking "quality of life" enhancements including a sense of community, recreational amenities and greenspace, better access to goods and services, reduced commute times to work, multiple housing options within a community (to trade up or house a parent nearby), and smaller yards (especially for single parent households and aging baby boomers).

[18] Interchanges along limited access roads (such as Interstate Highways) enhance development opportunities on nearby lands by increasing accessibility and decreasing commute times.

Enhancements such as these often require smaller developers to build for specific market segments, while larger developers are producing planned communities with a wider variety of elements. The result is often a larger scale of planned development, greater coordination among developers to integrate their products, more planned commercial development tied to specific residential projects, increased development near Interstate and other freeway interchanges, and greater orientation to amenities.

There are potential benefits to these trends, including reduced traffic generation (and therefore less congestion and pollution) as residents are able to walk, bicycle, or drive a short distance to reach more destinations. A potential concern with such communities is increasing income segregation and social insularity resulting from "gating."

These new development alternatives are not currently recognized in the Chatham County and City of Savannah zoning ordinances. Subsequent sections in part address the need for a modernized zoning ordinance that encourages new, beneficial development.

5.4.6 Recommended Character Areas

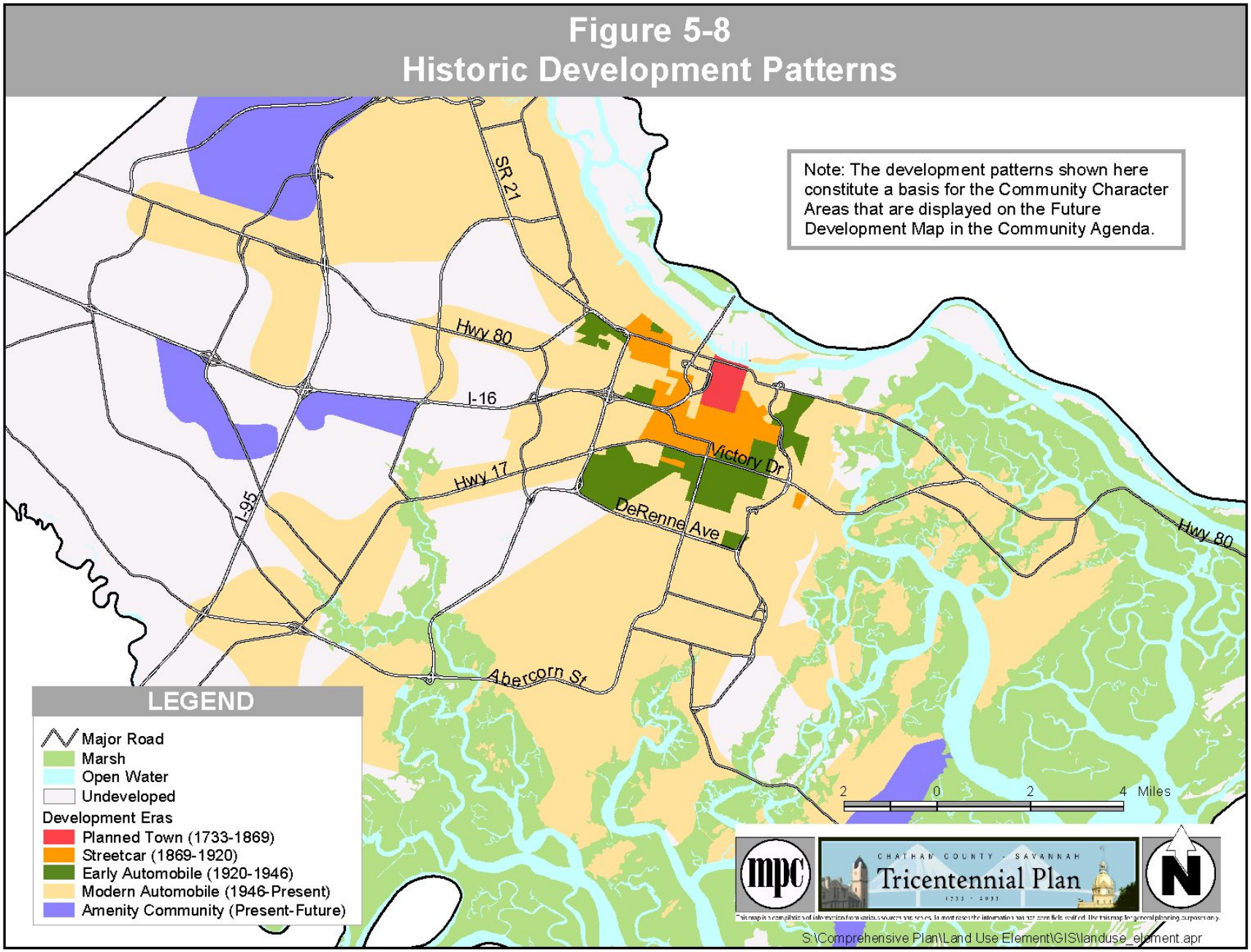
Based on the preceding analysis of historic development patterns, the following character areas are recommended for the Future Development Map in the Community Agenda:

- Downtown
- Downtown Expansion Area
- Traditional Commercial
- Traditional Neighborhood
- Commercial – Neighborhood
- Commercial – Suburban
- Commercial – Marine
- Planned Development
- Planned Campus

The boundaries of these areas correspond closely with the boundaries in Figure 5-8, Historic Development Patterns.

See the draft report entitled "Framework and Implementation Plan for New Zoning" for definitions of these proposed character areas. Conventional land use categories such as light and heavy industry are also proposed for use with the Future Land Use Map.

Figure 5-8
Historic Development Patterns



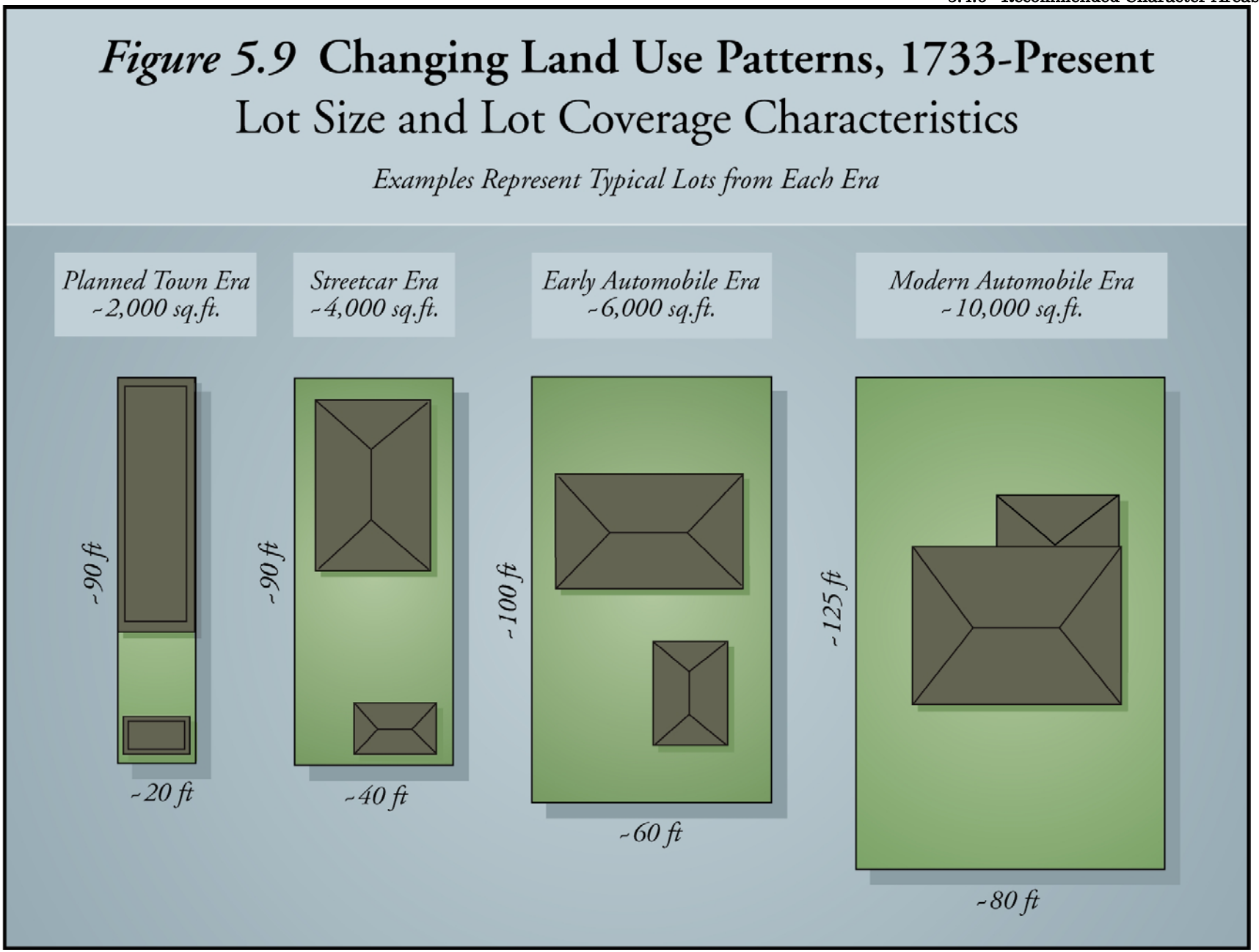


Figure 5.9 Changing Land Use Patterns, 1733-Present
Lot Size and Lot Coverage Characteristics
Examples Represent Typical Lots from Each Era
Planned Town Era
~2,000 sq.ft.
~90 ft
~20 ft
Streetcar Era
~4,000 sq.ft.
~90 ft
~40 ft
Early Automobile Era
~6,000 sq.ft.
~100 ft
~60 ft
Modern Automobile Era
~10,000 sq.ft.
~125 ft
~80 ft

Table 5.3. Historic and Present Day Development Patterns

OGLETHORPE REGIONAL PLAN	EARLY LAND USE PATTERN	SUBSEQUENT ERA OF DEVELOPMENT	PRESENT REGIONAL STRUCTURE	PRESENT LAND USE CHARACTERISTICS	GENERALIZED DEVELOPMENT CHARACTERISTICS[1]			
					DENSITY	LOT AREA	LOT COVERAGE	FRONT SETBACK
Planned Town	10 acre wards and town common	Planned Town Expansion 1733 – 1869	Downtown and Urban Neighborhoods	Highly compact, pedestrian-oriented, mixed use development pattern with original ward structure and peripheral street grid; high percentage of civic and open space	24	2,000	80	0
Community Gardens	5 acres	Streetcar Era 1869 – 1920	First Ring Suburbs	Compact, pedestrian-oriented, mixed use development pattern with significantly modified ward structure and street grid	16	4,000	50	5
Farm Lots	45 acres	Early Automobile Era 1920 – 1946	Second Ring Suburbs	Compact, pedestrian-transit-auto-oriented development pattern, more separation of uses, modified ward structure and street grid	8	6,000	40	20
Villages	640 acres (one square mile)	Modern Automobile Era 1946 – Present	Third Ring Suburbs	Dispersed, single use residential and commercial districts, automobile dependent, private subdivision structure	6	10,000	30	30
Land Grants and Indian Nations[2]	Rural	Amenity Community Era Present – Future	Fourth Ring Suburbs	Planned communities, often with commercial and amenity centers. While primarily auto-oriented, some offer increasing options for mobility both within the development and to external locations.	8	8,000	40	20

[1] The figures in these columns are *typical* residential development characteristics associated with each land use pattern and are provided here for general comparative purposes. Actual development characteristics fall within a wide range. **Density** is expressed as housing units per gross acre. **Lot Area** is expressed in square feet. **Lot Coverage** is expressed as a percentage of building footprint in relation to lot area. **Front Setback** is expressed as the number of feet from the property line to the building.

[2] Oglethorpe and the Georgia colonists negotiated with Native Americans to determine areas they would settle. Areas under Native American control were referred to generally as the Indian Nation, or as a specific tribal nation (e.g., Creek Nation).

5.5 Issues and Opportunities by Topical Area

This section relates issues and opportunities identified in other chapters to land use. The subsequent section contains an assessment of issues and opportunities by geographic area.

5.5.1 Economic Development

Economic development can be enhanced through efficient land use planning. Countywide economic development issues closely associated with land use patterns include the following:

- Ensuring the continued location of a wide range of employment opportunities accessible to traditional neighborhoods and low and moderate income wage earners.
- Ensuring continued strong growth of port-related industries by preventing land use conflicts between industry and other land uses.
- Ensuring continued viability of Hunter Army Air Field by prevention of residential and institutional encroachment near the western perimeter of the base.
- Ensuring continued tourist-related economic growth by enacting land use regulations that protect and enhance natural, historic, and archeological resources.
- Supporting knowledge-based businesses by creating mixed-use districts where cultural, recreational, and employment opportunities exist in close proximity to affordable housing.
- Supporting small businesses, particularly minority and women-owned businesses that locate in established neighborhoods, by permitting commercial uses where they have traditionally operated in the neighborhoods.

Additional information on economic development can be found in Chapter 6, Economic Development.

5.5.2 Housing Supply

Housing supply dynamics must continually adjust to meet evolving demand. The following issues have been identified as countywide priorities:

- Expanding the range of permitted housing types within land use categories and zoning districts where they will not conflict with established patterns.
- Expanding opportunities for mixed use development within both residential and commercial land use categories.
- Providing incentives such as density bonuses for affordable and special needs housing.
- Identifying areas of critical need and implementing inclusionary zoning in areas where critical needs cannot be met without public sector intervention.

Additional information on countywide housing needs can be found in Chapter 7, Housing.

5.5.3 Historic and Cultural Preservation

Increased preservation of historic and cultural assets has been identified as a critical need as county growth intensifies. The following land use-related issues have been identified as countywide priorities:

- Establishing a Chatham County program for preservation of historic, archeological, and cultural assets.
- Providing for a policy of "reciprocity" for new development locating in close proximity to – and benefiting from – historic and cultural resources. The policy would require mutual enhancement between the existing resource and the new development. Mutual enhancements should generally take the form of equal levels of accessibility, compatible aesthetics, and mutually reinforcing (rather than competing) economic impacts.
- Implementing design review through zoning in all historic neighborhoods.

Additional information on protection historic and cultural assets can be found in Chapter 8, Historic and Cultural Resources.

5.5.4 Environmental Protection

The City and County and the seven other municipalities have produced two policy studies related to protecting environmental as well as historic and cultural assets. The Countywide Open Space Plan, completed in 1996, established a policy framework for land preservation and identified specific sites for protection. The Georgia Community Greenspace Program, implemented in 2000, provided $2.2 million in funding for site acquisition.[21] The latter program was discontinued by the State in 2004, and a new program is being implemented to replace it. The MPC in 2004 began a review of these programs and a process of updating the identification of environmental protection priorities. Current priorities are as follows:

Islands Nature Park

- Continue to use SPLOST funds for acquisition of sites for environmental protection.
- Refine the Environmental Overlay District adopted by Chatham County in 2001 and extended in 2003 to reflect additional priorities identified in this Plan (see Community Agenda).
- Enhance marsh buffer protection with the use of Low Impact Development strategies and standards.
- Create new hammock protection by reducing development densities.
- Provide incentives for countywide conservation subdivisions similar to those in the Environmental Overlay District.

Additional information on environmental protection can be found in Chapter 9, Natural Resources.

[21] The latter required adopting a new Community Greenspace Plan, which updated the 1996 document. The 2000 plan carried over most of the material in the 1996 plan, while expanding the policy framework and updating the site inventory.

5.5.5 Transportation, Facilities, and Infrastructure

The Oglethorpe Plan established a grid 10 miles wide and seven miles deep (Figure 5-6-a). This grid pattern strongly influenced future land use patterns and the location of infrastructure. Dominant modes of transportation and associated infrastructure that filled in Oglethorpe's grid was largely responsible for the land use patterns of each era. Major infrastructure challenges are:

- The need for an efficient multi-modal transportation system.
- The need for increased compatibility between transportation infrastructure and land use.
- Preserving the integrity of pre-automobile land use patterns while providing modern infrastructure.
- Establishing a Pedestrian Transit Priority Area to ensure that areas of Savannah that pre-date automobiles are able to maintain their pedestrian orientation.
- Meeting the off-street parking needs of Downtown Savannah to help ensure its continued economic and cultural vitality.
- Providing linear trails and bicycle facilities for both transportation and recreational purposes.
- As the city grows, planning for additional public transportation services, including train or streetcar service linking the downtown expansion areas to the Central Business District.
- The development of a regional public transportation system to serve adjacent counties, including counties in South Carolina.
- Applying *context-sensitive design* principles to new or expanded infrastructure projects.
- Observing the guidelines set forth in the CUTS Amenities Package when building new roads or improving existing roads.
- Applying *environmental justice* principles to new or expanded infrastructure projects to avoid splitting or damaging neighborhoods for large scale highway and drainage projects.
- Reducing automobile dependency through the promotion of public transit and construction/rehabilitation of walkable neighborhoods.
- Enhancing road connectivity and reducing traffic congestion by providing multiple routes to major destinations.

Additional information on infrastructure can be found in Chapter 10, Transportation and in Chapter 11, Community Facilities and Services.

5.5.6 Land Use and Zoning

- The need for the Comprehensive Plan to address modernization, restructuring, and streamlining of the zoning ordinances.
- The need for a Land Use Plan and development regulations that foster infill development and neighborhood revitalization.
- The need for mixed-use development standards with "good neighbor standards" to protect both residential and commercial interests.
- The need for an updated Land Use Plan that employs character area assessment rather that generic land use categories.

- The need for consistency between land use and zoning.

Area-specific issues and opportunities related to land use and zoning are discussed in the following section.

5.6 Issues and Opportunities by Geographic Area

This section identifies needs and challenges associated with growth and development in four geographic areas.

5.6.1 Downtown Savannah

Savannah's central business district and adjacent historic neighborhoods face several major challenges.

- *Inclusion.* As the National Landmark District gains in recognition, attracts investment, and draws higher-income residents it also produces negative consequences. Gentrification, as the process is termed, causes displacement of many long term residents and businesses. Strategies to include a broader range of socioeconomic groups in the revitalization process can be found in the Housing and Economic Development chapters. Affordable housing in particular must be addressed to retain established communities and maintain a labor force near employment generators. Given the high cost of historic properties, Downtown Expansion Areas appear to be critically important for affordable housing production (see next bullet).
- *Expansion.* Growth in the National Landmark District is highly constrained. Brownfields and under-utilized sites adjacent to downtown Savannah represent an opportunity for planned expansion and larger building envelopes. Incentives associated with planned expansion can also address the *inclusion* issue described above. For example, larger building envelopes and greater building heights could be permitted (subject to design standards) provided they include affordable housing or contribute to a local affordable housing trust fund. Mandatory inclusionary zoning may also be considered.
- *Commercial Intrusion.* The high cost and limited availability of commercial property in downtown Savannah has driven entrepreneurs and investors to establish intensive commercial uses in historically residential neighborhoods.
- *Suburban Intrusion.* Most development in modern America is suburban in character (e.g., large building envelopes, structures sited to the rear, parking along the road, automobile-oriented access). The experience of most investors, developers, designers, and builders is with this form of development, which occurs in cookie cutter fashion throughout suburbia. Integrating compatible development into areas adjacent to downtown Savannah is more challenging and can add cost to a project. The return on the investment, however, can be greater than in a suburban setting.
- *Blight and Redevelopment.* The City of Savannah Neighborhood Planning and Community Development Department manages Community Development Block Grants (CDBG) and other programs that address blight and redevelopment. City of Savannah Housing and Economic Development departments also concentrate

resources in blighted areas. The CDBG Target Area encompasses most of the City's urban neighborhoods (see Chapter 6, Economic Development). Blighted areas and redevelopment initiatives to address blight are focused in this area. Brownfields and grayfields also represent forms of urban blight as well as opportunities for revitalization.

- *Reciprocity*. New development situated in close proximity to downtown Savannah and the National Landmark District derives enormous benefit from its location. Residential and commercial uses in particular benefit from the attractiveness of the district, its high volume tourism, regional centrality, and a high concentration of activities and events. Consequently, new development shall be expected to return value to downtown Savannah by enhancing its unique character and sense of place. New development should therefore participate in adding to the following: traditional street grid, general connectivity, river access, public realm, traditional aesthetics, traditional commercial siting, and to the long term viability of the downtown Savannah and the National Landmark District.
- *Brownfields*. Brownfields are vacant or underutilized industrial sites with environmental hazards or other site constraints that inhibit redevelopment. They are primarily located immediately to the east and west of downtown Savannah. However, scattered sites exist throughout Chatham County. Brownfield sites have not been thoroughly inventoried to date. Brownfields may represent a significant opportunity to expand the highly constrained downtown business district once they have been mapped and evaluated.
- *Grayfields*. Grayfields are vacant or under-performing commercial sites, typically shopping centers. They are typically automobile-oriented shopping centers and therefore most often located in second and third ring suburbs. Grayfield sites located in newer suburban areas are often "big box" retail stores vacated to occupy a new property. Some of these sites may be held off the market to prevent competitors from moving in, potentially creating blight and contributing to urban sprawl.
- *Downtown Master Plan (DMP)*. These issues will be addressed with the DMP, an integral part of the Tricentennial Plan that will establish "guiding principles" for development in the downtown area. Over 60 redevelopment plans and initiatives have been launched in the downtown area in recent years. The DMP will ensure that all such plans works together toward common goals.

5.6.2 First and Second Ring Suburbs

Many neighborhoods in these areas contain unique land use patterns and exceptional architectural assets. However, they face two significant challenges.

- *Inclusion*. Gentrification and displacement that first occurred in downtown Savannah is now being seen in several of these neighborhoods. The Metropolitan Planning Commission's Gentrification Task Force in a 2004 report identified several neighborhoods vulnerable to gentrification.
- *Land Use/Zoning Mismatch*. When the City and County zoning ordinances were adopted, in 1960 and 1962 respectively, they contained an implicit strategy to promote suburban development. First and second ring suburbs were perceived as largely blighted and over-crowded. They were rezoned with larger lot sizes, reduced

lot coverage, greater setbacks, and other suburban development characteristics in an effort to induce demolition, replatting, and redevelopment. This intentional mismatch of land use and zoning is inappropriate now that higher density urban neighborhoods are once more considered desirable living environments.

- *Affordable Housing*. Expansion of housing opportunities adopted with the Mid-City rezoning should be expanded to other first and second ring districts to permit mixed use development, accessory units, lane cottages, and appropriate higher density residential uses.

5.6.3 Third Ring: East Chatham County

As discussed in Section 5.2, East and West Chatham County have very different physical situations and growth characteristics. For that reason, separate discussions of the challenges facing these areas are provided.

The Islands and Southeast Chatham communities concerns were addressed with community plans and zoning amendments approved in 2001 and 2003. The Environmental Overlay District, in particular, was designed to fit these marshside communities; however, the following challenges remain as issues within these communities:

- *Hammocks*. With land becoming scarce, pressures to develop on hammocks and other marginal land areas are increasing. Current zoning (adopted in 1962) did not anticipate this, and new or amended zoning is needed to regulate development on hammocks. While the Department of Natural Resources is studying this issue and may introduce new, protective standards for hammock development, effective hammock zoning may still be needed at the local level.
- *Marsh Buffers and Setbacks*. The Environmental Overlay District increased marsh buffers and setbacks from 25 feet to 35 and 50 feet respectively. Buffers are particularly difficult to regulate, and essentially depend on voluntary compliance by landowners. As a result, buffers are often not maintained and yards are extended to the edge of marsh. Pesticides, herbicides, and fertilizers applied to yards without buffers result in marsh pollution. Lawns also increase the velocity of runoff, which adversely affects hydrologic regimes. Use of low impact development (LID) strategies coupled with perimeter conservation easements may offer more effective marsh protection (see the Chapter 9, Natural Resources).
- *Massing of Development on Marshfront and Waterways*. In recent years more development has been massed along the marshfront and waterways; architectural styles have moved away from the traditional coastal aesthetic; and private boat storage and boat ramps have become more intrusive along the shoreline. The Environmental Overlay contains standards to prevent excessive massing. These should be reviewed and, if necessary, replaced with more effective standards.
- *Containment of Commercial Development within Town Centers*. The *Islands Area Community Plan* and the *Southeast Chatham County Community Plan* identified a total of four town centers for commercial development. A policy of containing development within town center boundaries was adopted by the County. However, commercial pressures are continually testing this policy.

5.6.4 Third Ring: West Chatham County

Rapid growth experienced in the Islands, Southeast Chatham, and southside communities has shifted to West Chatham County as discussed earlier in Section 5.2.2. For that reason, a separate plan for that area was prepared by the MPC in 2004. The plan was prepared in conjunction with the Comprehensive Plan and is consistent with it. Six major challenges facing the area are outlined below:

- *Suburban Density Zoning.* The Rural Agricultural zoning district that encompasses most of West Chatham County was amended during a slower growth period to provide for residential development with 6000 square foot lots (resulting in densities of five to six units per acre where there is public water and sewer). While this initially had a positive impact by creating opportunities for moderate cost housing, it may now have the effect of promoting "leap frog" urban sprawl as a result of current rapid growth.
- *Commercial Strip Development.* New roads and major improvements such as the widening of US 17 are creating pressure to commercialize most frontage lots where traffic volumes are high and increasing.
- *Transportation.* Rapid growth will ultimately lead to increasing congestion. In such cases, the ability to put sound land use plans in place is often outpaced by housing production, commercial growth, new schools, and new or expanded roads.
- *Resource Protection.* Isolated wetlands, tree canopy, attractive vistas, and greenspace are being lost due to rapid development.
- *Affordable Housing.* While "starter home" subdivisions have been prevalent West Chatham, the market may trend toward higher-priced housing as land in other areas becomes increasingly scarce. Incentives or requirements to produce adequate numbers of affordable units may be needed. Incentives include density bonuses and site design flexibility. A potential inclusionary zoning requirement may be considered if needed to produce housing for all market segments. Inclusionary zoning typically requires large developments to produce at least 15 percent of total units at price points affordable to low or moderate income households.
- *Annexation.* Municipalities are continuing to annex portions of West Chatham County, making it difficult to plan this rapidly growing area. The Future Land Use Plan for this area should be adopted or its policies should be supported by annexing municipalities.

5.6.5 Fourth Ring: Amenity Communities

New greenfields development is changing in response to evolving market demands. Homebuyers are increasingly seeking community amenities including open space, sidewalks and trails, community centers for exercise and activities, and convenient access to goods and services. Emerging development patterns require new a reassessment of existing land use and zoning frameworks. Following adoption of the Community Agenda, a supplemental volume entitled Framework and Implementation Plan for New Zoning[22] will

[22] This is a working title, subject to revision during review by the public, the Metropolitan Planning Commission, City Council, and County Commission.

be prepared to provide new policies and recommendations for an updated zoning framework. Major challenges facing New Era development are described below:

- *Growth Policy Conflicts with Regulatory Framework.* The policies in the Comprehensive Plan encourage mixed use development, town centers, cluster and conservation design, and New Urban development options. The 1962 Chatham County Zoning Ordinance does not provide districts, uses, or development standards to encourage or even allow these forms of development. Consequently, such developments require complicated approvals involving "patchwork" zoning text amendments and variances.
- *Connectivity.* Because these developments are often a great distance from established commercial areas, they produce longer commutes to retail and employment centers. This spatial pattern worsens congestion, fuel consumption, water quality (affected by stormwater runoff), and air quality. Mitigation strategies include increasing external access points in new developments, increasing access to adjoining developments, and mixing land uses.
- *Physical and Social Compartmentalization.* Many New Era development characteristics are desirable and should be encouraged. However, other characteristics warrant public policy evaluation. In particular, the physical and social separation of some new developments limits the interaction of residents with surrounding communities and limits regional accessibility when road networks are closed to the general public.

5.7 Assessment

This section identifies and discusses three quality growth strategies – consistency, mixed-use development, and enhancing the public realm – that are common denominators associated with the issues identified above.

5.7.1 Consistency

The 1960 City and 1962 County zoning ordinances are based on planning paradigms and public policy of the late 1950s (see Community Agenda for further discussion). The policies of that era, however, were not incorporated into a comprehensive plan or similar public document. Land use and development decisions were therefore often made in a policy vacuum.

The 1992 Vision 20/20 process was a positive step toward correcting this deficiency. The State-mandated City and County comprehensive plans, adopted the following year, also updated and formalized public policy.

A weakness of the two policy documents is the absence of a requirement for consistency between policy and programs. Of particular relevance here is the lack of consistency between land use plans, on the one hand, and zoning on the other.

A requirement for consistency will be established in the Community Agenda document. The requirement is to be enforced procedurally by requiring approval of a "plan amendment" prior to approval of a zoning map or text amendment that is inconsistent with

the Land Use Plan. Thus, official public policy will be reviewed prior to considering a zoning amendment that is inconsistent with public policy.

5.7.2 Mixed Use Development

Mixed use development is a growth strategy with roots in traditional development patterns. The success of mixed use development in Savannah, as well as its increasing popularity across the country, has led to greater interest in expanding its implementation in suburban areas of Chatham County, particularly in larger, planned developments.

Savannah is frequently cited as a model for mixed use development. Its success in preserving the National Landmark District and eight other historic districts is extraordinary, and it accounts for the attractiveness of the city to tourists, new residents, and investors. The fine-grained, mixed use development patterns in these areas have established the city as a vibrant urban center for business, government, entertainment, and cultural activities.

Most other cities began replacing traditional mixed use development patterns in the 1950s and 1960s through "urban renewal" programs. These programs generally favored suburban zoning models, which were seen at the time as formulas to reduce blight, overcrowding, and crime. In Savannah, efforts at preservation helped to counter a process that literally bulldozed the vitality out of other cities.

Mixed use development in a downtown environment, however, is fundamentally different from mixed use development in surrounding first ring neighborhoods and in suburban settings. The Community Agenda identifies characteristics of land use patterns associated with downtown, and first, second, and third ring mixed use development. Zoning recommendations for mixed use development options should be compatible with these characteristics.

The importance of compatibility standards in mixed use districts is illustrated in Figure 5-10, which compares the levels of traffic generated by various land uses. Excessive traffic, noise, lighting, dust, and odors associated with intensive uses can greatly diminish the quality of life for residential uses. High intensity uses also place more strangers in a neighborhood, producing a destabilizing effect. Families and long-term residents tend to leave such areas.

The graph illustrates that single family, multi-family, professional offices, and neighborhood commercial uses can be mixed if appropriate size and appearance standards are in place. Medical and dental clinics can also be desirable in a mixed use neighborhood if located in nodes and corridors. More intensive CBD and highway commercial uses can be destructive to neighborhoods. Such uses include hotels, drive-through restaurants, supermarkets, shopping centers, malls, and automobile dealerships.

The "Framework and Implementation Plan for New Zoning" cited earlier is a supplemental volume that will provide recommendations for mixed use development and other land uses for the downtown area and for first, second, third, and fourth ring suburbs.

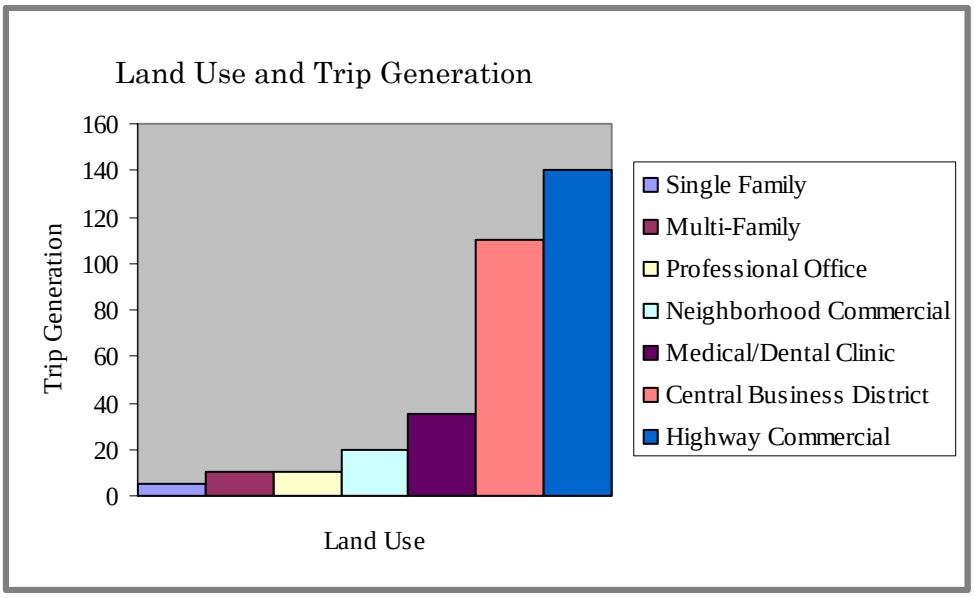


Figure 5.10. Estimated Trip Generation per 1000 Square Feet
(based on Institute of Traffic Engineers *Trip Generation Manual*)

5.7.3 Preserving and Enhancing the Public Realm

Downtown Savannah is recognized internationally for the quality of its public realm. It owes this distinction to the original town plan, to the preservation of the integrity of the plan, and to new expressions of the plan during later periods of growth.

The green elements of downtown Savannah – squares, parks, landscaped medians, and tree lawns – presently constitute 10 percent of the downtown area. Other elements of the public realm include streets, sidewalks, and public buildings, which collectively account for over 30 percent of downtown area.

Streets and sidewalks in downtown Savannah contribute to the public realm in unique ways made possible by the original town plan. The square at the center of each ward provides a natural traffic calming device. Wide sidewalks along adjoining streets, which connect with sidewalks within the squares, create an enlarged public realm comfortably shared by pedestrians and automobiles. The reduced speed of traffic provides uninterrupted pedestrian connectivity rather than creating a barrier to pedestrian movement. Automobile traffic moves continuously without traffic signal stoppages.

Sidewalks within and between wards are sufficiently wide to allow groups of pedestrians to pass with ease. They typically range from eight to 16 feet, having the greatest width along busy commercial streets. Sidewalks converge upon squares at 16 points, and squares typically contain eight pedestrian linkages to the surrounding sidewalks. As a consequence, squares are hubs of activity. Benches within squares are normally set back from busy pedestrian routes, thus making squares inviting as a destination as well as an aesthetically pleasant link in a trip.

Tree canopy extends across roads around the squares, further defining that space as part of the square and sending the message that the space is owned as much by pedestrians as by automobiles. Pedestrians and vehicles share the pavement easily without the restraint of traffic signals. Diagrams of pedestrian and vehicular circulation can be found in the Comprehensive Plan Appendix.

The importance of the public realm was reinforced during Streetcar and Early Automobile expansion eras. The present Thomas Square Streetcar Historic District, built over farm lots allotted to residents by Oglethorpe, was developed with planted tree lawns and larger yards intended to produce a greener community. Victory Drive and 37th Street both contain landscaped medians, and Thomas Square, later named Thomas Square Park, anchored the center of the new community with the neoclassical public library.

The City Beautiful Movement found its expression in Savannah during the Early Automobile Era, which created a second ring of suburban growth. The movement was first articulated at the World's Columbian Exposition in Chicago in 1893 and first implemented in the 1901 Plan for Washington, D.C. It emphasized the relationship between the quality of an urban environment and constructive citizenship. In particular, it made a strong argument for attractive parks and civic buildings. Its influence was felt in Savannah in the 1930s with the squares, circles, crescents, and road medians of Ardsley Park, Chatham Crescent, and Parkside/Daffin Park.

The subsequent Modern Automobile Era that began in 1946 following World War II was characterized by:

- Greatly increased accessibility made possible by new roads and affordable automobiles;
- The beginning of the Baby Boom;
- Large lot subdivisions offering nuclear families more private yard area; and,
- Privatization of commercial space in the form of shopping centers and, later, malls.

In Savannah, as in nearly every American city, suburbanization diminished the vitality of the downtown public realm, replacing it in newly developed areas with recreation-oriented parks, larger school playgrounds, and even shopping centers as community gathering places. Larger backyards became family and neighborhood gathering places, further reducing the importance of the public realm.

Struggling to compete with this powerful force for change, American downtowns first attempted to adjust by becoming more like the suburbs. New facades covered old windows with massive blank walls mimicking those of larger suburban buildings. Buildings were demolished to make room for parking lots. Streets were widened at the expense of sidewalks to accommodate more lanes and more automobiles. Other streets were closed to create pedestrian malls—which consistently failed. Stores continued to fail or close and leave for the suburbs. Attempts to compete with the suburbs by duplicating the suburban development model in the downtown environment consistently failed across the country.

Savannah was among those cities that escaped widespread demolition in the name of "slum clearance." Urban renewal loans, most often used to demolish and rebuild inner cities, were used to restore portions of historic neighborhoods in Savannah. These grants ere used to redevelop Troup Ward (1965), the central downtown area (1969), and the Riverfront (1975).[23]

Downtown Savannah, however, did not entirely escape the bulldozer. City Market at Ellis Square[24] became a parking garage, and neighborhoods and businesses on Elbert Square and Liberty Square were replaced by the Civic Center and Courthouse complexes. The new structures were built in modernist, suburban form with larger buildings occupying a central position in a ward. The ward structure was completely altered around Elbert and Liberty squares.[25]

African American neighborhoods were hit hardest in Savannah, as elsewhere, by urban renewal. The removal of Union Station and the Frog Town neighborhood to accommodate I-16 devastated African American commercial and residential cohesiveness along Martin Luther King, Jr. Boulevard (then West Broad Street).

While the damage caused by urban renewal was irreversible, improvements are being made to several areas that restore historic character and function. Martin Luther King, Jr. Boulevard has been retrofitted with a pedestrian-friendly median and street furniture. Broughton Street is regaining its "main street" character. Bay Street is being studied for eventual narrowing from four to two through lanes. Ellis Square will be reclaimed as an element of the public realm from its use as a parking lot since 1954.

The greatest threat to the public realm was implemented by city planners in 1960. The City of Savannah Zoning Ordinance enacted that year sought to bring modernist architecture[26] and suburban standards to downtown Savannah and the older neighborhoods ringing it. Planners at that time argued for greater building setbacks, less lot coverage, and larger residential lot sizes. Over time, they argued, downtown would acquire the modernist features needed to compete with the suburbs.

While no one now makes the argument for reviving modernism or retrofitting the suburban model into the downtown area, much of the zoning from that period remains in effect. Since obsolete zoning affects much more than the public realm, modernization of zoning is discussed separately in the Community Agenda.

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[23] The Housing Act of 1964 (section 312) authorized rehabilitation loans, thus providing an alternative to demolition.

[24] Ellis Square, leased for parking to a private City Market area developer for 50 years, reverted to public control in 2005 and will be restored for public use.

[25] Elbert and Liberty wards were partially altered in the 1930s to accommodate the realignment of Montgomery Street, which was to be incorporated into US 17.

[26] Modernism, partially inspired by suburban growth, dominated American architecture from 1940 to 1965. It was characterized by separation of land uses, segregating pedestrians and automobiles, and widely spaced monolithic structures. Many commentators feel modernism was rooted in a deep antipathy toward cities.

Homebuyers and renters have rising expectations for the quality of their living environment. Just as they expect higher quality interiors, they also expect more in and near their community. Landscaped areas, recreation facilities, greenspace, and nature preserves are increasingly important elements of the housing market. Developers have responded by including these kinds of features in their communities, a trend described in this chapter as Amenity Communities or fourth ring suburbs.

However, the public realm created by developers is increasingly restricted to community residents. Where the public realm was once expanded through public-private coordination (with the squares, circles, crescents, and medians of earlier eras), the public and private sectors now more often work separately. If the public realm is to remain an important element as new areas are developed, new policies must be in place to provide for it.

The Community Agenda contains the public policy framework for preservation and enhancement of the public realm through land use strategies and zoning, as well as a rational framework for future land use.

5.8 State Quality Community Objectives

The Standards and Procedures for Local Comprehensive Planning require a review of Quality Community Objectives adopted by the Department of Community Affairs for consistency with local plans. Six objectives closely related to land use are identified and discussed:

- *Regional Identity*. Each period of growth documented in this chapter brought with it unique land use and architectural patterns. The assessment of these patterns will be the basis for character areas used for future land use planning in the Community Agenda, and thereby reinforcement of regional identity.
- *Growth Preparedness*. Contemporary development is frequently at odds with historic development patterns. Building setbacks, parking configurations, and access controls, for example, produce forms of development that conflict with established development patterns from previous eras. The assessment in this document provides an initial basis for preparing for new growth while enhancing existing development patterns.
- *Open Space Preservation*. From the urbanized area to the urban fringes, open space preservation continues to be a high priority in Chatham County and the City of Savannah. The Community Assessment establishes a basis for new zoning that will enhance the ability of local government to preserve open space.
- *Traditional Neighborhoods*. This objective in particular has been thoroughly evaluated in the current chapter. The Community Agenda will further identify strategies for reinforcing traditional neighborhoods through land use policy and zxoning.
- *Infill Development*. The Mid-City Land Use and Rezoning Plan[27] adopted by the City of Savannah in February, 2005 provides a prototype for encouraging infill development. Wider application of this approach will be prescribed in the Community Agenda.

[27] The plan received the Award of Excellence from the Georgia Planning Association in 2005 in the land use and zoning category.

- *Sense of Place*. Downtown Savannah has a unique sense of place which the Comprehensive Plan seeks to reinforce. A Downtown Master Plan being developed as part of the Tricentennial Plan will lead to a set of "guiding principles" for development in the downtown area (including first ring neighborhoods).

The issues and opportunities discussed earlier in Sections 5.5 and 5.6 encompass those issue identified while completing the review of State Quality Community Objectives.

5.9 New Appreciation for Older Values

The Tricentennial Plan establishes a vision and goals for the Tricentennial of the founding of Savannah in 2033, while also looking to the past for inspiration. The plan for Savannah devised by Oglethorpe and the Trustees was a remarkable achievement of town and regional planning. The basic elements of the town plan in particular remain in place and inspire planners and civic leaders throughout the world. Drafting and adopting the Tricentennial Plan constitutes a rare opportunity when a community fundamentally re-examines and reinvents itself.

Unique and exemplary land use patterns established by earlier generations include the following, each of which contributes to the vision for the future:

- The open space, civic orientation, and connectivity of Oglethorpe's ward plan in downtown Savannah.
- The wisdom of civic leaders in continuing the plan with only minor modifications as long as public land permitted them to do so.
- The impetus during the Streetcar Era to continue the open, garden-like qualities of the city by establishing front yard planting area and tree lawns.
- The reaffirmation of the value of civic space during the Early Automobile Era when developers, inspired by the City Beautiful Movement, created a remarkable new public realm.
- The enduring efforts of civic leaders to retain tree canopy and preserve historic and scenic roads.
- The exceptionally effective efforts to preserve community-wide historic and cultural assets.
- The commitment to reinforce the identity of neighborhoods and build civic pride.

By updating the 1993 comprehensive plans and 1960 and 1962 zoning ordinances, the City and County have committed to re-evaluating an era of promoting single use district planning. They have elected to broaden development options to permit more mixed use development, new public realms, and land conservation; and they have also acknowledged that quality of place-making takes precedence over the quantity of development occurring with the city and county jurisdictions.

Chapter 6.0 *Economic Development*

The City of Savannah is built on a history of commerce, innovation, and prosperity. Founded by James Oglethorpe in 1733, Savannah was originally established to increase trade with the other Colonies. Savannah's business climate was as accommodating as its weather. Settlers quickly discovered that Savannah's soil was rich, and the climate was favorable for the cultivation of cotton and rice. Plantations and slavery became highly profitable systems for whites in the neighboring Lowcountry of South Carolina; therefore, Georgia, the last free colony, legalized slavery.

Due to the economic renaissance brought on by the exportation of cotton, residents built lavish homes and churches throughout the city of Savannah that reflected the wealth of the times. With the growth of trade, especially after the invention of the cotton gin on a plantation outside of Savannah, the city became a rival of Charleston as a commercial port. Many of the world's cotton prices were set on the steps of the Savannah Cotton Exchange in the 1800s.

Today, Savannah has a diverse economy that includes manufacturing, service, government and military, tourism, port-related distribution, and a burgeoning number of creative and technical businesses. Savannah has an available workforce and exceptional training opportunities, with more than 44,000 college students all within an hour's drive. Savannah also enjoys a strategic coastal location.

6.1 Introduction

The Economic Development Chapter of the Tricentennial Plan is an inventory and assessment of the community's economic base, labor force characteristics, and economic development opportunities and resources. It attempts to determine the community's needs and goals in light of population trends, natural resources, community facilities and services, housing, and land use in order to develop a strategy for the economic well-being of the community. This chapter tries to identify major economic development problems, determine future economic development needs, and develop a plan for managing economic development in the future. The economic characteristics reviewed in this chapter include: current employment, wage levels, income, labor force participation, occupations and commuting patterns. In this chapter, the year 2000 was used as the base year and therefore represent the current data.

6.2 Regional Economy

The region has a diverse economy that includes manufacturing, service, government and military, tourism, port-related distribution, and a burgeoning number of creative and technical businesses. The region has an available workforce and exceptional training opportunities, with more than 44,000 college students all within an hour's drive of the coast.

Chatham County and Savannah are the regional hub of an 11-county labor draw area. The region, within a 45- minute drive, has a population of 642,155 and a labor pool of 294,680. The workforce is as diversified as the economy, from software developers to freight handlers. The region is not only a top tourist destination but also an ideal place for businesses and families. People want to live and work in the Coastal Empire.

The unemployment rate in the region is consistently lower than the national average, but the underemployment rate is high. According to a study conducted by the Georgia Southern University Bureau of Business Research and Economic Development, approximately 9 percent of the local workforce is underemployed — a great indicator for growth.

6.3 Chatham – Savannah Economy

Over the past 20 years, the City of Savannah and Chatham County have experienced a boom of economic activities. Energized by the upsurge in tourism in the mid 1990s and other positive economic factors, the city and county have entered the 21st century in the enviable position of being able to use the past to enhance the present and future. Savannah's Landmark Historic District is in the midst of a commercial revitalization that is spreading southward into the Victorian District, eastward toward the islands, northward on to Hutchison Island, and finally westward toward the industrialized areas of Savannah.

As Savannah and Chatham County flourish with a diverse economy, the need for a trained workforce and higher paying jobs rises. While there are more employment opportunities

today, many of these do not pay wages necessary to support a family. As the city and county's economy continues to diversify, a better balance will be struck between job opportunities and wages.

British-owned JCB Inc., a leading manufacturer of construction and agricultural equipment, and Gulfstream Aerospace are just two world-famous businesses with headquarters in the area. Many other national and international firms are convinced that Chatham County and Savannah are great places to live well and prosper. Table 6.1 list the major employers in Chatham County and illustrates the broadening economic base of the region.

Table 6.1 Major Employers in Chatham County

COMPANY	SERVICE/PRODUCT	# OF EMPLOYEES
Private Non-manufacturers		
Memorial Health	Hospital	4,934
St. Joseph's/Candler	Hospital	3,800
Wal-Mart	Retail	1,675
Kroger	Retail food	1,100
The Home Depot	Retail, home and garden	967
Savannah Electric	Electric utility	549
Sitel	Call center	450
Publix	Retail food	433
SouthCoast Medical Group	Medical care	423
The Landings Club	Private club	400
Goodwill Industries	Non-profit Organization	385
AirTran Airways	Airline reservations	350
Manufacturers		
Gulfstream Aerospace	Jet aircraft	4,300
International Paper	Paper products	1,800
Georgia-Pacific Savannah River Mill	Paper products	1,408
Great Dane Trailers	Refrigerated trailers	650
Derst Baking Co.	Food products	475
Kerr-McGee Pigments Savannah	Titanium dioxide pigment	420
Imperial Sugar	Refined sugar	400
R.B. Baker	Asphalt	350
Savannah Morning News	Newspaper publishing	325
J.C. Bamford	Construction equipment	300
Education/Government		
Board of Education	Public schools	4,309
Ft.Stewart/Hunter Army Airfield	Civilian	3,485
City of Savannah	Government	2,408
Chatham County	Government	1,600
Savannah College of Art & Design	Education	1,200
Armstrong Atlantic State University	Education	1,052
Georgia Ports Authority	Ship terminal operations	741
US Army Corps of Engineers	Civil engineering	600

Table 6.1 Major Employers in Chatham County		
COMPANY	SERVICE/PRODUCT	# OF EMPLOYEES
Savannah State University	Education	410

Source: Savannah Area Chamber of Commerce "2005 Forecast and 2004 Economic Trend"

6.3.1 Manufacturing

Chatham County and Savannah enjoys a diversified manufacturing base. Products range from paper and forest products to chemicals, from construction equipment to food processing, and from corporate jets to drill bits. Combined, the 246 manufacturers have a total payroll of almost $700 million, employing more than 13,000 people. So, it should be no surprise that the manufacturing community is influential and well-supported.

The Manufacturers Council is an important resource. Created through the Savannah Area Chamber of Commerce, the Council protects the interests of manufacturers, ensures recognition of their commitment to the community, and provides a single forum for all member manufacturers and other supportive interests.

6.3.2 Port

The Port of Savannah is the largest single terminal container facility of its kind on the East and Gulf coasts, and a major economic development engine for the entire state of Georgia. The Georgia Ports Authority (GPA) operates two deepwater terminals in Chatham County: the Ocean Terminal and the Garden City Terminal. The port serves as a major distribution hub to and from a 26-state region – 75 percent of the U.S. population, due in part to location. The port expansion and ready access to two major interstate highways has resulted in the location of major warehouses in Chatham County.

The port services 12 local-area retail import distribution centers, moving more than 300,000 containers annually through more than 9 million square feet of warehousing. In 2003, the port shipped more than 1.5 million TEU's, representing a 31.5 percent increase from 2002. Additionally, the port has gained worldwide recognition as a major regional cargo hub, and it provides deepwater access to one of the East Coast's largest available mega sites.

6.3.3 Creative & Technical Businesses

A burgeoning group of more than 300 small to large creative and technical firms have chosen Chatham County and Savannah for their location. To support and encourage this growth, an organization called The Creative Coast was formed. The Creative Coast is a highly collaborative private and public partnership that leverages the area's unique blend of bright talent, leading-edge technologies, and exceptionally high quality of life – all to stimulate the growth of entrepreneurial, creative, and technical business in the area.

6.3.4 Military & Government

The Fort Stewart/Hunter Army Airfield military complex is a major sector in Savannah's economy.

Hunter Army Airfield (HAAF) is located inside the city limits of Savannah. Its mission is to provide air transport to Fort Stewart, home base of the "3d" Infantry Division, located in nearby Liberty County. HAAF has the longest army runway on the east coast, and facilities on the 5,400-acre airfield can handle the largest military aircraft. HAAF is accessed by rail and a major road network. Fort Stewart is located 40 miles from Savannah, in Liberty and Bryan Counties. In 2003, the combined personnel were 22,422 soldiers and 3,485 civilian employees. The combined payroll for Hunter/Fort Stewart was $934.48 million dollars.

There are three military installations in nearby Beaufort County, South Carolina - Parris Island Marine Corps Training Base, Marine Corps Air Station, and the Naval Hospital. The economic impact of these bases has been estimated to be $450 million per year. The strong presence of military in the area further increases the demand for businesses in retail, food service, real estate, education, and other sectors.

6.3.5 Tourism

Chatham County and Savannah have a well-earned reputation as a favorite tourist destination, and the atmosphere and activities that draw these visitors give it vibrancy unmatched by most coastal areas. The impact of tourism in Chatham County is shown in Table 6.2.

Table 6.2 Tourism in Chatham County

DESCRIPTION	1999	2000	2001	2002	2003
# of Lodging Rooms	9,371	9,819	10,486	11,157	11,153
Person-Trips Volume	5.15 million	5.71 million	5.58 million	5.47 million	5.98 million
Overnight Visitor	9.7 million	11.98 million	11.35 million	11.16 million	12.47 million
Paid Accommodation	7.1 million	8.5 million	8.27 million	7.92 million	8.73 million
Direct Spending	$1.043 billion	$1.526 billion	$1.415 billion	$1.659 billion	$1.702 billion
Room Tax Revenue	$7.77 million	$8.96 million	$9.2 million	$9.46 million	$10.44 million

Sources: D.K.Shifflet & Assoc, Smith Travel and Research, Chatham County Municipalities, Savannah Area Chamber of Commerce

Six million visitors in 2003 drove Chatham County and Savannah's direct traveler expenditures to $1.7 billion, a 4.4 percent increase over the year before. Savannah added 500 more tourism jobs, bringing the total number of local area residents employed in the sector to almost 17,000. Savannah's popularity for special events and festivals continues to grow. St. Patrick's Day, the Savannah Music Festival, off-shore power boat races, the Liberty Mutual Legends of Golf, the Savannah Film and Video Festival, and Octoberfest attract large numbers of visitors.

6.4 Issues & Opportunities

6.4.1 Education

The loss of manufacturing jobs to overseas companies is a matter of national concern. A greater, but less publicized, concern is the loss of skilled technical jobs to countries that place a high value on education thereby producing an abundance of engineers, mathematicians, computer

scientists, and other highly-trained professionals. The dominance of American universities focusing on scientific research and materials development, handling, and distribution has been a strength that has enabled the national economy to remain competitive in the world even as manufacturing jobs relocated to other countries.

Chatham County appears to be well situated for the challenge to produce highly skilled engineers and scientists who will be critical to the economic health of the nation and of the region. The unique educational-industrial partnerships that the Savannah Economic Development Authority has promulgated, the technical thrust of the Savannah College of Art and Design and Savannah Technical College, the Georgia Southern University Logistics and Intermodal Transportation (LIT) program, as well as the three public universities and one private business and health professions university in the area are capable of providing a skilled professional base.

While the facilities for tertiary education appear to anticipate the future challenges, the kindergarten through twelfth grade (K-12) facilities need additional support. Approximately 20 percent of the residents of Chatham County do not have a high school diploma (See Demographic Table 4.22). The Chatham County Board of Public Education is addressing the problem of high school dropout rates through a number of programs for at-risk students. It has also proposed construction of a new high school with a focus on technology in the area of the Georgia Tech Campus. The Live Oak Library system has adopted a progressive Facilities Plan to build and staff libraries throughout its three county service area. These programs are critical to the economic vitality of the region and will be successful only if the residents of the region make the connection between a strong educational system and the region's economic well-being.

6.4.2 The Natural Environment

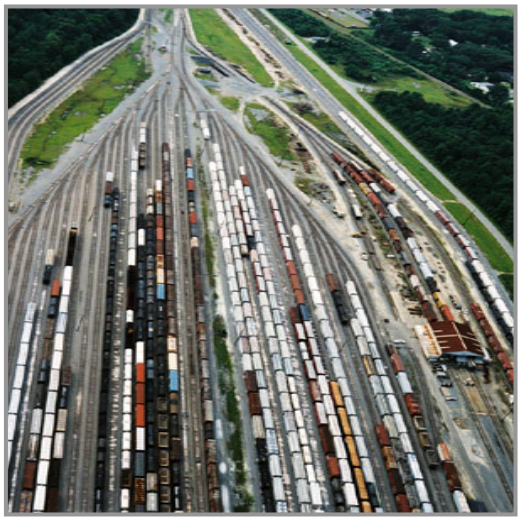
The success of the Port of Savannah, coupled with an innovative development authority, has established Chatham County as a major distribution center. Crossroads Business Park has provided convenient and attractive sites for major warehouse and distribution facilities as well as a site for the Georgia Tech campus. While no single factor is responsible for the success of Crossroads, the environmentally proactive layout of the building sites, with generous buffers and wildlife habitats that were once thought to be a liability to marketability have proven to be a key selling point that should provide a template for future business and industrial development in Chatham County.

6.4.3 Cultural Heritage

Cultural heritage is also a major factor that can improve the quality of economic growth, not only in historic districts but in new developments in West Chatham County. The pattern of development established by James Oglethorpe in the Landmark Historic District – public squares surrounded by a variety of residential housing types and institutional buildings, with a grid of through-streets separated from the quiet streets around the

squares – has proven to work well in downtown Savannah and is being touted as a model for new developments in other areas of the country. It would be prudent for developers of new areas to capitalize on the Oglethorpe Plan rather than adopting the development patterns that have been characterized as "Anywhere, U.S.A." and "Generica." The success of the Historic Landmark District from the perspective of businesses, tourists, residents, and the preservation of natural resources can serve as a model for development throughout Chatham County and spur more and higher quality development in undeveloped areas.

6.4.4 Transportation



Convenient, effective transportation systems will be of crucial importance to the development of Chatham County as a regional employment and retail center. While residential development is important, numerous studies indicate that residential development represents a net loss to the tax base whereas business and commercial development produce revenue. Establishing the county as an employment and retail center, even if workers and shoppers live in other counties, can be beneficial, provided that the transportation systems do not compromise the integrity of the area. In order to prevent a proliferation of roads that tend to produce rather than reduce congestion, the governing bodies of Chatham, Bryan, Effingham, Beaufort, and Jasper Counties have proposed a regional transportation authority in an attempt to coordinate and plan transportation systems that will provide rapid, efficient transportation on a regional basis. The success of a regional approach to transportation is a critical component of the future economic development of the region. Refer to Chapter 10 for more detailed information on transportation.

6.4.5 Information

An important component of economic development in Chatham County is establishing a single source for information about Chatham County, the City of Savannah, and other municipalities in Chatham County. Such a portal would contain information on governments; natural and human resources; regulations and laws; business, industrial, and cultural opportunities; schools, neighborhoods, and libraries; and a list of contacts for the broad spectrum of information that may be of interest to a developer. Clear procedures that eliminate uncertainty in the site plan approval process, the process of obtaining business licenses, and other facets of conducting business in Chatham County or its municipalities should be readily accessible.

6.4.6 Redevelopment

Redevelopment of existing vacant lots and decrepit buildings can be encouraged by shifting the tax base from buildings to land. By decreasing or eliminating the tax on buildings, owners who make improvements do not increase their tax liability. However, owners who choose to allow parcels to remain vacant must pay taxes on the land based upon its location rather than its improvements. The Georgia Brownfields Program provides legal protections

for potential developers of contaminated sites by limiting their liability and providing funds and expertise to return the sites to use.

6.5 Assessment

6.5.1 Economic Base

The City of Savannah and Chatham County has a diverse economic base similar to that of many coastal cities. Employment is highest in the service, retail trade, and manufacturing sectors. The largest manufacturing facilities in the city and county produce textiles, paper products, chemicals, transportation equipment, and food products. Retail trade establishments are located throughout downtown and the rest of the county, in shopping centers and on individual sites, and provide for the daily needs of area residents. Large facilities such as Oglethorpe Mall and Savannah Mall draw customers from throughout the region.

Major employers in the service sector include the health care industry, the tourist industry, and educational institutions. Three hospitals are the most visible component of the city's health care industry (see description in the Community Facilities Chapter). Additional health care jobs are provided at clinics, nursing homes, laboratories, and the offices of doctors, dentists and other health care practitioners. Major educational institutions providing employment include the Savannah State University (SSU), South University, Armstrong Atlantic State University (AASU), Savannah Technical College, Savannah College of Art and Design, and the Chatham County Board of Education. Major businesses providing support for the tourist industry include hotels, restaurants, gift shops, and museums.

6.5.2 Employment

Employment figures are a reflection of the economic base of Savannah. Table 6.3 shows employment within Chatham County and Georgia between 1970 and 2000, for each major sector of the economy. The data indicate that the service, retail trade, and manufacturing sectors account for approximately 93 percent of the total employment in Chatham County and 91 percent of the total employment in Georgia. These four sectors have dominated in the past and are expected to lead the way in the future.

Table 6.3: Total Employment by Sector

EMPLOYMENT	1970	1980	1990	2000
GEORGIA				
Manufacturing	475,209	528,812	572,477	613,992
Wholesale	108,659	174,084	228,213	276,326
Retail	288,609	407,627	606,608	816,701
Service	368,881	502,841	876,597	1,391,460

TOTAL	1,241,358	1,613,364	2,283,895	3,098,479
CHATHAM COUNTY				
Manufacturing	16,421	16,135	16,568	15,780
Wholesale	3,857	4,852	5,821	6,125
Retail	14,255	18,184	24,608	30,642
Service	17,828	21,766	35,213	51,374
TOTAL	52,361	60,937	82,210	103,921

Source: Woods & Poole (DCA)

Employment in Chatham County and Georgia is expected to increase over the next 25 years as shown in Table 6.4. Service, retail trade, and manufacturing will continue to be the three largest sectors. In 2025, the service sector will account for 82,832 jobs, or 57 percent of total employment in Chatham County. Jobs in retail trade total 40,360 (28 percent), and another 15,035 (10 percent) in manufacturing.

Table 6.4 Future Employment by Sector

EMPLOYMENT	2000	2005	2010	2015	2020	2025
GEORGIA						
Manufacturing	613,992	632,106	649,864	665,184	677,683	687,263
Wholesale	276,326	276,326	300,312	322,310	344,504	367,022
Retail	816,701	893,996	973,979	1,055,500	1,138,660	1,223,640
Service	1,391,460	1,532,290	1,692,630	1,873,380	2,074,950	2,298,230
TOTAL	3,098,479	3,334,718	3,616,785	3,916,374	4,235,797	4,576,155
CHATHAM COUNTY						
Manufacturing	15,780	15,410	15,162	15,013	14,968	15,035
Wholesale	6,125	6,494	6,740	7,006	7,301	7,627
Retail	30,642	32,435	34,335	36,283	38,286	40,360
Service	51,374	56,794	62,666	68,949	75,660	82,832
TOTAL	103,921	111,133	118,903	127,251	136,215	145,854

Source: Woods & Poole (DCA)

6.5.3 Annual Earnings and Average Wages

Table 6.5 shows current and historic average weekly wages paid within each major employment sector in Chatham County, and Table 6.6 shows state level totals within each major employment sector. The data indicate that average weekly wages are rising in all major employment sectors except retail. Between 1970 and 2000, gains were especially significant in the service sector (57 percent) and the manufacturing sector (53 percent). However, average weekly wages are below state averages in all of the sectors except manufacturing. One possible explanation for the lower wage rates is that lower paying sectors, such as services and retail trade, account for a large share of total employment in Chatham County. Another contributing factor is the relatively large high school dropout rate during the 1990s, that may have made it difficult for Savannah and Chatham County to attract or retain employers that pay relatively high wages (see Community Indicators Chapter).

Table 6.5: Historic Earnings in Chatham County

CHATHAM COUNTY	1970	1980	1990	2000

Annual Earnings				
Manufacturing	$487,483,000	$628,359,000	$697,341,000	$880,720,000
Wholesale	$109,371,000	$146,013,000	$184,133,000	$228,636,000
Retail	$241,079,000	$281,725,000	$350,183,000	$485,409,000
Service	$265,802,000	$423,925,000	$865,212,000	$1,337,850,000
Average Annual Wages				
Manufacturing	$29,687	$38,944	$42,090	$55,812
Wholesale	$28,356	$30,093	$31,633	$37,328
Retail	$16,912	$15,493	$14,230	$15,841
Service	$14,909	$19,476	$24,571	$26,041
Average Annual Wages				
Manufacturing	$571	$749	$809	$1,073
Wholesale	$545	$579	$608	$718
Retail	$325	$298	$ 274	$305
Service	$287	$375	$473	$ 501

Source: Woods & Poole (DCA) (1996 $)

Table 6.6: Historic Earnings in Georgia				
GEORGIA	1970	1980	1990	2000
Annual Earnings				
Manufacturing	$11,480,400,000	$14,997,800,000	$17,973,700,000	$23,849,500,000
Wholesale	$3,504,380,000	$5,900,690,000	$9,090,690,000	$13,549,200,000
Retail	$5,186,190,000	$6,870,370,000	$9,413,850,000	$14,426,000,000
Service	$6,248,030,000	$10,401,900,000	$22,532,200,000	$42,959,700,000
Average Annual Wages				
Manufacturing	$24,159	$28,361	$31,396	$38,843
Wholesale	$32,251	$33,896	$39,834	$49,033
Retail	$17,970	$16,855	$15,519	$17,664
Service	$16,938	$20,686	$25,704	$30,874
Average Weekly Wages				
Manufacturing	$465	$545	$604	$747
Wholesale	$620	$652	$766	$943
Retail	$346	$324	$298	$340
Service	$326	$398	$494	$594

Source: Woods & Poole (DCA) (1996 $)

6.5.4 Sources of Income

Income is another important component of Chatham County's economic base. The source of personal income is an indicator of the economic health of a community. The Georgia Department of Community Affairs (DCA), with the assistance of Woods and Poole Economics, Inc., has developed estimates and projections of the sources of personal income for all Georgia counties. In developing this information, personal income is divided into the five categories that are listed below.

1. **Wage and Salary** – Total income earned as compensation for working or rendering services.
2. **Other Labor Income** – Total employer contributions to private pension or worker's compensation funds.
3. **Proprietor's Income** – Proprietor's income measures total profits earned from partnerships and sole proprietorships.
4. **Dividends, Investment, Rent, and Interest Income** – Total income from investments and rental property.
5. **Transfer Payments** – Total income from payments by the government under many different programs, such as social security, unemployment insurance, SSI, food stamps, and veterans benefits.

Table 6.7 shows the source of personal income by type for Chatham County and the State of Georgia between 1990 and 2000. The data indicate that wage and salary income account for nearly 64 percent of personal income in Chatham County. This is well above the state average for wage and salary income. Locally, proprietors' income is below the state average, indicating that Chatham County has a lower percentage of self-employed people.

Table 6.7: Historic and Current Income by Type (%)

	1990		1995		2000	
	CHATHAM COUNTY	GEORGIA	CHATHAM COUNTY	GEORGIA	CHATHAM COUNTY	GEORGIA
Wages & Salaries	63.41	60.36	60.14	59.07	63.29	61.18
Other Labor Income	9.41	8.68	9.03	8.63	7.11	6.84
Proprietor's Income	5.69	7.11	6.49	7.96	6.70	8.65
Dividends, Interest, & Rent	20.77	17.34	20.40	16.31	22.85	16.80
Transfer Payments to Persons	13.38	10.94	15.24	13.62	13.86	11.13

Source: Woods & Poole (DCA)

According to the projections in Table 6.8, the profile of personal income sources in Chatham County is expected to remain about the same over the next 20 years.

Table 6.8 Projected Income by Type (%)

	2005		2010		2015	
	CHATHAM COUNTY	GEORGIA	CHATHAM COUNTY	GEORGIA	CHATHAM COUNTY	GEORGIA
Wages & Salaries	63.75	61.09	64.14	61.00	64.53	60.94
Other Labor Income	7.08	6.71	7.04	6.60	7.00	6.48
Proprietor's Income	6.60	8.52	6.54	8.43	6.48	8.34
Dividends, Interest, &	22.75	16.76	22.60	16.70	22.38	16.61

Rent						
Transfer Payments to Persons	14.13	11.25	14.44	11.43	14.78	11.66

	2020		2025	
	CHATHAM COUNTY	GEORGIA	CHATHAM COUNTY	GEORGIA
Wages & Salaries	64.92	60.92	65.32	60.92
Other Labor Income	6.96	6.38	6.93	6.28
Proprietor's Income	6.43	8.26	6.39	8.19
Dividends, Interest, & Rent	22.09	16.49	21.72	16.34
Transfer Payments to Persons	15.15	11.93	15.54	12.25

Source: Woods & Poole (DCA)

6.5.5 Labor Force

The labor force characteristics of a community provide potential investors and private companies with insights into the availability of workers and their skill levels, occupations, and employment levels. This section includes an inventory and assessment of Chatham County's labor force. Information is provided on employment, unemployment, labor force participation, occupations, and commuting patterns. Local data are compared to state and national figures as appropriate.

a. Employment by Occupation

Information on employment by occupation indicates the mix of skill levels in a community's workforce. This information is useful to companies interested in expanding or locating a new business in the community. Skill levels also indicate the relative need for vocational training programs.

Table 6.9 shows the percentage of employment by occupation in Chatham County, Georgia and the United States. Locally, professional and technical occupations account for the greatest percentage of jobs. This is followed by jobs in sales and office occupations and service occupations. The state occupation mix is similar to the nationwide mix. The percentage of management and clerical workers is slightly higher in the state and nation than in Chatham County.

Table 6.9 Employment by Occupation

OCCUPATION	UNITED STATES	GEORGIA	CHATHAM COUNTY
Executive, Administrative, and Managerial	17,448,038	538,647	11,843
Percent	13.45	14.03	11.59
Professional and Technical Specialty	26,198,693	717,312	21,136
Percent	20.20	18.68	20.68
Technicians and Related Support	NA	NA	NA

Table 6.9 Employment by Occupation			
OCCUPATION	UNITED STATES	GEORGIA	CHATHAM COUNTY
Percent	NA	NA	NA
Sales	14,592,699	446,876	13,589
Percent	11.25	11.64	13.30
Clerical and Administrative Support	20,028,691	581,364	14,247
Percent	15.44	15.14	13.94
Private and Household Services	NA	NA	NA
Percent	NA	NA	NA
Protective Services	NA	NA	NA
Percent	NA	NA	NA
Service Occupations	15,575,101	444,077	14,773
Percent	12.01	11.57	14.46
Farming, Fishing, and Forestry	951,810	24,489	217
Percent	0.73	0.64	0.2
Precision Production, Craft, and Repair	11,008,625	346,326	6,261
Percent	8.49	9.02	6.13
Machine Operators, Assemblers & Inspectors	12,256,138	415,849	10,705
Percent	9.45	10.83	10.47
Transportation & Material Moving	7,959,871	254,652	6,988
Percent	6.14	6.63	6.84
Equipment Cleaners Helpers and Laborers	NA	NA	NA
Percent	NA	NA	NA
TOTAL	129,721,512	3,839,756	102,196
Percent	100.00	100.00	100.00

Source: Georgia Department of Community Affairs/US Census (2000)

b. Employment Status

In this section, data are presented on the male/female and civilian/military characteristics of the local labor force. In 2000, almost 63 percent of the nearly 113,087 persons in Chatham County over the age of 16 were in the labor force, according to the U.S. Bureau of the Census. Over 68 percent of the males in that age group were in the labor force, compared to only 59 percent of the females. Only two percent of the local labor force participants were in the military labor force (see Table 6.11).

In order to see how local labor force statistics contrast with statewide and nationwide statistics, Tables 6.10 and 6.11 compare employment in Chatham County, the State of Georgia and the U.S. for the years 1990 and 2000. The increase over the 10 year period in the female participation rate of all three segments of the labor force is the most striking change. For Chatham County, the rate increased from 56 percent to 58 percent, as the total number of females in the labor force went up by two percent. Both the male and female participation rates for Chatham County fell below those for the state and the United States. In both 1990 and 2000, Georgia had the highest military labor force of the three, when expressed as a percentage of the total labor force.

Table 6.10 Employment Status (1990)						
	UNITED STATES	%	GEORGIA	%	CHATHAM COUNTY	%
TOTAL	191,293,337	100.00	4,939,774	100.00	165,339	100.00
In Labor Force	124,882,409	65.28	3,353,372	67.89	105,637	63.89
Not in Labor Force	66,410,928	34.72	1,586,402	32.11	59,702	36.11
Civilian Labor Force	123,176,636	64.39	3,280,314	66.41	101,048	61.12
Military Labor Force	1,705,773	0.89	73,058	1.48	4,589	2.78
Total Males	91,866,829	100.00	2,357,580	100.00	77,328	100.00
Male Labor Force	68,417,853	74.48	1,807,053	76.65	56,092	72.54
Males Not in Labor Force	23,448,976	25.52	550,527	23.35	21,237	27.46
Male Civilian Labor Force	62,639,048	72.82	1,741,609	73.87	51,998	67.24
Male Military Labor Force	1,520,812	1.66	65,444	2.78	4,094	
Total Females	99,426,508	100.00	2,582,194	100.00	88,010	100.00
Female Labor Force	56,464,556	56.79	1,546,319	59.88	49,545	56.29
Females Not in Labor Force	42,961,952	43.21	1,035,875	40.12	38,465	43.71
Female Civilian Labor Force	56,279,595	56.60	1,538,705	59.59	49,050	55.73
Female Military Labor Force	184,961	0.19	7,614	0.29	495	0.56

Source: Woods & Poole (DCA)

Table 6.11 Employment Status (2000)						
	UNITED STATES	%	GEORGIA	%	CHATHAM COUNTY	%
TOTAL	217,168,077	100.00	6,250,687	100.00	180,093	100.00
In Labor Force	138,820,935	63.92	4,129,666	66.07	113,087	62.79
Not in Labor Force	78,347,142	36.08	2,121,021	33.93	67,006	37.21
Civilian Labor Force	137,668,798	63.39	4,062,808	65.00	108,791	60.41
Military Labor Force	1,152,137	0.53	66,858	1.07	4,296	2.39
Total Males	104,982,282	100.00	3,032,442	100.00	85,356	100.00
Male Labor Force	74,273,203	70.75	2,217,015	73.11	58,287	68.29
Males Not in Labor Force	30,709,079	29.25	815,427	26.89	27,069	31.71
Male Civilian Labor Force	73,285,305	69.81	2,159,175	71.20	54,692	64.08
Male Military Labor Force	987,898	0.94	57,840	1.91	3,595	4.21
Total Females	112,185,795	100.00	3,218,245	100.00	94,737	100.00
Female Labor Force	64,547,732	57.54	1,912,651	59.43	54,800	57.84
Females Not in Labor Force	47,638,063	42.46	1,305,594	40.57	39,937	42.16
Female Civilian Labor Force	60,630,069	57.39	1,903,633	59.15	54,099	57.10
Female Military Labor Force	164,239	0.15	9,018	0.28	701	0.74

Source: Woods & Poole (DCA)

c. Unemployment Rates

Another key item of information for assessing a community's economic situation is the unemployment rate. The unemployment rate in Chatham County declined from a high of 6.7 percent in 1992 to 3.8 percent in 2000. Like most of the nation, Chatham County lost a significant number of manufacturing jobs during the decade.

Table 6.12 shows how the present and historic unemployment rates for Chatham County compares to rates for surrounding counties, the U.S. and the State of Georgia. Chatham County's unemployment rates have generally been lower than that of the nation as a whole. While Georgia's rates tended to be lower than those for Chatham County. Chatham County's unemployment rates were also higher than the surrounding counties in each of the years from 1990 to 2000.

The general trend for all of the areas identified in Table 6.12 was a high unemployment rate from 1991 through 1995, a steadily lowering rate during 1996-2000.

Table 6.12 Unemployment Rate

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States	5.6	6.8	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0
Georgia	5.5	5.0	7.0	5.8	5.2	4.9	4.6	4.5	4.2	4.0	3.8
Chatham County	4.7	4.3	6.7	6.1	5.8	5.5	5.1	5.2	4.7	4.4	3.8
Bryan County	4.5	4.4	5.7	4.6	4.6	4.1	3.8	3.5	3.3	3.3	2.8
Effingham County	3.9	4.9	6.3	4.7	4.6	4.2	3.9	3.7	3.7	3.3	2.9
Jasper County	NA	NA	NA	NA	NA	NA	5.2	3.8	3.3	3.5	3.6
Beaufort County	NA	NA	NA	NA	NA	NA	3.3	2.4	2.1	2.3	2.1

Source U.S. Census (DCA) (percent of total)

d. Commuting Patterns

Examining Chatham County's commuting patterns provides insight into economic development, housing, land use issues, and traffic patterns. Table 6.13 illustrates the local commuting statistics of Chatham County and the surrounding counties. The data supports the conclusion that Chatham County is expanding its role as the economic center of the region.

Chatham County's workforce commutes mainly from Bryan

County, Liberty County, Effingham County, Bulloch County, Jasper County (S.C.) and Beaufort County (S.C.). These same counties were the primary place of work for Chatham County residents who chose to work outside of Chatham County. About 3.5 percent of Chatham County employed residents commute to jobs in surrounding counties.

Overall, the commuting pattern data indicates that Chatham County is the employment hub of the region. In 2000, more than one out of five workers in Chatham County commuted in from a surrounding county to work, while only three in 100 Chatham County residents worked elsewhere.

Table 6.13 Commuting Patterns

Commuting Patterns - Employees	BRYAN		CHATHAM		EFFINGHAM	
	1990	2000	1990	2000	1990	2000
Worked in County of Residence	1,948	2,766	92,218	98,501	3,822	5,728
Percent	29.5	25.9	97.2	96.5	34.7	35.0
Worked Outside County of Residence	4,662	7,898	2,705	3,614	7,189	10,648
Percent	70.5	74.1	2.8	3.5	65.3	65.0
TOTAL	6,610	10,664	94,923	102,115	11,011	16,376

Source U.S. Census (DCA)

6.6 Quality Growth Objective

The Standards and Procedures for Local Comprehensive Planning require a review of Quality Community Objectives adopted by the Department of Community Affairs for consistency with local plans. The objective closely related to economic development is identified and discussed:

- *Employment Options.* The policies and activities of the county and city are consistence with the Employment Options Objective adopted by the Department of Community Affairs which states: A range of job types should be provided in each community to meet the diverse needs of the local workforce.

Chapter 7.0 *Housing*

The City of Savannah houses one of the nation's most valuable assemblages of 19th century architecture. Founded by General James Oglethorpe in 1733, Georgia's colonial capital now encompasses eight Historic Districts and features a unique design of streets and 21 squares framed by 19th and 20th century buildings.

The first houses in Savannah were of frame construction, eight feet high, sixteen feet wide and twenty-four feet deep. According to Mills Lane, author of Savannah Revisited, this was "an echo from the late middle ages in England, where the eight foot-bay necessary for an ox and cart to pass under shelter had become architectural tradition." The abundant forests ensured that frame construction would predominate for the first 100 years of the colony.

The development of the streetcar and later the automobile enabled the crowded community to develop housing farther and farther from the center of the city. The 20th century saw American cities moving to the suburbs. Savannah was no exception as it abandoned the grid layout and expanded to the south. Grand old inner city houses became unfashionable and expensive to maintain. Many were broken up into apartments. The trend continued unabated until the 50's, when several close calls with destruction of landmarks forced local citizens to act. The Historic Savannah Foundation was established to preserve the historic downtown. It took decades of effort, but they largely succeeded in their task and now Savannah is widely regarded as a model for historic preservation and mixed use development.

7.1 Introduction

The Housing Chapter of the Tricentennial Plan is an inventory and assessment of the community's housing stock, as well as the issues and needs associated with housing. It attempts to identify major housing problems, determine future housing needs, and develop a plan for managing housing development in the future. In order to achieve the community goal of ensuring that every resident secures a safe and decent place to live within a satisfactory environment, the housing strategies within the Community Agenda promote the close coordination of housing policies and programs at the local, state, and federal levels. Based upon these strategies, a variety of housing opportunities must be available throughout the county, at prices that are widely affordable, to ensure a socio-economically diverse community.

7.2 Regional Housing Market

The housing characteristics throughout the region reflect the area's history and early development patterns. More recent trends indicate how and where housing development will occur in the future. This section of the Housing Chapter addresses the relationship between the existing housing stock and commuting patterns. This section also looks at the housing market in surrounding counties. These aspects of the community, when compared with existing housing stock, is a good measure of how well the housing market meets the residents' needs.

7.2.1 Commuting Patterns

Examining Chatham County's commuting patterns provides insight for economic development and housing planning, land use issues, and traffic patterns. Table 7.1 illustrates the local commuting statistics of Chatham County's workforce.

Table 7.1: Commuting Patterns to Work, 1990-2000

COMMUTING CATEGORY	1990	2000
Number of workers employed in Chatham County	111,106	127,044
Percent of workforce living in Chatham County	83	78
Percent of workforce living outside Chatham County	17	22
Number of Chatham County residents commuting elsewhere	2,705	3,614

Source: U.S. Census Bureau

Census data reveals that a far greater number of Chatham County workers resided inside the county in 2000 than in 1990. In 2000, the Census showed 127,044 workers in Chatham County. Of these, 98,501, or 78 percent, both lived and worked in Chatham County. The remaining 28,543, or 22 percent of the workforce, worked in Chatham County but lived in another county. A total of 3,614 people, or two percent of Chatham County residents, worked in another county in 2000. Contrast these numbers with 1990, when only one percent of Chatham County residents worked in another county and 17 percent of Chatham County's workforce came from other counties. Therefore, between 1990 and 2000, Chatham County both attracted more workers from other counties, and exported more of its own residents to work in other counties.

In 2000, Chatham County's workforce commuted mainly from Bryan County, Liberty County, Effingham County, Bulloch County, Jasper County (S.C.) and Beaufort County (S.C.). These same counties were the primary place of work for Chatham County residents who chose to work outside of Chatham County.

Overall, the commuting patterns data indicates that Chatham County is a principal job center for the region. In 2000, more than one out of five workers in Chatham County commuted from a surrounding county to work in Chatham County, while only two in 100 Chatham County residents worked elsewhere.

7.2.2 Surrounding Counties

a. Bryan County

This county south and southwest of Savannah offers a unique blend of wooded areas and marshland. Its proximity to I-95 and I-16 makes it a popular choice for commuters. The fastest growing part of Bryan County is near the coast. Prices for most of the homes there are between $150,000 and $500,000. There are also a large number of new, luxury homes in both Richmond Hill, once the winter quarters of Henry Ford, and Pembroke, a charming town offering peaceful country living and an upscale golf course community. The Ford Plantation is just one of many, historic places in Bryan County.

b. Effingham County

This fast-developing county offers home buyers a choice of residential areas with different characters: Busy Rincon, quaint Guyton, and Springfield, the county seat. All three municipalities retain their country-style atmosphere. Effingham County features traditional and contemporary homes, ranging from elegant with Savannah River views to historic homes in town to secluded wooded surroundings. Well-planned subdivisions, upscale town homes, and condominiums offer rental properties as well as homes on golf course sites. Home prices range from $90,000 to $600,000.

c. Beaufort County, S.C.

Located on the mainland across from Hilton Head Island is Bluffton, one of the fastest growing communities in the country. Bluffton is rich in history and has a charming, small-town atmosphere. It also features modern amenities and many new residential areas. Bluffton offers a wide range of shopping centers, restaurants, businesses, hotels, golf courses, and residential communities in addition to the natural beauty of this charming Lowcountry location. Home prices in the more than two dozen communities range from $150,000 to $3,000,000.

7.3 Chatham – Savannah Housing Market

Chatham – Savannah is an area rich not only in history, but geography as well, from quiet countryside to salt water marshes and riverways to balmy, sun drenched Atlantic beaches. The real estate market here reflects this diversity with housing opportunities ranging from restored 18th century townhomes to beachfront cottages and golf lot patio homes to secluded marsh-view hideaways, with a wide variety of price ranges and sizes.

7.4 Issues & Opportunities

Long-term housing projections, shown in Table 7.2, indicate that approximately 36,537 new housing units will be constructed in Chatham County by 2030, an increase of 36 percent from the 2000 level. Approximately 10,033 of these units, or 27 percent, are expected to be in the City of Savannah, 11,385 (32 percent) in the other incorporated areas of Chatham County, and 15,119 (41 percent) in the unincorporated area.

Assuming that the future mix of housing types in 2030 remains similar to the 2000 mix, an additional 22,653 single family detached homes, 2,193 single family attached homes, 10,232 multifamily units, and 2,595 manufactured homes would be added countywide. However, demographic changes make it unlikely that the housing mix will remain constant over the next 30 years.

Table 7.2: Projected Future Housing Units

YEAR	CHATHAM COUNTY	UNINCORPORATED AREA	SAVANNAH
2000	99,780	29,097	57,543
2005	107,131	32,852	59,494
2010	113,835	35,588	61,416
2015	120,546	38,332	63,322
2020	127,205	41,046	65,218
2025	131,755	42,630	66,393
2030	136,317	44,216	67,576

Source: MPC Projections

There are two primary factors that will influence the different types of housing units that will be built: zoning, which specifies the types of units developers are allowed to build, and market demand, which dictates the types of housing units people want to buy. The future market demand for specific types of units will depend upon the future demographic changes of various population groups. For example, if the future population is projected to be either very young or very old, the market will likely demand relatively more multi-family units than are provided in the current housing mix.

In addition to estimating the total future demand for housing, the projections in the Population Chapter can also be used to estimate the future demand for various types of housing. There are three types of housing needs that are addressed in the next section: multi-family housing; affordable housing; and special needs housing.

7.4.1 Multi-Family Housing

One major factor in estimating the future need for various housing types is the age distribution of the future population. Age is a major factor in housing choice because people within a given age group tend to share various characteristics. People in their early twenties are more likely to rent an apartment than buy a house because young people tend to have fewer financial resources than older people, and they also tend to be more mobile. People in their working years are likely to choose to live in single-family homes because they have more capital and are likely to be raising young children. People who are retired may opt for a simpler lifestyle, which may involve selling their single family home and moving into a townhouse, garden apartment, or other type of multi-family unit. An area's age distribution, along with its wealth and cultural characteristics, is therefore a major factor in determining that area's demand for various types of housing units.

Table 7.3: Projected Age Distribution, Chatham County					
AGE	2000	2010	2020	2030	% Chg 2000-2030
<5	15,663	17,219	17,442	17,514	11.8
5 to 14	33,073	34,008	34,911	35,141	6.3
15 to 24	35,347	33,666	35,056	35,221	-0.4
25 to 34	33,768	35,959	34,690	35,354	4.7
35 to 44	34,712	35,318	35,370	34,949	0.7
45 to 54	29,678	35,318	35,370	37,340	25.8
55 to 64	20,037	29,466	35,494	34,789	73.6
Over 65	29,770	33,772	48,040	57,696	93.8

Source: MPC Projections

The aging of the overall population is a nationwide trend as the "Baby Boom" generation approaches retirement and the generation of the "baby bust" that follows it is significantly smaller. This nationwide aging effect will be even more pronounced in the South, which is a retirement destination. The local effect in Chatham County will likely be even more pronounced because of its desirable coastal location and the close proximity to resorts and retirement communities.

As shown in Table 7.3, Chatham County's population is projected to age significantly over the next 30 years. The largest population gains will be in older age groups. The effect will be increasingly pronounced among the oldest age groups, with 45 to 54 year olds increasing 25 percent from 2000 levels, and 55 to 64 year olds increasing nearly 75 percent and people who are over 65 nearly doubling in number. Younger age groups, by contrast, are projected to experience either no growth or very modest growth from current level. No age group is projected to experience major decline.

As people grow older many find it advantageous to relocate from single-family homes to multi-family dwellings, making it likely that an increase in demand for multi-family units will accompany the aging population. The future demand for multi-family units should be even higher because of the projected increase in the population of college students. Although Chatham County's total population of young adults is projected to decrease slightly between 2000 and 2030, it is expected that the county's population of college students will increase as Chatham County's major institutions of higher learning continue to expand and attract students from outside the county.

7.4.2 Affordable Housing

Projecting the future demand for affordable housing is challenging because the affordable housing market is dependent upon economic conditions, which are difficult to forecast. Affordable housing is also a relative issue; all housing is affordable to somebody. Which

units in particular are affordable to a given individual is a matter of personal income or wealth. One of the answers to affordable housing, from a regulatory standpoint, is to provide a range of housing types and sizes, in various locations, to help ensure a diverse housing stock and thereby maximize housing choices for the individual.

There are numerous zoning strategies that can be used to help ensure a diverse housing stock. One strategy is to allow a variety of housing types within residential zones. It is a common zoning practice to separate different housing types, which prevents developers from building a mix of housing types. This practice limits differentiation within the housing stock, as many local governments and developers are biased in favor of single-family detached housing. However, the zoning ordinance can also include affordable housing incentives such as density bonuses and inclusionary zoning, to help make constructing affordable housing more attractive to developers. Another strategy is to allow innovative housing types, such as accessory dwelling units, in new and existing residential areas. This is already a common practice in many of Savannah's historic neighborhoods, where carriage houses have been converted into rental units. Infill development of this type not only creates a second source of income for the landowner (thereby helping to increase the affordability of the primary unit), it also decreases costs for the city, which benefits from the gain in residential population without investing in additional infrastructure. Additionally, it benefits the renters of accessory units, who gain the opportunity to live in a neighborhood that may otherwise be unaffordable.

Because low income and elderly populations have a higher reliance on public transportation than other groups, the zoning ordinance should encourage special needs and affordable housing units in walkable, mixed-use neighborhoods. A walkable development pattern will reduce dependency on automobiles for special needs populations (who either cannot afford cars or are physically unable to drive), and will also help make the provision of mass transit more effective.

7.4.3 Housing Mix

Maintaining a mix of housing types is one of the most important housing strategies. It helps to ensure a socially and economically diverse community by providing viable housing options for people from the full spectrum of personal preference and economic buying power.

Table 7.4: Housing Types as a Percent of Total Housing Units, 1990-2000

	CHATHAM COUNTY			UNINCORPORATED AREA			SAVANNAH		
Units in Structure	1990	2000	% Chg	1990	2000	% Chg	1990	2000	% Chg
1 (detached)	58.6	62.2	16.0	68.0	73.3	41.7	54.2	56.9	2.7
1 (attached)	5.2	5.5	15.4	3.1	3.1	32.1	6.6	7.4	9.8

Table 7.4: Housing Types as a Percent of Total Housing Units, 1990-2000									
	CHATHAM COUNTY			UNINCORPORATED AREA			SAVANNAH		
Units in Structure	1990	2000	% Chg	1990	2000	% Chg	1990	2000	% Chg
2	7.2	4.9	-25.4	1.3	1.5	50.7	9.8	6.7	-33.7
3 to 4	7.2	7.9	18.9	2.4	2.9	58.6	8.9	10.7	16.9
5 to 9	7.3	5.6	-15.7	3.4	3.6	39.6	9.2	7.2	-23.3
10 to 19	3.3	2.8	-9.5	2.9	3.2	45.0	3.6	2.6	-28.9
20 to 49	1.4	1.5	22.6	1.3	1.9	93.2	1.4	1.6	9.1
50+	2.6	4.0	65.1	0.0	1.4	N/A	3.6	5.5	50.8
Manufactured Home	6.2	5.6	-1.1	17.0	9.3	-28.2	1.5	1.4	-12.9
Other	1.0	0.1	-89.4	0.7	0.1	-90.3	1.1	0.0	-96.2

Source: U.S. Census Bureau

The dominant form of housing in both 1990 and 2000 was single-family detached housing. The concentration of single-family detached homes was highest overall in the unincorporated area, and lowest in the City of Savannah. Furthermore, between 1990 and 2000, the trend was toward increased dominance of the housing mix by single-family detached homes.

7.4.4 Substandard Housing

As shown in Table 7.8, less than one percent of all housing units in the county lack complete plumbing or kitchen facilities. Strangely, the data indicated that the total number of units lacking these facilities actually rose slightly between 1990 and 2000. As noted earlier in the chapter, the unexplainable increase in housing units that lack plumbing facilities are most likely due to sampling error. It seems unlikely, however, that housing units lacking complete kitchen and plumbing facilities will be a major trend in the years ahead. Rather, other forms of substandard housing such as vacant, boarded up, and blighted units are the primary concern. This is especially true for the City of Savannah, which has experienced stagnant population growth in recent years and has a sizable inventory of large older homes that are expensive to maintain.

7.4.5 Public and Assisted Housing

The Housing Authority of Savannah (HAS) operates public housing and rental assistance programs in the Savannah area. HAS serves approximately 7,000 residents with 2,262 units of conventional public housing and an additional 5,900 residents (2,413 units) with housing assistance payments programs (Section 8)[1]. In recent years, HAS has made great strides toward achieving its goal of producing Savannah's first fully integrated mixed income/mixed use housing project at the former Garden Homes public housing site. HAS has leveraged $16 million HOPE VI grants as well as substantial private investment to make the project a reality.

[1] Source: http://www.savannahpha.com/facts.htm

The demand for public and assisted housing is likely to grow as total population continues to increase in Chatham County. The Garden Homes project, if successful, will serve as a model for future public housing production.

7.4.6 Homelessness

Although it seems unlikely that the problem of homelessness will ever be completely solved, the Chatham-Savannah Authority for the Homeless is making great strides toward helping homeless people. The Authority's strategy has gradually shifted away from a shelter-based approach and toward its current system of providing a continuum of care for homeless persons. The strategy focuses on a "shelter plus care" approach where the homeless are provided with skills training and other services in addition to shelter. Future goals include the founding and expansion of support groups for the formerly homeless, as well as continued training and services for the population of chronically homeless persons.

7.4.7 Baby Boom Demographics

Housing demand in the City of Savannah and the county as a whole is directly affected by the characteristics of the population. In particular, the Baby Boom generation is changing the housing market at every stage of their life. The Baby Boom generation, generally considered to be those who were born between 1946 and 1964, represents a generation substantially larger in size than previous generations.

The substantial size of the Baby Boom generation resulted in a significant increase in the demand for housing as they began to enter their adult years. In addition, as a group, Baby Boomers postponed marriage and starting a family until later in life than previous generations. More women were remaining single longer and establishing careers for themselves. The cumulative effects of these lifestyle choices was an increased demand for housing, a change in type of housing demanded, and a decrease in average household size.

In the 1980s the Baby Boom generation was just beginning to form households. During the 1990s, they were having families. During the first decade of the new century, they are starting to experience both empty nests and the return of adult children. By 2030, surviving Baby Boomers will be between the ages of 66 and 84 and most will be retired. Some will have very comfortable retirements, while others will suffer economic hardship.

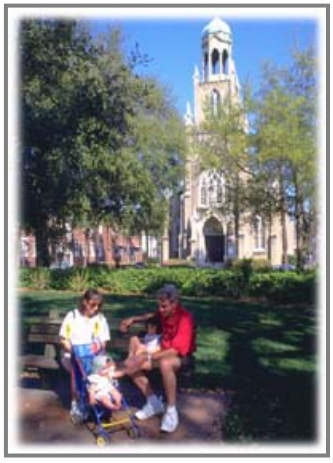
The aging Baby Boomers, combined with longer life spans, has made elderly housing a critical issue in every community. Large segments of the elderly population have continued to live independently rather than moving in with family members or into group care facilities, which has further increased the demand for housing while simultaneously decreasing the size of the average household. The Baby Boomers are expected to continue this trend toward independent living as they age.

7.4.8 Gentrification

It is increasingly evident that gentrification is becoming a major housing problem that affects all citizens in and around the City of Savannah to one degree or another. If left unchecked, gentrification can hurt a community by forcing lower income residents and

business owners to move to less desirable and less valuable areas. The result can be a disruption of lives, loss of community character, and diminished ability to build wealth.

Over the past several years, Savannah has seen neighborhoods that were previously considered unsafe or blighted turn into vibrant, desirable, and more expensive places to live. In an era of growing traffic congestion, inner-city neighborhoods have become popular residential areas for young professionals and many others. With many affluent professionals moving in, however, communities have become increasingly concerned that rising rents and property taxes would push existing residents and business owners out of their neighborhoods.



While each community is unique, gentrification tends to unfold in stages. It begins with the attraction of more affluent investors to an area because of lower housing prices, demographic diversity, historical character, or architectural quality of an area. Secondly, the new inhabitants begin to renovate properties, bringing more money into the community. This, in turn, leads to a third stage by attracting even more affluent people who see the area as an investment. Another important factor in this process is that those with higher incomes are often moving closer to their places of employment and the central business district. As a result of property improvements, the local government raises property taxes, which drives up housing costs and displaces the earlier residents and business owners. Intervention must occur as early as possible in the process if positive outcomes are to be secured for existing residents as well as investors and future residents. In Savannah, the challenge for local government, the business community and neighborhood residents are to help ensure that revitalization is equitable and that its benefits are shared among all community members in the city. Moreover, the adverse consequences of gentrification, which are increases in property taxes and displacement of families and businesses, must be anticipated and effectively addressed or avoided.

Following consultation with City Council, the MPC established the Gentrification Task Force in April, 2004. The purpose of the Task Force was to examine the process of gentrification and to identify ways to guide community revitalization without displacing existing residents and businesses. The Task Force was specifically tasked to address the following: identification of neighborhoods vulnerable to gentrification; assessment of the Thomas Square area proposed rezoning vis-à-vis gentrification; and guidance on the issue of gentrification in drafting the new Chatham County-Savannah Comprehensive Plan.

Based upon its deliberations, the Task Force offered the following conclusions:

- Due to a lack of clarity on the process of gentrification, it has become a politically loaded term that generally has not been useful in resolving debates over growth and change in the city's neighborhoods. Recognizing this, the Task Force worked to produce a definition for gentrification that would further constructive discussion on this important issue as it affects Savannah.

- The process of gentrification disrupts the economic and social fabric of the vulnerable neighborhoods. Even though gentrification is coupled with the beneficial process of revitalization, its negative consequences should no longer be ignored.
- Gentrification arguably produces both positive and negative consequences for communities, businesses and families. The Task Force focused on mitigating the negative effects, while preserving the benefits of revitalization.
- Understanding and monitoring the effects of gentrification requires establishing indicators to measure the process of gentrification.
- Successful revitalization sometimes causes gentrification in long-distressed communities whose amenities, such as ease of commute and architectural resources are highly valued.
- The two main types of gentrification easily identified in Savannah are residential and commercial. The involuntary displacement of long-term residents and business owners are the most significant adverse consequences of gentrification.
- Effectively addressing the adverse consequences of gentrification requires a strong resolve, effective policies based on a rational assessment of the problem, and multiple programs in the areas of housing, economic development, redevelopment, education, and land use and zoning.
- Finally, the challenge for local government, the business community, and neighborhood residents is to help ensure that revitalization is equitable and that its benefits are shared among all community members.

7.5 Assessment of Housing

7.5.1 Housing Unit Types

Residential land uses occupy approximately 32,430 acres within the county as a whole. This includes a mix of single-family, multi-family, and manufactured homes. Housing units by type within each governmental jurisdiction in Chatham County are shown in Table 7.5. Within the county as a whole, 90 percent of all housing units are occupied. Occupancy rates in Savannah are almost identical to the countywide rate (89 percent), while the occupancy rate in the unincorporated area is slightly higher (94 percent).

However, when the total number of housing units is broken down into categories, the rates are quite different. Seventy-six percent of the housing stock within the unincorporated area is single-family homes, as compared to 64 percent in the City of Savannah and 68 percent in the county as a whole. Fourteen percent of the unincorporated area's housing stock is multi-family homes, as compared to 34 percent in the city and 27 percent in the county as a whole. The breakdown of manufactured homes also varies between governmental jurisdictions, with nine percent in the unincorporated area, one percent in the City of Savannah, and six percent in the county as a whole.

Table 7.5: Distribution of Housing Types						
HOUSING TYPE	CHATHAM COUNTY		UNINCORPORATED AREA		SAVANNAH	
	#	%	#	%	#	%
Total Housing Units	99,780	100	29,097	100	57,543	100
Occupied Units	89,865	90	27,354	94	51,375	89
Single-Family	67,431	68	22,221	76	36,954	64
Multi-Family	26,574	27	4,173	14	19,725	34
Manufactured Homes	5,584	6	2,697	9	793	1

Source: U.S. Census Bureau, 2000

Census statistics show that Chatham County gained approximately 22,000 housing units between 1980 and 2000, an increase of 29 percent. A majority of that increase occurred during the 1980s, when the total number of housing units increased by 18 percent. Housing growth then slowed to nine percent during the 1990s (see Table 7.6).

One of the most dramatic changes in the housing stock over the past two decades was the change in the number of existing manufactured homes. Countywide, there was a dramatic upswing (51 percent increase) in the number of manufactured homes during the 1980s. During the 1990s, however, the trend reversed and the total number of manufactured homes decreased by one percent (64 units) countywide. Most of the countywide decrease can be attributed to significant declines in the number of manufactured homes in both unincorporated Chatham (-28 percent) and the city of Savannah (-13 percent).

The decline in manufactured homes in Chatham County during the 1990s was offset by the net addition of 9,268 single-family homes and 93 multi-family dwelling units. During the 1990s, single-family homes experienced the fastest rate of growth while multi-family units and manufactured homes saw either declines or minor growth.

Between 1980 and 2000, the total number of housing units in the City of Savannah increased six percent to 57,543 units. The majority of this increase came between 1980 and 1990 when total housing units increased eight percent. During the 1990s, however, the total number of units in Savannah decreased by two percent, a decrease that is wholly attributable to decreases in both multi-family units and manufactured homes. Nevertheless, a majority of all housing units in Chatham County (58 percent) are in the City of Savannah. Unlike Savannah, the unincorporated area recorded significant increases in total housing units during the 1990s. The total number of housing units in the unincorporated area grew by 6,981 units (32 percent) during the 1990s. The unincorporated area experienced growth in nearly all housing unit categories, but approximately 90 percent of the total housing growth was in the form of single-family detached houses.

The single-family, site-built home continues to be the dominant type of housing unit in the market, representing 68 percent of the total units in Chatham County in 2000. This is up slightly from a 64 percent share in 1990 but is below the 70 percent share recorded in 1980. In the last twenty years a number of new apartment complexes have been built throughout Chatham County. In 2000, multi-family housing units (structures with two or more units) comprised almost 27 percent of the housing stock. Manufactured homes accounted for six percent of the housing units, which is approximately the same percentage as in 1990. Table 7.6 shows countywide trends in housing units over the past 20 years.

Table 7.6: Trends in Housing Types 1980-2000

	TOTAL HOUSING UNITS	% Chg	SINGLE-FAMILY	% Chg	MULTI-FAMILY	% Chg	MANUFACTURED HOMES	% Chg
Chatham County								
1980	77,485	--	53,469	--	19,520	--	3,744	--
1990	91,178	18	58,163	9	26,481	36	5,648	51
2000	99,780	9	67,431	16	26,574	0	5,584	-1
Unincorporated								
1980	14,850	--	10,627	--	1,529	--	2,563	--
1990	22,125	49	15,733	48	2,480	62	3,757	47
2000	29,097	31	22,221	41	4,173	68	2,697	-28
Savannah								
1980	54,284	--	36,712	--	16,987	--	508	--
1990	58,762	8	35,708	-3	21,506	27	910	79
2000	57,543	-2	36,954	3	19,725	-8	793	-13

Source: U.S. Census Bureau

7.5.2 Age and Condition of Housing

The age of Savannah's housing stock reflects the area's early development. In 2000, approximately 62 percent of the housing stock in Savannah was at least 30 years old and 27 percent was over 50 years old (Table 7.3). Homes that are more than 30 years old are generally at the greatest risk of being substandard and/or subject to deterioration associated with improper maintenance and repair. The highest rehabilitation need usually occurs in communities with the following combination of characteristics: *an older housing stock; a high percentage of non-government subsidized rental housing; and a high percentage of low-income households*.

Table 7.7 also indicates that over half (53 percent) of the housing units in Chatham County were constructed between 1940 and 1979. Another 26 percent of the units were constructed

between 1980 and 1994, but only about 10 percent have been constructed in the last ten years or so. The remaining 11 percent were built in 1949 or earlier. Generally speaking, the majority of the units that are 50 years old or older are concentrated in Savannah's various historic neighborhoods (see additional discussion in the Historic Resources Chapter).

Table 7.7: Age of Housing Structures

	CHATHAM COUNTY		UNINCORPORATED AREA		SAVANNAH	
	#	%	#	%	#	%
Total Housing Units	99,780	100	29,097	100	57,543	100
Built 1999 to 2000	2,631	3	1,752	6	331	1
Built 1995 to 1998	7,249	7	4,669	16	1,456	3
Built 1990 to 1994	7,640	8	4,443	15	2,166	4
Built 1980 to 1989	17,528	18	7,920	27	7,234	13
Built 1970 to 1979	17,245	17	5,309	18	9,797	17
Built 1960 to 1969	13,211	13	2,061	7	9,371	16
Built 1950 to 1959	14,745	15	1,573	5	11,203	19
Built 1940 to 1949	8,381	8	651	2	6,534	11
Built 1939 or earlier	11,053	11	728	3	9,404	16

Source: U.S. Census Bureau, 2000

One indicator of housing conditions is the number of units that lack complete plumbing facilities. In 1990 the number of houses in the City of Savannah without plumbing facilities was slightly lower than the county as a whole but substantially higher than the unincorporated area. Between 1990 and 2000, the number of housing units in Chatham County without plumbing facilities more than doubled. The countywide increase can be almost wholly attributed to the City of Savannah, which saw a 150 percent increase in the number of housing units without plumbing facilities. However, it has been noted that the unexplainable increase in housing units that lack plumbing facilities are most likely due to sampling error and the increase in vacant and abandoned housing units. But, because the residents of these units may potentially be living in unhealthy, substandard conditions, the County and City should consider actions to renovate or replace any units without plumbing facilities. Table 7.8 below shows the trend in units lacking plumbing facilities for the past 20 years.

Table 7.8: Units Lacking Plumbing Facilities

	2000	1990	1980
Chatham County			
Total Units	99,780	91,178	77,485
Units Lacking PF	796	341	874
Unincorporated Area			
Total Units	29,097	22,125	14,850
Units Lacking PF	61	49	226
Savannah			
Total Units	57,543	58,762	54,284
Units Lacking PF	695	275	596

Source: U.S. Census Bureau

Another indicator of housing conditions is the number of persons per room in occupied housing units. An occupied housing unit is considered overcrowded if there are more than 1.01 persons per room. At the time of the 2000 census there were 3,840 overcrowded units in Chatham County, representing four percent of all occupied housing units. Renter-occupied units accounted for 70 percent of all the overcrowded units in Chatham County. The percentage of overcrowded units in 2000 was identical to the four percent recorded in 1990. The following table (Table 7.9) shows that the percentage of overcrowded units has been gradually declining for owners and gradually increasing for renters since 1990.

Table 7.9: Overcrowded Housing Units 1990-2000

	1990		2000	
	#	%	#	%
Chatham County Total	3,125	100	3,840	100
Owner Occupied	1,047	34	1,168	30
Renter Occupied	2,078	66	2,672	70
Unincorporated Total	471	100	592	100
Owner Occupied	269	57	328	55
Renter Occupied	202	43	264	45
Savannah Total	2,358	100	2,810	100
Owner Occupied	646	27	672	24
Renter Occupied	1,712	73	2,138	76

Source: U.S. Census Bureau

7.5.3 Owner and Renter Occupied Units

In the unincorporated area, 77 percent of all households are owner occupied. This is a substantially higher incidence of owner occupancy than in the City of Savannah (50 percent) and the county as a whole (60 percent). Although the 77 percent owner occupancy rate for the unincorporated area is high, it is slightly down from the 80 percent rate in 1980. Over the last 20 years, owner occupancy rates within the county as a whole, the City of Savannah, and the unincorporated area have remained fairly stable.

In 2000, 50 percent of Savannah's occupied housing units were owner-occupied, representing a slight decrease from the city's 51 percent owner occupancy rate in 1990. Because Savannah contains nearly 58 percent of all the housing units in Chatham County, the city's owner/renter split is a major factor in determining the county's owner/renter split (60/40 percent). In addition, 72 percent of the county's renters live within the City of Savannah. Prior to 2000, a majority of the occupied units in Savannah were owner-occupied units. This characteristic had been a part of Savannah's housing market for several decades, owing in part to the age of the housing stock and a small concentration of public housing complexes in the city. Until the

1990s, the renter-occupancy rate had been steadily increasing in Chatham County. The construction of several apartment complexes during the 1980s pushed the percentage of renter-occupied units up. Table 7.10 summarizes housing tenure in Chatham County, the City of Savannah, and the unincorporated area.

Table 7.10: Housing Tenure 1980-2000

	CHATHAM COUNTY		UNINCORPORATED AREA		SAVANNAH	
	Number	%	Number	%	Number	%
Year 2000						
Total Occupied	89,865	100	27,354	100	51,375	100
Owner Occupied	54,293	60	20,963	77	25,842	50
Renter Occupied	35,572	40	6,391	23	25,533	50
Year 1990						
Total Occupied	81,111	100	20,527	100	51,943	100
Owner Occupied	47,727	59	15,876	77	26,319	51
Renter Occupied	33,384	41	4,651	23	25,624	49
Year 1980						
Total Occupied	71,323	100	13,558	100	50,681	100
Owner Occupied	42,334	59	10,900	80	26,621	53
Renter Occupied	28,989	41	2,658	20	24,060	47

Source: U.S. Census Bureau

7.5.4 Costs of Housing

The cost of housing countywide, both owner-occupied and renter-occupied, has increased steadily over the past two decades. In 1990, the median price for a home in Chatham County was $63,300. By 2000, the median price of a home rose to $95,000, a 50 percent increase in a ten-year period. In Savannah, during the same time period, the cost of housing rose 43 percent from $54,800 in 1990 to $78,500 in 2000 (Table 7.11).

Table 7.11: Median Home Value/Rent for Specified Owners and Renters 1980-2000

	CHATHAM COUNTY	SAVANNAH
Owner-Occupied		
1980	$36,100	$33,200
1990	$63,300	$54,800
2000	$95,000	$78,500
Renter-Occupied		
1980	$133	$125
1990	$296	$281
2000	$475	$450

Source: U.S. Census Bureau (Not adjusted for inflation)

By comparison, the median income among Chatham County and Savannah households increased by 41 and 31 percent, respectively, between 1990 and 2000. If housing prices continue to increase faster than incomes, an increasing percentage of Savannah and Chatham County residents will find housing costs becoming unaffordable.

Between 1990 and 2000, the median contract rent for Chatham County increased by 60 percent, from $296 to $475. In Savannah, during the same time period, the median contract rent also rose 60 percent from $281 in 1990 to $450 in 2000. (Table 7.11) Contract rent is the dollar amount a renter pays under a rental or lease agreement, excluding utility costs (unless these costs are included in the rental agreement). However, the Census reports do

not necessarily provide an accurate measure of market rents. The rents reported by the census may be artificially low because many rental units in Savannah are either income and rent restricted (government subsidized rental apartments) or a part of the federal Housing Choice Voucher Program (Section 8), where residents pay no more than 30 percent of their incomes for rent.

An indication of the difference between contract rents and market rents is the federal government's estimate of fair market rents for the coastal area (Savannah, MSA). The fair market rent is the dollar amount a property owner is entitled to receive, less utility costs, for a rental unit occupied by a low-income tenant with a federal housing voucher. The federal government pays the difference between the fair market rent and the tenant's payment. The 2004 fair market rents in the coastal area range from $392 for a studio apartment to $796 for a four-bedroom rental unit, with an average market rent of $602 per unit (including allowances for utilities).

7.5.5 Special Needs

A variety of people within Chatham County and Savannah have special housing needs. Table 7.12 includes an inventory of some disabilities accounted for by the Census Bureau. In terms of how these disabilities affect housing needs, many simply require modifications to existing residences such as replacing steps with ramps and improving wheelchair accessibility. Other disabled people, such as individuals with extreme mental disabilities, require long-term residential care. Chatham County and Savannah have an array of residential services within the jurisdiction. There are shelters for victims of domestic violence and their families, rehabilitation centers for individuals recovering from drug addiction and mental illness, additional residential facilities for people with developmental disabilities, and transitional housing for homeless families and individuals. A number of agencies provide subsidized or affordable housing for older adults and there is a hospice residence for patients with terminal diseases.

Table 7.12 Age by Type of Disability

	CHATHAM COUNTY	UNINCORPORTATED AREA	SAVANNAH
Total people with disabilities	82,495	18,826	53,097
People 5 to 15 years:	2,582	758	1,558
Sensory disability	344	82	244
Physical disability	338	55	269
Mental disability	1,628	567	839
Self-care disability	272	54	206
People 16 to 64 years:	52,341	11,988	33,573
Sensory disability	3,206	788	1,928
Physical disability	8,896	1,998	5,551
Mental disability	5,714	1,496	3,625
Self-care disability	2,668	624	1,661
Go-outside home disability	11,668	2,344	7,988
Employment disability	20,189	4,738	12,820
People 65 yrs and older:	27,572	6,080	17,966
Sensory disability	4,648	1,210	2,871
Physical disability	9,066	1,933	5,939

Table 7.12 Age by Type of Disability			
	CHATHAM COUNTY	UNINCORPORTATED AREA	SAVANNAH
Mental disability	3,840	832	2,534
Self-care disability	3,345	676	2,293
Go-outside home disability	6,673	1,429	4,329

Source: U.S. Census Bureau, 2000

7.5.6 Historic Housing Inventory

By far, the greatest numbers of identified historic resources in the City of Savannah are located within neighborhoods that are listed on, or are eligible for listing on, the National Register of Historic Places. Ninety-two percent of these resources are residential structures. These pedestrian-oriented urban residential neighborhoods offer numerous advantages for rehabilitation such as established shade trees, paved streets, sidewalks, water and sewer, trash pick-up and public transportation. It makes more economic sense to maintain and upgrade older neighborhoods than to further expand suburban construction, which places new demands on transportation and other infrastructure systems.

The historic housing stock provides opportunities for a variety of housing types. Additionally, the quality of materials, craftsmanship, and detail would be prohibitively expensive to duplicate today. Listing on the National Register qualifies these houses for various federal and local rehabilitation tax incentive programs. For further discussion of the advantages and challenges faced in historic neighborhoods see Chapter 8: Historic and Cultural Resources. A complete list of individual historic resources can be reviewed at the Chatham County-Savannah Metropolitan Planning Commission (MPC).

7.6 Quality Growth Objectives

The Standards and Procedures for Local Comprehensive Planning require a review of Quality Community Objectives adopted by the Department of Community Affairs for consistent with local plans. The objective closely related to housing is identified and discussed:

- *Housing Opportunities.* The policies and activities of the county and city are consistence with the housing objective adopted by the Department of Community Affairs which states: 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.

Chapter 8.0 *Historic & Cultural Resources*

A temperate climate, abundant wildlife, and spectacular scenery have made Chatham County an ideal location for human settlement. From shell rings to mid 20th century subdivisions, there is physical and cultural evidence of over 4,000 years of human habitation and activity in Chatham County. These historic resources give the area its unique character and help create a cultural landscape that commemorates the evolution of the community's diverse history.

Hundreds of Native American archaeological sites have been identified throughout the County and like today's river marsh communities these prehistoric period settlements were largely associated with the marsh environment and its amenities. The node-like development patterns were connected by waterways and road systems laid out by the Indians on the tops of old sand dune structures and later paved by the European settlers. As transportation innovations evolved, development naturally occurred along these routes, expanding commercial and residential opportunities.

Planners are focusing national attention on New Urbanism and green design concepts. Savannah and Chatham County provide an existing showcase for how designed expansion, connected neighborhoods, multiple open spaces, tree canopy and buildings that respond to climatic conditions continue to create an exceptional quality of life.

8.1 Introduction

Over 8,000 historic and cultural resources have been identified in Savannah and Chatham County. These resources contribute to the character of the community's neighborhoods and are the basis of the area's robust tourist economy. In the 1960's Historic Savannah Foundation, the local non-profit preservation organization coined the phrase "In Savannah, historic preservation goes hand-in-hand with economic progress." At that time tourism was generating yearly revenues of less than $100,000. In 2003, six million visitors came to Chatham County to enjoy the tree canopied neighborhoods and historic architecture of the county. Heritage tourism contributed 1.2 billion dollars to the local economy. The preservation and revitalization of these historic areas is a primary goal in Chatham County.

8.2 Regional History

The aboriginal people of the Georgia coast were known as the Guale. They inhabited the lagoon and marsh sections of the coast where there were abundant food sources. The historic Guale extended their habitat along the river banks and tidal creeks. In the early 1600's the mainland settlements were encouraged by the Spanish to relocate to Barrier Islands. By 1702 incursions by the British drove the Spanish and the Guale to settlements near St. Augustine.[1]

Permanent European settlement came in 1733 when the British settled the Colony of Georgia to buffer their northern colonies from the Spanish in Florida. James Edward Oglethorpe founded Savannah as the seat of the thirteenth English colony near a Creek Indian village called Yamacraw. Oglethorpe forged friendly relations with the Indians which enabled him to establish a successful town 18 miles inland from the Atlantic Ocean. James Oglethorpe devised a colonial settlement plan that set it apart from other cities in the New World. The nucleus of the plan was the ward. Each ward had a name and was a part of a larger integrated regional land system that included town commons, gardens, farms, estates, agricultural villages and fortified outposts. The plan informed the architecture, resulting in a dense urban pattern of townhouses and carriage houses in the old town and a more and more suburban pattern as development advanced into the former farm lots. Modern-day street patterns closely follow the old land divisions between the farm lots. Beyond the farms were agricultural villages such as Hampstead and Highgate (now occupied by Hunter Army Air Field) and private estates on the water such as Wormsloe and Beaulieu. The plan was completed by fortified farming villages such as those at Thunderbolt and Modena on Skidaway Island.

Darien, Georgia Oglethorpe's second major settlement and Brunswick, Georgia were laid out more or less true to the Savannah model with squares and wards, but unlike Savannah,

[1] Historic Indian Period Archaeology of the Georgia Coastal Zone, David H. Thomas, Georgia Archaeological Research Design Paper No. 8, Athens 1993.

the physical integrity of the plan has not been preserved in these towns. Professor John Reps of Cornell University has written that "Savannah…used the power gained through municipal ownership of the Common to shape the growth in the public interest. The decisions to do so and, in the process, to replicate the original, spatially nonhierarchical system of uniform open squares produced America's most unusual city plan."

The outlying settlements were connected to the City of Savannah by waterways and colonial road systems. These colonial roads followed the high ground (usually the ridges of old barrier island dune structures). Early development naturally occurred along these routes including the Western Road (Louisville Road), the White Bluff Road (an extension of Bull Street), the Great Ogeechee Road (Southern Road), Wheaton Street (to Thunderbolt and the ferry to Skidaway Island), and the Augusta or River Road. Plantations were established along the Savannah and Ogeechee Rivers and on the islands such as Ossabaw, Skidaway and Wassaw.

Oglethorpe's policies against slavery restricted the size of farms and plantations in colonial Georgia, in stark contrast with South Carolina landholders and their slave labor force. The ban was lifted in 1752 when control of the colony reverted to the crown. Subsequently, rice production began in the Savannah and Ogeechee River basins. Slaves were housed on the plantations or in the city where they lived in lane cottages or along the edges of the old city. Notable pre-Civil War African American resources include the tabby slave cottages on Ossabaw Island, the Owens Thomas House carriage houses and the First African Baptist Church. During Reconstruction many of the former slaves established communities on the mainland near waterways such as Coffee Bluff, Nicholsonboro, Pin Point, Sand Fly and Grimball's Point. In Savannah, the Beach Institute and Brownsville were urban neighborhoods occupied by Freedmen.

Between 1826 and 1830 the Savannah and Ogeechee Rivers were connected by the Savannah and Ogeechee Canal. When completed, the canal was 16.5 miles long, 48 feet wide at the top and five feet deep. During the Antebellum period, the canal improved the transportation of products to the port of Savannah. Communities such as Bethel in Southwest Chatham grew up in conjunction with the canal. Competition from rail access to upland cotton through South Carolina, however, spurred the construction of the Central of Georgia Railway system. The railroad soon eclipsed the canal as an economic force. Railhead communities such as Burroughs grew up in outlying portions of the county from which farmers could ship their produce by rail.

After the Civil War, street railroads encouraged suburban and river resort development. With the advent of the automobile many of these summer resorts became year-round residential suburbs and palm-lined causeways connected these communities to the mainland. Street railroads enabled urban expansion into the former farm lots where larger lots and deeper setbacks were the norm. These neighborhoods are now desirable residential districts.

Industrial development replaced the Savannah River plantations in the Twentieth Century. Like the Nineteenth Century canal and railroads, industries spurred the development of industrial worker's communities like Woodville and West Savannah. Prior to World War II, the Savannah urban area was bounded roughly by DeRenne Avenue on the South, Pennsylvania Avenue on the East, and Lathrop Avenue and Laurel Grove Cemetery on the West. Outside of several smaller municipalities, the remaining areas were rural in character, dominated by dairy farms, timber and truck farming.

Since World War II, automobile-related mobility enabled urban expansion and suburbanization, which spread to all quadrants of the county. With the exception of the estates of Wormsloe, Beaulieu, Grove Point, Oakland, Lebanon and the islands of Wassaw and Ossabaw, there is little rural landscape left.

8.3 Savannah National Historic Landmark District

Savannah was founded in 1733. Although other British-planned cities preceded Savannah in the New World, Savannah was a utopian town plan carried through to completion. The aesthetic qualities embodied in the plan through its squares have influenced its quality of life for more than 270 years. In a dense urban environment, these open spaces served a multitude of social gathering purposes. The power of Savannah's unique plan, its uncommonly pedestrian-oriented setting, and its tree canopy tolerates significant architectural diversity.

The Savannah Historic District was designated a National Historic Landmark on November 13, 1966 for its significance in town planning and its significant architecture. The local design review district encompasses several wards to the west of the Landmark District in order to review development in the gateways to the Landmark District.

The architecture was originally surveyed in 1962 under the direction of the University of Virginia and Historic Savannah Foundation. This original survey appears to have a period of significance of 1733 to circa 1880. In 1977 the Keeper of the National Register affirmed that Trustees Garden was included in the boundaries and extended the period of significance to 1900.

In 1985 the nomination Landmark District was again amended and approximately 200 structures dating from 1900-1940 were added. In 1992, the historic preservation department of the Savannah College of Art and Design worked with the National Register Program of the National Park Service and resurveyed every building in the National Historic Landmark District. Georgia State Site Survey forms were filled out for over 1500 buildings and squares in the Savannah Historic District. The importance of this resurvey is that while earlier nominations recognized Colonial, Federal, Gothic Revival, Greek Revival and Italianate style buildings as significant, the 1990's survey recognized late nineteenth to mid-twentieth century buildings in the Second Empire, NeoClassical, Beaux Arts, International, Moderne, Art Deco, Queen Anne, Folk Victorian and pre-1940's residential and commercial vernacular buildings. Based on these findings the National Park Service is currently completing in 2005 a revised nomination that extends the period of significance officially to the 1940's. This is critical to the preservation of Savannah's early to mid-20th century architecture. Locally, these structures were added to the local survey in several surveys culminating in 2002.

The importance of this is that the Historic District and other subsequent historic neighborhoods are evolving compositions of numerous styles of buildings built over the years. These neighborhoods need to be reassessed over time to extend the period of significance as the neighborhoods age and to understand which buildings are contributing and worthy of preservation.

8.4 Historic Neighborhoods

Savannah's regional plan with its town lots and squares, garden lots, and farm lots formed a blueprint for growth that is evident in the street patterns even today. (See Chapter 5, Land Use for further discussion of the design of the Savannah town plan.) Major boulevards such as 37th Street, Victory Drive, Bull Street and Waters Avenue follow the former divisions between the farm lots. Edmund Bacon, author and city planner wrote that "The simple purity and humanity of the Oglethorpe concept is just as appropriate today as it was in 1733. It proved that an intimate and intensely human small scale unit can be the basis for large scale regional organization."

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The first successful extension of development into the former farm lots occurred in 1870. In the late 1860's street railroads were extended from Bay to Anderson Streets enabling the development of the **Victorian Historic District**, a mid-Nineteenth Century horse drawn streetcar suburb of modest frame houses embellished with exuberant builder's catalog ornamentation.

The Southern Road, or Ogeechee Road ran southwest past an 1867 development by Dr. Louis A. Falligant known as Brownsville. Dr. Falligant, a physician, was concerned with the welfare of the recently emancipated slaves and established a residential community on the outskirts of the city. The community grew into a prominent African American neighborhood and is listed on the National Register as the **Cuyler-Brownsville Historic District.**

The electrification of the streetcar in 1891 encouraged the extension of the plan into the **Thomas Square Historic District** and interesting neighborhood with examples of it's 18th century farm lot past in buildings such as the Andre Drouillard Plantation House, now the Cottage Shop on Abercorn Street. In more recent times the Thomas Square neighborhood housed much of the city's dairy industry. A number of former creameries and bottling plant structures are currently undergoing renovation for adaptive reuse. With the extension of the street car lines eastward neighborhoods such as the **Eastside-Collinsville-Meadows Historic District** flourished on former farmlands.

The second wave of development occurred in the early twentieth century particularly after the introduction and acceptance of the automobile (see Chapter 5 for a discussion of the resulting "ring" pattern of urban growth). Influenced by

the City Beautiful movement, many of these latter neighborhoods featured parks and landscaped boulevards as amenities

Across Victory Drive, Bull Street forms the western boundary of the **Ardsley Park-Chatham Crescent Historic District**, two early Twentieth Century planned automobile suburbs significant for the incorporation of multiple public parks, architecture and streetscape amenities. To the East and South of these neighborhoods are **Parkside** and **Ardmore** two more automobile suburbs built with park amenities and which are listed or eligible for listing on the National Register of Historic Places. To the East **Gordonston**, was laid out by Juliette Gordon Low and her brothers on her family's farmlands. An eight acre park and radiating streets anchor this neighborhood of Colonial Revival and Craftsman style houses.

On the south side of the city, White Bluff Road (as Bull Street south of DeRenne Avenue is called) passes near the colonial town of Vernonburg**,** incorporated in 1742 by German indentured servants. Nearby plantation sites included Vaucluse and Cedar Grove among others. South of Vernonburg is Rose Dhu Island. The island has a Civil War battery and since 1915, has been the site of a Girl Scout camp. Reconstruction era African-American sites and settlements along the road include Nicholsonboro, Mt. Herman, Mt. Pleasant, Coffee Bluff and the White Bluff Zion Baptist Church Cemetery. Rapidly decaying along the side of the road near Felt Drive is the ruin of a country store that provided staples and gasoline to the neighborhood residents.

After WW II, the rural appearance of the White Bluff area began to change as mid Twentieth Century subdivisions such as **Windsor Forest** were developed. Free of the constraints of the Oglethorpe street grid, these modern subdivisions used curvilinear streets and large lots for siting ranch style houses.

The urban development of Savannah, constrained by low-lying lands on the east and west, generally followed a north to south pattern. In 1953, DeRenne Avenue on the South, Bee Road on the East, and West Broad Street (MLK) on the west (with a few exceptions such as the Gordonston and West Savannah neighborhoods) enclosed the urban areas of the city. South of DeRenne Avenue were pastures and farm fields, remnants of the more than 60 small dairy businesses that had flourished in Chatham County, along with a myriad of small truck farms.

The neighborhood now known as **West Savannah** was reserved for Indian lands in Colonial times. The Jasper Springs Monument on Augusta Road commemorates the Revolutionary War Battle of Savannah that took place in this vicinity in 1779. Later the lands became rice growing acreage; however, this was discontinued in 1818, when wet culture was prohibited within three miles of the city limits.

At the turn of the century the area was still rural, occupied by truck and dairy farms. In 1907, Father Ignatius Lissner and a group of Alsatian priests of the Society of African Missions came to Savannah to aid in the education of African-American Catholic children. He founded St. Benedict the Moor's church in 1907 in downtown Savannah, St. Anthony of Padua church and school in West Savannah in 1909 and the St. Mary's School in the Cuyler Brownsville neighborhood in 1910.[2] The St. Anthony mission bought lots from Victor

[2] www.smafathers.org

Schreck and the Urban Development Company. They planted fruit trees and vegetables and helped support the mission through the sales of their produce and honey in the Old City Market. When it appeared that legislation would be passed forbidding Black children to be taught by White teachers, Father Lissner, together with Mother Mary Theodore Williams, founded in 1916, the Handmaids of Mary in Savannah. This religious order of African-American women taught in the St. Anthony school until the early 1920's when they were transferred to New York. Lissner Avenue in West Savannah commemorates this era of the neighborhood's history.

New employment opportunities for West Savannah came with industries such as the Savannah Sugar Refinery in 1917, the Diamond Match Company in 1918, and Union Camp in 1930. The urbanization of West Savannah began at this time. The Fell Avenue public school was built in 1918 between Richards and Augusta Avenue. Residential activity increased after WWII when single family free standing homes began to replace the earlier rented row houses. A new St. Anthony's school was built in 1949 on the northeast corner of Richards and Fell Street. St. Anthony's remained central to the neighborhood, with mass held in an old wooden church and a bell that marked the hours for the neighborhood. In 1969, the school was closed and the students were transferred to the Cathedral School. The church replaced the original one story wooden buildings between 1972 and 1979.

The **Woodville** neighborhood appears on the 1914 Gardner Map of Savannah, however the history of the neighborhood is much older. Reverend John H. Sengstacke was the son of a slave and a German merchant. Since the social conditions of the time dictated that the status of the child followed that of the mother, his parents sent him to be raised in Germany. He returned to Savannah and in 1871 he founded the Pilgrim Congregational Church. He also founded a newspaper, the Woodville Times in the 1880's. With his wife, he ran the Sengstacke Academy in Woodville that was still operating in the 1920's. John Sengstacke's stepson, Robert S. Abbott, founded the Chicago Defender.[3] The Woodville Cemetery lies at the foot of Roberts Street. The cemetery appears to have begun as a plantation burying ground for whites as well as African-Americans. One mausoleum is similar to that of Jonathan Bryan at Brampton Plantation, of late Eighteenth or early Nineteenth Century manufacture. The earliest tombstones date from the 1920's. Nearby stood the Woodville Community Center, built by the Works Progress Administration in 1935 for Sophronia M. Tompkins. Ms. Tompkins was principal of the Woodville Elementary and Junior High Schools and had the

[3] An Historical Guide to Laurel Grove Cemetery South by Charles J. Elmore, Ph.D. 1998

Woodville Community House and Training Center built to train youth in domestic skills such as cooking and gardening. Woodville Elementary School was built in 1919. It later became Tompkins High School. All these old buildings have been recently replaced by the new Tompkins campus.

Savannah remains a city of residential neighborhoods. More than 88 have been identified for planning purposes. There are 10 identified historic neighborhoods within the City of Savannah. Eight of these are listed on the National Register of Historic Places. (A ninth district, The Central of Georgia Historic District is Industrial.) Midtown and Ardmore are eligible for listing. These historic neighborhoods provide diverse housing opportunities, high quality materials, walkable neighborhoods, mixed use opportunities (such as corner stores), access to transportation lines, and in some cases, large institutional buildings that can be converted to affordable and elderly housing.

Because of the hundreds of resources located within these historic districts, only the total number of contributing resources within each district have been listed in the resource tables. More detailed lists of addresses and maps of contributing structures may be obtained from the Metropolitan Planning Commission.[4] Structures listed on the National Register are listed individually within each district. An additional 12 neighborhoods with resources from the recent past are currently under review for historic status at the time of this report.

8.5 Chatham County-Savannah Resources

8.5.1 Southeast Chatham

The historic neighborhoods in Southeast Chatham include Isle of Hope, Sandfly, Pin Point, Montgomery, Beaulieu, Vernon View/Rio Vista/Burnside Island, and Skidaway Island. The aesthetic resources include tree canopy, scenic vistas, gardens and historic resources dating from the Nineteenth and Twentieth Centuries.

The original Beaulieu settlement was deeded to William Stephens, the first President of Georgia, by the Trustees of the Colony in 1737. The Stephens plantation site remains significant for its archaeological potential. During the Revolution, approximately 4,000 French and Haitian troops under Count d'Estaing landed at Beaulieu to support American troops, including Pulaski's Legion, under the command of General Benjamin Lincoln. These troops were defeated in an ensuing battle on the west side of Savannah.

On Orphan House lands adjacent to Beaulieu, the Bethesda Home for Boys was founded in 1740 by George Whitefield, an associate of Oglethorpe. It is the oldest existing orphanage in America, and is listed on the National Register of Historic Places.

Across the marsh from Bethesda, Skidaway Island strategically served in the outer defense of Savannah during both the Revolution and Civil wars, and is the site of historic

[4] The City owns approximately 40 public monuments. These are overseen by the Site and Monument Commission and Park and Tree Department. A complete listing of public monuments and their sculptors may be seen at MPC.

Confederate earthworks and batteries including Indian Fort Battery. Other significant Civil War batteries and fortifications are located at Green Island and Beaulieu.

During Reconstruction, a number of African-American communities were established near the water. These include Pin Point, Grimball's Point, and Sandfly. All were settled by former slaves who once worked on Skidaway, Wormsloe or Ossabaw Island plantations. Some individual properties within these communities have been identified as eligible for National Register listing, while others are locally contributing. For instance, in Sandfly, the Union Baptist Church and eight residences in the Luten Family District are eligible for National Register listing because they are locally significant in the areas of ethnic heritage (African-American) and architecture.

In the late Nineteenth Century Sandfly was a streetcar hub. Streetcar lines extended from downtown Savannah to a station located at the intersection of Montgomery Crossroad and Skidaway Road. Streetcars provided access to the cool breezes along the marshes, encouraging summer resort development. Isle of Hope was connected to the mainland by Central Avenue and was established as a river resort "on the salts", as these salt marsh communities were called. Wormsloe Plantation was established in 1736 by Noble Jones. Now a State Historic Site, Wormsloe contains the tabby ruins of Jone's fortified house, as well as a later house with extensive gardens, a Greek Revival library and a 1.5 mile long oak-lined drive. The Isle of Hope Historic District contains numerous buildings and summer cottages, some of which date from the 1820's. Historically significant summer homes are also located on nearby Grimball's Point.

Many of the resort islands were originally accessible only by boat. Palm-lined causeways were built in the 1920's. The Burnside Island causeway off Shipyard Road and Isle of Hope causeway off Skidaway Road are two examples (see Chapters 9 and 10, Natural and Transportation Resources for additional canopy roadway and palmetto avenue discussion).

With the advent of the automobile, many of these summer communities became year-round residential suburbs while retaining a rural character. A notable modern plantation, Modena, was established in 1934 on Skidaway Island as a vacation home and working Angus beef cattle farm for the Roebling family. It was named for Oglethorpe's original fortified settlement on Skidaway. Several unique outbuildings include a power and fire house, a round barn and a cane grinding shed. In 1967, the Roeblings donated almost 800 acres and all the buildings except the family home to the University of Georgia for use as part of the Ocean Science Center of the Atlantic and the Skidaway Institute.

8.5.2 Savannah River and Coastal Barrier Islands

Archaeological evidence indicates nomadic Indian occupation on Ossabaw Island from about 2000 B.C. until the arrival of Euro-American explorers in the 1500's. Unlike Sapelo and St. Catherine's Island to the south, no evidence, to date, has been found to suggest Spanish mission activity on Ossabaw.

Ossabaw Island was initially reserved for the Indians and it remained that way until 1759-1760 when it was transferred to the British Colonial government. John Morel acquired the island and commenced the cultivation of cotton and other cash crops. The island was divided after the death of John Morel in 1776 and four plantations emerged. From 1760 to 1861 cotton was planted on the island. Live oaking, the act of harvesting timber for ship construction was also a significant Eighteenth and Nineteenth Century industry on the island. Even in the Twentieth Century, oak trees from Ossabaw Island were used for landscaping the avenues in Daffin Park in Savannah.

Ossabaw Island's African-American population lived first as slaves on the plantations. The several plantation sites offer numerous archaeological resources for slave life studies. During Reconstruction, the island was under the control of the Freedmen Bureau's agent, Tunis G. Campbell. Former slaves continued to live on the island for several decades. Following the hurricane of 1881 they left the island, moving their church, Sweetfield of Eden, to Pin Point on the main land.

In 1924, the island was acquired by Dr. Henry N. Torrey (1880-1945) of Detroit. He constructed a home designed by Henrik Wallin, a well-known Savannah architect. The State of Georgia acquired the island in 1978 from Dr. Torrey's daughter, Eleanor Torrey West, who retains a life estate.

Wassaw Island, located immediately north of Ossabaw Island, was purchased in 1792 by Timothy Barnard. It was also used for plantation purposes and then purchased as a private vacation retreat by the Parsons family of New England. During 1898, the Wassaw Battery was built as part of the Spanish-American War coastal defenses.

Several other islands are located within the Savannah River channel including, Onslow, Hutchinson, and Argyle Islands. These islands were used for tidewater rice cultivation in the Eighteenth and Nineteenth Centuries. Historic resources from this era are archaeological in nature and include remnants of canals, flood gates and trunks, rice mills, and residential complexes.

8.5.3 Back Barrier Islands

The back barrier islands include Wilmington, Whitemarsh, Talahi, Oatland, McQueens, Cockspur and the vicinity of Causten's Bluff on the Savannah River. In the Eighteenth and Nineteenth Centuries, Wilmington, Whitemarsh, Talahi and Oatland were rural farming areas, accessible only by boat. Indigo and cotton were the principal crops. Joseph Bryan's plantation on Talahi, called Non Chalance, and the farm of Dr. Arminius Oemler on Wilmington Island were typical. Dr. Oemler, an agriculturalist, was also a promoter of the oyster industry in Georgia. In 1893, the Wilmington Island Pleasure and Improvement Company started a summer community on the south end of Wilmington Island. More

resort development followed in 1927 with the Hotel Wilmington Island (later called the General Oglethorpe), a popular destination for golf. Today this building is restored as condominiums.

On Oatland Island, the Brotherhood of Railway Conductors built a large retirement home, which from WWII to 1974 became a mosquito control research center. Today it serves as a natural resource education center for the Board of Education.

Cockspur Island held a strategic location at the mouth of the Savannah River for the protection of Savannah. Two forts preceded Fort Pulaski, which was built as a part of a line of fortifications along the Atlantic and Gulf Coasts after the War of 1812.

Fort James Jackson, was built on Salter's Island, about three miles east of downtown Savannah. Its purpose was to protect Savannah from naval attack. In the early Nineteenth Century the marshes around the fort that were cultivated for rice were drained and filled in with dredge spoils from the River. The fort is significant as one of the few preserved Second System Seacoast Fortifications in the United States. During the Civil War, three lines of defense were adopted to protect Savannah. The first line of defense extended from Causton's Bluff to the Ogeechee River and embraced Greenwich, Thunderbolt, Isle of Hope, Beaulieu and Rose Dhu. Detached works were also constructed on Whitemarsh, Skidaway, and Green Islands. Many of these defenses are still evident.

8.5.4 Southwest Chatham

In the late Eighteenth and early Nineteenth Centuries, several large plantations were located between the Great and Little Ogeechee Rivers. Built in 1756, Wild Heron Plantation, located at the intersection of Wild Heron and Grove Point Roads, is one of the oldest domestic structures in the state. By the 1830's, almost 1,000 slaves worked in the rice fields of several large rice plantations on the Ogeechee. Following the Civil War, many of the former slaves remained in the area. Burroughs was one such rural African-American community, carved out of land originally associated with Wild Heron Plantation. The New Ogeechee Missionary Baptist Church (1893) and St. Bartholomew Episcopal Church served this community of approximately 50 houses, a school, and a store. The one room school is situated next to St. Bartholomew Church. The community of Burroughs became a railhead for the shipping of rice and vegetables into Savannah.

Not far from Burroughs is the Savannah and Ogeechee Canal a 16.5 mile long canal constructed from 1826 to 1830 by slaves and Irish immigrants. The canal, upon its completion, shipped various commodities. The Bethel community near the canal had its start in the late 1770's when Jacob Gould built a house on Little Neck Road. The nearby Bethel Cemetery dates from 1848 and is contemporary with the 19th century Gould house (now restored as a private residence).

Lebanon Plantation is another colonial-era rice plantation located on the Little Ogeechee River. The main house dates from 1873 and in the Twentieth Century was the location for the development of the Savannah Satsuma orange. During the Civil War, Lebanon was the site of Federal troop headquarters. Confederate and Union army camps and emplacements can be found all over southwest Chatham County.

Just north of the Ogeechee River, at Ogeechee Road and Canebrake Road, stands the plant introduction station established by Barbour Lathrop in 1920. A Cuban rice planter, Andreas Moynelo introduced bamboo plants from Japan on nearby Vallambrosa Plantation. These were transplanted to the site of the Bamboo Farm in 1890 and came to the attention of Mr. Lathrop in 1915. This fascinating site is still an active plant testing and coastal garden facility run by the University of Georgia.

8.6 Issues and Opportunities

In the introduction to this Chapter the economic impact of tourism and its direct correlation to historic resources was demonstrated. The renovation of historic resources is also good for business. Between January 2001 and March 2004, $50.3 million was invested in the Broughton Street Urban Redevelopment Area (BURA) and $75.2 million was invested along Martin Luther King, Jr. Boulevard (MLK) and the Montgomery Street corridor. Appraised property values in both targeted areas have increased exponentially. In 1986, at the inception of the BURA designation, commercial properties in the 12 block area were valued at $38.7 million. Today, that figure has dramatically increased to more than $123.3 million, excluding public properties. In 2000, commercial properties along the 52 block MLK and Montgomery corridor were valued at $75.9 million. Today that figure has increased to $174.6 million, excluding public properties.[5]

Historic commercial buildings provide interesting space for retail, inns, lofts and condominiums. In 2002-2003 approximately $6.5 million has gone into condo/loft acquisition and improvements in the Broughton Street Urban Redevelopment area.[6] The housing stock in historic neighborhoods provides a range of housing choices in unique landscapes settings close to existing transportation lines. New developments in proximity to historic neighborhoods gain value from that location. In turn, these developments need to reinforce the street patterns, public accessibility and aesthetics of the surrounding historic neighborhoods.

Despite the positive statistics not all communities recognize the value of historic preservation. In a recent survey of Certified Local Governments across Georgia, six main concerns were raised. In order of magnitude these were: demolition by neglect and

[5] Figures obtained from Savannah Development and Renewal Authority
[6] Savannah Development and Renewal Authority.

speculative demolition, lack of funds, substandard housing, apathy both by the community and local elected officials, subdivision of large properties and/or abandoned downtowns.[7]

The Historic Preservation Subcommittee of the Chatham County-City of Savannah Tricentennial Plan and the Steering Committee identified eight similar concerns. These are discussed below.

8.6.1 Preserving Buildings Within the City and Unincorporated County

There are 7,730 individual historic resources that have been identified within the City of Savannah. The great majority of these (6,600) are located within the nine historic districts that have been listed on the National Register of Historic Places. The overwhelming number of resources are residential, dating from the late Nineteenth and early Twentieth centuries. In looking at the age of resources within the city, only 32 resources were identified from the period 1733-1800 and 177 from the period 1801-1850. Ninety-eight percent of the resources identified date from after 1850. This demonstrates the critical need to preserve Savannah's remaining older buildings.

Far fewer contributing resources (230) were identified in unincorporated Chatham County. However, over 1,000 archaeological sites have been identified. They have not been individually listed in this report for the purpose of security. As in the city, the majority of the identified resources (aside from archaeological) are residential, dating from the period 1851-1950.

The industrial category has the least number of identified resources, followed by rural resources. This reflects the urbanization of Chatham County and the subsequent loss of its rural context. In the case of the Industrial resources, this may be due to under reporting.

8.6.2 Public Policies that Protect Historic Resources.

The National Register of Historic Places is a Federal program administered by the National Park Service. Authorized under the 1935 Historic Sites Act and expanded under the National Historic Preservation Act of 1966, the register is a guide to be used in identifying the nation's historic resources. Those resources listed on the National Register are worthy of preservation and consideration in local, state and national planning processes. In addition, listed resources may be eligible for national, state or local grants and tax incentives.

Statewide in Georgia, there are 86 historic districts and 449 individual sites listed on the National Register. Currently, the City of Savannah has a total of nine historic districts (8 residential/mixed use neighborhoods and one industrial) listed on the National Register containing a total of 6,600 contributing structures. In addition, within the City 22 structures are individually listed on the Register. In unincorporated Chatham County one historic district and 12 individual sites are listed. These nominations to the National Register have originated locally, usually sponsored by a neighborhood association or other non-profit group. The final authority to list neighborhoods in the National Register rests

[7] http://hpd.dnr.state.ga.us Certified Local Government facts

with the Georgia Department of Natural Resources, Historic Preservation Division, and the National Park Service (see Figure 8-1 Historic District Statistical Profile).

Continued efforts need to be made to list all eligible properties and districts on the National Register. Examples of eligible districts include Wassaw Island, and the Ardmore and Midtown neighborhoods. Examples of individual eligible sites include the buildings at Oatland Island and the Bamboo Farm among others. Private surveys are currently underway in Carver Heights, Pine Gardens, and by the Bolton Street Baptist Church and Isle of Hope Union Baptist Church.

A listing on the National Register of Historic Places, either individually or as a contributing property to a National Register Historic District, places no restrictions on the use or disposition of the property or otherwise obligates the private property owner in any way. An updated list of sites designated on the National Register in the City of Savannah and Chatham County is available on the National Register web site.

Section 106 of the National Historic Preservation Act requires a Federal agency head with jurisdiction over a federal, federally assisted, or federally licensed undertaking to take into account the effects of the agency's undertakings on properties included in or eligible for the National Register of Historic Places, and prior to approval of the undertaking, to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking (see also Programmatic Agreement).

The Georgia Historic Preservation Act is the State's enabling legislation for local preservation commissions and design review of historic properties. The act provides minimum standards and guidelines for local preservation ordinances, provides membership qualifications for local preservation commissions, and authorizes specific commission activities such as survey and inventory and recommendation for listing on the National Register. The Savannah Historic District and its Board of Review were set up prior to the passage of the 1980 Act and are, therefore, grandfathered under the Act.

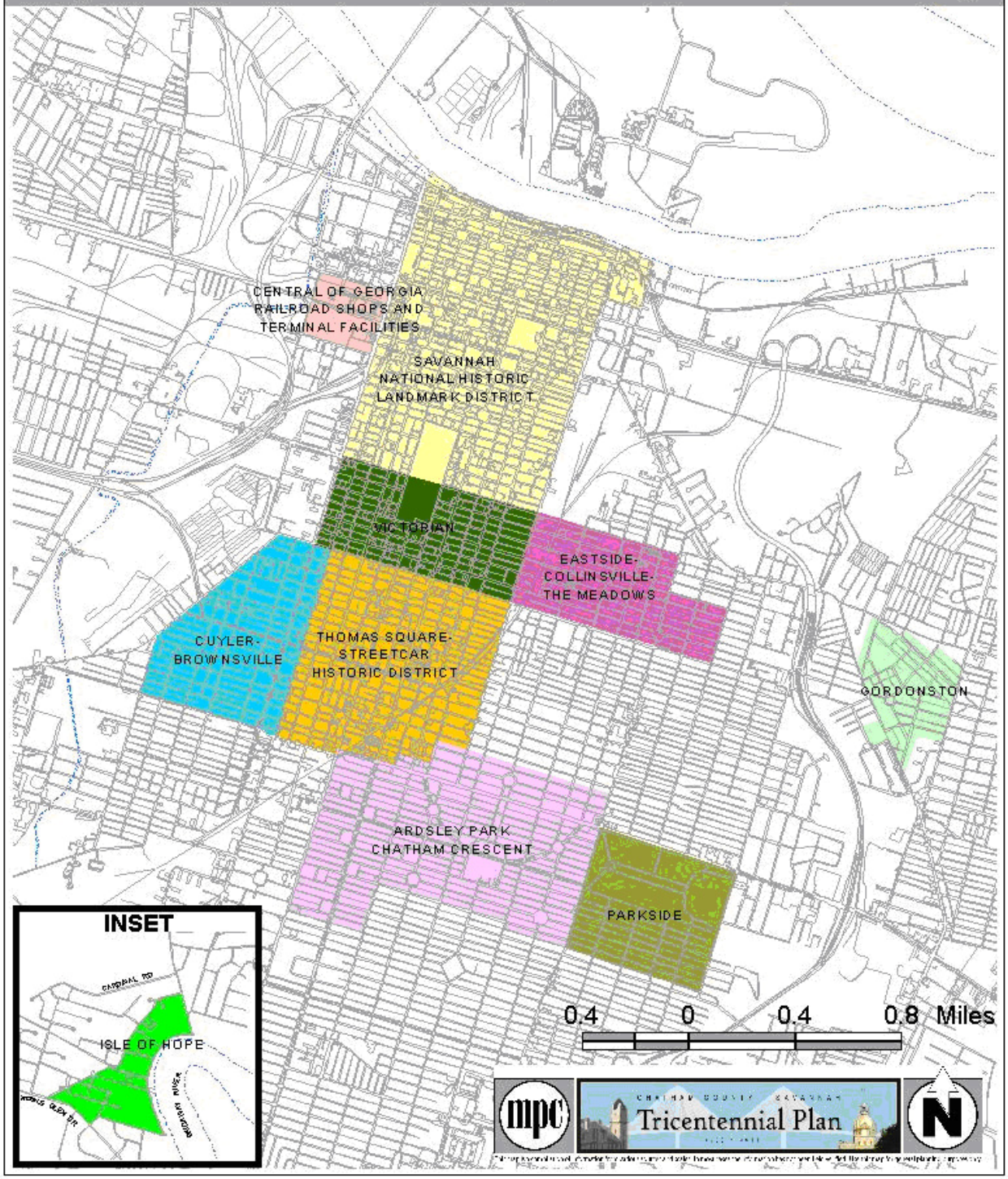
The Certified Local Government (CLG) Program extends the federal and state preservation partnership to the local level. Any city, town, or county that has enacted a historic preservation ordinance, enforces that ordinance through a local preservation commission, and has met requirements outlined in the Procedures for Georgia's Certified Local Government Program is eligible to become a CLG. The benefits of becoming a CLG include: 1) eligibility for federal historic preservation grant funds; 2) opportunity to review local nominations to the National Register; 3) opportunity for technical assistance; and 4) improved coordination with state and federal participants.[8]

One hundred and nine local governments in Georgia have historic preservation ordinances and commissions. Sixty-nine are Certified Local Governments recognized by the State Historic Preservation Office and National Park Service as meeting a national standard for incorporating historic preservation into their local planning efforts.[9] In 1996, the City of Savannah became a Certified Local Government. This enabled the City to be eligible for s

[8] http://hpd.dnr.sate.ga.us Georgia Historic Preservation Division Certified Local Government Program Information.
[9] Ibid

Table 8-1. Historic District Statistical Profiles					
HISTORIC DISTRICT	DATE LISTED	AREA (in Acres)	CONTRIBUTING STRUCTURES	HOUSING UNITS (2000 Census)	POPULATION (2000 Census)
National Landmark	1966	533.6	1286	3,905	6,102
Victorian	1974/82	167.7	799	1,451	2,638
Central of Georgia Railroad Shops and Terminal Facility	1976/78	41.3	16	6	11
Isle of Hope	1984	91.5	62	156	351
Ardsley Park Chatham Crescent	1985	394.0	1056	1,716	3,423
Thomas Square Streetcar	1997	310.0	1113	2,116	4,019
Cuyler-Brownsville	1998	193.8	909	1,202	2,663
Parkside	1999	161.7	270	327	622
Gordonston	2001	86.2	170	332	661
Eastside, Collinsville, The Meadows	2002	156.7	492	737	1,706
Total	--	2,136.5	6173	11,948	22,196

Figure 8-1
National Register Historic Districts
City of Savannah and Unincorporated Chatham County



special earmarked preservation planning grants through the State Historic Preservation Office.

In 2005, the Chatham County Commission directed the Chatham-Savannah Metropolitan Planning Commission to draft a preservation ordinance for the county for its consideration. This would enable the County to designate local historic districts.

8.6.3 Conserving Energy Through Appropriate Techniques

Operable windows, shutters, awnings, skylights, natural light, vestibules are all features that make historic structures more energy efficient than some contemporary buildings. Where retrofitting is necessary to improve energy efficiency the historic character of the building should not be jeopardized. This is especially critical where windows must meet contemporary storm impact codes.

8.6.4 Rehabilitation of Affordable Housing

The Federal government allocates funds that local governments can use to acquire and rehabilitate existing housing units and abandoned commercial or industrial buildings for affordable housing. These buildings must be listed on or eligible for listing on the National Register. Section 106 of the Historic Preservation Act of 1966 (NHPA) requires that all federally funded or licensed undertakings be reviewed for potential adverse impacts to properties listed on or eligible for listing on the National Register of Historic Places. This applies to the City's Community Development Block Grant Programs including its programs for the revitalization of low income housing.

Initially, all of the City's CDBG rehabilitation projects were sent to the Georgia DNR Historic Preservation Division for review. This resulted in project delays. However, in 1990 the City of Savannah entered into a *Programmatic Agreement* with the State Historic Preservation Office (the body that administers the 106 process at the State level) and the Advisory Council on Historic Preservation to expedite the review process. A qualified preservation professional was identified locally to conduct reviews of specific local projects for compliance with the Secretary of Interior's standards on behalf of the State Historic Preservation Officer. This cut the review time to an average of 10 days per project. In return for this delegation of review authority, the City completed its comprehensive baseline architectural survey to identify properties eligible for listing on the National Register. In the 14 years of its implementation, the Programmatic Agreement has enabled the City of Savannah to assist in the repair and rehabilitation of hundreds of affordable housing units.

8.6.5 Design Guidelines for all Historic Neighborhoods

Almost without exception, contemporary residential developments have mandatory covenants governing what can be built within the community. Covenants are also used to protect the property from future development that might adversely affect its character. Without design review, character-defining features of historic neighborhoods can be eroded away. Four neighborhoods in the City of Savannah have historic zoning that allows review of alterations and new construction for adherence to specific neighborhood design criteria. They are the Savannah Historic District, the Victorian Planned Neighborhood Conservation District (PNC), the Cuyler-Brownville PNC and the Mid-City District (Thomas Square-

Streetcar Historic District). Local design review should not be confused with the federally mandated Section 106 review. These are two separate reviews, and for tax projects within local design review districts both reviews must be carried out. Local design review does not include interiors. However, reviews under Section 106 may include interiors. Clearly articulated and illustrated design standards are essential in preserving the architectural and community character of a neighborhood. Savannah has had design standards for the historic district since 1973. These standards have been periodically updated with public input. During the past 30 years design review overlay zones have been placed over the underlying land use zoning. Under the current zoning ordinance revisions, design review standards will be incorporated directly into the various historic neighborhood zoning districts, rather than as an overlay.

The need for standards in these neighborhoods is critical. Modest historic structures are being torn down and replaced by incompatible new structures. Inappropriate materials are being used such as fixed plate glass in lieu of double hung windows and new infill structures are being built that do not enhance the neighborhood in terms of scale, materials and setbacks. Design standards help property owners conserve the character-defining features of their property while helping the owner to comply with new standards such as the hurricane codes.

8.6.6 Maintenance Regulations for Historic Areas

Demolition by neglect can result in the loss of character defining features and building fabric that in the worst case can result in the complete loss of the resource. Only the Landmark Historic District has adequate protection against demolition. In the Victorian district the property owner only has to state that the property is incapable of an economic return and upon denial of the demolition, wait one year or less and then tear down the resource. Under the Cuyler Brownville and Mid-City (Thomas Square-Streetcar Historic District) ordinances much more rigorous documentation of evidence to support the demolition of a resource is required. However, the resource may still be lost after a six month stay of demolition.

Minimum maintenance requirements need to be strengthened to require that a vacant building be maintained in a completely weather-tight condition. Boarding windows while the roof continues to leak does not preserve the resource. In addition, the longer a structure sits vacant, the more vulnerable it is to "mining" or the illegal removal of character-defining features such as mantels and newels.

8.6.7 Adequate Funding to Protect Cultural and Historic Resources

Funding for historic preservation has always been scarce and often requires innovative use of existing programs. Listing on the National Register enables districts and properties to be eligible for consideration for federal funding incentives. Such funds have been used by the City to fund its affordable housing programs and by individual developers and homeowners to complete their restoration funding package. Future sources of funding such as tax increment financing, and affordable housing funds need to be explored.

Listing on the National Register either individually or as a contributing structure within a National Register District is a prerequisite in order to take advantage of certain federal and

state tax incentives for rehabilitation. Rehabilitation must meet the Secretary of Interior Standards for Rehabilitation. Interior work is also reviewed.

Federal Rehabilitation Investment Tax Credit

This program provides a twenty percent federal tax credit of qualified rehabilitation expenses, applicable towards federal tax liabilities. This is a program of the National Park Service that is administered at the state level by the State Historic Preservation Office.

State Preferential Property Tax Assessment Program

Qualified properties receive an eight-year preferential property tax abatement, which means the property assessment is frozen at the pre-rehabilitation value for eight years. In the ninth year the assessment goes up to the difference between the frozen value and the fair market value, and in the tenth year the assessment goes to the fair market value. All work for this program must be reviewed and approved by the State Historic Preservation Office.

Historic preservation can be a cost effective way to provide affordable housing through the reuse of existing historic buildings (see also section 8.6.4). In the City of Savannah, between January, 1966, and April 2004, 446 Investment Tax Credit and Preferential Property Tax Assessment projects have been approved for a total of 1,672 units totaling approximately $83,101,863 million in rehabilitation costs. An example of an affordable housing project is the Heritage Place apartments. Located in the Cuyler-Brownsville Historic District, this project consists of the Charity Hospital, listed on the National Register and the Florance Street School. The financial package for this project included state and federal low income housing tax credits, Federal Home Loan Bank of Atlanta Affordable Housing Program funds, City HOME funds, blended with CHSA money and Historic Tax Credits (For Charity Hospital only).

Income Tax Credit Program for Rehabilitated Historic Property

This program allows eligible participants to apply for a state income tax credit equal to 10 percent, 15 percent, or 20 percent of rehabilitation cost up to $5,000, depending on the building type and use. It applies to eligible rehabilitation projects started after January 1, 2004. Both historic residential and commercial properties are eligible to participate. The credit is a dollar for dollar reduction in taxes owed to the State of Georgia.

For further information on these state programs refer to the Georgia State Historic Preservation Office web site.

Savannah Development and Renewal Authority

This City authority administers the Business Improvement Loan Fund which provides façade improvement grants to owners rehabbing commercial properties on Broughton Street and in the Martin Luther King, Jr. Boulevard-Montgomery Street corridor. Since 1993, the program has successfully leveraged $639,574 in public sector loans with more than $14.6 million in private sector funds to improve 31 structures in the two focus areas. This equates to $22.83 of private sector dollars for every $1 of public investment. The façade improvement program is funded through both Community Development Block Grant and the city's General Fund.

The SDRA also administers the Sprinkler Cost Assistance Program which assists in the financing of fire suppression systems in buildings under rehabilitation in the focus areas. The Sprinkler Cost Assistance program is funded through the City's Water Enterprise Fund.[10]

Local Non-Profit Preservation Organizations

Historic Savannah Foundation, Inc. is a local private non-profit preservation organization founded in 1955 to preserve the Oglethorpe plan and architecture of Savannah. Now in its 50th year Historic Savannah was instrumental in advocating National Register listing for the National Historic Landmark District and in saving hundreds of buildings from demolition. The organization administers a revolving preservation fund to buy and resell endangered historic structures for rehabilitation. They hold façade easements on a number of structures and they also provide design services for rehabilitation.

8.6.8 Conservation Districts in Unique Neighborhoods

The proposed County Preservation Ordinance makes a provision for designating neighborhoods with character defining design characteristics, but which are not yet old enough to be classified as historic. The curvilinear street patterns of the mid Twentieth Century neighborhoods or the tree coverage and building location of waterfront neighborhoods may be examples of characteristics for which criteria could be developed that would protect these features.

8.7 Assessment

8.7.5 Historic Resource Conservation

The establishment of Fort Pulaski in Eastern Chatham County as a National Monument in 1924 helped promote an awareness of the importance of preserving the area's historic built heritage. The National Park Service sent several historians to Savannah during the 1920's and 1930's who were charmed with the City's architecture and squares. They urged

[10] Figures were obtained from the Savannah Development and Renewal Authority August 2004.

Savannahians to develop a comprehensive city plan based on a survey of historic sites that would act as a basis for a movement that would preserve the beauty of the old, and adapt modern buildings to harmonize with the general plan.

At about the same time, the first of three photo inventories by the Historic American Buildings Survey occurred in Savannah. The second was in 1965 and together 67 buildings were documented. These surveys reflected the preservation thinking of the day which focused on individual landmarks rather than whole districts of buildings. There were no policies in place to prevent demolition and many of the documented buildings were subsequently torn down for parking lots.

In 1954 the City's market on Ellis Square was demolished for a parking structure and the next year a similar fate awaited the Davenport House. Although the Owens Thomas House and the Wayne Gordon House had been purchased in the early 1950's to be opened to the public as house museums there was no organization to champion the cause. The threat to the Davenport House prompted seven women to start Historic Savannah Foundation who saved the Davenport House and began the advocacy for preserving the City's historic heritage. One of the founding members of Historic Savannah had been instrumental in organizing the Junior League of Savannah. League contributions made it possible for the Foundation to hire a planning consultant who helped the Foundation conduct a comprehensive architectural inventory of Savannah which was later published with their help as the survey book *Historic Savannah*.

Concurrent with the founding of Historic Savannah, the City and County formed a joint planning commission in 1955. The Metropolitan Planning Commission faced two issues of vital significance in the first decade of its existence. One was the need to protect the historic architecture identified in the survey and the other was to adjust the zoning to allow new development consistent with the character of the historic area. Following the designation of the Oglethorpe Plan as an historic district on the National Register of Historic Places, the Mayor appointed a committee in 1966 to develop historic area regulations. R-I-P-A zoning was adopted in 1971 and a historic review board appointed in 1973. The local design review district extends slightly beyond the boundaries of the National Landmark District.

Urban Renewal was used to a positive effect in the Historic District of Savannah. The 312 loan program made loans available to remodel dwelling units within an urban renewal area. Prior to the Savannah experience these loans had only been made in the suburbs, but in Savannah it was applied to the row and town houses of Troup Ward. Each Urban Renewal area had its own design review board. Criteria for new construction were written as part of the urban renewal plan and it was these compatibility criteria that were adopted into the District-wide historic zoning ordinance in 1973.

Design controls were extended into the Victorian District in 1981 when it was designated a Planned Neighborhood Conservation Area.

The first major revision of the Historic District Ordinance occurred in 1986 with the creation of the position of City Preservation Officer within the MPC to serve as staff to the Review Board. The creation of full-time preservation staff within the city was a positive

step because many actions that affect historic neighborhoods occur at all levels of city and county government. The Housing Department is involved in rehabilitation and providing affordable housing; the Community Development department produces neighborhood plans; Facilities Maintenance and Traffic Engineering oversee streets and sidewalks and lighting; Park and Tree governs the tree lawns and parks and so on. The coordination of all these efforts is essential to protecting the quality of the Community's neighborhoods.

The original architectural inventory of the Historic District was updated in 1985, and again in 2000 and 2002. At the same time the National Park Service also resurveyed the Historic District, extending the national period of significance to 1940, but did not extend the Landmark District boundaries.

In December, 1997 the Cuyler-Brownsville Neighborhood was designated an urban redevelopment area and a design review process was established for a portion of the neighborhood. In 2003, design review was extended to all of the neighborhood. Also in 1997 more specific standards and a height map were adopted for the Historic District. Both of these documents were refined in 2004 and 2005.

The most recent neighborhood to have design review is the Mid-City District (listed as Thomas Square on the National Register). This designation marks a major change in the City's approach to design review in that it is now a development standard within the zoning rather than an overlay district as in the other three design districts. Chatham County is currently exploring adopting an enabling ordinance to designate historic design districts in the unincorporated county.

8.7.6 Cultural and Historic Resource Inventories

Table 8.2 Southeast Chatham Historic Resources Inventory

MONTGOMERY	
Residential	
1. 511 Whitfield Avenue ca 1880	12. 536 Whitfield Avenue ca 1900
2. 512 Whitfield Avenue ca 1870	13. 527 Whitfield Avenue ca 1900
3. 514 Whitfield Avenue ca 1906	14. 8810 Whitfield Avenue ca 1930
4. 515 Whitfield Avenue ca 1929	15. 8912 Whitfield Avenue ca 1935
5. 516 Whitfield Avenue ca 1890	16. 9207 Whitfield Avenue ca 1945
6. 518 Whitfield Avenue ca 1905	17. 9305 Whitfield Avenue ca 1930
7. 519 A Whitfield Avenue ca 1900	18. 9355 Whitfield Avenue ca1930
8. 520 Whitfield Avenue ca 1867	19. 9501-9549 Whitfield Avenue
9. 521 Whitfield Avenue ca 1900	20. 9677 Whitfield Ave. ca 1914,1940
10. 525 Whitfield Avenue ca 1940	21. 9790 Whitfield Avenue ca 1930
11. 529 Whitfield Avenue ca 1920	22. 529 Whitfield Avenue ca 1935
Commercial	
23. 515 A Whitfield Avenue ca 1920	
Institutional	
24. C. 1890 First Beulah Baptist Church Railroad Avenue and Shipyard Road	25. 9890 Whitfield Avenue ca 1880 Montgomery Baptist Church

Table 8.2 Southeast Chatham Historic Resources Inventory	
BEAULIEU	
Residential	
26. 488 Beaulieu Avenue ca 1870 27. Beaulieu Avenue ca 1910 28. Beaulieu Avenue ca 1911	29. 485 A Beaulieu Avenue ca 1946 30. Beaulieu Ave Train servant's cottage 31. 5 Shipyard Landings Road ca 1888
VERNON VIEW	
Residential	
32. 301 McAlpin ca 1900 33. 225 Center Street ca 1910 34. 310 McAlpin Street ca 1911 35. 311 McAlpin Street ca. 1911	36. 304 McAlpin Street ca 1936 37. McAlpin Street residence ca 1917 (Ossabaw) National Register 38. N. Drive ca 1920 Wesley Gardens
Transportation	
39. 1920's palm-lined causeway.	39. Shipyard Road Causeway
BETHESDA National Register	
Institutional	
40. 9520 Ferguson Avenue Chapel C. 1925	41. Two wings main Bethesda Building ca 1870
Transportation	
42. Bethesda canopy road between Whitfield and Ferguson 18th century	
SANDFLY	
Residential	
43. 2129 Norwood Avenue ca 1920 44. 2244 Norwood Avenue ca 1919 45. 2304 Norwood Avenue ca 1920 46. 2310 Norwood Avenue ca 1900 47. 7239 Skidaway Road ca. 1925 48. 7224 Skidaway Road ca 1930 49. 7314 Skidaway Road ca 1920	50. 7318 Skidaway Road ca 1940 51. 7320 Skidaway Road ca 1940 52. 7321 Skidaway Road ca 1920 53. 7322 Skidaway Road ca 1940 54. 7337 Skidaway Road ca 1910 55. 7341 Skidaway Road ca 1930 56. 7343 Skidaway Road ca 1920
Commercial	
57. 2130 Norwood Avenue ca 1925	
Industrial	
58. 2233 Norwood Avenue ca 1927, 1939 and 1957	
Institutional	
59. 208 Ferguson Avenue Union Baptist Church. 1870's, 1941, moved c. 1930	
Transportation	
60. Norwood Avenue 1920's palm lined drive	62. Central Avenue Isle of Hope streetcar right-of-way

Table 8.2 Southeast Chatham Historic Resources Inventory	
61. Skidaway Road Causeway 1920's palm lined drive	
Archaeological and Cultural	
63. Montgomery Crossroads and Sallie Mood Drive Eugenia Cemetery	64. NE cor Skidaway Rd and Norwood Ave Old Church Cemetery ca 1863
PIN POINT	
Industrial	
65. 9924 Pin Point Avenue Varn's Seafood plant	
Institutional	
66. 9630 Lehigh Avenue Sweetfield of Eden Baptist Church and Cemetery	67. Pin Point Ave Community Center
ISLE OF HOPE HISTORIC DISTRICT 62 contributing resources	
Residential	
68. 7509 Laroche Avenue ca 1920 69. 6701 Laroche Avenue ca 1890	70. 7511 Laroche Avenue ca 1870
Transportation	
71. Central Avenue Railway bed for suburban railroad	72. Laroche Avenue 1920's palm-lined drive
GRIMBALL'S POINT	
Residential	
73. 50 Grimball's Point Road	75. 11 Grimball's Point Road
74. 52 Grimball's Point Road	76. 18 Hopecrest
WORMSLOE STATE HISTORIC SITE National Register	
Residential	
77. Wormsloe House 1828 foundations, remodeled several times 78. Gate House ca 1918	79. Gates ca 1907
Institutional	
80. Fort Wymbery 1733 tabby fortified house	81. DeRenne Library 1907
Skidaway Island:	
Rural	
82. Skidaway Island N end Modena	
Archaeological and Cultural	
83. Confederate battery ca 1861 Skidaway State park 84. Confederate earthwork and ditch ca 1861 North end of Big Ferry nature Trail 85. Confederate earthworks ca. 1861 Sandpiper Nature Trail 86. Confederate earthworks ca 1861 Marina	87. Indian Fort Civil War battery and shell ring off Delegal Road about 1/4 mile east in marsh. 88. Delegal Plantation grave site ca 1782 Corner Tidewater Way and Hopetree Crossing 89. Waters grave site ca 1808 15th fairway off Log Landing Road

Table 8.2 Southeast Chatham Historic Resources Inventory	
GREEN ISLAND:	
Archaeological and Cultural	
90. Fort Screven ca 1861 Ruins brick bomb proof and salt works.	
Source: Department of Natural Resources Historic Preservation Division Georgia Historic Site Survey forms; Environmental Assessment Report for Skidaway Road widening Project, 1998	

Figure 8.2
Southeast Chatham Historic Resources Map

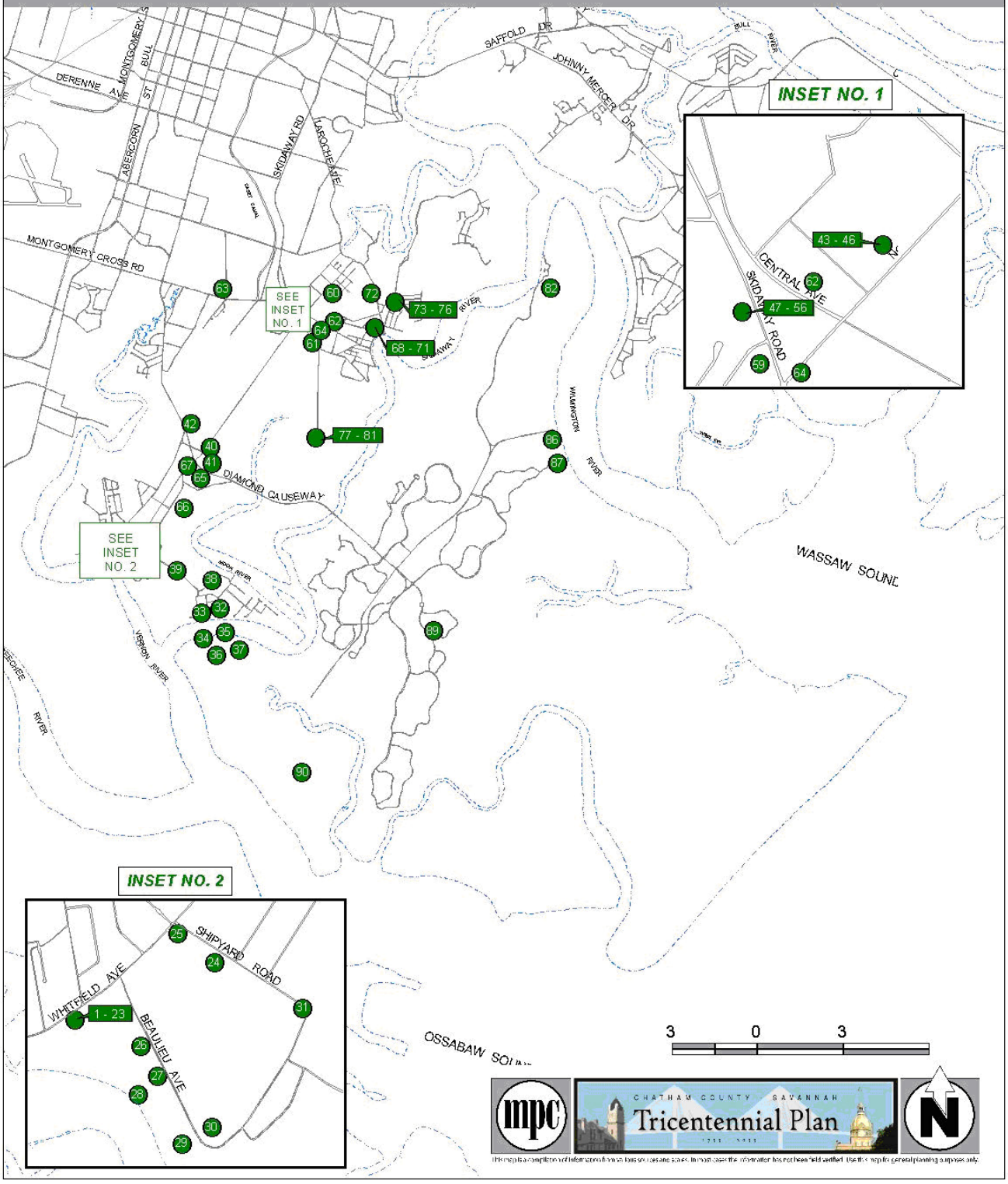


Table 8.3 Savannah River and Coastal Barrier Islands Historic Resource Inventory	
ARGYLE, ISLA, ONSLOW AND HUTCHINSON ISLANDS	
Archaeological and Cultural	
1. Lower Argyle Island Rice Mill remains	
OSSABAW ISLAND	
Residential	
2. North End Torrey Mansion 3. North End Club House	4. North End Tabby House
Industrial	
5. North End Tabby oyster house	
Rural	
6. North End Barn	
Archaeological and Cultural	
7. North End Plantation site 8. South End Plantation site	9. Mid island Buckhead plantation site 10. Mid island Middle Place Plantation site
WASSAW ISLAND	
Residential	
11. Parson's Tract, Wassaw Creek Chisholm House, c. 1860 12. Parson's Tract, Wassaw Creek Parson Family lodge # 1 C. 1900	13. Parson's Tract, Wassaw Creek Family Lodge # 2 14. Parson's Tract, Wassaw Creek pool structures
Archaeological and Cultural	
15. North end Beach Wassaw Battery ruins, 1898	
Sources: Ossabaw Island National Register nomination 1996; Archival Research, Archaeological Survey, and Site Monitoring Back River Chatham County, Georgia and Jasper County, South Carolina, U. S. Army Corps of Engineers 1994	

Figure 8.3
Savannah River and Coastal Barrier Islands Historic Resources Map

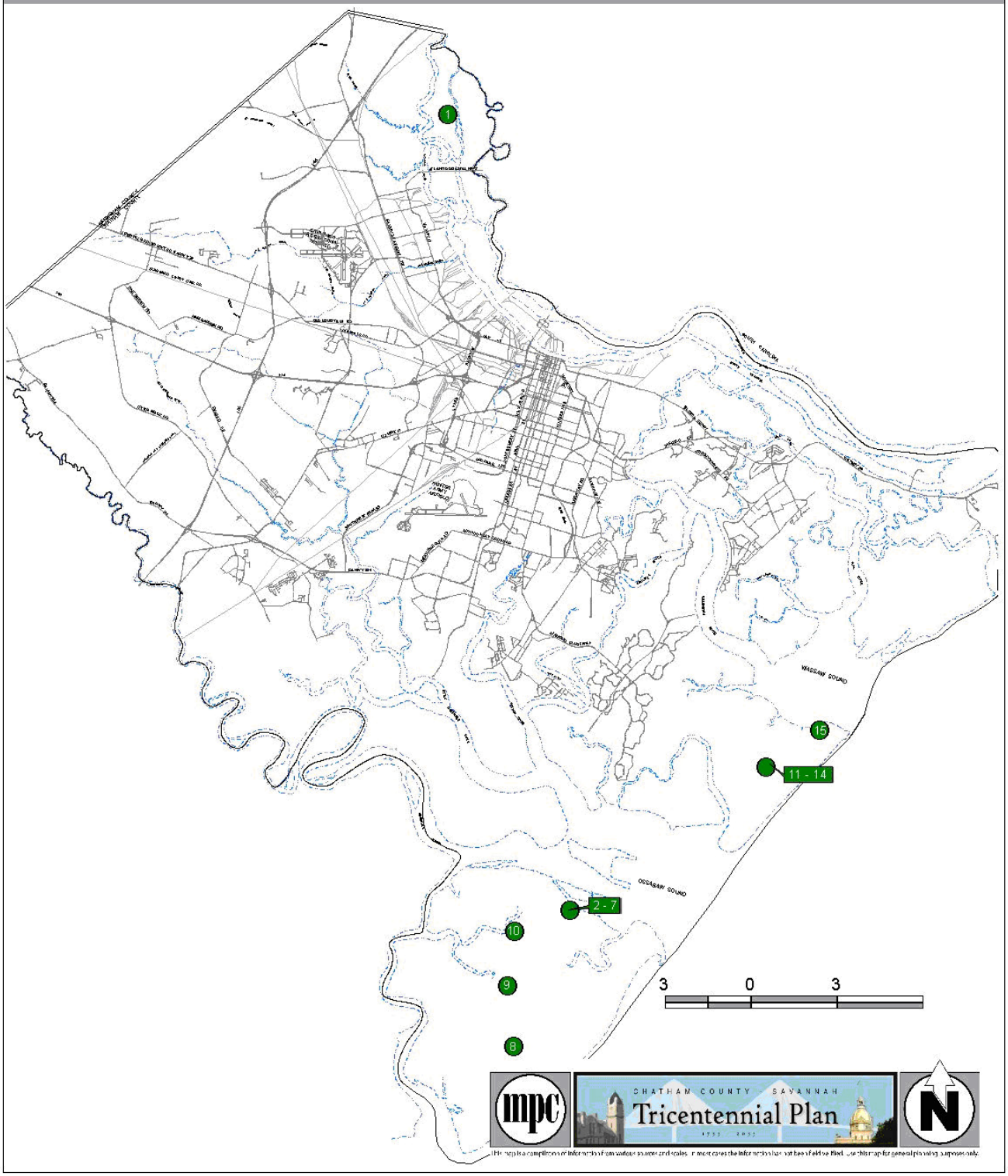


Table 8.4 Back Barrier Islands Historic Resource Inventory	
WILMINGTON ISLAND	
Residential	
1. 2226 East Boulevard 1938 2. 2228 East Boulevard 1910 3. 2309 East Boulevard 1928 4. E. Boulevard between Kessel and Land Streets ca 1930 5. 2122 Walthour Road ca 1930 6. 2308 Walthour Road 1930	8. 1540 Wilmington Island Road ca 1895 9. 1530 Wilmington Island Road ca1895 10. 1710 Wilmington Island Rd ca 1900 11. 1728 Wilmington Island Road 1930 12. 1724 Wilmington Island Rd pre 1893 13. 1320 Wilmington Island Rd ca 1910 stable
7. 1806 Wilmington Island Road 1930	
Commercial	
14. 618 Wilmington Island Road a. 1910	15. 612 Wilmington Island Road 1927
Rural	
16. 47 Morningside Drive ca 1881	17. Dogwood & Wilmington Island Rd. Silo ca 1920
WHITEMARSH ISLAND	
Residential	
18. Turner's Rock Demere House, ca 1930	
Institutional	
19. Johnny Mercer and Saffold Field Confederate earthwork redan and redoubt, 1861 20. Battery Circle 1861, Gibson's Point Battery	21 Turner's Rock Confederate battery, ca 1861
TALAHI ISLAND	
Archaeological and Cultural	
22. 243 Falligant Ave. Bryan Cemetery ca 1812	
OATLAND ISLAND	
Institutional	
23. 711 Sandtown Road 1927	
MCQUEEN'S ISLAND	
Transportation	
24. U. S. 80 4.5 mile palm-lined drive ca 1920's	25. U. S. 80 8-mile segment Tybee RR r-o-w ca 1890
COCKSPUR ISLAND	
Institutional	
26. Fort Pulaski national Monument 1829-1847 National Register 27 Battery Hambright ca 1890's.	28. South Channel Savannah River 18th C. light house
Archaeological and Cultural	
29. John Wesley Memorial 20th century	
CAUSTEN'S BLUFF and vicinity	
Institutional	
30. #1 Fort Jackson Road Fort Jackson, National Landmark, 1808 31. Causten Bluff Sub. Confederate Battery, ca 1861	32. Savannah River CSS Georgia national Register 1861

Table 8.4 Back Barrier Islands Historic Resource Inventory	
WILMINGTON ISLAND	
Transportation	
33. # 1 Fort Jackson Road Tybee Depot, ca 1890	
Cultural and Archaeological	
34.NW cor President St & Wahlstrom Rd LePageville Cemetery	
Sources: National Register nominations; Georgia Department of Natural Resources Historic Preservation Division Chatham County Historic Site Survey; Chatham County Cemetery inventory by Mrs. Miles Pinckney 2004	

Figure 8.4
Historic Resources Back Barrier Islands Map

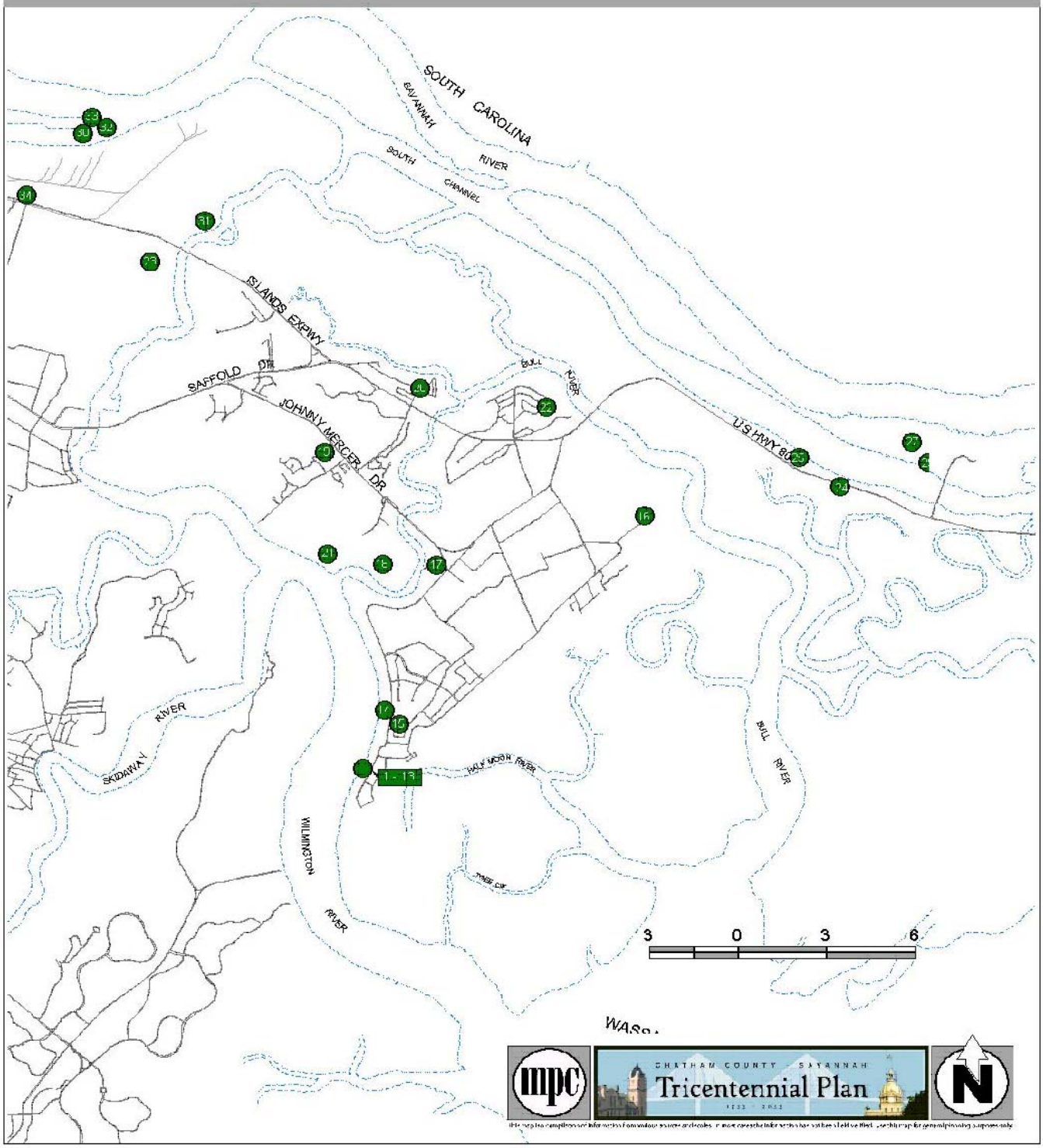


Table 8.5 Southwest Chatham Historic Resource Inventory	
Residential	
1. 342 Chevis Road Burroughs Community, ca 1920 2. 2033 Grove Point Road Early 20th C.	3. 1253 Little Neck Road Gould-Fawcett House, ca 1840 4. Little Neck Road, Carrie E. Gould House, 19th C.
Commercial	
5. 776 Chevis Road ca 1900 country store	
Institutional	
6. 2 Canebrake Road Coastal Gardens (Bamboo Farm), 1929 multiple resources 7. Chevis Road 3.5 miles south of U.S. 17St. Bartholomews Episcopal Church,1896, National Register	8. 751 Chevis Rd. New Ogeechee Baptist Church ca 1893 National Register 9. Chevis Rd. St. Barthomew's community house
Transportation	
10. Savannah and Ogeechee Canal 1826-30 National Register	11. Palm Avenue off Chevis Road
Rural	
12. U. S. 17 Lebanon Plantation National Register, ca 1873. Multiple resources 13. Grove Point Road Wild Heron Plantation National Register, C. 1756	14. Grove Point Road Grove Point Plantation, ca 1886 15. Grove Point Road Vallambrosa Plantation Chevis Mill
Archaeological and cultural	
16. Chevis Rd end of Palm Dr.Southfield Cemetery, ca 1890 17. Little Neck Rd. Hopeton Plantation Cemetery "Woodstock" 18. 201 Buckhalter Rd. Oakland Plantation House Site and Civil War batteries 19. Grove Point Rd. Valambrosa Plantation Slave cemetery 20. Little neck Rd. Bethel Cemetery, ca. 1848 21. GA 204 Brickyard Cemetery	22. Wild Heron Rd. Nr Chevis Emma Grove Cemetery 23. NW cor Grove Hill and Shore Rd. Grove Hill Cemetery 24. Grove Point Road Grove Point cemetery 25. SW area GA 204 and I-95 Sand Hill Cemetery 26. Palm Avenue Burroughs Community South Field Cemetery 27. Rice Mill Plantation Subdivision Wild Heron Cemetery
Sources: Chatham County Cemetery Inventory by Mrs. Miles Pinckney 2004; National Register nominations; Department of Natural Resources Historic Preservation Division Chatham County Historic Site Survey .	

Figure 8.5
Southwest Chatham Historic Resources Map

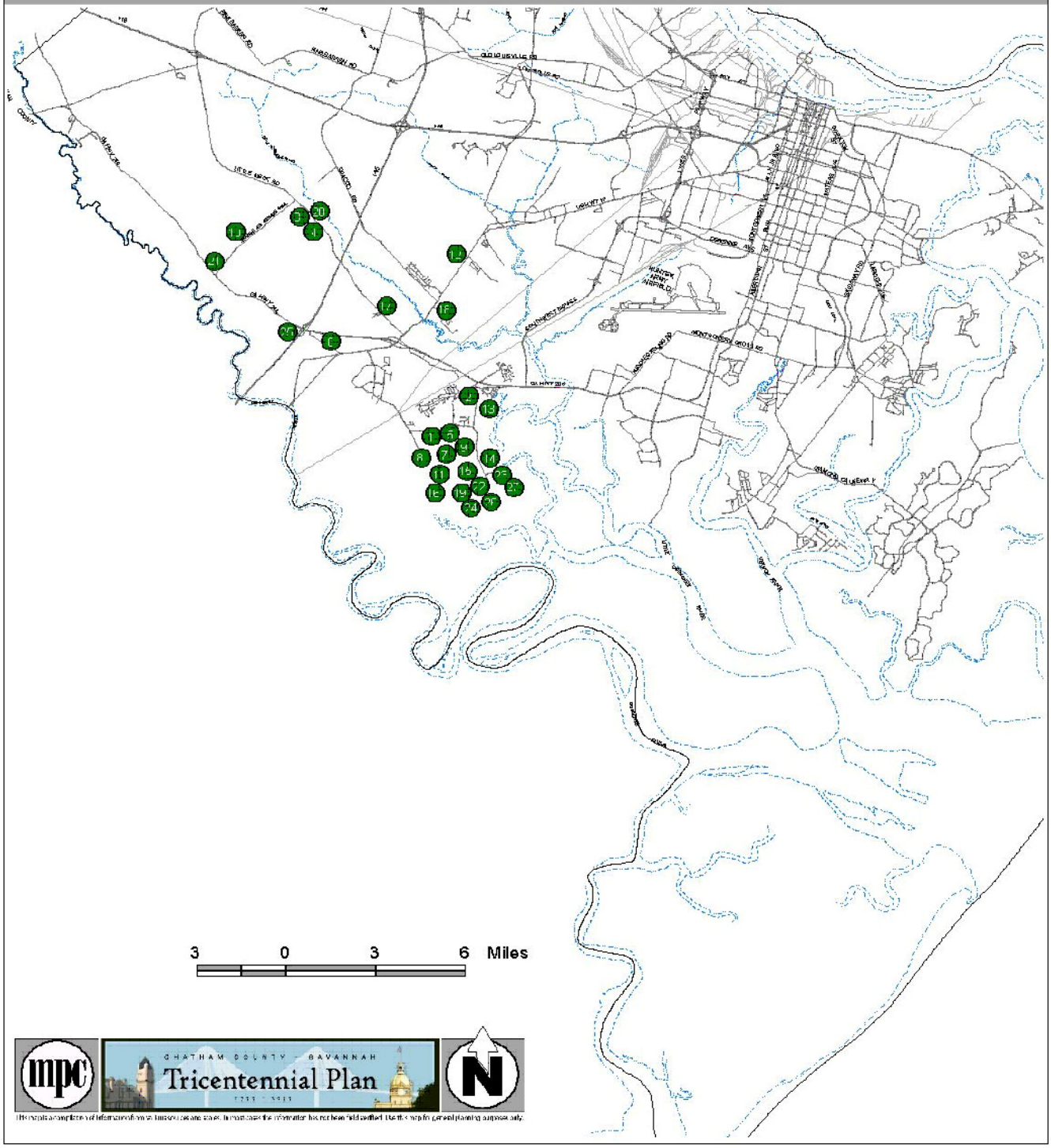


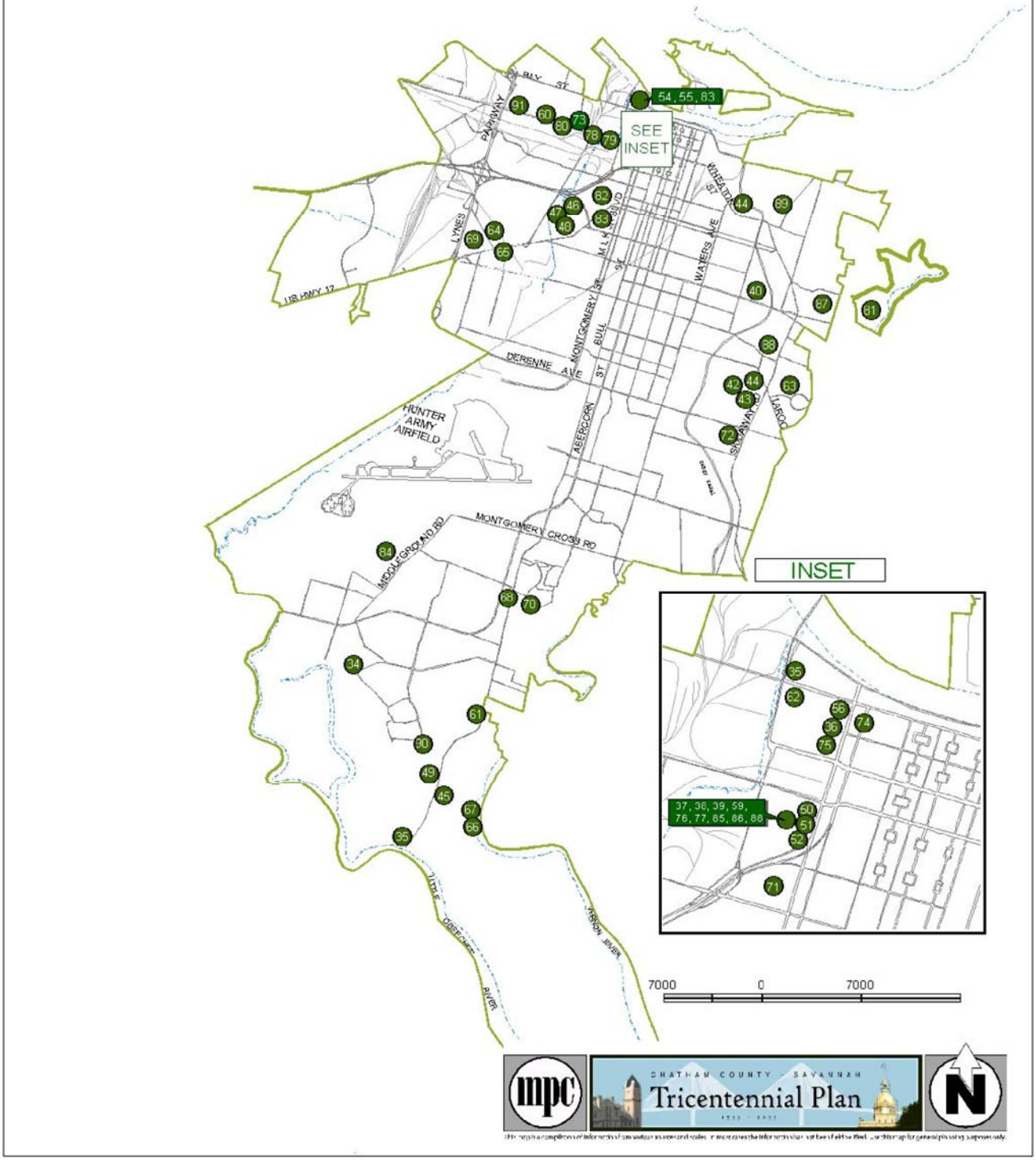
Table 8.6 City of Savannah Historic Resource Inventory	
NATIONAL HISTORIC LANDMARK DISTRICT 1,730 contributing resources[11]	
Residential	
1. 324 E. State St. National Register 2. 1 W. Macon St. National Landmark 3. 10 E. Oglethorpe Ave. National Landmark	4. 124 Abercorn National Landmark 5. 27 Abercorn St. National Register 6. 121 Barnard St. National Landmark
Commercial	
7. 101 MLK, Jr. Blvd. National Register	
Institutional	
8. 1-3 E. Bay St. National Register 9. 125 Bull St. National Register	10. 501 Whitaker St. National Register 11. 207 E. Gordon St. National Register
CENTRAL OF GA SAVANNAH SHOPS AND TERMINAL HISTORIC DISTRICT	
Industrial	
12. 227 MLK, Jr. Blvd. Gray Building 1856 13. 237 MLK, Jr. Blvd. Cotton Yard gates 1856 14. 233 MLK, Jr. Blvd. Red Building 1887 15. 301 MLK, Jr. Blvd. Terminal 16. Cotton Yard Up,1853 & down freight,1859 warehouses 17. West Boundary St. Main line (1853) and Dooley Yard (1860) viaducts 18. Motive Power Yard Smokestack, water tank and privies (1855)	19. Motive Power yard Round House 1926 20. Motive Power yard Mchine Shop 1855 21. Motive Power yard Blacksmith Shop 1855 22. Motive Power yard Engine Boiler Room 1854 23. Motive Power yard Lumber Shed 1855 24. Motive Power Yard Carpentry Shop 1853, 1923 25. Motive Power yard Paint and Coach Shop 1923-1925
SAVANNAH VICTORIAN HISTORIC DISTRICT 799 contributing resources	
Institutional	
26. 912 Drayton 1940	
THOMAS SQUARE STREETCAR HISTORIC DISTRICT 1,113 contributing resources	
Rural	
27. 2422 Abercorn St. 1799 National Register	
CUYLER BROWNSVILLE HISTORIC DISTRICT 909 contributing resources	
Institutional	
28. 644 W. 36th St. National Register	
EASTSIDE/COLLINSVILLE/MEADOWS HISTORIC DISTRICT 492 contributing resources	
ARDSLEY PARK/CHATHAM CRESCENT HISTORIC DISTRICT 1056 resources.	
GORDONSTON HISTORIC DISTRICT 170 Contributing resources.	
Residential Resources	
29. 2 Pierpont Circle National Register	
Archaeological and Cultural Resources	
30. Goebel, Gordonston, Edgewood and Pierpont Avenues Gordonston Park	32. Atkinson Avenue canopied road between Gwinnett and Skidaway

[11] The 1,730 contributing resource figure is several hundred higher than that used by the National Park Service. The local inventory includes each carriage house as an individual structure. See the National Park Service National Register Landmark nomination for additional discussion on the historic district plan and historic resources. A copy may be seen at MPC.

Table 8.6 City of Savannah Historic Resource Inventory	
31. Henry St. and Atkinson Avenue Pierpont Circle	33. Kinzie Avenue canopied road streetcar right-of-way between Forrest and Pennsylvania Ave.
PARKSIDE HISTORIC DISTRICT; 270 contributing resources.	
HISTORIC NEIGHBORHOODS eligible for listing on the National Register	
Ardmore: 196 contributing resources.	
Midtown: 854 contributing resources.	
NEIGHBORHOODS UNDER EVALUATION for historic status	
Carver Heights 1946, Stiles Ave, CSX RR, Kennedy park, Gwinnett	Paradise Park, 1955 White Bluff Road, Harmon Canal, Dyches Drive
Fairway Oaks, 1950 Waters Avenue and Bacon park Drive	Windsor Forest, 1955 White Bluff Road on lands of Cedar Grove plantation
Pine Gardens, 1940's Pennsylvania Ave, Capitol St.	Magnolia Park, 1952 Waters and Derenne
Mayfair, 1950 Montgomery Crossroads	Liberty City, 1945 Mills Bee Lans Blvd.
West Savannah, 1890 W. Bay, Louisville Road, I-516	Woodville, 1890 W. Bay, Louisville Rd. Lynes, Pkwy, W. Lathrop
Hudson Hill, Rankin St. W. Bay St., W Lathrop Ave.	Kensington Park, 1952 Waters, DeRenne, Habersham Streets
INDIVIDUAL HISTORIC RESOURCES within the city limits, not in Historic Districts	
Rural	
34. Windsor Forest Cedar Grove Plantation	
Residential	
35. 15 East Back Street Coffee Bluff	42. 4901 Skidaway Rd. ca 1910
36. 41 W. Broad St., 1819 National Landmark	43. 3600 Skidaway Rd. Ca 1925
37. 535 W. Charlton St. ca 1888	44. 1220 Wheaton St. ca 1800
38. 342 Purse St. ca 1888	45. 13710 Coffee Bluff Rd. 19th C.
	46. 2101 Ogeechee Rd. Pre 1916
39. 536 W. Jones St. ca 1888	
40. 1650 E. Victory Dr. a. 1880	47. 2123 Ogeechee Rd. Pre 1916
41. 4702 Skidaway Rd. ca 1940	48. 2231 Ogeechee Rd. Pre 1916
Commercial	
49. White Bluff at Felt Dr. general store	51. 339-345 MLK, Jr. Blvd.
50. 217 MLK, Jr. Blvd. 1906	52. 347-355 MLK, Jr. Blvd.
Industrial	
53. 518 Indian St. Brush Electric Company Plant 1894	57. 646 W. Bay St. Pre 1916
54 666 Indian St. ca 1940	58. 506-508 W. Jones St. ca 1930
55. 648 Indian St. ca 1916	59. 513 W. Jones St.
56. 31 MLK, Jr. Blvd. ca 1939	60. Louisville Rd. Meddin Brothers 1917
Institutional	
61. Old White Bluff Rd. Nicholsonboro Baptist Church, two structures 1870's, 1890. National Register	67. Rose Dhu Island, Camp Low ca 1951
62. 575 W. Bryan St. First Bryan Baptist Church National Register	68. 11305 White Bluff Road old White Bluff School 1907
63. Savannah State College, Hill Hall 1901 National Register	69. Ogeecheeton Mt. Zion M.E.Church

Table 8.6 City of Savannah Historic Resource Inventory	
64. Ogeechee Rd & Blossum Dr. Confederate earthworks western defense line ca 1864 65. Ogeechee Rd. Savannah Powder Magazine 1898 66. Rose Dhu Island, Confederate Battery 1861	70. 21 Lorwood Dr. Zion White Bluff Baptist Church and Cemetery 1898 71. 613 MLK, Jr. Blvd. St. Philip A.M.E. Church 1911 National Register 72. 5715 Skidaway Road Cohen's Men's Retreat 1933 73. Fair and Alfred St. Woodville Lodge Hall
Transportation	
74. 37 MLK, Jr. Blvd. 1919 75. 109 MLK, Jr. Blvd. Greyhound Bus Depot ca 1939	78. 62 Louisville Rd. Brick gas station 79. Louisville Rd. and Lathrop Gas station
76. 77 Selma St. Seaboard Airline R.R. Signal Building 1947 77. 601 Cohen St. Railway Express Agency Garage	80. Stiles Ave. and Lathrop Savannah and Atlanta RR building
Archaeological and Cultural	
81. Bonaventure Road Bonaventure Cemetery National Register 82. W. Anderson St. & Ogeechee Rd. Laurel Grove Cemetery North National Register 83 Ogeechee Rd. Laurel Grove Cemetery South National Register 84. Hunter AAFB Lincoln Cemetery 1926 85. Cohen St. Sheftall Family Burial Ground 1765	86. 601 Cohen St. rear, Jewish Community Cemetery ca 1770 87. East end of Bolling St. East Savannah Cemetery 88. NW cor Skidaway Rd & 52nd St. Oak Grove Cemetery 89. Wheaton Street Catholic Cemetery 90. S of Largo Cedar Grove Cemetery 91. S of Roberts St. Woodville Cemetery ca 1840 & later
Sources: National Register nomination forms, Georgia Department of Natural Resources State Historic Preservation Office; City of Savannah Historic Buildings Maps and Historic building notebooks, MPC; SHPO Georgia Historic Resource Survey Cards for Chatham County	

Figure 8.6
City of Savannah Historic Resources Outside of the Historic Districts Map



8.7.7 Archaeology

Virtually every tract of land in Chatham County has the potential to contain cultural remains from the community's prehistoric and historic past. Many of these sites have been identified and researched, but many others go undetected. These sites are subject to damage during land disturbing projects, to the detriment of scientific, historical, and anthropological knowledge. The dilemma faced in managing these sites is how to identify them in order to preserve them in the face of development while at the same time not alerting those who would deliberately loot the sites for recreation or economic gain.

In 1937, the Works Progress Administration began a series of archaeological excavations in Chatham County.[12] Artifacts discovered indicated occupation back to 2200 B.C. Significant archaeological resources along the Georgia Coast , such as the Bilbo Site, exist in Chatham County.[13] Excavations took place along the Savannah River and Wilmington Island among other locations.

More recent studies have been made on Ossabaw. 220 aboriginal and historic sites have been recorded there and the island has not yet been completely surveyed. To date, there have been 1,054 total Chatham County archaeological sites recorded in the archaeological sites files at the University of Georgia.[14]

In addition to aboriginal sites in Chatham County,[15] Colonial sites such as Mary Musgrove's trading post, military installations from the Revolutionary and Civil Wars and domestic and agricultural sites from the Eighteenth and Nineteenth Centuries provide fertile ground for future study. These sites need to be protected, but in the face of increasing development sites such as the West Chatham Confederate and Union lines are in danger of damage or loss.

Archaeological sites, like historic buildings, are considered cultural resources if they meet eligibility requirements set forth in the National Historic Preservation Act. Unlike historic buildings, however, archaeological sites are not always evident to the untrained eye. While some archaeological sites have obvious above ground indicators such as earth mounds, shell rings, or chimney remains, most consist of artifacts (objects made or modified by humans such as stone tools, pottery, bottle glass) and features (post holes, trash pits, stone hearths, human burials, etc.) that are underground. Where there is federal involvement in a project in the form of federal funds (CDBG/EIP grants, FDIC loans, etc) or permits (Section 404 of the Clean Water Act etc.) Section 106 of the National Historic Preservation Act requires that a professional Phase I survey be undertaken. This survey is a systematic, detailed examination of the area, designed to gather information about archaeological sites within the area of potential effect. An additional goal may be to evaluate the site for eligibility for inclusion on the National Register of Historic Places. Hiring a professional

[12] W. P. A. Archaeological Excavations in Chatham County, Georgia: 1937-1942 by Chester B. DePratter, S. C. institute of Archaeology and Anthropology, USC: 1991.
[13] The Bilbo Site A 2001 Status Report Report of Investigations, Antonio J. Waring, Jr. Archaeological Laboratory State University of West Georgia 2003.
[14] Georgia Archaeological Site File, UGA June 2004
[15] "Georgia Ports to Fund New Musgrove Exhibit" Savannah Morning News 7-14-2004

archaeologist/consultant is an effective way of streamlining the compliance process and ensuring that archaeological resources are being treated according to the law.

Archaeological sites on Federal and State owned lands are covered by various levels of protection. The Official Code of Georgia Annotated (OCGA) 12-3-621 states that a person who is not operating under Section 106 must have written landowner permission to conduct archaeology on private property and must provide written notification to the Georgia Department of Natural Resources (DNR) at least five (5) business days prior to the excavation. Other code sections apply more generally to human remains, but are relevant because of the possibility of discovering such remains at archaeological sites. OCGA 31-21-6 requires notification of local law enforcement upon the disturbance of human remains. If law enforcement determines that it is not a crime scene, DNR is notified of the discovery. However, there is no local legal protection for archaeological resources on either public or private land.

For the purposes of the archaeological component of the Chatham County inventory those resources with above ground features and historic cemeteries have been noted in the historic resource list.

8.8 Quality Growth Objectives

The Heritage Preservation objections are to maintain the traditional character of the Chatham-Savannah community through the preservation and revitalization of its historic areas; to encourage new development that is compatible with the traditional features of the community; and to protect other scenic and natural features that are important to defining the community's character.

- Neighborhood design standards have been adopted for four historic neighborhoods. Current efforts are to revise the remaining neighborhood zoning regulations to include zoning standards that recognize traditional lot sizes and building coverages, height limitations and to pass a County Historic Preservation Ordinance will ensure these character-defining features will also be protected in the unincorporated county.
- The Historic District Height Map sets limits on the height of new construction that helps encourage appropriate and compatible new development. New development needs to be sensitive to the character defining features of a neighborhood.
- The identification and stewardship of historic resources in neighborhoods often encourages nearby development in non-historic areas. Just as new developments benefit from the attractiveness of nearby historic neighborhoods, these developments need to respond in a manner that complements the historic environs, not necessarily in imitation of style, but in quality of construction, accessibility and street connectivity. This reciprocity issue is discussed further in Chapter Five.
- Often rural neighborhoods are not old enough to qualify as historic districts, and yet they maintain character defining natural and scenic features. It is an objective to protect these areas with conservation districts.

Chapter 9.0 *Natural Resources*

Not many landscapes can match the beauty and romance of the coastal environment. Since the earliest times of Oglethorpe, people have wanted to live near the water. Our streams, rivers and marshes are now more attractive than ever as a place to live.

Tide, climate and geology all shape the unique relationship between land and water along the nation's coastline. Southeast Georgia and South Carolina are experiencing phenomenal growth. People and homes are only part of the growth we are experiencing. With population, come the other elements of development.

The vision of a community that is a healthy place to live, work, and raise a family, where the protection of natural resources is considered an integral part of its social and economic values can be accomplished when forethought and reverence for the environment is taken into account. To control and manage the development of our coastal areas, residents and local government must continue in their efforts of overseeing and protecting our natural resources. With the proper planning, we can ensure that Chatham County will continue to be a place of beauty for centuries to come.

9.1 Introduction

Chatham County contains exceptional natural resources vitally important to its economy and development potential. The County therefore has an interest in promoting, developing, sustaining, and protecting its natural resources for future generations.

This chapter of the Tricentennial Plan includes an inventory and assessment of specific natural resources found in Chatham County as well as specific goals and objectives for the management and protection of these resources.

9.2 Water Resources

9.2.1 Water Supply Watersheds

Chatham County is located within the Atlantic Coast Flatwoods section of the State within both the Savannah and Ogeechee River Basins and more specifically within the boundaries of the Lower Savannah, Lower Ogeechee and Ogeechee Coastal Watersheds.

The Ogeechee River Basin is located in mid to southeastern Georgia and is flanked by the Altamaha and Oconee River Basins to the west and the Savannah River Basin to the east. The headwaters are located in the southeastern edge of the Piedmont province and the basin continues southeastward to the Atlantic Ocean. In the headwaters, the North and South Fork Ogeechee Rivers join to form the Ogeechee River, which runs 245 miles in a southeasterly direction, nearly the entire length of the basin. It is a "black water" river, carrying a high load of dissolved organic carbon that imparts a "tea" color to the water. The Ogeechee has a higher pH (near 7.0) than that of other black water rivers due to a large input of carbonate-rich water brought down from Magnolia Springs. The river basin is located entirely in the State of Georgia and drains approximately 5,540 square miles and plays a significant role in forming Wassaw, Ossabaw, Saint Catherine's, Black Beard and Sapelo islands off the coast of Chatham County.

The Savannah River Basin is a 10,577 square mile watershed whose headwaters originate in the Blue Ridge Province of North Carolina, South Carolina, and Georgia. The Savannah River is formed by the confluence of the Seneca and Tugaloo Rivers at the Hartwell Reservoir in Hartwell, Georgia. The Savannah River forms the boundary between South Carolina and Georgia as it flows southeast to the Atlantic Ocean at Savannah. The River is approximately 300 miles long, and is fed by many moderate sized tributaries, some of which have drainage areas greater than 200 square miles. The river basin has a population in Georgia of more than 523, 000 people and nearly 500,000 people in Georgia receive their drinking water from the Savannah River Basin by municipal or privately owned public water systems. In turn, the Savannah River proves to be the most extensively used surface water source in the Savannah River Basin.

Figure 9.2.1
Water Supply Watersheds

Figure 9.1: Lower Savannah Watershed

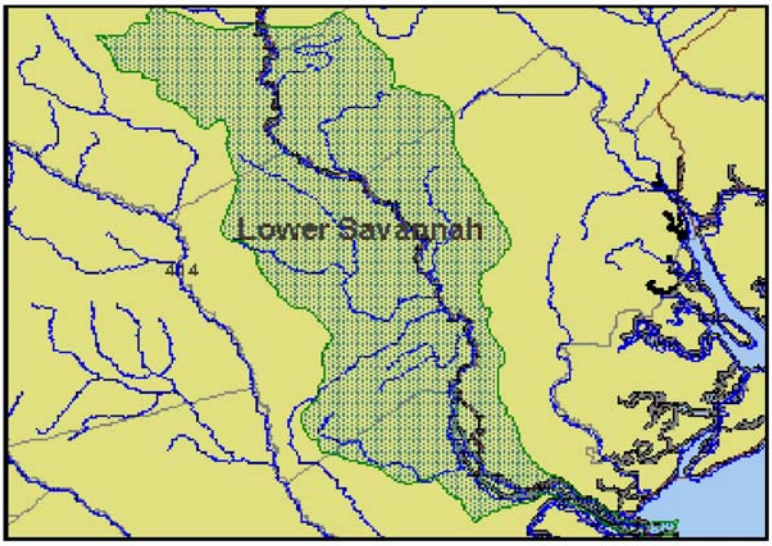
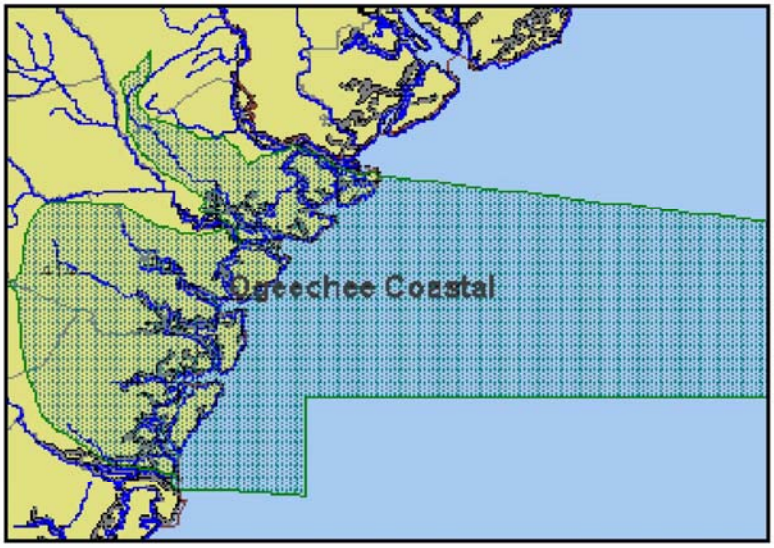


Figure 9.2: Ogeechee Coastal Watershed



3 0 3 6 Miles

mpc CHATHAM COUNTY - SAVANNAH Tricentennial Plan 1733 - 2033 N

This map is a compilation of information from various sources and scales. In most cases the information has not been field verified. Use this map for general planning purposes only.

9.2.2 Public Water Supply Sources

The groundwater resources of Coastal Georgia, specifically the Floridan Aquifer system, are recognized as some of the most productive in North America. This particular system underlies an area of about 100,000 square miles in southern Alabama, southeastern Georgia, southern South Carolina and all of Florida. The depth below the ground surface to reach the top of the Floridan Aquifer increases from less than 150 feet in coastal South Carolina to more than 1,400 feet in Glynn and Camden counties, Georgia.

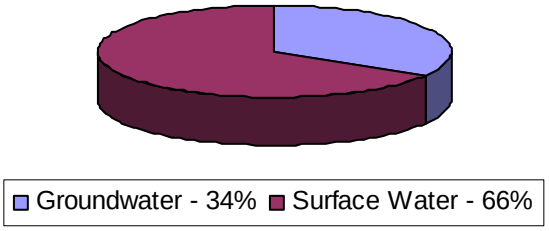
Since the 1880s, the Upper Floridan Aquifer has served as the largest source of fresh water in Coastal Georgia and in turn has served as the primary water supply for Chatham County. As a result of extensive pumping in much of the developed areas of Savannah and in the adjacent coastal areas in Georgia and South Carolina, there have been a number of changes that have occurred over time. The most noticeable of changes have been the decline of the regional water levels as well as a cone of depression in the Upper Floridan Aquifer beneath the City of Savannah. The large withdrawal of groundwater from the Upper Floridan Aquifer in the Savannah-Hilton Head Island area has lowered the head and reversed the gradient in the aquifer, creating the cone of depression and causing lateral encroachment of seawater in the Upper Floridan Aquifer at the north end of Hilton Head Island, South Carolina[1]. In turn, this has caused a vertical intrusion of saltwater into the Upper and Lower Floridan Aquifers in the Brunswick, Georgia area. As a result, there have been changes in the groundwater levels, the rates and distribution of recharge and discharge, the rates and direction of groundwater flow, and the overall quality of the water in the aquifer system.

Figure 9.2. Floridan Aquifer System

By comparison, as shown by the charts below for the year 2000, United States Geological Survey (USGS) data indicates that roughly 66.4 percent of the total amount of fresh water used in Chatham County comes from surface water sources equaling 142.8 million gallons per day (Mgal/d). Groundwater use is almost half that amount at 72.2 Mgal/d, or 33.6 percent, of the fresh water used within Chatham County. This data incorporates all water uses including: public supply, domestic, irrigation, industrial, thermo-electric power, livestock, mining, commercial and aquaculture.

[1] Chatham County-Savannah Metropolitan Planning Commission, *Chatham County Comprehensive Water Supply Management Plan*, November 2000.

Figure 9.3. Sources of Freshwater in Chatham County



According to data from the November 2000 *Chatham County Comprehensive Water Supply Management Plan*, there are 24 municipal groundwater systems in Chatham County. This includes eight City of Savannah systems, six Chatham County systems, one system for each of the remaining municipalities (not including Vernonburg), and the Hunter Army Airfield and Skidaway Island Utilities Systems. There are also 59 active community water systems which serve from 25 to 2,163 people. In addition to the community systems, 68 non-community systems serve people in Chatham County.

The monthly usage rates (in millions of gallons) for 2003 as reported by the County and the municipalities was 10.34 billion gallons (total municipal groundwater usage) and the monthly average was 861.72 million gallons.

9.2.3 Groundwater Recharge Areas

Specifically, the groundwater recharge area is the land where the water that eventually seeps down into an aquifer first enters the ground. Groundwater can move readily through soils and rocks that have large pore spaces (porous), such as sand, gravel, sandstone, or limestone. However, soils and rocks having small pore spaces (non-porous), such as clay, shale, or granite, will retard water movements.

As water is pulled downward by gravity and other pressures, it moves along the path of least resistance; through porous layers of rocks or soil and going around non-porous layers whenever possible, until it comes to a non-porous layer of rocks or soil that it cannot get around. This "confining layer" will block further downward movement of the water so that a groundwater reservoir, of sorts, will form in the porous layers of soil or rock above the confining layer. These underground "reservoirs" are called aquifers, and it is from these reservoirs that Chatham County ultimately gets its groundwater supply.

The principal aquifer recharge zone for the Floridan Aquifer system is located approximately 100 miles northwest of the City of Savannah where the upper boundary of the aquifer's confining layer outcrops at the surface near the Fall Line separating the Piedmont province from the Coastal Plain. Rainwater enters the aquifer in this recharge area and two confining units prevent the water from escaping to the surface or moving to greater depths. The water then moves eastward and southward at a rate of about one inch

per day. This could bring rain water that fell within a recharge area to Chatham County as much as 17,000 years later[2].

If hazardous or toxic substances pollute the water that seeps into the ground in a recharge area, these pollutants are likely to be carried into the aquifer and contaminate the groundwater, making it unsafe to drink. Once polluted, it is almost impossible for a groundwater source to be cleaned up. For this reason, local wellhead protection ordinances have been passed and the Chatham County Inspections Department routinely performs inspections of community wells to prevent wellhead contamination and to address any stormwater pollutants that have the potential to impact groundwater quality through the wellhead.

For a better understanding of stormwater and the associated Best Management Practices (BMPs) that can be implemented to help control non-point source pollution, see the Appendix portion of the Comprehensive Plan.

In Chatham County and Savannah the protection of groundwater recharge areas is also overseen by restricting land uses that generate, use, or store pollutants within groundwater recharge areas and by establishing minimum sizes for lots within groundwater recharge areas that are served by on-site sewage management systems. Prior to the issuance of a building permit or a demolition permit, the Zoning Administrator assesses whether the proposed activity is located within a groundwater recharge area as identified by the Georgia Department of Natural Resources (GA DNR). All lands identified as groundwater recharge areas are subject to restrictive development standards. Figure 9.5 shows the overall Ground Water Pollution Susceptibility for Georgia and Figure 9.6 shows the actual groundwater recharge areas for Chatham County.

[2] Georgia Department of Natural Resources, Geologic Survey; Atlanta, Georgia. http://csat.gatech.edu/csat.html>

Figure 9.4.: Groundwater Pollution Susceptibility of Georgia

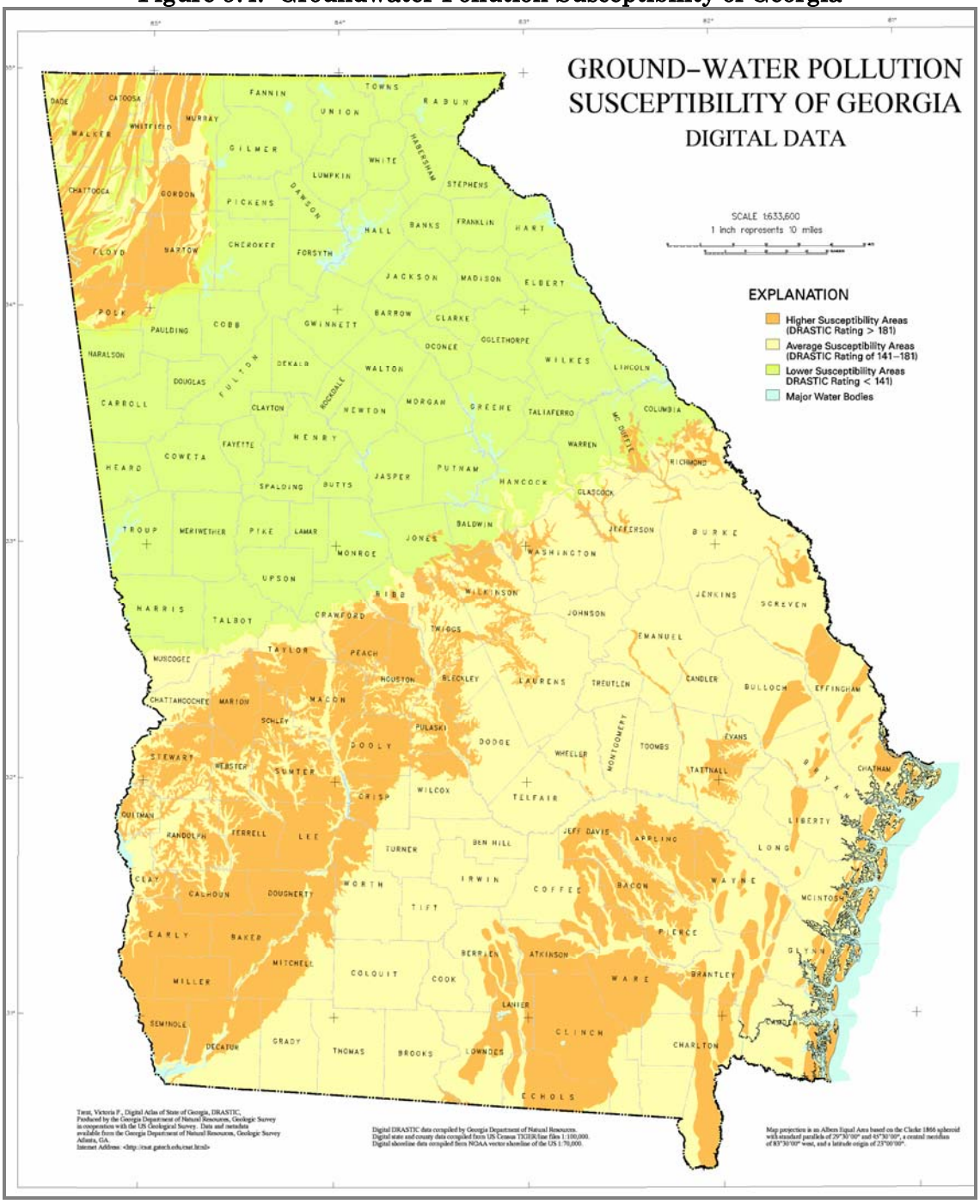
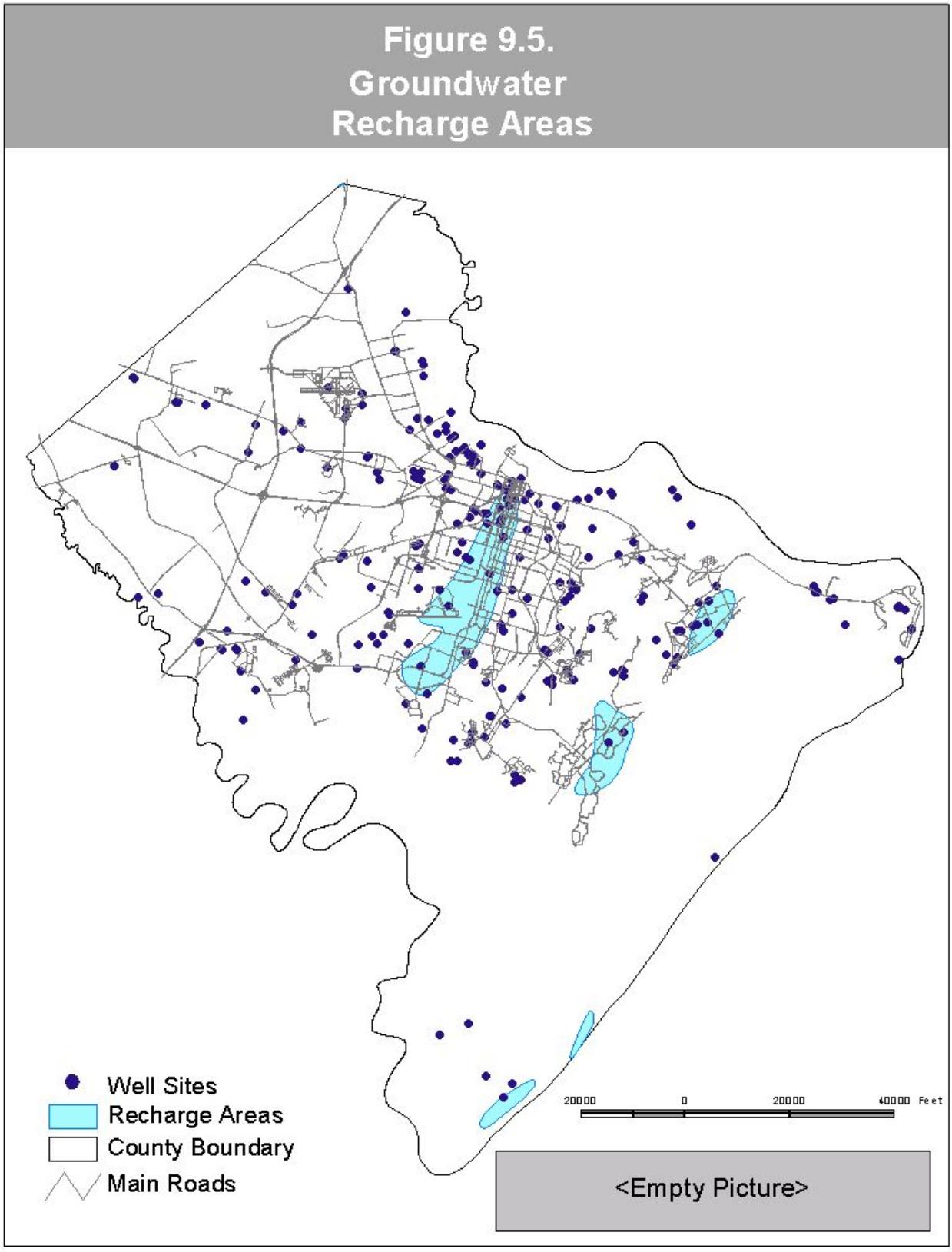


Figure 9.5. Chatham County Groundwater Recharge Areas



9.2.4 Wetlands

Georgia ranks fifth in the nation in wetlands conservation, where only eight states have more wetland acreage than Georgia. In the mid 1970s Georgia had 5,298,000 acres of wetlands, having altered about 146,000 acres since the mid 1950s and 1.5 million acres since the 1780s. Between 80 and 90 percent of these alterations were conversions to other land uses. Most of these conversions were of freshwater wetlands and occurred on the coastal plain. Conversion rates in Georgia have accelerated during the last 15 years due to changing demands for agricultural and forest products, population growth and urban expansion in the Piedmont, mountains and along the coast.

Directly related to the need for wetland conservation, under the Part V Environmental Planning Criteria, Chatham County and the cities of Bloomingdale, Garden City, Pooler, Port Wentworth, Tybee Island, and the Town of Thunderbolt adopted Wetlands Protection Ordinances that provide a procedure for local governments to coordinate federal wetlands permitting with local permitting. These ordinances provide a regulatory framework by which potential wetland impacts can be evaluated before local permits for land disturbance and building are issued.

To control and manage development of coastal areas, the Georgia Legislature passed the Marshlands Protection Act in 1970 requiring a Georgia Department of Natural Resources permit to alter saltwater and brackish wetlands in any way. The freshwater marshes, which are intimately connected to them, are protected under Section 404 by requiring permits for altering, dredging, or filling any of these areas to include both seasonal and temporary wetlands.

The future of wetlands is closely linked to land-use decisions made not only by governments but by the private landowner as well. Therefore, land-use regulations are the most commonly used wetland protection techniques among local governments throughout the country since regulations are inexpensive relative to acquisition and can provide substantial protection for wetlands. Local governments can tailor a regulatory program to fit their needs. Regulations can be narrowly drafted to protect discrete parts of a wetland from specific uses on adjacent lands, or even throughout the watershed. Communities can enact new regulations or amend their existing land-use control laws to include wetland protection goals.

Regulations generally take the form of zoning or subdivision controls or a combination of both. Regulations may be adopted as separate ordinances designed solely for the purpose of wetland protection or as part of a more comprehensive program regulating a number of activities and areas in addition to wetlands and adjacent buffer zones. An example of this is the *Island's Area Community Plan* for Chatham County's Oatland, Talahi, Whitemarsh, and Wilmington Islands adopted in June 2001. This plan established an "environmental overlay district"

with supplemental standards to bolster those currently under the Chatham County Zoning Ordinance. The effect was to, a) protect and enhance community character; and b) to protect environmental quality, especially the estuarine system surrounding the community.

In local jurisdictions where land values are high and numerous or significant wetland systems exist, the establishment of a specific wetland protection district or ordinance is a logical way to address such issues as the possible restoration or replacement of wetlands and to provide the procedures or data that are necessary to determine if a proposed use may adversely affect a wetland.

Wetland regulations can be contained in other codes in addition to the zoning ordinance to provide comprehensive wetland protection. Floodplain ordinances such as those adopted by Chatham County are addressed in the Floodplains section of the Natural Resources Element can be amended by adding standards to prevent fill and drainage of wetland portions of the floodplain. Subdivision and planned unit development codes can be used to encourage clustering of buildings on upland sites and to require dedication or permanent preservation of wetland areas. Building codes can be used to control development on hydric soils and in flood hazard areas.

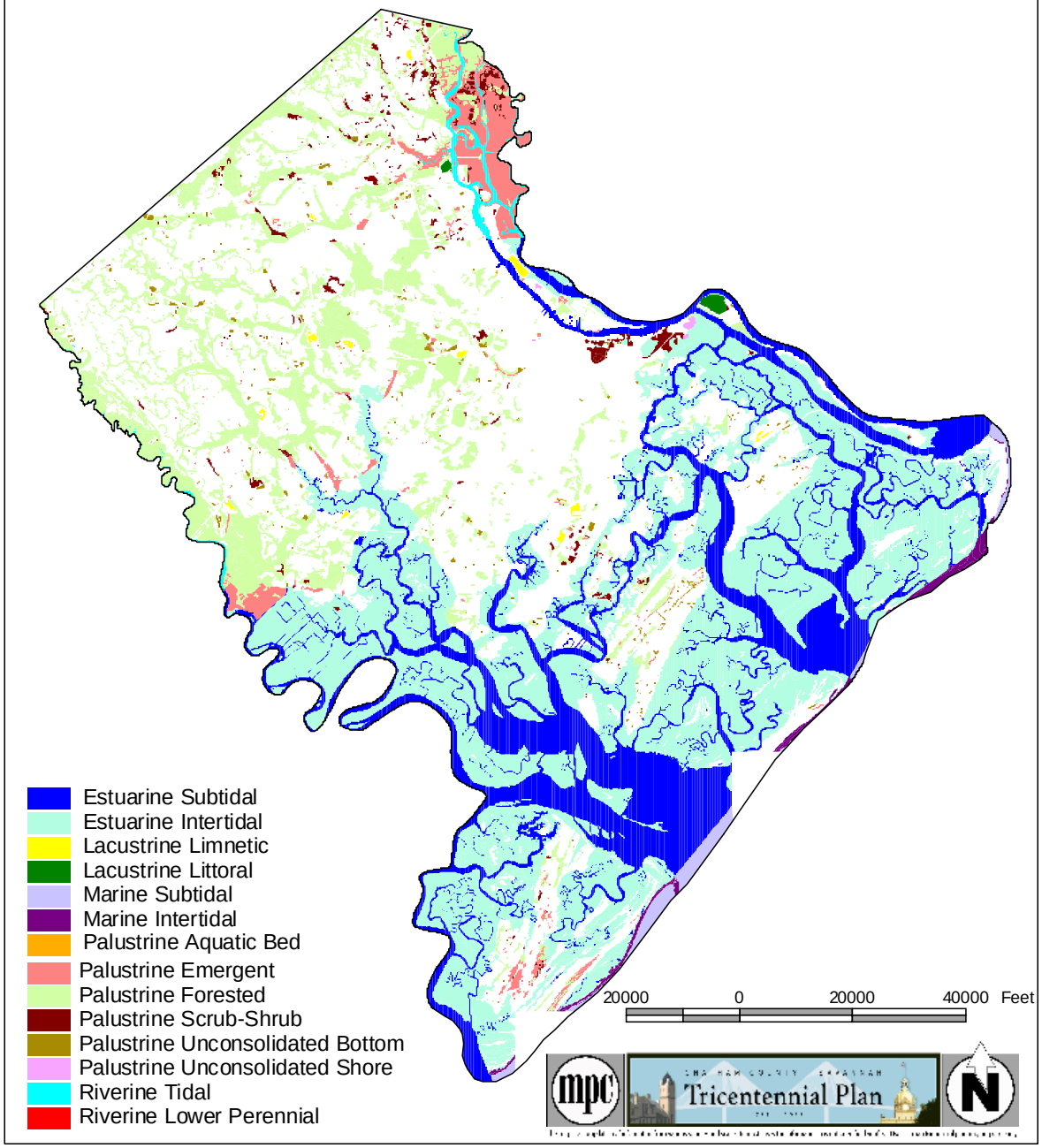
Stormwater management ordinances such as those implemented by all of the jurisdictions within Chatham County can be used to protect wetlands as a means of reducing non-point-source pollutants and to create artificial wetlands for the treatment of surface runoff. In addition, pollution controls may be used to prohibit discharges into area wetlands.

Figure 9.5 shows the National Wetland Inventory (NWI) and the associated types of wetlands within Chatham County.

Among the numerous functions of wetlands, the following items are the most important:

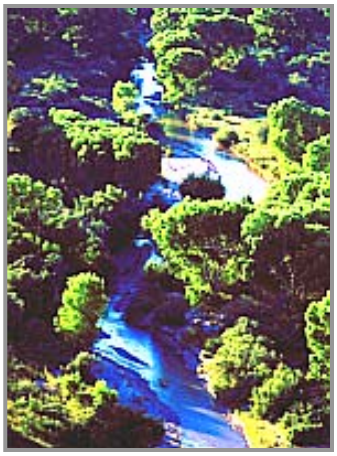
- Flood control,
- Water quality and availability,
- Erosion control,
- Fish and wildlife habitat,
- Recreation and aesthetics,
- and economy.

Figure 9.5. NWI Wetlands



9.2.5 Protected Rivers and Corridors

River corridors are the strips of land that flank major rivers in Georgia. These corridors are of vital importance in that they help preserve those qualities that make a river suitable as a habitat for wildlife, a site for recreation, and a source for clean drinking water. River corridors also allow the free movement of wildlife from area to area within the state, help control erosion and river sedimentation, and help absorb floodwaters.



The Coastal Georgia Regional Development Center prepared a Regional River Corridor Protection Plan for counties within their jurisdiction. The Plan describes the ten local governments and the associated rivers that are affected by the River Corridor Protection Act, and puts forward a regional plan for the protection of river corridors. The plan provides for construction of road crossings, acceptable uses of river corridors, maintenance of a vegetative buffer along rivers for a minimum of 100 feet from the river's edge (residential structures are allowed within the buffer zone), timber production standards, wildlife and fisheries management, recreation, and other uses. Chatham County is one of the eight coastal counties affected by the River Corridor Protection Act and therefore, as required, has adopted a Regional River Corridor Protection Plan for the Savannah River.

The maintenance of a 100-foot natural vegetative buffer, often referred to as a "riparian buffer", on both sides of any protected river is required under the River Corridor Protection Act. Similarly, under the State of Georgia Erosion and Sedimentation Act, one provision requires that land-disturbing activities shall not be conducted within 25 feet of the banks of any State waters, thus mandating a riparian buffer 25 feet in width.

Riparian buffers are of particular importance to the overall protection of water quality and habitat within the Lowcountry and coastal areas of Georgia. Scientific research and documentation cites many reasons for riparian buffers, including: a) to reduce the volume and velocity of stormwater runoff in order to protect the hydrological profiles of the surrounding waterways; b) to reduce the sediment and pollutants going into the open water; c) to provide upland wildlife habitat areas and; d) to help maintain the in-stream temperatures provided by the shade within the tree canopy of the buffer system.

The primary effect of the buffer on not only the waterbody, but the overall watershed as well, is to reduce non-point source pollution from the human activities upstream from the riparian area. Runoff water filtered through a well-maintained buffer zone carries fewer nutrients, chemicals and sediment into the waters and helps to protect the natural profile of the shoreline. For example, studies show that a *minimal buffer of 35 feet will often remove over 60 percent of sediment and pollutants before they enter the water*, thereby greatly reducing the detrimental impacts to the area.

With this in mind, in 2001 the MPC set forth development standards in the *Island's Area Community Plan* for Chatham County's Oatland, Talahi, Whitemarsh, and Wilmington Islands that established a minimum riparian buffer of 35 feet, 30 percent of which may be altered by pruning and selective clearing for access and to maintain view corridors. Such

practices as these result in reduced stormwater runoff essential for environmental protection and flood control; buffering adjacent neighborhoods, and enhancing community appearance.

Under related environmental protection measures, section 303(d) of the 1972 Clean Water Act mandates that all states develop lists of impaired waters within their jurisdiction.

There are 445 waterbodies on the 303(d) for the Sate of Georgia and 4 of those areas fall within the Chatham County region. They are Casey Canal, Hayners Creek, Little Ogeechee River, and the Savannah Harbor. These four Chatham County sites all fall within the Ogeechee Coastal and Lower Savannah Watersheds.

The following table shows a complete breakdown of the four areas as well as the specific reason for the impairment.

Table 9.1: Impaired / 303(d) Listed Waters Within Chatham County (2004)

WATERBODY NAME	WATERBODY TYPE	STATE BASIN NAME	WATERSHED NAME	LOCATION	303(D) LISTED IMPAIRMENTS
Casey Canal	Stream/ Creek/River	Ogeechee	Ogeechee Coastal	Chatham County	Dissolved Oxygen; Fecal Coliform; Fish Consumption Guidance (Dieldrin)
Hayners Creek	Stream/ Creek/River	Ogeechee	Ogeechee Coastal	Chatham County	Dissolved Oxygen; Fecal Coliform; Fish Consumption Guidance (Dieldrin)
Little Ogeechee River	Stream/ Creek/River	Ogeechee	Ogeechee Coastal	Chatham County	Fecal Coliform
Savannah Harbor	Estuary	____	Lower Savannah	Hwy 17 to South Channel	Dissolved Oxygen

Source: United States Environmental Protection Agency

9.3 Coastal Resources

Georgia's coastal marshlands and beaches are seen as one of the State's greatest resources and a defining characteristic feature of Chatham County.

Chatham County has enacted a zoning district for marsh conservation. According to the county's 2001 zoning ordinance, the purpose of the Conservation Marsh (C-M) District is to encourage all reasonable public and private uses and developments of the marshlands. The uses are not to be significantly detrimental to the biological ecology, aquatic life, wildlife, recreation, and scenic resources of the marshlands. The uses will not pollute the inlets and coastal waters with human or industrial wastes or the long-term silting that would result from unduly disturbing the marshlands. The purpose of the C-M district is to protect and

conserve a natural land and water condition for the recreational, economic and general welfare of the citizens of Chatham County.

The landscape along the Georgia coast is also dotted with marsh hammocks — back barrier islands or small upland areas surrounded by tidal waters and marshes that provide a haven for wildlife. The Department of Natural Resources has found that there are about 624 hammocks in the coastal counties of Chatham, Bryan and Liberty. Of those, about half of them are the same distance -- about 1,000 feet -- from the mainland or another island linked to the mainland by road. As the state's coastal population grows, hammocks are under increasing development pressure so, in order to effectively protect Georgia's coastal habitat, public policies regarding hammock conservation must be enacted.

A report completed by the GA DNR entitled *Report of the Coastal Marsh Hammocks Advisory Council* stated that approximately 1,200 hammocks comprising over 17,000 acres are now identified and mapped on the Georgia coast primarily throughout the areas of Chatham, Bryan, Liberty, McIntosh, Glynn and Camden Counties. The hammocks range in size from less than one acre to over 1,000 acres with nearly 85 percent of them falling into the less than 10 acre category. Chatham County has 38 percent of the total number of hammocks for the coastal region.

Table 9.2 presents distribution of hammocks and acreage by county according to size classes. Under each county name the total acreage per size class is given, followed by the number of hammocks within the class.

Table 9.2: County Distribution of Hammocks By Size Class

	CHATHAM		BRYAN		LIBERTY		MCINTOSH		GLYNN		CAMDEN	
Size Class (acres)	Acres	#	Acres	#	Acres	#	Acres	#	Acres	#	Acres	#
0-.99	84.4	186	6.0	9	19.3	38	27.1	50	57.4	129	11.9	28
1-9.99	627.4	196	84.8	26	233.0	69	380.4	108	444.0	140	134.9	37
10-49.99	1044.7	53	99.4	5	260.3	15	505.6	28	457.7	21	203.0	13
50-99.99	560.3	8	216.9	3	63.9	1	225.9	3	310.8	2	133.9	2
100+	1919.5	7	491.9	2	1616.4	6	2318.1	6	-	-	4486.8	8

Source: GA DNR; Report of the Coastal Marsh Hammocks Advisory Council

Private ownership is the rule with 43 percent of the hammocks under single or multiple private ownership. This represents over 58 percent of the hammock acreage in Chatham County, or 2,466 acres. Table 9.3 offers the number of hammocks, acreage, and the proportion represented by each ownership category.

Table 9.3: Hammock Ownership Data for Chatham County				
OWNERSHIP TYPE	NUMBER OF HAMMOCKS	PERCENT OF TOTAL HAMMOCKS	ACREAGE	PERCENT OF HAMMOCK AREA
Multiple Private	12	2.7	652.7	15.4
Private	183	40.7	1813.3	42.8
City	1	0.2	1.7	0
County	12	2.7	74.6	1.8
State	140	31.1	1140.1	26.9
Fed/ Conservation	98	21.8	541.7	12.8
No Data	4	0.9	12.1	0.3
TOTAL	450	100	4236.2	100

Source: GA DNR; Report of the Coastal Marsh Hammocks Advisory Council

Data indicates a predominance of private ownership both in number of hammocks and in acreage. Fifty-eight percent of Georgia's hammocks are owned privately. That amounts to nearly 54 percent of the land area represented by coastal hammocks. While nearly 21 percent of the hammocks are State-owned, these represent only 11 percent of the total acreage of marsh hammocks. Chatham County has about 80 hammocks that are in State ownership that were purchased through an effort with conservation organizations.

9.3.1 Floodplains

Floodplains are flat or lowland tracts of land adjacent to lakes, wetlands, and rivers that are typically covered by water during a flood. The ability of the floodplain to carry and store floodwaters should be preserved in order to protect human life and property from flood damage. However, undeveloped floodplains also provide many other natural and economic resource benefits. Floodplains often contain wetlands and other areas vital to a diverse and healthy ecosystem. By making wise land use decisions in the development and management of floodplains, beneficial functions are protected and negative impacts to the quality of the environment are reduced.

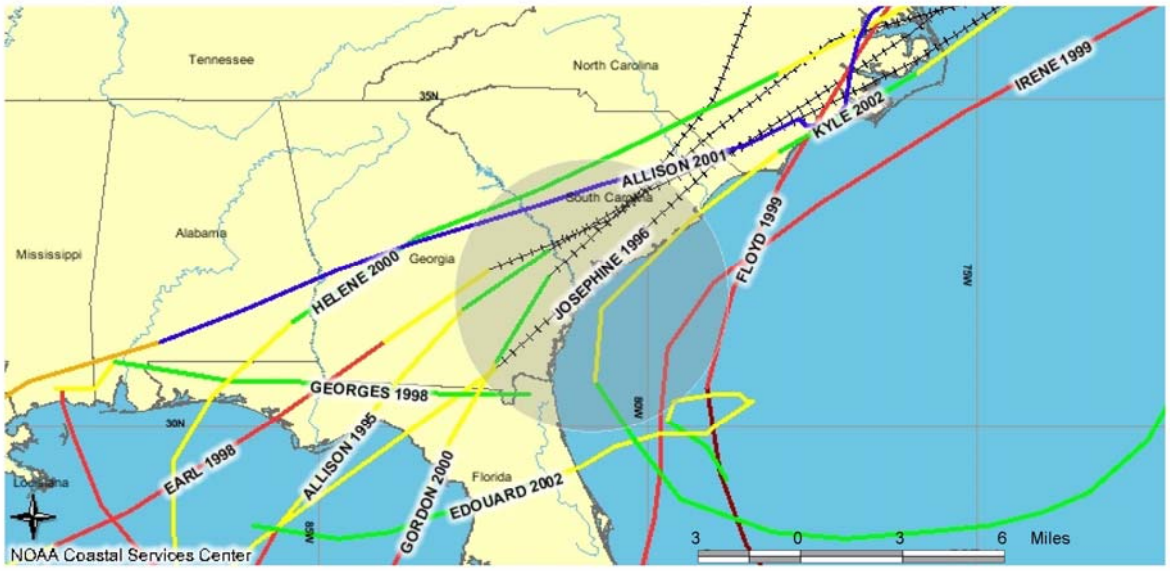
The values and benefits provided by land allocated in floodplains may include the following: Natural and beneficial floodplain values; water quality maintenance; groundwater recharge; as well as living resources and habitat values.

9.3.2 Hurricane Vulnerability

Hurricane season officially runs from June 1 through November 30, although peak period for hurricane development is in early to mid September.

The six coastal counties at highest risk of evacuation because of storm surge are Bryan, Camden, Chatham, Glynn, Liberty and McIntosh. The hurricane threat in Chatham County is high since Georgia's coastline is impacted from tropical systems from both the Atlantic Ocean and the Gulf of Mexico.

Figure 9.6
Historical Hurricane Tracks
(1995 - June 2003)



Source: National Oceanic and Atmospheric Administration

Population growth along the coast has complicated the evacuation and sheltering process. Millions of residents and tourists from Georgia and its neighboring states of Florida, North Carolina and South Carolina jam highways in search of safety and shelter when evacuation orders are issued. And often, just the threat of a hurricane is enough to put voluntary and mandatory evacuation orders into effect.

Improved forecasting and warning capabilities have diminished hurricane-related deaths in the 20th century; however, damage to property has increased with the rapid growth along coastal regions. For this reason, population growth, flood plain management, and housing development issues are carefully monitored by government and municipal agencies to ensure that all of the coastal communities and their inhabitants are safe for years to come.

9.3.3 Soil Types

Georgia has a relatively wide range of soil and climatic conditions. The state can be divided into eight soil provinces geographically, often referred to as major land resource areas (MLRA). A MLRA is a geographic land area characterized by a particular combination or pattern of soils, climate, water resources, land use and types of farming. The southeastern

portion of the State, to include all of Chatham County, has been labeled as the Atlantic Coast Flatwoods area of Georgia.

The Atlantic Coast Flatwoods area occurs along the seaward portion of Georgia and covers approximately seven million acres. It is characterized by nearly level topography and poorly drained soils that are underlain by marine sands, loams or clays.

Favorable topography, abundant surface and subsurface water resources, and mild climate create a high potential for vegetable, tobacco, corn, and soybean production. Water control problems and wide variations in soil texture and other properties make management of these soils difficult. About 75 percent of this area is located in forested areas and about 15 percent in crop land and pasture land. Most of the cropland is on the better-drained areas.

9.3.4 Prime Agricultural and Forest Land

A farm, as defined, is any place from which $1,000 or more or agricultural products were sold or normally would have been sold, during the census year. According to the *Georgia Guide*, Chatham County had 228 farms in 1964, 51 farms in 1987 and 42 in 1997. The average size of a farm in 1997 was 207 acres, down from 209 acres in 1987. Lastly, there were 927 acres of harvested cropland in Chatham County in 1997.

In 1997, Chatham County ranked 154 out of 159 counties statewide with the percent of total land being used as farms. Only 3.1 percent of the total land area of the county was being used for agriculture.

Chatham County has 92,980 acres of timberland. This equates to 32.8 percent of all land in the county. There are 10,999 acres of long-leaf slash pine; 25,873 acres of loblolly-shortleaf pine; 14,305 acres of oak-pine; 23,810 acres of oak-hickory; and 17,993 acres of oak-gum-cypress. And the ownership of the forest land is classified either as government (17.3 percent), forest industry (39.5 percent) and other private (43.2 percent).

9.3.5 Plant and Animal Habitats

Wildlife requires food, cover, and water in suitable combinations. Lack of any one of these requirements, unfavorable balance between them, or an inadequate distribution of them may severely limit or account for absence of desired wildlife species.

Most wildlife habitats are managed by planting suitable vegetation, by improving existing vegetation so as to bring about a favorable habitat and an increase of the number of desired plants, or by a combination of such measures. The degree of suitability of many soils for various plants is known, and it can be estimated for other soils from knowledge of soil characteristics and behavior.

Ratings of the suitability of soils for wildlife habitat have been established. The elements of wildlife habitat and the types of vegetation can be covered in one of the following categories:

- Grain crops
- Grasses and legumes
- Wild herbaceous upland plants
- Hardwood woody plants
- Coniferous woody plants
- Wetland food and cover plants
- Shallow water developments
- Ponds

In order to protect the wildlife that Chatham County and the State of Georgia hold so dear, both jurisdictions strictly follow procedures to ensure Georgia's wildlife is sustained. Any endangered or threatened species of animals and plants are given federal protection under the Endangered Species Act (ESA) which prohibits all "taking" of a threatened or endangered species.

9.3.6 Major Park, Recreation and Conservation Areas

The natural and scenic amenities of Chatham County offer many recreational and cultural opportunities. Due to the amount of open space in Chatham County being reduced annually, surveys were performed and a resulting countywide *Open Space Plan* was completed by the MPC in 1996. This plan was drafted to provide direction in providing and conserving adequate amounts of natural open space for Chatham County to enjoy in the years to follow.

As defined in the open space plan, "*open space* is an area that is valued for active and passive recreation and protection of the natural resources (including natural processes and wildlife) and which provides public benefit and which is part of one or more of the following categories: developmentally difficult lands, natural resource areas, commercially used natural resources areas, natural amenity areas, recreational areas and urban form areas." Under this definition, there are five areas under Federal jurisdiction and six areas under State jurisdiction within Chatham County that fall within this title of conservation/recreation areas.

Additionally, there are a number of recreational and conservation areas within Chatham County that are not under State or Federal jurisdiction. Some of the conservation and recreational areas within Chatham County include the following sites:

- Fort Pulaski National Monument
- Savannah National Wildlife Refuge

- Tybee National Wildlife Refuge
- Atlantic Intracoastal Waterway
- Wassaw Island National Wildlife Refuge
- Skidaway Island State Park
- Marine Extension Center
- Wormsloe Historic Site
- Ossabaw Island
- Little Tybee Island
- Cabbage Island
- Oatland Island Education Center
- McQueen's Island Trail
- Bacon Park
- Lake Mayer
- L. Scott Stell Community Park / The Jim Golden Complex
- King's Ferry Park
- Tom Triplett Park

9.3.7 Scenic Views and Sites

Chatham County is one of the most historic and beautiful counties in Georgia. Its scenic attributes include numerous rivers and creeks with vast marsh vistas, ocean beaches and dense systems, wooded barrier islands and an unparalleled urban forest. A more in-depth discussion of this topic can be found in *Chapter 10: Transportation*, and throughout *Chapter 8: Historic and Cultural Resources* of the Tricentennial Plan.

9.4 Issues and Opportunities

In order to determine the adequacy of existing policies and programs, an assessment is needed. This will ensure that resources are utilized, developed, managed and preserved wisely for maximum long range benefits for each community within Chatham County.

After careful review, the following list was created to highlight those points that may need careful attention in the future.

- *Groundwater Recharge Areas*- The largest recharge area in the County lies just under the intense development area of the Abercorn and White Bluff corridors extending south from Victory Drive. Currently, there are no policies in effect to manage or protect the groundwater recharge areas from possible contamination or reduced recharge due to the proximity of human activity. Future land use plans should indicate environmentally sensitive areas, including groundwater recharge areas. Development plans must identify how development will occur while not negatively impacting the functioning of the recharge areas.

- *Coastal Resources*- The Islands and Southeast Chatham areas of the County are environmentally unique in that they are marshside communities. Some elements

that need increased protection within these communities are the hammocks, wetlands and back barrier islands as well as the individual marsh buffers and setbacks on each site. More intense local programs and development standards for marsh, wetland and island protection need to be established, implemented and maintained once put into place. There is also a strong need for those natural resource sites in need of protection to be identified and ultimately "protected" through a number of means: possible acquisition using SPLOST funds, zoning, conservation easements, donation, etc. Also in need of continued protection are those coastal species of flora and fauna in danger of population decline and extinction.

- *Prime Agricultural and Forest Land- Agricultural* activity continues to decline in Chatham County as a result of residential, business and industrial development whereas forest lands have the greatest potential for staying within similar percentages in the future. However, some of these lands owned by corporate entities as well as private individuals are being proposed for development which could result in a net loss of forest lands. The need for a forest and agricultural land management program is great.

- *Major Park, Recreation, and Conservation Areas-* State and Federal laws provide some protection and management for these resources but too often these laws are not sufficient to protect sites from adjacent development impact. More restrictive zoning regulations and buffer requirements may be needed in the future to limit or prohibit future uses in these areas.

- *Scenic Views and Sites-* Overall, some of the area's scenic views are being lost with the rise in commercial and residential development. Without adequate land use and buffer controls, the likelihood of these scenic areas to be impacted will increase and long term loss will occur.

- *West Chatham County-* Rapid growth in Western Chatham County has led to separate, unique challenges for this portion of the County. A definite program for natural resource protection is needed to ensure that the area's isolated wetlands, tree canopies, and greenspace are not lost due to the rapid development.

- *Stormwater-* Stormwater Best Management Practices (BMPs) such as Low Impact Development (LID) strategies that reduce stormwater runoff need to be accepted and implemented throughout the County to lessen the impacts of runoff on the coastal environment. There is also a need county-wide to determine whether a stormwater utility would be necessary and/or feasible for the continued maintenance ,management, and treatment of the area's stormwater systems.

- *Salt Water Intrusion-* Salt water intrusion into the Floridan Aquifer system needs to be addressed regionally to ensure the protection of the coastal area's groundwater source.

- *Impaired Waterways-* Any 303(d) listed impaired waterbodies currently listed by the U.S. Environmental Protection Agency (EPA) need to be evaluated and addressed to improve the quality to ultimately allow for delisting.

- *Solid Waste*- Solid waste control and disposal needs to be evaluated and addressed on a regional basis to allow for a more thorough approach to management, reduction and continued capacity for the coastal areas.

9.5 Assessment of Natural Resources

The purpose of an assessment of Chatham County's natural resources is to present a factual and conceptual foundation upon which the rest of the County's comprehensive plan can turn to for information and guidance.

9.5.1 Environmental Planning Criteria

Throughout *Sections 9.2: Water Resources and 9.3: Coastal Resources*, numerous local and regional resources were identified and defined. More specifically, to ensure continuous protection of water supply watersheds, groundwater recharge areas, wetlands, and river corridors, specific environmental planning criteria have been developed and are subsequently discussed.

- *Criteria for Water Supply Watersheds*- The purpose of these criteria is to establish the protection of drinking water watersheds. This protection is necessary for the enhancement of public health, safety and welfare as well as to assure that surface sources of drinking water are of high quality in order to be treated to meet all State and Federal drinking water standards. The criteria established by the local governments through its current zoning ordinances and management practices, allow development within a water supply watershed without contaminating the water source to a point where it cannot be treated to meet drinking water standards. The criteria utilized within Chatham County accomplish this by establishing buffer zones around streams and by specifying allowable impervious surface densities within watersheds. The criteria also include protection of water supply reservoirs by incorporating buffer zones and management practices that are ultimately approved by the Georgia Department of Natural Resources. A map and further discussion of the watersheds within Chatham County can be seen in Section 9.2.1 of this Chapter.

- *Criteria for Protection of Groundwater Recharge Areas*- The purpose of these criteria is to establish the protection of groundwater recharge areas from human induced pollution. The criteria established by Chatham County's local governments through its current zoning ordinances and management practices, allow development within a groundwater recharge area without contaminating the water source via septic systems; wastewater facilities; through the introduction of hazardous waste or stormwater into the area; as well as chemicals and petroleum. These areas have been mapped and are discussed further in Section 9.2.3 of this Chapter. All of the municipalities within the Chatham County area have also adopted Wellhead Protection Ordinances to further ensure the quality of the groundwater within the Floridan Aquifer remains the same for years to come.

- *Criteria for Wetlands Protection*- Under Part V Environmental Planning Criteria, Chatham County and the cities of Bloomingdale, Garden City, Pooler, Port Wentworth, Tybee Island, and the Town of Thunderbolt adopted Wetlands Protection Ordinances that provide a procedure for local governments to coordinate

federal wetlands permitting with local permitting. These ordinances provide a regulatory framework by which potential wetland impacts can be evaluated before local permits for land disturbance and building are issued.

To control and manage development of coastal areas, the Georgia Legislature passed the Marshlands Protection Act in 1970 requiring a Georgia Department of Natural Resources permit to alter saltwater and brackish wetlands in any way. The freshwater marshes, which are intimately connected to them, are protected under Section 404 by requiring permits for altering, dredging, or filling any of these areas to include both seasonal and temporary wetlands.

These areas are further protected through the State's identification process as well as local mapping that is then utilized on a daily basis throughout the County to ensure continued protection. A more in-depth discussion as well as a visual depiction of area wetlands can be found in Section 9.2.4.

- *Criteria for River Corridor Protection*- The purpose of these criteria is to ensure that the strips of land that flank major rivers throughout Georgia are preserved and protected. These corridors are of vital importance to Georgia in that they help preserve those qualities that make a river suitable as a habitat for wildlife, a site for recreation, and a source for clean drinking water. River corridors also allow the free movement of wildlife from area to area within the state, help control erosion and river sedimentation, and help absorb flood waters. The method mandated in both State and local law through zoning and management is the establishment of natural vegetative buffer area bordering each protected river. Local government within Chatham County developed standards for development along the Savannah River that allows for the maintenance of the buffer area's integrity. Some aspects incorporated into the criteria focus on:
    - septic tanks
    - road crossings
    - utility crossings
    - receiving and storage of hazardous waste
    - landfill operation
    - construction

A more in-depth discussion of protected rivers and corridors within Chatham County can be reviewed in Section 9.2.5 of this Chapter.

9.5.2 Environmentally Sensitive and Significant Areas

Chatham County contains exceptional natural resources vitally important to its economy and development potential. The County therefore has an interest in promoting, developing, sustaining, and protecting its natural resources for future generations.

Throughout this chapter of the Tricentennial Plan, there are several sections that inventory specific natural resources found in Chatham County as well as specific goals and objectives for the management and protection of these resources. Although specific mechanisms are in place, the area continues to see a decline in the region's natural resources due to the rise in commercial and residential development due to rapid population growth. Without adequate

land use and buffer controls, the likelihood of the number of areas impacted will increase and long term loss will occur.

9.6 Quality Growth Objectives

Based on growth and development issues identified in both local and regional plans throughout Georgia, a specific planning goal was put into place for natural resources. The planning goal for natural resources is to conserve and protect the environmental and natural resources of Georgia's communities, regions and the state. To further elaborate on this state goal, Chatham County and the City of Savannah have set forth specific objectives to ensure that the community's planning policies, activities, and development patterns are in-line with the state's goal. Three objectives closely related to natural resources are identified and discussed:

- *Open Space Preservation*: From the urbanized area to the urban fringes, open space preservation continues to be a high priority in Chatham County and the City of Savannah. The Community Assessment with *Chapter 5: Land Use* establishes a basis for new zoning that will enhance the ability of local government to preserve open space. The desired result is that new development will continue to be designed to minimize the amount of land consumed and open space will be set aside from development for use as public parks, greenways and wildlife corridors. Continued enforcement through zoning ordinances, proper land use decisions and overall management will be the key to ensuring the preservation of open space areas in Chatham County and Savannah. This issue can also be reviewed in *Chapter 5: Land Use* and *Chapter 10: Transportation*.

- *Environmental Protection:* Through development practices, zoning ordinances and environmental compliance regulations, the air quality in the region and environmentally sensitive areas are protected from negative impacts of development. Environmentally sensitive areas throughout Chatham County have been identified and receive special protection, particularly when they are important for maintaining traditional character or quality of life of the community or region. Whenever possible, the natural terrain, drainage, and vegetation of an area is preserved and protected. A more-depth discussion of these measures of protection can be found throughout this chapter as well as in *Chapter 10: Transportation, Chapter 5: Land Use* and *Chapter 8: Historic Resources.*

- *Regional Cooperation:* Regional cooperation is continuously encouraged during Chatham County and the City of Savannah's priority setting process. Through continued partnerships; the identification of shared needs; as well as finding collaborative solutions to the area's natural resource issues, Chatham County and the City of Savannah's natural resources goal is guaranteed. This topic is one of great importance to the region. For more discussion on specific cooperation efforts, please review *Chapter 10: Transportation, Chapter 11: Facilities and Services and Chapter 12: Intergovernmental Coordination.*

Chapter 10.0 *Transportation*

The road network was one of the primary components of Oglethorpe's original town plan for Savannah. The plan featured adherence to a strict grid pattern that was characterized by roadways featuring regular widths (37.5feet, 45feet, and 75feet, depending on street type) that were spaced at regular intervals. The streets formed the geographic boundaries between wards, and provided a high level of connectivity throughout the city as a whole. The road network that was established at the colony's founding is still in place today.

Transportation technology has been a driving force behind many of the changes to Savannah's spatial pattern that have occurred in the nearly three hundred years since its founding. The downtown core developed during an era of pedestrian and horse-drawn transportation. This lack of mobility helped to keep the city very compact. The advent of streetcar technology in the 1800s and automotive technology in the 1900s led to new eras of growth and expansion, with development patterns changing to accommodate these new modes of transportation.

10.1 Introduction

This chapter provides a summary of the transportation plan for Chatham County[1], based primarily on the Chatham Urban Transportation Study's (CUTS) 2030 Long Range Transportation Plan (LRTP). This chapter also establishes connections between transportation and the other chapters of the Comprehensive Plan, most notably Land Use (see Chapter 5).

10.2 Regional Transportation

As the largest city in Coastal Georgia, Savannah also has the most significant urban road network in the region. Two major interstates, I-95 and I-16, intersect in Chatham County. I-95 runs from Miami, FL to the Canadian border at Houlton, ME, and is the primary north-south interstate on the East Coast. I-16 runs from Savannah to Macon, and is the primary interstate route for traffic from Coastal Georgia to the Atlanta Metropolitan Area.

Commuting activity from adjacent counties is one of the principal regional transportation issues in Chatham County today. Chatham County is the economic hub of the region, and as such, it attracts a large number of commuters from adjacent counties. As shown in Table 6.13 in the Economic Development chapter, nearly all Chatham County residents work in Chatham County, while a significant majority of Bryan and Effingham residents also work in Chatham County. These large numbers of commuters pose capacity challenges for the county's regional roadway system, including interstates, US highways, and other major roads.

In addition to its roadway infrastructure, Chatham County is also home to several other unique and significant regional transportation assets. These include the Port of Savannah, Savannah-Hilton Head International Airport, and Hunter Army Airfield. Each of these facilities fulfills vital transportation needs on a regional level. These facilities are discussed in detail in section 10.6 of this chapter.

10.3 Road Network

The road network is the backbone of Chatham County's transportation infrastructure. This section will inventory the network in terms of functional classification, average daily traffic loads, bridge locations, and roadway amenities.

[1] Transportation planning has its own countywide planning process in the form of the Chatham Urban Transportation Study (CUTS), which is the Savannah area's Metropolitan Planning Organization (MPO). Unlike the Metropolitan Planning Commission, which has planning influence only in the City of Savannah and unincorporated Chatham County, the CUTS planning process is countywide, and includes the seven other incorporated municipalities in Chatham County: Bloomingdale, Garden City, Pooler, Port Wentworth, Thunderbolt, Tybee Island, and Vernonburg.

10.3.1 Functional Classification

Functional classification refers to a road's role, or "function", in an area's roadway system. A number of factors contribute to the classification that is assigned to any particular road, including the road's capacity and purpose (i.e. to carry local traffic or regional traffic).

The Georgia Department of Transportation (GDOT) produces functional classification maps. The classification system is somewhat different for roads in rural and urban settings. Table 10.1 outlines the functional classification system in descending order of intensity.

Table 10.1. GDOT Functional Classification System

RURAL	URBAN
Interstate Principal Arterial	Interstate Principal Arterial
Principal Arterial	Urban Freeway and Expressway
Minor Arterial	Urban Principal Arterial
Major Collector	Urban Minor Arterial
Minor Collector	Urban Collector Street
Local Road	Urban Local Road

Source:http://www.dot.state.ga.us/

This classification system can be simplified into three major categories of roads: arterials, collectors, and local streets.

- **Arterials**- Major roads that handle high traffic volumes and speed limits. Arterials connect major activity and population centers, and are often the principal means of travel across town or to distant destinations. The highest order of arterials is limited access roads (freeways), which always have at least two lanes in each direction, and are characterized by high speed limits and a total lack of regulatory stop control (traffic lights and stop signs). Lower-order arterials are not limited-access roads, but they often have multiple lanes, high speed limits, and minimal stop control.

- **Collectors**- Medium-volume roads that connect arterials to local streets.

- **Local Streets**- Usually associated with residential land uses, local streets have low traffic volumes and speed limits and are often designed to discourage through traffic.

Figure 10.1 shows functional classification for all public roads in Chatham County.

10.3.2 Annual Average Daily Traffic[2]

GDOT counts or estimates traffic at approximately 400 locations in Chatham County. Data is collected throughout the year and is factored to produce estimates of Annual Average Daily Traffic (AADT), which is an estimate of the total number of vehicles that travel on a particular road segment, in both directions, during a full 24-hour day. There are three continuous counting stations in Chatham County (located on Abercorn Street, Oglethorpe

[2] Source: CUTS 2002 Annual Daily Traffic poster; published June, 2003

Avenue, and I-95) that record traffic counts every day of the year. AADT for all other locations is estimated from tube counts that are taken at that particular location for a minimum of one 24-hour period. Sample traffic counts are then adjusted by GDOT to produce AADT figures, which are intended to represent traffic volumes on a "typical" day during the year in which the data was collected. AADT for monitored roads is shown in Figure 10.2.

Of all roads monitored by GDOT in Chatham County, the highest AADT was 65,400 trips per day, which was recorded along portions of I-95. The lowest AADT was 20, recorded along a short residential stretch of Coffee Bluff Road. Between these two extremes lies a wide variation. At the high end of the scale are the interstates and principal arterials, many of which carry 30,000 vehicles or more per day. At the middle range of the scale, carrying between 10,000 and 30,000 vehicles per day are the minor arterials and some of the more heavily traveled collector streets. The lower end of the scale, with 10,000 trips and fewer, is comprised primarily of local streets and the remainder of the collector roads.

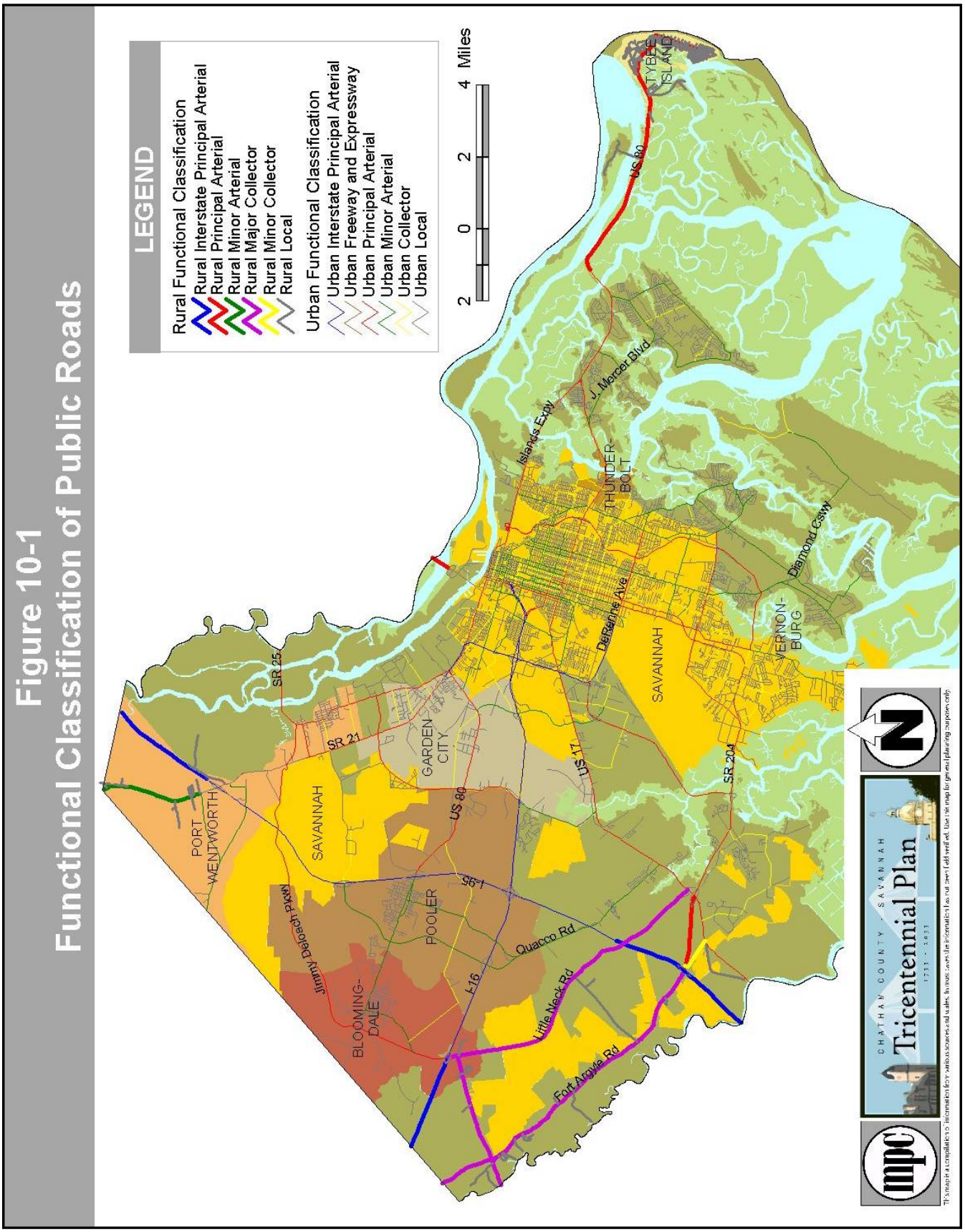


Figure 10-1
Functional Classification of Public Roads
LEGEND
Rural Functional Classification
Rural Interstate Principal Arterial
Rural Principal Arterial
Rural Minor Arterial
Rural Major Collector
Rural Minor Collector
Rural Local
Urban Functional Classification
Urban Interstate Principal Arterial
Urban Freeway and Expressway
Urban Principal Arterial
Urban Minor Arterial
Urban Collector
Urban Local
2 0 2 4 Miles
TYBEE ISLAND
US 80
J. Mercer Blvd
Islands Expy
THUNDER-BOLT
Diamond Cswy
DeRenne Ave
SAVANNAH
VERNON-BURG
SR 25
SR 21
GARDEN CITY
US 17
SR 204
PORT WENTWORTH
SAVANNAH
US 80
SR 1
POOLER
Jimmy Deloach Pkwy
Quacco Rd
I-16
BLOOMING-DALE
Little Neck Rd
Fort Argyle Rd
N
CHATHAM COUNTY - SAVANNAH
Tricentennial Plan
1733 - 2033
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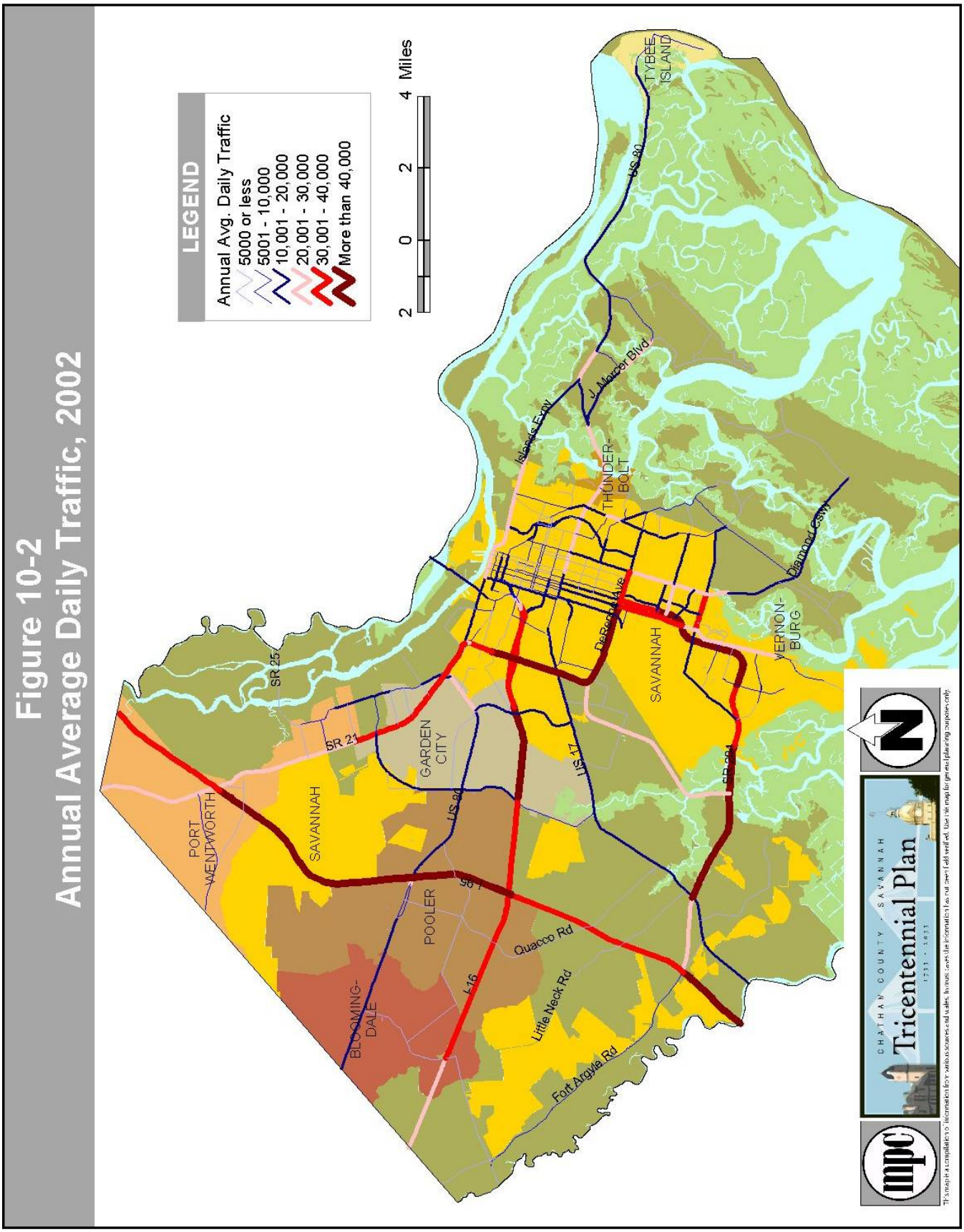
Figure 10-2
Annual Average Daily Traffic, 2002
LEGEND
Annual Avg. Daily Traffic
5000 or less
5001 - 10,000
10,001 - 20,000
20,001 - 30,000
30,001 - 40,000
More than 40,000
2 0 2 4 Miles
TYBEE ISLAND
US 80
J. Mercer Blvd
Islands Expy
THUNDER-BOLT
Diamond Causeway
DeRenne Ave
SAVANNAH
VERNON-BURG
SR 25
SR 21
GARDEN CITY
US 17
SR 204
PORT WENTWORTH
SAVANNAH
US 80
SR 307
POOLER
I-16
BLOOMING-DALE
Quacco Rd
Little Neck Rd
Fort Argyle Rd
N
CHATHAM COUNTY - SAVANNAH
Tricentennial Plan
1733 - 2033
mpc

10.3.3 Bridge Inventory

The location of bridges in Chatham County is shown in Figure 10.3. The inventory shows a total of 307 bridges in Chatham County, and includes bridges of various types and lengths. Most of the bridges in the inventory are minor facilities, such as overpasses and creek and stream crossings. A few of the bridges are major facilities such as the Talmadge Bridge across the Savannah River. The bridges that serve the various island communities in East Chatham should be considered crucial facilities, as many of them provide the sole link to the mainland from their respective islands. US 80, for example, is the only link between Tybee Island and the mainland. Skidaway Island is in a similar situation, with the Diamond Causeway providing its sole link to the mainland. Connectivity is slightly better for Wilmington and Whitemarsh Islands, which have two routes to the mainland.

Under an evacuation scenario, the most significant bridges are those that are located on designated evacuation routes. Chatham County has four designated evacuation routes: I-16, SR 21 SR 204, and US 80[3].

10.3.4 Roadway Amenities

Chatham County has many roadway corridors that feature unique amenities that should be preserved for future generations and constrained from redevelopment that would jeopardize their unique qualities. There are six types of amenity corridors in Chatham County:

- Canopy Roadways and Roadways with Replanting Opportunities
- Palm Lined Causeways
- Historic Road Segments
- Community Gateways
- Scenic Corridors and Vistas
- Landscaping and Enhancement of New and Recently Completed Roads

Roadways featuring these unique qualities have been identified and mapped (see Figures 10.4 and 10.5). These roadways have been designated "constrained corridors" in the development of the Congestion Management System Plan and subsequently the 2030 Long Range Transportation Plan. As a result of this designation, improvements to these existing amenity corridors, if congested, will be limited to management strategies such as signal retiming, signal coordination, access management, turn lanes, intersection geometry improvements and the like. Strategies which would be destructive to the tree canopy or other historic resources, such as road widening, will be avoided.

[3] Source: Georgia Emergency Management Agency (GEMA) http://www2.state.ga.us/GEMA/

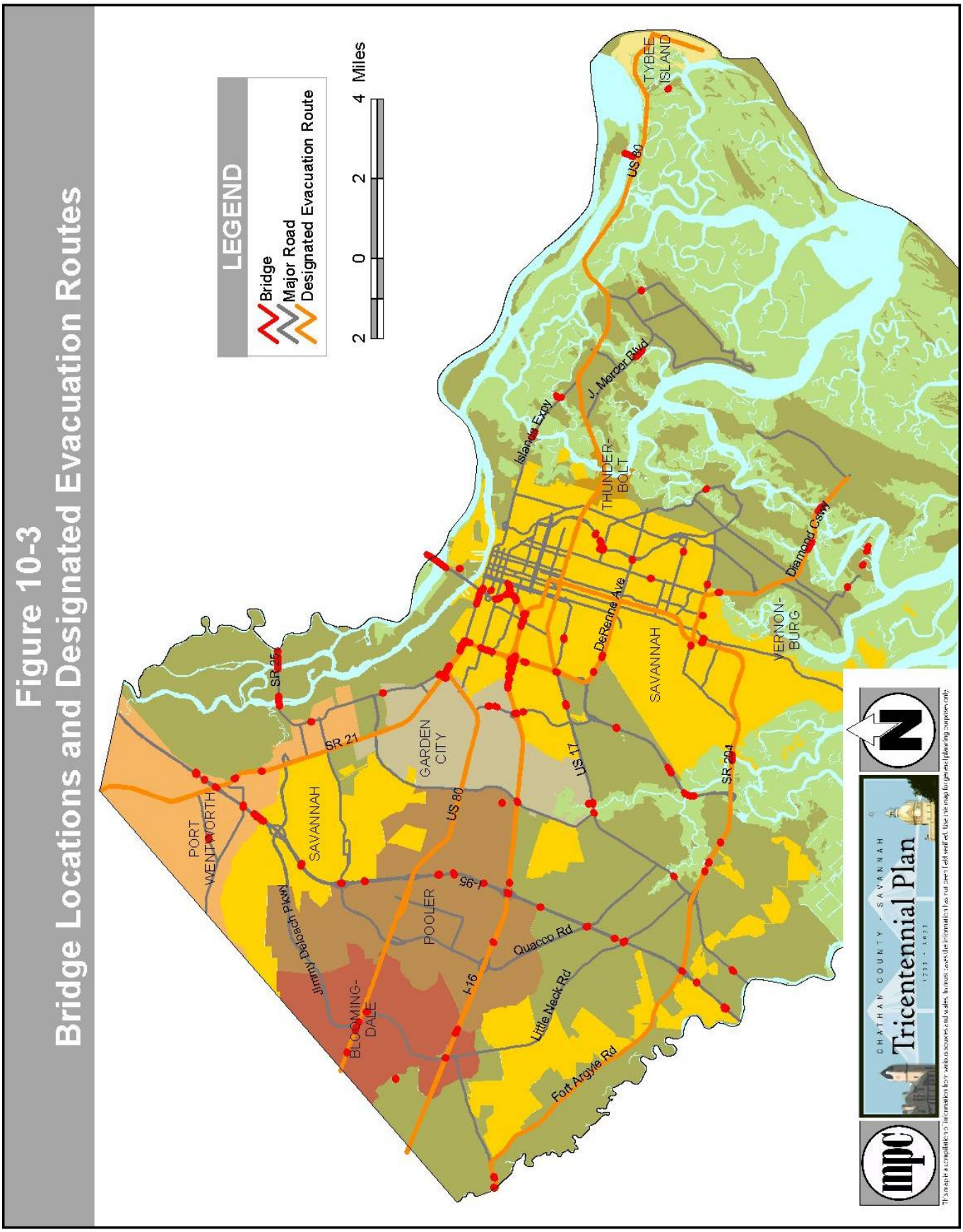
Figure 10-3
Bridge Locations and Designated Evacuation Routes
LEGEND
Bridge
Major Road
Designated Evacuation Route
2 0 2 4 Miles
TYBEE ISLAND
US 80
Islands Expy
J. Mercer Blvd
THUNDER-BOLT
Diamond Cswy
DeRenne Ave
SAVANNAH
VERNON-BURG
SR 25
SR 21
GARDEN CITY
US 17
US 80
SR 204
PORT WENTWORTH
SAVANNAH
I-95
POOLER
Jimmy Deloach PKWY
Quacco Rd
I-16
BLOOMING-DALE
Little Neck Rd
Fort Argyle Rd
N
mpc
CHATHAM COUNTY - SAVANNAH
Tricentennial Plan
1733 - 2033

In addition to protecting existing amenity corridors, CUTS recently instituted an amenities funding plan. With the adoption of the 2030 Long Range Transportation Plan in 2004, CUTS enacted a new planning policy to fund transportation amenities for all road construction projects. One percent of the anticipated road construction funds identified in the 2030 Long Range Transportation Plan have been set aside to fund transportation amenities. It is now the policy of the MPO that all road projects contain transportation amenities equal to or greater than one percent of the roadway construction cost. Transportation Amenities Plans will be prepared during the design phase of road widening, reconstruction, and new location projects, and will contain treatments appropriate to the community, the facility type, and the anticipated travel. To the maximum extent possible, these amenities will be implemented during road construction projects in order to minimize costs and inconvenience to travelers.

10.4 Alternative Modes of Transportation

"Alternative Mode" is a transportation planning term that refers to any means of transportation other than the private automobile. Most often, the term is used to collectively refer to public transit, bicycling, and walking.

The transportation needs of private automobiles receive the bulk of attention and money in the transportation planning process. Alternative transportation modes are typically dwarfed by the attention that is given to the private automobile, but when properly planned, these alternative modes can yield major dividends for communities. The benefits can include decreased roadway congestion, decreased air pollution, "walkable" neighborhoods, and increased quality of life.

All of these facilities (public transit, bikeways, and pedestrian facilities) are most successful when residential and commercial uses are mixed (or clustered into nodes) and development densities are high. Downtown Savannah, for example, has a very compact development pattern and is renowned for its walkability. Part of what makes the downtown so walkable is that many different land uses are mixed together, creating myriad origin and destination points for pedestrians. This mixed use pattern, in turn, is enhanced by downtown Savannah's high development density, which ensures that different types of destinations are within walking/biking distance from each other.

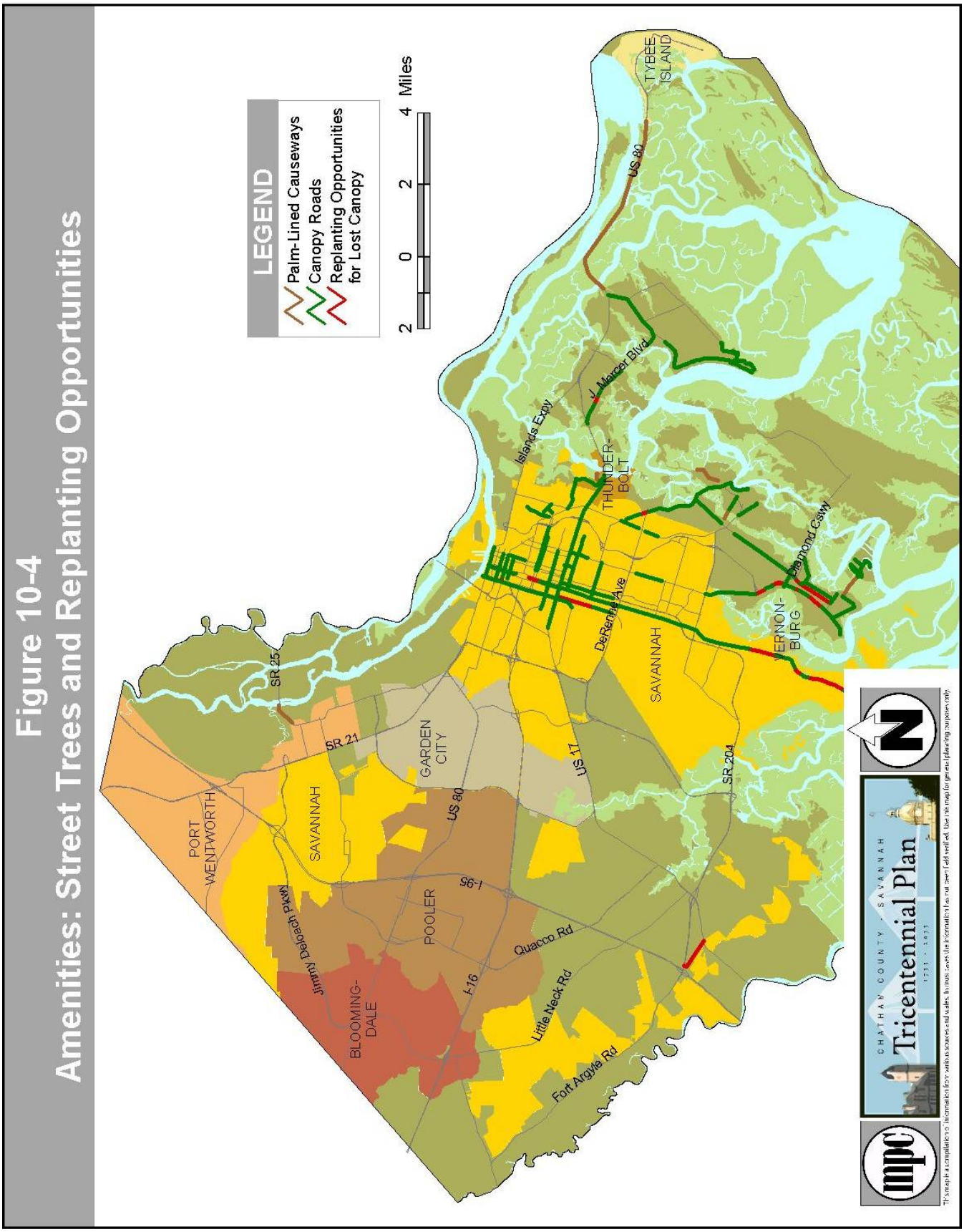
Figure 10-4
Amenities: Street Trees and Replanting Opportunities
LEGEND
Palm-Lined Causeways
Canopy Roads
Replanting Opportunities for Lost Canopy
2 0 2 4 Miles
TYBEE ISLAND
US 80
J. Marcer Blvd
Islands Expy
THUNDER-BOLT
Diamond Cswy
DeRenne Ave
SAVANNAH
VERNON-BURG
SR 25
SR 21
GARDEN CITY
US 17
SR 204
PORT WENTWORTH
SAVANNAH
US 80
I-95
POOLER
Jimmy Deloach PKWY
BLOOMING-DALE
I-16
Quacco Rd
Little Neck Rd
Fort Argyle Rd
N
CHATHAM COUNTY - SAVANNAH
Tricentennial Plan
1733 - 2033
mpc

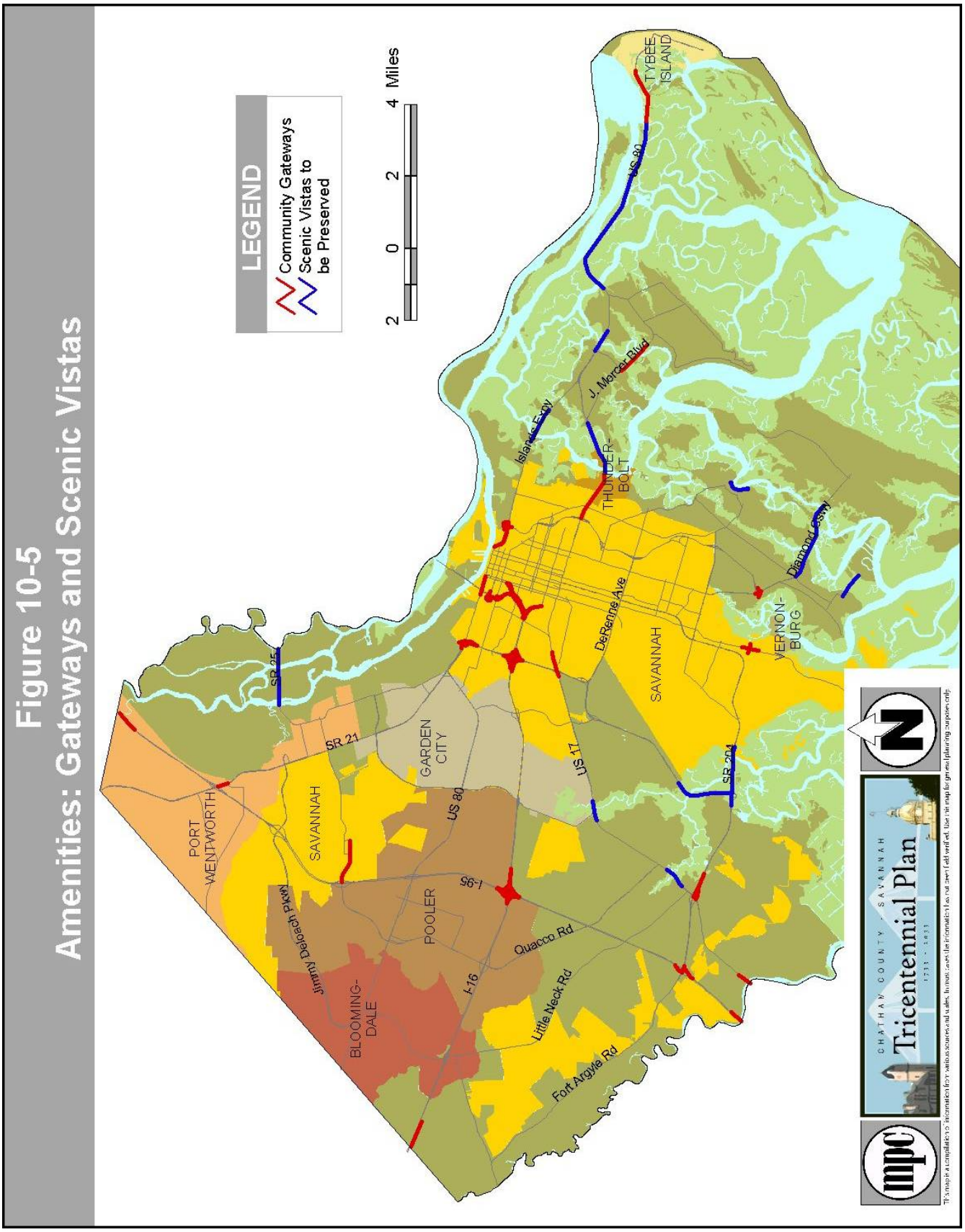
Figure 10-5
Amenities: Gateways and Scenic Vistas
LEGEND
Community Gateways
Scenic Vistas to be Preserved
2 0 2 4 Miles
TYBEE ISLAND
US 80
J. Mercer Blvd
Islands Expy
THUNDER-BOLT
DeRenne Ave
Diamond Causeway
VERNON-BURG
SAVANNAH
SR 25
SR 21
GARDEN CITY
US 17
SR 204
US 80
PORT WENTWORTH
SAVANNAH
I-95
POOLER
Jimmy Deloach Pkwy
I-16
BLOOMING-DALE
Quacco Rd
Little Neck Rd
Fort Argyle Rd
N
CHATHAM COUNTY - SAVANNAH
Tricentennial Plan
mpc

The same factors that make an area more walkable also make public transportation more viable. Higher development densities increase the number of potential patrons for any given bus stop, while mixed use development increases the likelihood that a bus stop will have a nearby destination worth walking to. The denser an area is, the higher the number of potential destinations within walking distance of a bus stop. In general, public transportation systems become less viable as densities decrease.

The Transportation Chapter of the Comprehensive Plan and the 2030 Long Range Transportation Plan include the following measures in support of alternative transportation modes:

- Amenities Funding— CUTS has adopted a new policy stating that 1% of the funds for roadway projects will be reserved to fund amenities like sidewalks, bike lanes, landscaping, and similar enhancements.
- Bikeway Identification— The 2030 LRTP extensively expands upon Chatham County's existing system of bikeways. The existing system has approximately 44 miles of bikeways. The proposed system is several times that size (see Figure 10.6).
- Bikeway Funding— The Georgia Department of Transportation has established a policy of including bicycle facilities in road construction projects when the bikeways are part of a locally-adopted plan. As such, it is anticipated that much of the implementation costs of planned on-road bikeways can be absorbed by corresponding road construction projects. The true cost of developing on-road bikeways in this manner will be significantly less than if the bikeways were constructed as separate projects.
- Compact Development— Proposed zoning will allow historically-appropriate densities downtown and in Savannah's older neighborhoods. The zoning that was adopted in 1960 imposed suburban-style development standards on many older neighborhoods with traditional development patterns. The resulting mismatch between standards and existing development patterns made redevelopment difficult and contributed to blight. In many older neighborhoods, this zoning mismatch was never corrected and still exists today. The comprehensive rezoning of Savannah and Unincorporated Chatham County will correct these mismatches and allow redevelopment in older neighborhoods to match historic patterns.
- Mixed use Development— Proposed zoning will help reduce car dependency by encouraging mixed use development in appropriate areas. Mixed use development is an appropriate zoning strategy in areas that have either urban character or a history of mixed land uses.

10.4.1 Sidewalks

Savannah is nationally renowned for its compact, walkable downtown area. Sidewalks line both sides of all streets in the National Historic Landmark District and cut through the city's numerous squares and parks. Most of Savannah's other historic neighborhoods, such as the Victorian District, the Thomas Square Streetcar Historic District, Cuyler-Brownsville, and Ardsley Park are also well-served by sidewalk facilities. In addition, both the City of Savannah and unincorporated Chatham County currently have regulations that require sidewalks on both sides of the street in most new residential subdivisions[4]. For the most part, residential areas that currently do not have any sidewalks (or sporadic/incomplete sidewalk networks) tend to fit into one of the following categories: lower and middle-income neighborhoods that were built in the early to mid 1900s, auto-oriented suburbs from the mid 1900s, or areas with rural/semi-rural character.

In addition to their transportation function, sidewalks are also an integral component of the "public realm" within the urban landscape. This is especially true in Savannah's Landmark District.

10.4.2 Bikeways and Greenways[5]

Chatham County has several designated bikeways, as well as one designated public greenway. The bikeway system includes a combination of on-road and off-road facilities that are designed to serve a transportation purpose and to serve recreation-oriented cyclists. Almost all of the designated bikeways in Chatham County are shared facilities in some way (either with pedestrians or automobile traffic).

Table 10.2 Chatham County Designated Bikeways and Greenways

FACILITY NAME	DESCRIPTION	LENGTH (MILES)
River St. Bike Path	Combination of shared and exclusive on-street bike lanes	0.8
Historic District Bikeway	On-street shared lane facility	3.3
Forsyth Park Perimeter	Off-street pedestrian/bikeway facility	1.0
Lincoln St. Bikeway	Dedicated on-street bike lane	1.3
Habersham St. Bikeway	Combination of shared and exclusive on-street bike lanes	14.0
East-West Bikeway	On-street shared lane facility	6.4
Hunter Perimeter Bikeway	On-street shared lane facility	10.0
US 17 Bikeway	Dedicated on-street bike lane	3.75
Lake Mayer Bikeway	Off-street pedestrian/bikeway facility	0.75
Robert McCorkle Bikeway	Combination of off-road paths and on-street shared lane facilities	2.0
Tybee Island Bikeway	Dedicated on-street bike lane	2.0
McQueen's Island Trail	Off-street greenway	6.0

Source: Chatham County Bikeway Plan, 2000

[4] See section 601 of the county's subdivision ordinance, and section 8-2006 of the city's subdivision ordinance.
[5] Source: Chatham County Bikeway Plan, 2000

Chatham County's existing bikeway system primarily serves the more densely populated areas of the county, most notably the City of Savannah, where a majority of the bikeways are currently located. The system of proposed bikeways (see Figure 10.6) is much more extensive than the existing system, and is much better distributed throughout the county.

The Coastal Georgia Greenway, which is still in the planning phase, is a separate bikeway initiative that bears mentioning. The Coastal Georgia Greenway is a proposed 460-mile trail system connecting South Carolina and Florida[6]. New pedestrian and bicycle trails are proposed for many of the areas of Chatham County that are currently underserved by trail facilities, including West Chatham and the four municipalities that are located there (Bloomingdale, Garden City, Pooler, and Port Wentworth).

10.4.3 Public Transportation

Public transportation in Chatham County traces its origins back to 1869, when the Savannah-Skidaway and Seaboard Railway Company first began providing horse-drawn streetcar service. This first system had a regional focus, and connected Savannah to the then-distant communities of Thunderbolt, Isle of Hope, Montgomery, and White Bluff. In the following years, other companies established their own transportation systems, all of which were eventually consolidated in 1882 by the City and Suburban Railway. Savannah's electric streetcar era began in 1890, and quickly led to development on what was then the urban fringe (including the now-historic neighborhoods of Thomas Square, Metropolitan, Eastside, and Cuyler-Brownsville). The Savannah Electric Company acquired the streetcar system in the early 1900s and operated it until 1946, when it was purchased by the Savannah Transit Company. Savannah's streetcar era ended later that year, when the system made a full transition to bus lines.

As the nationwide trend of suburbanization began to gain a foothold in the 1950s, the Savannah Transit Company found it increasingly difficult to operate its bus system at a profit. The Savannah Transit Authority (STA), a public authority that received a portion of its operating budget in the form of government subsidies, took over the bus system in 1960. During its 27 years of operation, the quality of the STA's transportation system deteriorated and ridership steadily decreased as the Savannah metropolitan area spread outward and reliance on the private automobile increased. The transit system was acquired by the Chatham Area Transit Authority (CAT) in 1987, with the goal of revitalizing public transportation in Chatham County.

Overall, CAT has been successful in its efforts to improve transportation facilities and increase ridership. Despite recent declines in ridership, 3,432,000 people rode on a CAT bus in 2003, a 27 percent increase from 1986[7], which was the last year of STA's transit operation.

[6] Source: http://www.coastalgagreenway.org/.
[7] Ridership in 1986 was 2,700,000. Source: 1994 Long Range Transportation Plan

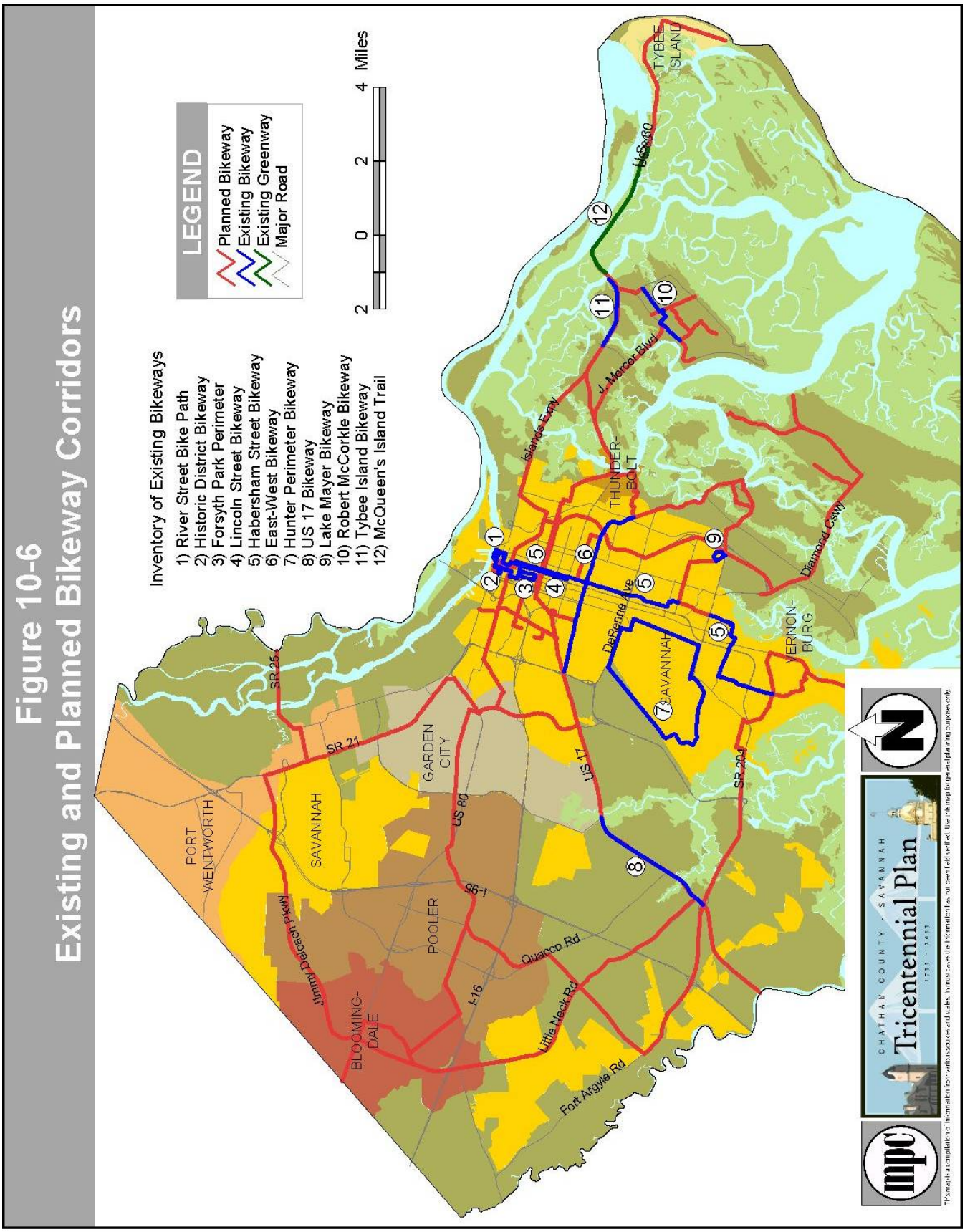
Figure 10-6
Existing and Planned Bikeway Corridors
LEGEND
Planned Bikeway
Existing Bikeway
Existing Greenway
Major Road
2 0 2 4 Miles
Inventory of Existing Bikeways
1) River Street Bike Path
2) Historic District Bikeway
3) Forsyth Park Perimeter
4) Lincoln Street Bikeway
5) Habersham Street Bikeway
6) East-West Bikeway
7) Hunter Perimeter Bikeway
8) US 17 Bikeway
9) Lake Mayer Bikeway
10) Robert McCorkle Bikeway
11) Tybee Island Bikeway
12) McQueen's Island Trail
PORT WENTWORTH
SAVANNAH
GARDEN CITY
POOLER
BLOOMING-DALE
THUNDER-BOLT
VERNON-BURG
TYBEE ISLAND
SR 25
SR 21
US 80
SR-1
I-16
US 17
SR 204
Islands Expy
J. Marcel Blvd
DeRenne Ave
Diamond Cswy
Jimmy DeLoach PKWY
Quacco Rd
Little Neck Rd
Fort Argyle Rd
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1733 - 2033
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Downtown Savannah serves as the hub for the CAT transit system, with routes connecting to distant areas throughout the county such as Georgetown, the Savannah-Hilton Head International Airport, and Wilmington and Skidaway Islands. Accessibility to bus stops is better within the Savannah city limits than in other parts of Chatham County (see Fig 10.7). Most residents of the City of Savannah live within comfortable walking distance (0.5 mi) of a bus stop. Accessibility in other areas of the county is generally limited to communities with population densities that are high enough to support public transit.

Downtown Savannah serves as the bus system's primary trip generator and attractor, as 14 of CAT's 18 routes travel through the downtown area. Other major trip generators and attractors, as identified by CAT, include the Abercorn commercial corridor, Savannah's three major hospitals (St. Joseph's, Candler, and Memorial Health), and the other employment centers in the vicinity of Waters Ave[8].

The CAT bus system currently has no designated transit terminals or transfer stations. CAT has been working on plans for a downtown transit station for several years. Such a facility could be designed to include amenities such as a climate-controlled passenger waiting area, ticket sales office, administrative offices, parking, and retail space. Future plans could potentially include a second transfer station on Savannah's southside. In addition, CAT is currently working to upgrade bus stops throughout its system with new shelters, benches, and trash receptacles. CAT's goal is to upgrade 100 stops per year in 2004 and 2005[9].

In addition to standard bus service, CAT also operates Teleride (a door-to-door paratransit system for the elderly and disabled), the Savannah Belles Ferry System (a water ferry that provides service between River Street and the convention center on Hutchinson Island), and the CAT shuttle (a free downtown shuttle that runs on a continuous loop through Savannah's Landmark District). In addition to these services, CAT also operates the new shuttle service for the Liberty Street Parking Garage.

[8] Source: CAT staff
[9] Source: ibid

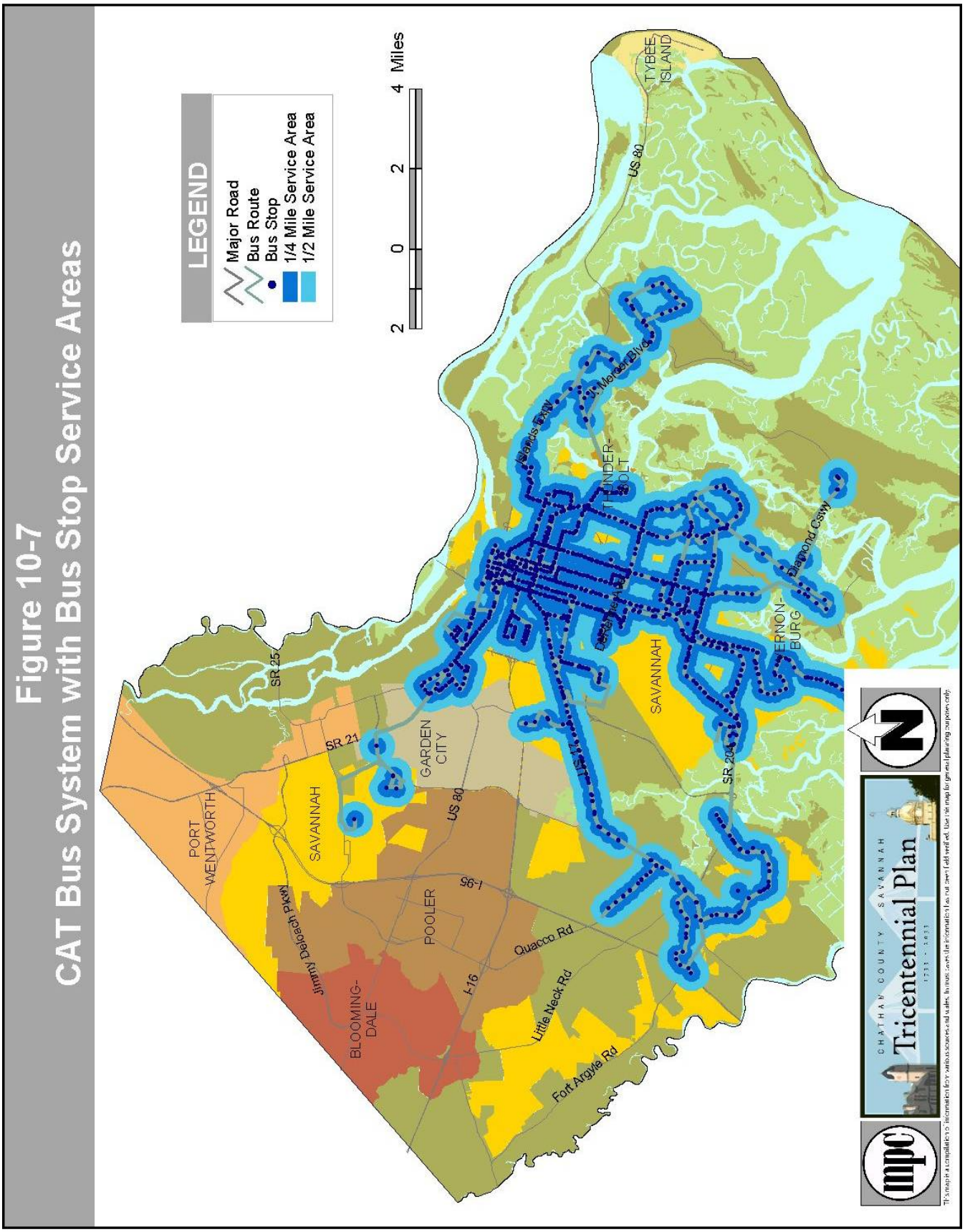


Figure 10-7
CAT Bus System with Bus Stop Service Areas
LEGEND
Major Road
Bus Route
Bus Stop
1/4 Mile Service Area
1/2 Mile Service Area
2 0 2 4 Miles
TYBEE ISLAND
US 80
Islands Expy
E Victory Dr
E Meldrim Blvd
Abercorn St
Bull St
Drayton St
Barnard St
Lincoln St
Whitaker St
Habersham St
Price St
Lathrop Ave
Waters Ave
Martin Luther King Jr Blvd
Montgomery St
Jefferson St
Lincoln St
Bull St
Barnard St
Drayton St
Abercorn St
Whitaker St
Habersham St
Price St
Lathrop Ave
Waters Ave
Martin Luther King Jr Blvd
Montgomery St
Jefferson St
Diamond Cswy
SR 204
I-516
I-95
I-16
SR 21
SR 25
US 80
Jimmy Deloach Pkwy
Quacco Rd
Little Neck Rd
Fort Argyle Rd
TYBEE ISLAND
THUNDER-BOLT
SAVANNAH
GARDEN CITY
SAVANNAH
VERNON-BURG
POOLER
BLOOMING-DALE
PORT WENTWORTH
SAVANNAH
N
mpc
CHATHAM COUNTY - SAVANNAH
Tricentennial Plan

10.5 Parking

This section provides an inventory of significant public parking facilities in Chatham County. For the purpose of this inventory, "significant" parking facilities are defined as parking lots and structures with capacity in excess of 100 spaces that are available for use by the general public. Therefore, large private lots or parking structures that exclusively serve a specific business or group of businesses (including shopping center parking lots, etc.) are not included in this inventory.

In addition to the parking facilities listed in Table 10.3, downtown Savannah has a significant number of on-street parking spaces. A parking study conducted by the Savannah Development and Renewal Authority's Parking Committee in the early 1990s identified 4,931 on-street parking spaces in downtown Savannah[10], a number that greatly exceeds the total number of off-street spaces that are available in publicly-owned downtown parking structures.

Table 10.3 Significant Parking Lots and Structures (Public Access Only)

NAME	LOCATION	CAPACITY	FACILITY TYPE	OWNERSHIP/MANAGEMENT (PRIVATE/PUBLIC)
Bryan Street Garage	100 E. Bryan St.	497	Garage	Public (City of Savannah)
State Street Garage	100 E. State St.	452	Garage	Public (City of Savannah)
Robinson Garage	132 Montgomery St.	520	Garage	Public (City of Savannah)
City Market Parking	200 W. Congress St.	514	Garage	Public (Acquired by the City of Savannah on 12/31/04)
Lincoln Garage Associates	Corner of Lincoln St. and Congress St.	270	Garage	Private
BB&T Parking	115 E. Congress	431	Garage	Private
Chatham County Parking	133 Montgomery St.	300	Garage	Public (Chatham County)
All Right Parking- Days Inn	219 W. Bryan St.	168	Garage	Private
Liberty Street Garage	Corner of Liberty St. and Montgomery St.	888	Garage	Public (City of Savannah)
Airport Parking	Savannah/ Hilton Head International Airport	2,594	Garage/ Surface Lots	Private
Civic Center Lot	Corner of Liberty St. and Montgomery St.	225	Surface Lot	Public (City of Savannah)
Visitors' Center Lot	Corner of Liberty St. and Martin Luther King, Jr. Blvd.	298	Surface Lot	Public (City of Savannah)

Sources: Savannah Parking Services Staff; 1994 Long Range Transportation Plan, Chapter 14 "Downtown Parking"; and http://www.savannahairport.com.

[10] Source: Savannah Development and Renewal Authority "Downtown Savannah Parking Fact Sheet"

Parking shortages in Savannah are primarily a result of the city's historic development patterns. Many areas of the city developed before the modern automobile era. Some residents in these areas have access to private off-street parking via lanes, but many others have no access to off-street parking. However, residential streets in these areas are typically wide enough to accommodate on-street parking on at least one side of the street. To date, on-street parking in most pre-automobile neighborhoods has proven to be ample enough to meet parking demand. However, as the population of these neighborhoods increases (via rehabilitation of historic homes and construction of new infill housing), on-street parking in historic neighborhoods will likely become increasingly scarce. In extreme cases, centrally-located community parking lots may need to be considered as a future solution, but parking in residential areas is not yet scarce enough to warrant consideration of that strategy at this time.

By far, downtown Savannah has a greater need for off-street parking than any other area in Chatham County. The City of Savannah has responded to the need for downtown parking on several occasions in the recent past, including construction of the State Street Garage in the 1980s and the Bryan Street Garage in the 1990s. However, parking availability continues to be an issue downtown. The City of Savannah has recently responded to the downtown parking shortage, this time by constructing Savannah's largest parking facility to date: an 888-space facility on West Liberty Street that opened in June, 2005.

Most recently, the downtown parking debate has centered around the City Market parking garage, which was recently reacquired by the City of Savannah at the end of 2004 after the expiration of a fifty-year lease with a private company. The City is moving forward with plans to raze the existing parking deck and restore a public square on the site. The City will construct a new subterranean parking deck underneath the restored square. The primary benefit of this ambitious project is that it will expand the downtown's parking supply while simultaneously restoring a public square that was lost to development in the 1950s.

The success of urban redevelopment efforts in downtown Savannah in recent years has resulted in a lack of significantly large undeveloped downtown parcels that could be used to construct additional parking garages in the future. One long range option for increasing parking supply in the downtown area is to develop parking lots and garages outside of the downtown core and transport people into the city using a shuttle service similar to the system currently in place for the Liberty Street garage. By providing parking on the periphery and shuttling people into the downtown, Savannah can meet its future parking needs and also avoid razing any existing buildings to make way for additional parking garages.

10.6 Intermodal Transportation Systems

The term "intermodal" is used to describe the mass transportation of freight or human passengers, usually over long distances, and via more than one mode of transportation. Three types of intermodal facilities are discussed in this section: ports, railroads, and airports.

10.6.1 Port Facilities

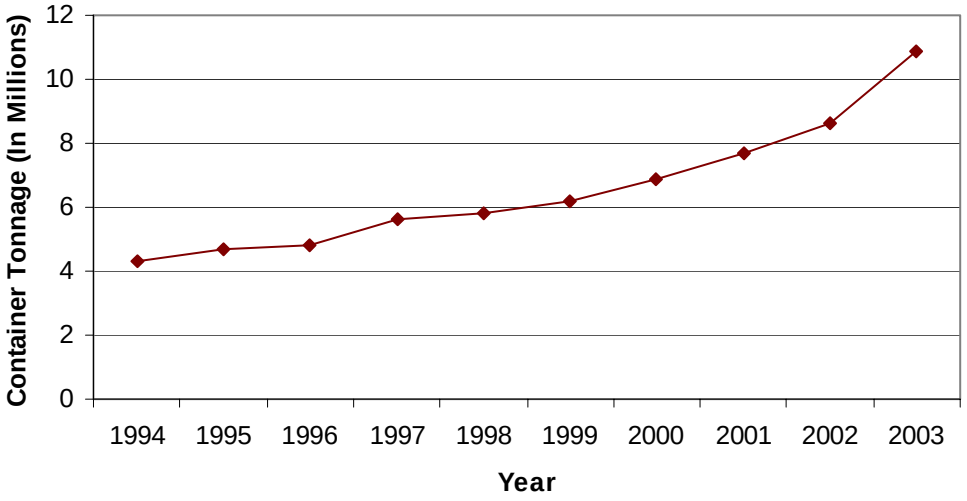
Chatham County has two port facilities on the Savannah River that are collectively known as the Port of Savannah. Both facilities are run by the Georgia Ports Authority (GPA), which is a state-level quasi-governmental organization. Ocean Terminal, which is a dedicated breakbulk and roll on/roll off facility, is the smaller of the two facilities. Ocean Terminal is 208 acres in size and has over 1.5 million square feet of covered storage. Garden City Terminal is more than 1,200 acres in size and is the largest single-terminal container port on the East Coast[11].

The Georgia Ports Authority, which also operates port facilities in Brunswick, has a huge impact on economics and trade in Georgia. The GPA's statewide economic impact is estimated at $23 billion annually in total revenue, $1.8 billion in income, $585 million in state and local taxes, and 80,100 in statewide employment[12]. The GPA's operations have grown steadily for the past 16 years. The Port of Savannah, in particular, has experienced rapid growth. In 2003, the Port of Savannah handled a total container tonnage of 10.9 million tons, which is 26.7 percent more than it handled in 2002 and 153.5 percent more than it handled in 1994[13]. Furthermore, the Port of Savannah is the fastest-growing container port in the United States[14].

The Port of Savannah's rapid growth is expected to continue for the foreseeable future. One of the keys to the port's success has been the strong financial and political support it has received from the state of Georgia. In addition to state-level support and site limitations, the remaining constraints on future port expansion are likely to be related to insufficiencies in the surrounding transportation infrastructure (roads and rail). As port operations grow and intensify, the surrounding transportation infrastructure will need to support that growth. The 2030 long range transportation plan includes numerous projects that will help support port operations. It should be MPO policy to include these projects, as needed, in the annual Transportation Improvement Program (TIP) process to ensure that they receive adequate funding.

[11] Source: http://www.gaports.com/overview.asp
[12] Source: http://www.gaports.com/ei.html
[13] Source: http://www.gaports.com/ps.html
[14] Source: http://www.gaports.com/fyr6.html

Figure 10-8 Port of Savannah
Total Container Tonnage 1994-2003



10.6.2 Railroads

Amtrak provides passenger rail service at its Savannah station. Savannah is served by the Palmetto, Silver Star, and Silver Meteor trains of Amtrak's Silver Service line, which runs from New York City to Miami, and stops at nearly 50 cities in between. The Savannah train station is typically served by six trains daily. The station served 38,180 passengers in 2002, or 28 percent of all Amtrak passengers in Georgia[15].

In addition to passenger rail service, Chatham County is also served by approximately 170 miles of rail freight facilities, of which CSX Transportation and Norfolk Southern provide the major intermodal services. Other rail freight service providers include Atlantic Coast Line (ACL), Central of Georgia Railroad, and Savannah and Atlanta Railroad. Almost all of these railroads and railroad yards are located in the western part of Chatham County and around the Port of Savannah. The major commodities that are transported via rail in Chatham County are pulp and paper, furniture or fixtures, tobacco products, rubber and plastics, leather, clay, concrete, glass or stone products, fabricated metal products, non-electrical and electrical machinery, instruments, waste or scrap materials, and miscellaneous manufacturing.

Much of Chatham County's extensive rail infrastructure provides freight-oriented service to the Port of Savannah. Overnight rail service is available from the port to Atlanta, while two-to-four day service is available for other regional freight distribution cities, such as Dallas and Chicago[16]. The integration of the port with rail freight providers allows for a highly streamlined process of intermodal freight movement, all of which is a strong economic generator for the local and regional economies.

[15] Source: 2003 Georgia Transit Programs Fact Book, Page 50; GDOT Office of Intermodal Programs
[16] Source: http://www.gaports.com/index2.html

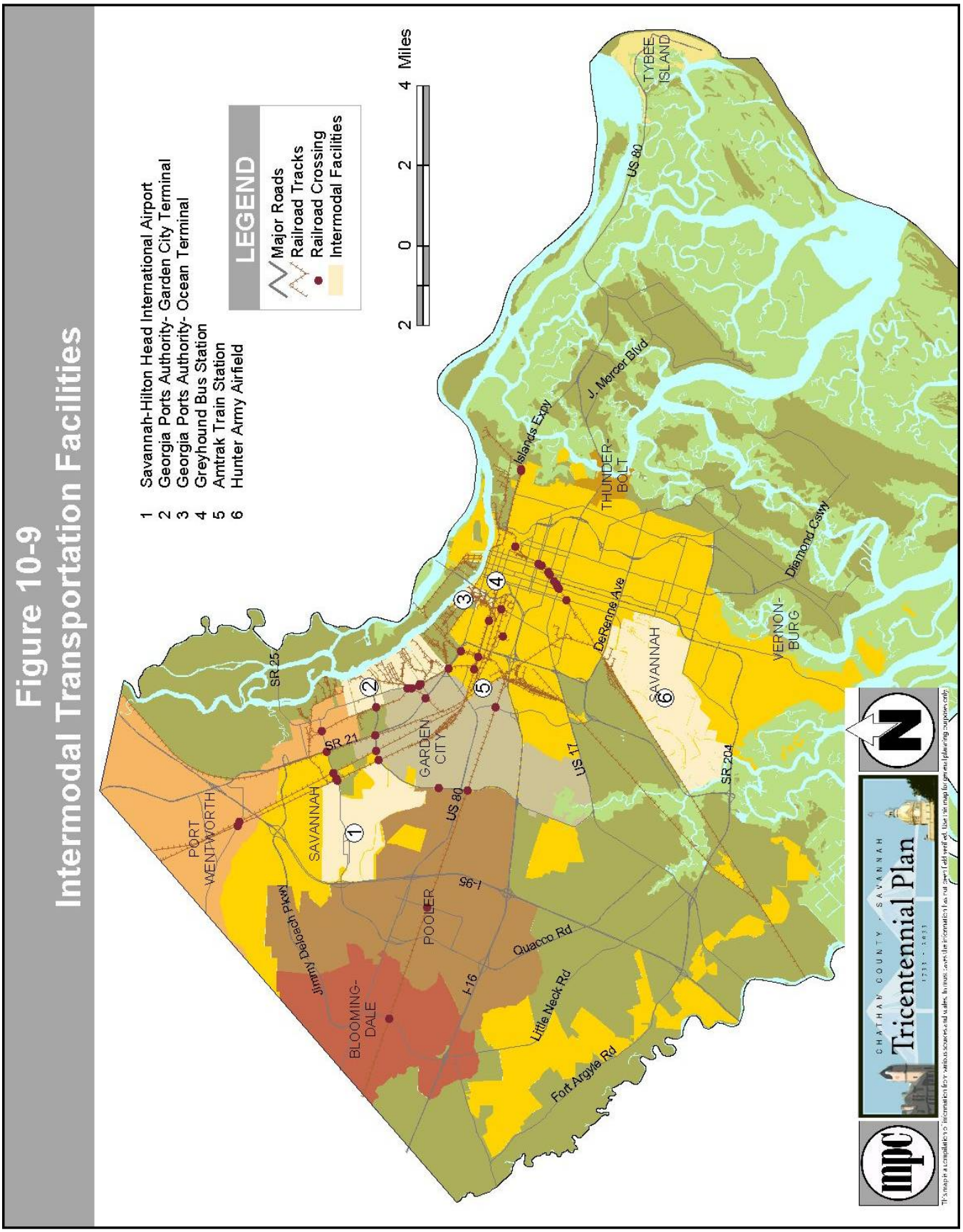


Figure 10-9
Intermodal Transportation Facilities
1 Savannah-Hilton Head International Airport
2 Georgia Ports Authority- Garden City Terminal
3 Georgia Ports Authority- Ocean Terminal
4 Greyhound Bus Station
5 Amtrak Train Station
6 Hunter Army Airfield
LEGEND
Major Roads
Railroad Tracks
Railroad Crossing
Intermodal Facilities
2 0 2 4 Miles
PORT WENTWORTH
SAVANNAH
GARDEN CITY
POOLER
BLOOMING-DALE
THUNDER-BOLT
VERNON-BURG
TYBEE ISLAND
SR 25
SR 21
US 80
I-95
I-16
US 17
SR 204
Islands Expy
J. Mercer Blvd
DeRenne Ave
Diamond Cswy
Jimmy Deloach Pkwy
Quacco Rd
Little Neck Rd
Fort Argyle Rd
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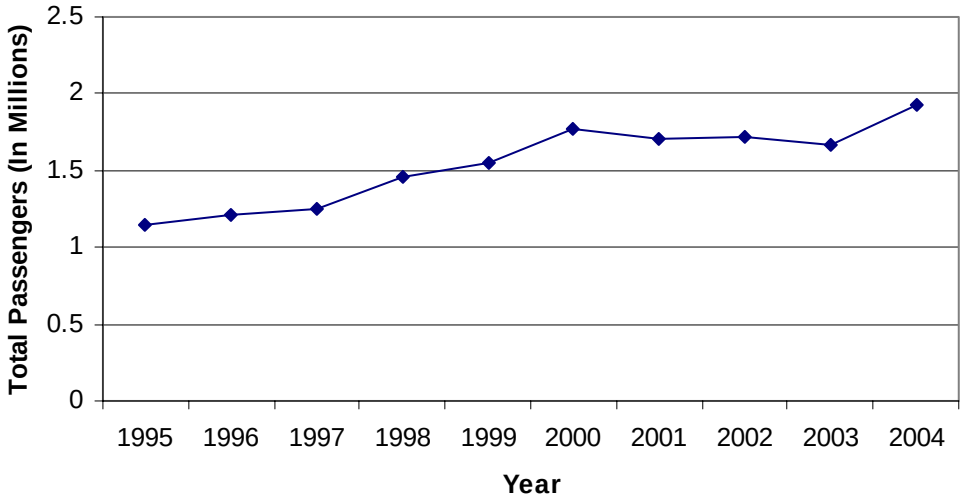
mpc

10.6.3 Airports

After experiencing a 3.4 percent decrease in travelers during 2003, Savannah/Hilton Head International is again experiencing growth in passenger travel. The airport had its busiest year on record in 2004. The airport served over 1.9 million passengers in 2004, a 16 percent increase from 2003[17]. Because of this growth in customers, the airport will be expanding and enhancing many of its facilities in the near future. Projects underway as of 2004 include: expansion of the parking deck, construction of a perimeter access road around the southwest quadrant of the airport, and site preparations that will eventually open up an additional 100 acres of land for aviation-related development[18].

The Savannah/Hilton Head International Airport is the largest airport in Coastal Georgia. The airport occupies a 3,500 acre site and has two operational runways. The current terminal was completed in 1994 and has 10 gates and a total square footage of 275,000 square feet[19]. Savannah/Hilton Head International is currently served with regular flights from the following airlines: Air Tran, Continental Express, Delta, Delta Connection, Independence Air, Northwest, Northwest Airlink, US Airways, and United Express. Direct flights are currently available to the following cities: Atlanta, Boston, Charlotte, Chicago, Cincinnati, Dallas, Detroit, Houston, Minneapolis, New York , Newark, Philadelphia, Pittsburgh, and Washington, D.C.

Figure 10-10 Savannah/Hilton Head International Airport Total Passengers 1995-2004



[17] Source: CUTS 2030 Long Range Transportation Plan
[18] Source: Savannah Airport Commission Comprehensive Annual Financial Report; Dec 31, 2004
[19] Source: http://www.savannahairport.com

Many of the airport's current facilities should be adequate for the foreseeable future. The current terminal was constructed in 1994, and is thus relatively new by national standards. Furthermore, the main terminal of Savannah-Hilton Head International was designed with future growth in mind. There is sufficient space at the airport to double the number of gates at the existing terminal.

Hunter Army Airfield is Chatham County's other major air transportation facility. Hunter AAF is a sub-installation to nearby Fort Stewart, and provides operational support to the 3d Infantry Division as well as numerous other non-divisional and tenant units. It is estimated that Fort Stewart and Hunter AAF together generate more than $1 billion annually for the regional economy, with more than 19,500 military personnel stationed at the two bases and more than 3,700 civilian jobs[20].

Joint Land Use Study

In 2004 and 2005, personnel from Ft. Stewart and Hunter Army Airfield worked together with surrounding communities to conduct the Fort Stewart/Hunter Army Airfield Joint Land Use Study (JLUS). The study used a land use planning approach to address the issue of incompatible development near Fort Stewart and Hunter AAF. Many of the recommendations from the Joint Land Use Study have been incorporated into the Tricentennial Plan to help ensure that military operations and civilian life can continue to coexist harmoniously in Savannah and Chatham County.

Diligent land use planning is one of the primary tools that local government can use to help ensure the continued operation of this important military installation. Land use conflicts adjacent to military bases can be an impetus for Base Realignment and Closure (BRAC). Preventing the introduction of incompatible uses adjacent to military bases can help prevent BRAC. Much of the land to the immediate east of Hunter is developed with commercial uses, most of which are compatible with nearby military operations. However, much of the land to the west of Hunter is currently undeveloped. Preventing incompatible development to the west of Hunter is a key objective of the land use plan for that area.

10.7 The Transportation and Land Use Connection

Issues discussed in each of the individual chapters of the Comprehensive Plan are interconnected. As a result, transportation issues in the future will be affected by policy recommendations located in other chapters of the Comprehensive Plan. Of these, the Land Use Chapter will have a particularly strong impact on transportation. Through its placement of commercial centers and residential areas, the Future Land Use Map will help determine the county's future spatial pattern, which in turn will affect things like road connectivity. Furthermore, the density of those developments will help determine the future viability of other modes of transportation, such as bus and rail.

The impact goes both ways. Transportation decisions can impact issues that are typically considered the realm of other planning sub-disciplines. Aspects of street design, such as speed limits, aesthetic design elements (landscaped medians, street trees), and traffic

[20] Source: Ft. Stewart-Hunter AAF Joint Land Use Committee Request for Proposals; March, 2004.

capacity can have a profound effect on things like land use, housing, economic development, and quality of life.

The process of suburbanization has proven that transportation decisions regarding street placement and design can be deterministic forces on land use in undeveloped areas. Dramatic changes to an area's transportation network can also have significant impacts on land use and quality of life in developed areas. For example, in the 1950s and 1960s the interstate highway system bisected numerous urban neighborhoods across the country. Many of the affected areas were low income, often vibrant, working class neighborhoods. In most instances, the reality of being bisected by an elevated limited access road contributed to decades of neighborhood decline, some of which continues today. Urban decline, in turn, helped fuel the exodus of residents from central cities across America. This example illustrates the strong impact that transportation projects can have on quality of life when they aren't designed with neighborhood concerns in mind.

When designing road projects within a neighborhood, care must be taken to ensure that roads fit into a proper "neighborhood scale". Furthermore, good street design should strive to have a positive impact on urban form. Roads can be much more than a means to get from point A to point B. The best roads blend into an area's urban form and make a positive contribution to its character. Victory Drive in Savannah is often used as an example of the positive impact that road design can have on an area. Victory Drive's extensive tree canopy and wide, landscaped medians help to make it one of the signature streets in Savannah. Victory Drive is proof that a road can be both beautiful and functional; it can carry large amounts of traffic while simultaneously contributing to the aesthetic appeal of the surrounding neighborhood.

In coming years, it is expected that many of Savannah's older neighborhoods will densify as a result of infill development and rehabilitation of historic homes. Countywide, it is expected that many areas of the county that are currently undeveloped will see suburban-style development in the future. The most successful transportation planning efforts over the next 30 years, therefore, will be transportation plans and projects that recognize these unique development patterns and strive to enhance them.

10.8 Issues and Opportunities

The Comprehensive Plan's Steering Committee has identified the following Issues and Opportunities with respect to transportation planning in Chatham County:

- *Multi-Modal Efficiency.* The need for an efficient multi-modal transportation system. Over-reliance on private automobiles to meet transportation needs can result in congested roads and leaves the community vulnerable to natural resource shortages.
- *Transportation/Land Use Compatibility.* The need for increased compatibility between transportation infrastructure and land use.
- *Historic Preservation.* Preserving the integrity of pre-automobile land use patterns while providing modern infrastructure.

- *Pedestrian Transit Priority Area (PTPA).* Establishing a Pedestrian Transit Priority Area to ensure that areas of Savannah that pre-date automobiles are able to maintain their pedestrian orientation.
- *Off-Street Parking.* Meeting the off-street parking needs of Downtown Savannah to help ensure its continued economic and cultural vitality.
- *Trail Facilities.* Providing linear trails and bicycle facilities for both transportation and recreational purposes.
- *Public Transportation (Local).* As the city grows, planning for additional public transportation services, including train or streetcar service linking the downtown expansion areas to the Central Business District.
- *Public Transportation (Regional).* The development of a regional public transportation system to serve adjacent counties, including counties in South Carolina.
- *Context-Sensitive Design.* Applying context-sensitive design principles to new or expanded infrastructure projects. Context-sensitive design seeks to develop transportation facilities that fit their physical settings and preserve scenic, aesthetic, historic, and environmental resources while maintaining safety and mobility.
- *Amenities.* Observing the guidelines set forth in the CUTS Amenities Package when building new roads or improving existing roads.
- *Environmental Justice.* Applying environmental justice principles to new or expanded infrastructure projects to avoid splitting or damaging neighborhoods for large scale highway and drainage projects. Ensure that minority and low income populations are not forced to disproportionately bear the adverse impacts of these projects.
- *Automobile Dependency.* Reducing automobile dependency through the promotion of public transit and construction/rehabilitation of walkable neighborhoods.
- *Connectivity and Congestion.* Enhancing road connectivity and reducing traffic congestion by providing multiple routes to major destinations.

In addition to the issues and opportunities listed above, Chatham County faces several specific transportation challenges that will need to be addressed in the future. Major challenges facing Chatham County's road network include:

- *Connectivity.* Without efficient north-south and east-west routes through or around Savannah, congestion will continue to worsen along several local corridors that already have congestion problems.
    - East-West Connector— Improving east-west traffic in and around Savannah is one of the most pressing transportation needs in Chatham County. Adding a high capacity east-west route through or around the city should help alleviate other transportation issues, such as freight traffic on Bay Street and congestion on DeRenne Avenue.
    - Truman Parkway Extension— Completion of the Truman Parkway will provide an efficient route for north-south traffic in Savannah, and should help alleviate congestion on several other north-south thoroughfares, including Abercorn Street, Waters Avenue, and Skidaway Road.

  - Suburban Growth— Population projections for 2033 predict extensive growth in suburban areas, especially in western Chatham County. Roadway infrastructure will need to be added to accommodate the growth.
- *Congestion Management.* Traffic congestion relief is a commonly-cited goal of road construction projects, especially road widening. However, major construction projects should be viewed as a congestion management tool of last resort. When possible, traffic control techniques should be used (such as retiming traffic signals) to manage congestion. When used effectively, these tools can help minimize congestion and even avoid the need to widen roads or construct new facilities.
- *Funding Constraints.* Projected transportation funding is not sufficient to construct all of the projects that transportation planners would ideally like to see built. The challenge is to provide the highest level of service possible using the limited amount of funding that will likely be available.

10.9 Assessment

The assessment of current and future needs focuses on current and projected deficiencies in Chatham County's transportation network. The end results of the analysis are depicted in Figures 10.12 and 10.13. For a more detailed analysis than what is presented here, including specific timelines and estimated project costs, please refer to the CUTS 2030 Long Range Transportation Plan.

10.9.1 Current Service and Deficiencies

Level of service, or LOS, indicates a transportation facility's operating efficiency. For roads, LOS calculation methods vary by functional classification, and often take into account statistics such as average density of passenger cars, average travel speed, volume-to-capacity ratios, and average time delays. LOS is usually summarized by a scale that runs from A to F, with A representing free-flowing traffic and F representing highly congested, stop-and-go traffic. As a general rule, LOS ratings of A, B and C are considered to be acceptable. A level of service rating of D characterizes deficient service, while a rating of E or F indicates critically deficient service.

It should be noted that the level of service that is acceptable to a community varies with the transportation facility and the context. On a rural interstate, drivers may expect a level of service of B or better, while on a local road in a downtown setting, a level of service of D or E might be considered acceptable. In some cases, such as scenic or historic corridors, local residents may be willing to accept a lower level of service in exchange for other amenities that the road provides, such as a scenic view. Because of this, "deficient" LOS ratings do not necessarily mean that a road widening or other construction project is wanted or needed. Keeping this caveat in mind, it is also true that deficiencies in the road network are most easily identified using level of service ratings.

In 2003, LOS ratings were calculated for the three peak traffic times (morning, midday, and evening) as part of the Congestion Management System (CMS) study. Of the three peak travel times, LOS ratings were worst during the evening, when 18 percent of road segments on the CMS network were performing at a LOS of D or lower, compared to 10 percent and

11 percent for the am and midday periods, respectively. Of the 176 road segments operating at a deficient level of service during the evening peak, 15 (9 percent) were either undergoing construction or were part of a detour at the time of data collection, and therefore were performing at a lower LOS than they normally would. LOS ratings for the evening peak are shown in Figure 10.11.

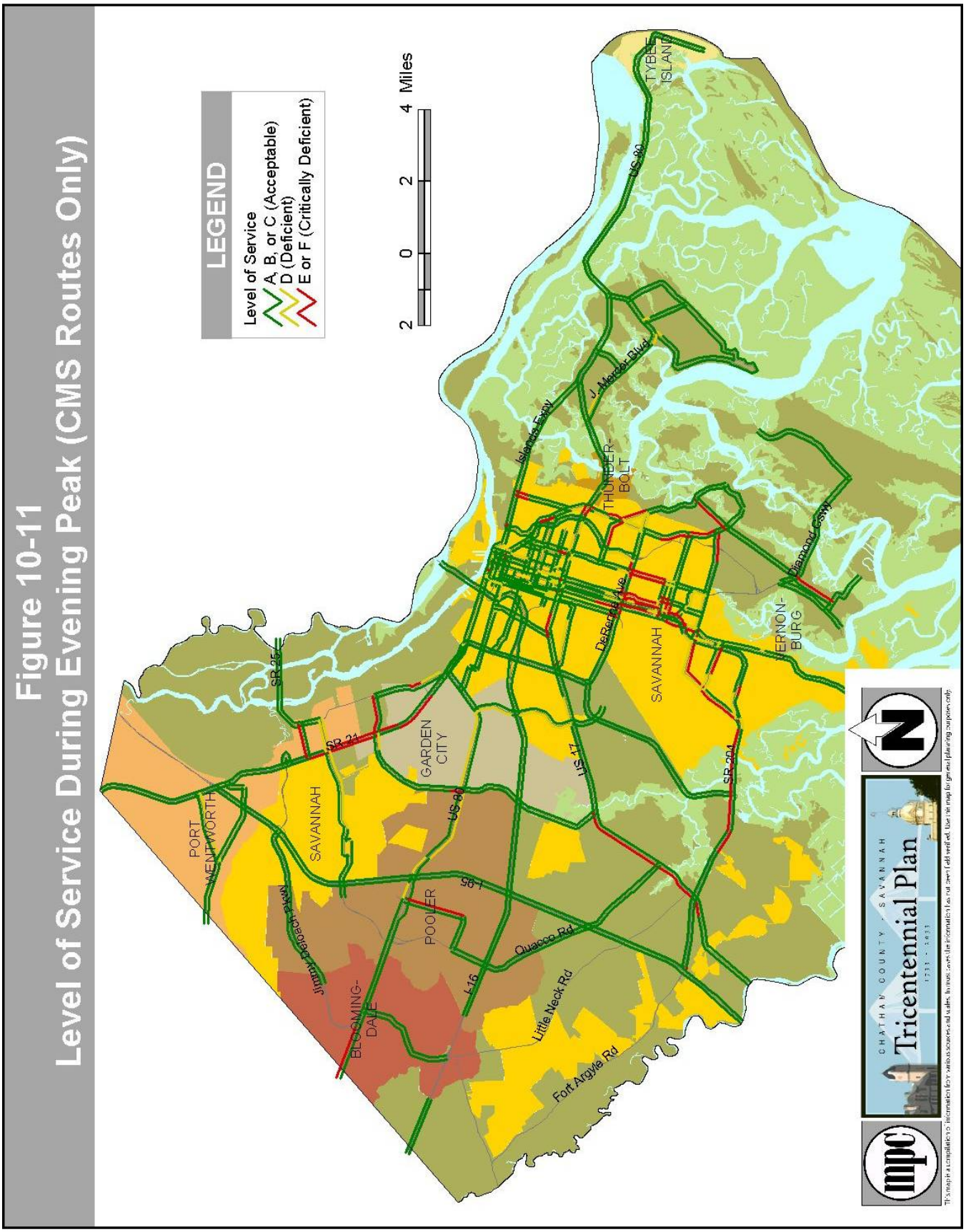


Figure 10-11
Level of Service During Evening Peak (CMS Routes Only)
LEGEND
Level of Service
A, B, or C (Acceptable)
D (Deficient)
E or F (Critically Deficient)
2 0 2 4 Miles
TYBEE ISLAND
US-80
J. Marder Blvd
Islands Expy
THUNDER-BOLT
DeRenne Ave
Diamond Cswy
VERNON-BURG
SAVANNAH
SR-204
US-17
GARDEN CITY
US-80
SR-21
SR-25
PORT WENTWORTH
SAVANNAH
I-95
POOLER
Quacco Rd
I-16
Little Neck Rd
Fort Argyle Rd
BLOOMING-DALE
Jimmy DeLoach Pkwy
N
CHATHAM COUNTY - SAVANNAH
Tricentennial Plan
1733 - 2033
mpc

10.9.2 Meeting Future Needs with Current Facilities

Funding for transportation projects is limited, which makes it all the more important that funds be allocated to the projects with the greatest need. Fiscal responsibility dictates that, to the greatest extent possible, decision-makers must strive to meet future travel demand with existing facilities. To assess the adequacy of the current transportation network for meeting projected future demand, CUTS conducted a series of LOS simulations for the year 2030 using the CUTS travel demand model.

Before the future adequacy of the existing system could be tested, planners needed to estimate the likely future travel demand on the transportation network. Future travel demand was estimated by using projected population and economic data (see Chapters 4 and 6 of the Community Assessment for more information on population and economic projections). CUTS travel demand models utilized the following socioeconomic data inputs for each of the 589 Traffic Analysis Zones (TAZs) in Chatham County:

- Population
- Households
- Mean Income
- Total Employment
- Retail Employment
- Service Employment
- Manufacturing Employment
- Wholesale Employment
- School Enrollment

The travel demand modeling process is a system planning approach, which means that the entire metropolitan area is modeled as a system instead of separately evaluating individual projects or corridors. The cumulative effects of all proposed transportation improvements are considered together rather than as individual unrelated efforts. Travel demand modeling allows planners to evaluate sets of alternative transportation improvements and then select a preferred scenario.

For the 2030 needs assessment, trips associated with projected growth in population and employment were assigned to a "No-Build" network, which consisted of the 2001 highway network and highway improvements that were under construction at the time of analysis. This resulted in an assessment of the ability of the current transportation system to handle projected future demand. Based on the "No-Build" network, the model projected that the following corridors will be severely congested in 2030:

- I-95 from Bryan County to I-16
- SR-21 from Smith Avenue to Effingham County
- I-516 from its end at DeRenne Avenue to I-16
- Abercorn Extension (SR 204) from Rio Road to I-95
- SR-25 from Brampton Road to Bonnybridge Road

The model predicted that other heavily congested corridors will be:

- I-95 from I-16 to SR-21
- I-516 from I-16 to its end in Garden City
- I-16 from I-516 to Effingham County
- US-17 from Chevis Road to I-516
- Ogeechee Road from I-516 to Victory Drive
- DeRenne Avenue from I-516 to Abercorn Street
- Bay Street / General McIntosh Blvd / President Street from I-516 to Truman Parkway
- White Bluff Road from DeRenne Avenue to Stephenson Avenue
- Blvd from Ogeechee Road to Montgomery Street

Portions of other roadways were identified as being moderately congested. The project's steering committee noted that due to the development characteristics and the moderate level of congestion that is projected for these corridors, recommended improvements should mostly be operational in nature (improved signalization, turn-lane modifications, etc.). Notable corridors of this type are:

- Oglethorpe Ave
- Liberty Street / Louisville Road
- Gwinnett Street
- 37th Street
- Victory Drive
- Martin Luther King Jr. Blvd
- Bull Street
- Waters Avenue
- Skidaway Road

If the "No-Build" network were in place in 2030, Chatham County would see an increase of nearly 38,000 hours of delay per day (a 750% increase from 2001). Assuming 250 workdays per year and an average wage rate of $15 per hour, this translates into an increase of more than $140 million in annual costs due to congestion, or nearly $500 per person. By contrast, the total annual cost of congestion in 2001 was $18.5 million, or $80 per person. Assuming linear growth in delays and the congestion cost assumptions mentioned previously, the cumulative costs due to congestion delays from 2005 to 2030 would be over $2.5 billion, or a cumulative cost per person of nearly $10,000 over the 25 year period.

As shown in Table 10.4, in 2001 approximately 4% of Chatham County's highway system route miles were operating at a deficient level-of-service (LOS D) and around 1% at a critically deficient level-of-service (LOS E or F). With the No-Build network in place in 2030, 21% of route miles would be operating at a deficient LOS and 10% would be operating at a critically deficient LOS. The most significant decline in LOS would be observed on major highways. Interstate route miles operating at a deficient LOS would increase from 6% in 2001 to 61% in 2030. Interstate route miles operating at a critically deficient LOS would increase from 0% in 2001 to 29% in 2030. Principal arterial route miles operating at a deficient LOS would increase from 9% in 2001 to 29% in 2030. Principal arterial route miles operating at a critically deficient LOS would increase from 2% in 2001 to 15% in 2030.

10.9.3 New Facilities: Recommended Constrained Plan

After evaluating the ability of the current transportation network to handle future demand, CUTS tested several additional scenarios with the goal of identifying long range transportation projects that maximize performance but are also financially feasible. This resulted in a recommended constrained plan, so called because it addresses major deficiencies that were identified in the "No-Build" network but is constrained by fiscal limitations.

As shown in Table 10.4, the LRTP's financially constrained plan offers a significant LOS advantage over the no-build network. The constrained plan cuts deficient route miles in half, and all but eliminates the presence of critically deficient route miles.

Table 10.4 Deficient/Critically Deficient LOS Under Two Development Scenarios

	DEFICIENT AND CRITICALLY DEFICIENT ROUTE MILES (% of total)		
Deficient Route Miles	2001 Base Data (Existing Conditions)	Scenario #1: 2030 "No-Build" Network	Scenario #2: 2030 Financially Constrained Plan
All Roads	4	21	11
Interstates	6	61	26
Principal Arterials	9	29	16
Critically Deficient Route Miles			
All Roads	1	10	2
Interstates	0	29	4
Principal Arterials	2	15	2

Source: CUTS 2030 Long Range Transportation Plan

10.9.4 Public Transportation Needs

A good public transportation system is essential to many residents of Chatham County, and is beneficial to all residents and businesses. Public transportation provides access to job, education, and medical care. Funds invested in public transportation have a positive impact on the economy of the area. Every dollar invested in public transportation provides six dollars in economic returns[21]. Public transportation also improves air quality, provides relief from traffic congestion, and reduces the need for parking.

Estimates of public transportation facility needs and associated funding over the course of the next 20 years are shown in Table 10.5.

[21] Source: CUTS 2030 Long Range Transportation Plan

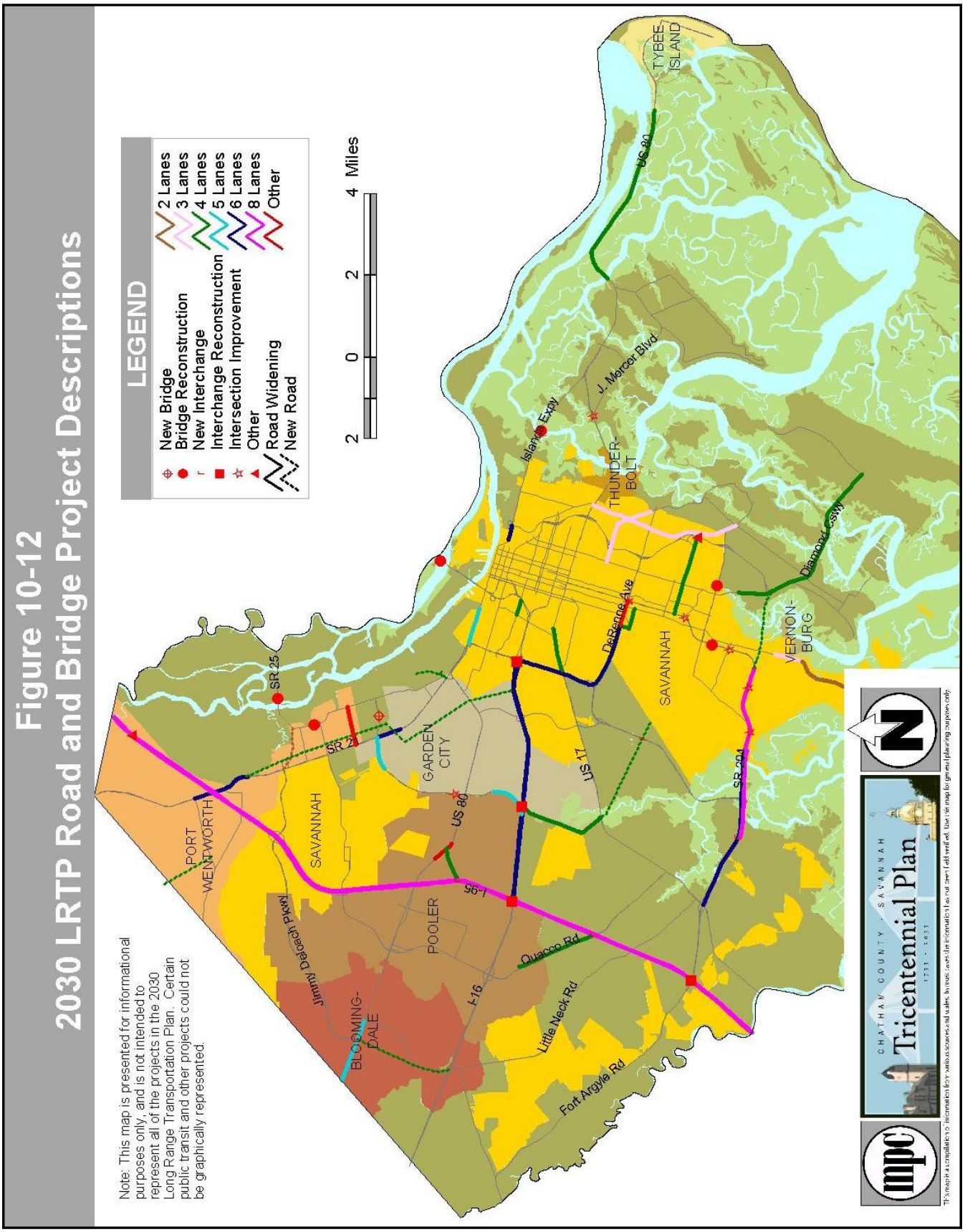


Figure 10-12
2030 LRTP Road and Bridge Project Descriptions
LEGEND
New Bridge
Bridge Reconstruction
New Interchange
Interchange Reconstruction
Intersection Improvement
Other
Road Widening
New Road
2 Lanes
3 Lanes
4 Lanes
5 Lanes
6 Lanes
8 Lanes
Other
2 0 2 4 Miles
Note: This map is presented for informational purposes only, and is not intended to represent all of the projects in the 2030 Long Range Transportation Plan. Certain public transit and other projects could not be graphically represented.
TYBEE ISLAND
US 80
J. Mercer Blvd
Islands Expy
THUNDER-BOLT
DeRenne Ave
Diamond Cswy
VERNON-BURG
SAVANNAH
GARDEN CITY
PORT WENTWORTH
SR 25
SR 21
US 17
US 80
SR 204
SR 1
Jimmy DeLoach PKWY
POOLER
I-16
Duacco Rd
Little Neck Rd
BLOOMING-DALE
Fort Argyle Rd
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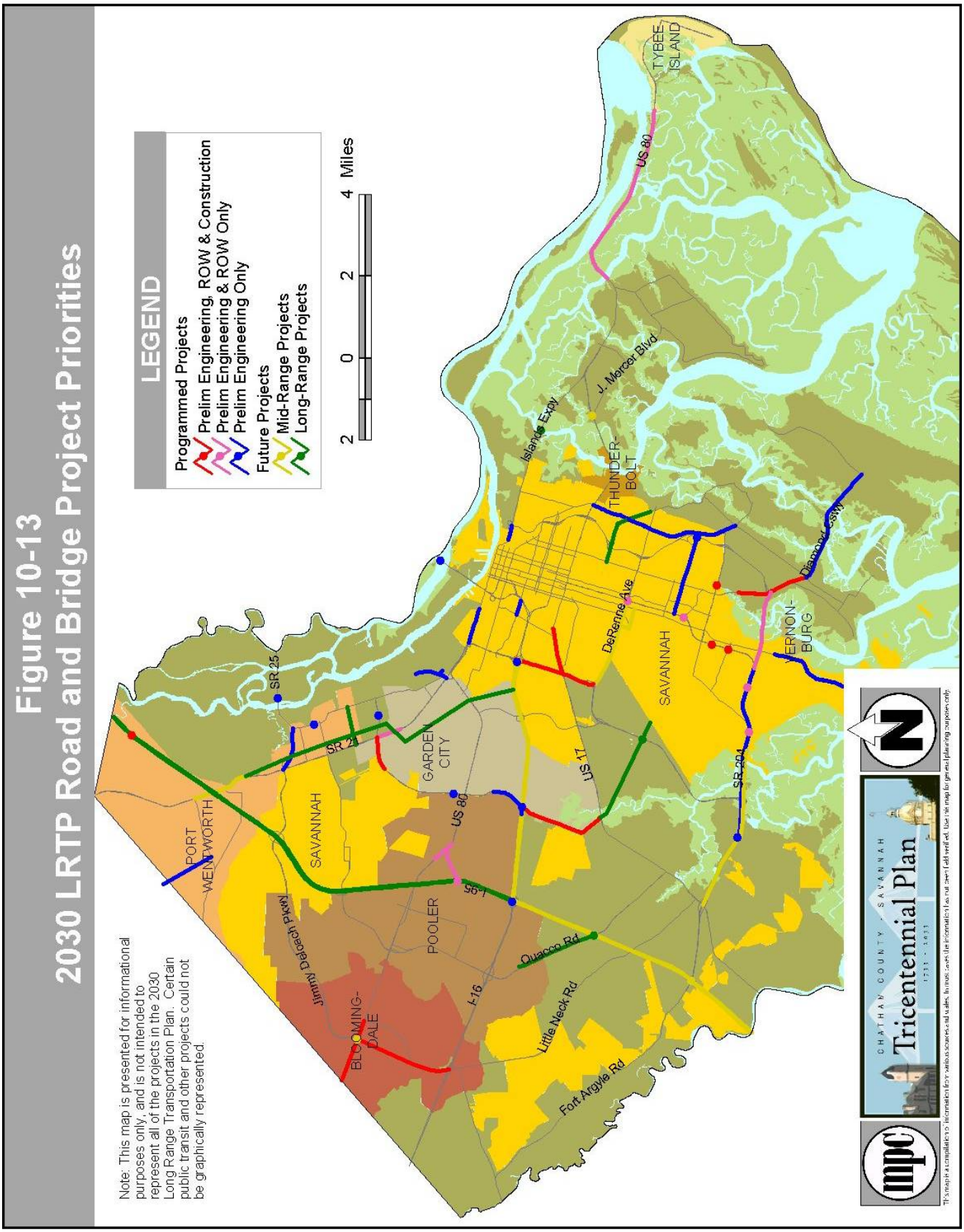
Figure 10-13
2030 LRTP Road and Bridge Project Priorities
LEGEND
Programmed Projects
Prelim Engineering, ROW & Construction
Prelim Engineering & ROW Only
Prelim Engineering Only
Future Projects
Mid-Range Projects
Long-Range Projects
2 0 2 4 Miles
Note: This map is presented for informational purposes only, and is not intended to represent all of the projects in the 2030 Long Range Transportation Plan. Certain public transit and other projects could not be graphically represented.
TYBEE ISLAND
US 80
J. Mercer Blvd
Islands Expy
THUNDER-BOLT
DeRenne Ave
Diamond Cswy
SAVANNAH
ERNON-BURG
SR 25
SR 21
GARDEN CITY
US 17
SR 204
US 80
SR 1
POOLER
I-16
Jimmy Deloach Pkwy
BLOOMING-DALE
Quacco Rd
Little Neck Rd
Fort Argyle Rd
PORT WENTWORTH
SAVANNAH
CHATHAM COUNTY - SAVANNAH
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Table 10.5 Estimated Costs of Priority CAT Transit Projects, 2005-2025

PROJECT	CAPITAL	PLANNING	OPERATING	JARC[22]	TOTAL
135 Buses	33,750,000				33,750,000
Paratransit Vans	6,300,000				6,300,000
Transit Stations	20,000,000				20,000,000
Passenger Amenities	1,500,000				1,500,000
Ticket Vending Machines/Other Amenities	1,000,000				1,000,000
Modifications to Existing Facilities	5,000,000				5,000,000
Modifications to New Facilities	3,000,000				3,000,000
Preventative Maintenance	26,000,000				26,000,000
Intelligent Transportation Systems (ITS)	9,000,000				9,000,000
Tools/Equipment	2,500,000				2,500,000
JARC Operations				34,306,000	34,306,000
Planning		2,730,000			2,730,000
Lease/Purchase Buses	3,000,000				3,000,000
Service Delivery Vehicles	1,500,000				1,500,000
Vanpool	875,000				875,000
Savannah Belles Ferries and Facilities	5,000,000				5,000,000
Downtown Shuttle Vehicles	70,000				70,000
Fareboxes	1,300,000				1,300,000
Federal Operating Assistance			46,162,000		46,162,000
TOTAL	119,795,000	2,730,000	46,162,000	34,306,000	202,993,000

Source: CUTS 2030 Long Range Transportation Plan

10.10 Quality Growth Objectives

As presented in Chapter 110-12-1-.06 of the Georgia Department of Community Affairs' Standards and Procedures for Local Comprehensive Planning, the State of Georgia has one Statewide Planning Goal and one Quality Community Objective that are directly related to transportation planning:

[22] Job Access and Reverse Commute, or JARC, is a national grant program administered by the Federal Transit Administration that provides grants to communities on both a competitive and congressionally districted basis for the purpose of filling gaps in employment transportation. The primary beneficiaries of this program are low-income families that otherwise would have a difficult time getting to jobs and related services, such as child care and training. The grant requires a 50 percent match. Source: Community Transportation Association of America http://www.ctaa.org/ntrc/atj/jarc.asp.

- Goal: Land Use and Transportation
  To ensure the coordination of land use planning and transportation planning throughout the state in support of efficient growth and development patterns that will promote sustainable economic development, protection of natural and cultural resources and provision of adequate and affordable housing.

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

10.10.1 Goal: Coordinate Transportation Planning and Land Use Planning

As discussed in Section 10.7, the Transportation-Land Use Connection, transportation and land use are inextricably connected. This connection makes the joint coordination of land use planning and transportation planning all the more important.

Compared to many other metropolitan areas, the coordination between transportation planning and land use planning in Chatham County is already quite good. CUTS, the Savannah area's Metropolitan Planning Organization (MPO) is housed in the MPC office. Transportation planning functions as a department within the MPC, and MPC management also supervises the MPO's activities. This arrangement helps ensure that the MPC's executive director, in particular, is kept fully in the loop on all land use planning and transportation activity, and can jointly coordinate the two. This helps to ensure that the policies of both the MPC and the MPO work in the best interest of the greater community. One of the primary limiting factors in this arrangement, however, is the fact that the MPC only has planning jurisdiction in the City of Savannah and unincorporated Chatham County. The other seven municipalities in Chatham County (Bloomingdale, Garden City, Pooler, Port Wentworth, Thunderbolt, Tybee Island, and Vernonburg) do not participate in the MPC, but are members of the MPO. Because of their participation in joint transportation planning, but not joint land use planning, these seven municipalities do not benefit from the MPC and MPO's planning arrangement to the same degree as the City of Savannah and unincorporated Chatham County.

10.10.2 Objective: Provide/Encourage Alternatives to the Private Automobile

Savannah is a historic city with an in-tact mixed use land use pattern, and as such, is often held up as a prime example of a walkable American city. This is especially true of most neighborhoods north of Victory Drive. These neighborhoods were developed in the 200+ years of Savannah's history that predate the widespread use of automobiles. As such, most of these neighborhoods are both well-served by sidewalk facilities, and within walking distance of neighborhood-scale commercial uses. South of Victory Drive, and in East and West Chatham, development occurred in the automobile era, so development patters tend to be less dense, and mixed use development less common. Many neighborhoods in these areas have sidewalk facilities, but walking destinations such as commercial corridors, parks, schools, and neighborhood-scale shopping centers tend to be located farther away than in older parts of the city.

Bicycles are already a relatively popular mode of transportation in Savannah, especially in the downtown and the neighborhoods adjacent to it. The downtown's compact development pattern is well-suited to transportation via bicycle. In addition, the city's numerous squares serve as traffic-calming devices that help bicyclists and pedestrians alike feel more safe and comfortable on the street. Bicycles and the downtown are a natural fit, but increasing bicycle use outside of the downtown area will require more aggressive planning practices. There are currently some, but not many, dedicated bicycle lanes outside of the downtown core. Increasing both the prevalence and connectivity of bike lanes will help promote bicycle use outside of the downtown core. Figure 10.6 shows a map of proposed bikeways. To reduce costs, bike lanes will be provided on these streets concurrently with other road improvements, such as road widening, when they are deemed necessary.

As discussed in Section 10.4, areas that are dense and walkable also tend to be better-suited to support public transit service, and this assertion is supported by the map of Public Transit Service Areas (see Figure 10.7). Public transit in areas with suburban densities and land use patterns is simply not as viable as it is in areas with more urban densities and land use patterns. One solution to this problem is to build denser suburbs, and the Amenity Community category on the Future Land Use Map (please refer to the Community Agenda) will lead to new zoning that will allow denser development in new planned communities. But for suburban areas that are already built out at low densities, the primary solution to better transit service is to increase the use of park and ride lots. Park and ride facilities are able to overcome the limitations of low density development by providing a centralized facility from which to provide public transit service. As the county's population grows, and parking becomes more scarce and expensive downtown, park and ride lots will become an increasingly viable option in suburban areas.

Chapter 11 *Community Facilities & Services*

11.1 Introduction

The Community Facilities and Services Chapter of the Tricentennial Plan provides maps of service areas for water distribution and wastewater collection, stormwater management, police and fire protection, and solid waste facilities. It identifies libraries, parks and recreational facilities, and discusses the adequacy of transportation system for current and future needs. It identifies inconsistencies and suggests improvements to the service delivery strategy.

11.2 Regional Issues

The two most pressing regional issues are groundwater quality and the effect of stormwater runoff and septic tank leachate on the tidal marsh. Transportation planning and solid waste disposal are two other areas that require a regional perspective to be effective.

11.2.1 Groundwater

Historically, the Floridan Aquifer has supplied water to Chatham County. Until the middle of the twentieth century, there were numerous artesian wells throughout the county. Industrial and residential development has resulted in increased pumpage and a reduction of the piezometric pressure in the aquifer. Not only have the artesian wells disappeared, but the migration of salt water into the Floridan Aquifer from its terminus in Port Royal Sound in South Carolina is a major threat to the groundwater supply in Chatham and other coastal counties.

In 1997, the State of Georgia Environmental Protection Division (EPD) limited the amount of groundwater that could be withdrawn from the Floridan Aquifer. The moratorium on additional groundwater withdrawal was viewed as a temporary measure pending a study to measure saltwater intrusion into the groundwater supply. The study, called *The Sound Science Initiative* and scheduled to be completed in December 2005, will provide the basis for issuing groundwater withdrawal permits for providers in Georgia.

As part of *The Sound Science Initiative*, a model predicting the rate of horizontal salt water intrusion from Port Royal Sound at various pumping rates in Chatham County and other coastal counties was developed by the United States Geological Survey (USGS). The model is somewhat at odds with studies by the South Carolina Department of Health and Environmental Control (DHEC) that predict accelerated contamination of the groundwater due to vertical migration though the upper confining layer of the aquifer.

The DHEC study considered a 900 square mile area including the Calibogue Sound between Georgia and South Carolina, Tybee and Little Tybee Islands in Georgia, and the Savannah River channel off the coast of Tybee Island. Preliminary indications are that migration through the upper confining layer of the aquifer is as much a threat to water quality as horizontal migration from Port Royal Sound.

The final results of the *Sound Science Initiative* have not been published at the time of this report. Although the results are scheduled for completion in 2005, the findings of the SCDHEC study may result in the requirement for additional time to integrate the findings

of the two studies and prepare a model that accounts for both horizontal and vertical migration of groundwater.

The issues affecting groundwater quality (domestic, industrial, and agricultural pumpage and vertical and horizontal migration of saltwater into the aquifer) must be addressed on a regional basis because groundwater withdrawal in one area affects the piezometric pressure throughout the aquifer, and salt water intrusion in one part of the aquifer may rapidly contaminate the entire aquifer.

11.2.2 Stormwater Runoff and Septic Tank Leachate

Tidal marshes and open saltwater comprise approximately 43 percent of the total land area in Chatham County. The estuarine system is a critical habitat and spawning area for an ecosystem that extends far beyond the borders of Chatham County and the State of Georgia. Between 1990 and 2000, approximately 18,900 acres of high ground in Chatham County were developed. Runoff from impervious surfaces is discharged largely untreated into the tidal marsh. The ability of the marsh to absorb and treat contaminants from parking lots, roadways, golf courses, and lawns is limited. The capacity is further compromised by upstream discharges and septic tank leachate.

Upstream development is inevitably accompanied by road, parking lot, and highway construction. The current engineering practice of storm water collection and end-of-pipe discharge creates numerous point-source discharges of water that contain a wide variety of organic and inorganic contaminants. Subsurface discharge from septic tank drain fields in Chatham and upstream counties further compromise the water quality entering the area. Because the marsh is tidal, pollutants are not flushed away from land into the ocean but remain in the area indefinitely following tidal fluctuations.

Degradation of surface water quality can be best addressed by adoption of regional best management practices for managing stormwater runoff from impervious surfaces such as highways and parking lots and by adoption of regional standards for the design and installation of septic tanks and drain fields.

11.2.3 Transportation

Chatham County is the economic seat of a five-county region that includes three counties in Georgia (Bryan, Chatham, and Effingham) and two counties in South Carolina (Jasper and Beaufort). In order to provide effective, safe, and efficient transportation systems, coordination between the counties and states is imperative. Because of the environmental sensitivity of the area, the goal of transportation planning should be the movement of people rather than of vehicles. This represents a change in the way planners approach the solution to transportation problems and will require coordination between local and state agencies and between the agencies themselves. (See Chapter 10 for an assessment of the adequacy of the transportation system for current and future needs.)

11.2.4 Solid Waste Management

The privately owned and operated sanitary and industrial landfills in Chatham County accept solid waste from surrounding counties. This arrangement is satisfactory from the

standpoint of the waste haulers and their customers who enjoy the benefits of the short-distance hauls. However, because of the high land costs in Chatham County, it is unlikely that land will be available to construct new landfills in the county. When the landfills in Chatham County reach capacity, the residents of Chatham County will be required to pay the additional transportation costs to new landfills in other counties. It is likely that the surrounding counties will demand a premium to accept waste generated outside of their area.

Constructive reuse of solid waste both reduces the requirement for landfill capacity and dependence on the finite supply of raw materials. Currently, the cost of recycling inhibits its wide use in Chatham County. Even so, the potential of resource recovery through recycling is directly proportional to the volume of waste. Regional resource recovery operations that handle waste streams sufficiently large to justify the necessary capital expenditures are more likely to be successful than smaller labor intensive operations.

The most economical immediate solutions to solid waste disposal may result in the worst long-term consequences. Preserving the capacity of the landfills through reduction of the waste stream by recycling and mulching of yard waste may not appear cost effective. However, if the time required to permit a new landfill, the capital expense of constructing it, and the transportation costs to reach it are factored into the equation, recycling and reuse may prove the most economical approach. Similarly, reducing the number of waste haulers in each neighborhood by contracting on a neighborhood rather than on an individual basis may not appear advantageous to the individuals living in the neighborhood. But when traffic disruption, road maintenance, and the proliferation of litter are factored in, licensing haulers by neighborhood may be the best option.

Because the management of solid waste requires a long term perspective, a regional authority answerable to the citizens of Chatham County is warranted.

11.3 Water Supply and Treatment

Approximately 95 percent of the population of Chatham County is served by municipal or community water systems[1]. Ninety-eight percent of the water provided by these systems is pumped from the Floridan Aquifer and meets or exceeds drinking water standards. Water is pumped directly into the distribution system with chlorine and fluoride being the only treatment necessary.

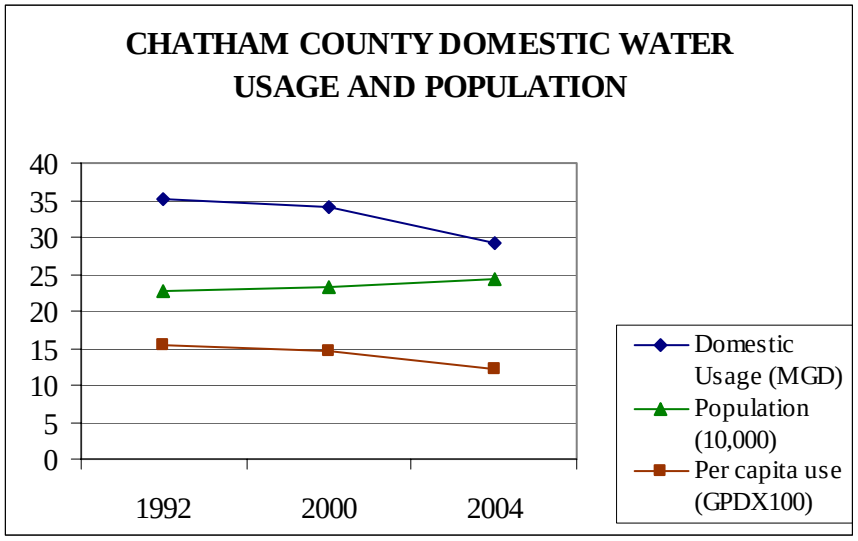
The City of Savannah is the largest provider of water in Chatham County and supplies water to Effingham County. Sixty percent of the City's water supply including industrial, commercial, and residential users is from groundwater wells in the Floridan aquifer. The remaining 40 percent is surface water from the Savannah River. The City's Industrial and Domestic (I&D) Water Treatment Plant treats water from the Savannah River using the hydrated lime coagulation and sand filtration treatment process. The plant's capacity is 62.5 million gallons per day (MGD), and it currently produces 36 MGD. The cost of treating river water significantly exceeds the cost of pumping groundwater. As population growth increases the demand for drinking water and reduction in groundwater usage becomes

[1] Chatham County Comprehensive Water Supply Management Plan (2000 Update).

necessary to prevent saltwater intrusion, the existing capacity of the treatment facility will play a major role in meeting the future demand for water.

Measures to reduce the amount of groundwater pumped from the Floridan Aquifer were instituted in 1995 when the *Comprehensive Water Supply Management Plan for Chatham County* was adopted. The Plan was the result of a cooperative effort by the municipalities, major domestic water companies, and major industrial water users to reduce groundwater pumpage. The State of Georgia Environmental Protection Division (EPD) capped the amount of groundwater that could be withdrawn from the Aquifer and mandated a 10 million gallon reduction in pumpage by 2005. Annual updates of the Plan indicate that the measures have been effective.

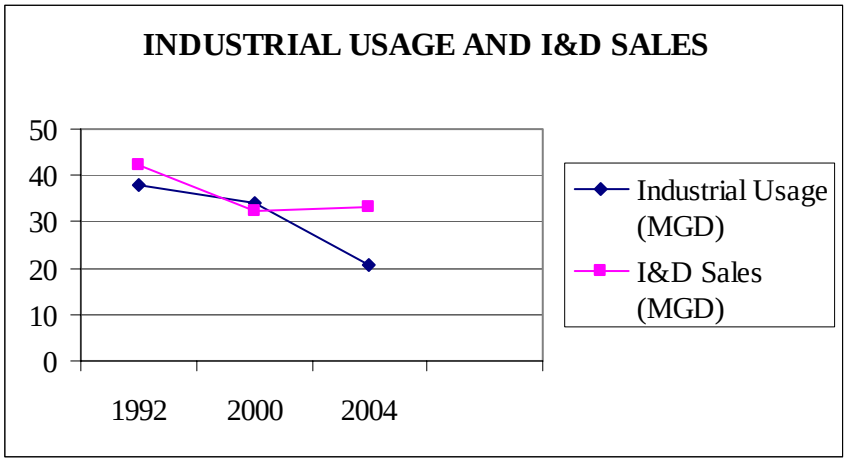
Figure 11.1 Chatham County Domestic Water Usage and Population



Between 1992 and 2004, domestic usage has been reduced by approximately seventeen percent even though the population over the same period has increased by seven percent. The per capita usage has dropped from 155 gallons per day to 121 gallons per day.

In 1997, the capacity of the Savannah Industrial and Domestic (I&D) water treatment plant, which treats surface water from the Savannah River, was increased from 50 million gallons per day (MDG) to 62.5 MGD. Industrial usage has been reduced by 46 percent, partially due to water conservation measures and partially due to a reduction in industrial activity. Although the I & D Plant production has decreased, it has not tracked the decrease in industrial volume. A greater portion of the plant capacity is supplying domestic users in order to reduce the volume withdrawn from the Floridan aquifer.

Figure 11.2 Industrial Usage and I & D Sales



Industrial and domestic water usage is carefully monitored and the caps are enforced by the EPD. However, agricultural water usage in the State is currently not monitored or regulated. Agricultural usage, particularly in the areas south and west of Chatham County has a significant effect on the piezometric pressure in the Floridan aquifer which surfaces in the Port Royal Sound in South Carolina approximately 30 miles northeast of Savannah.

A map showing the areas served by water systems in Chatham County is included as Figure 11- 3.

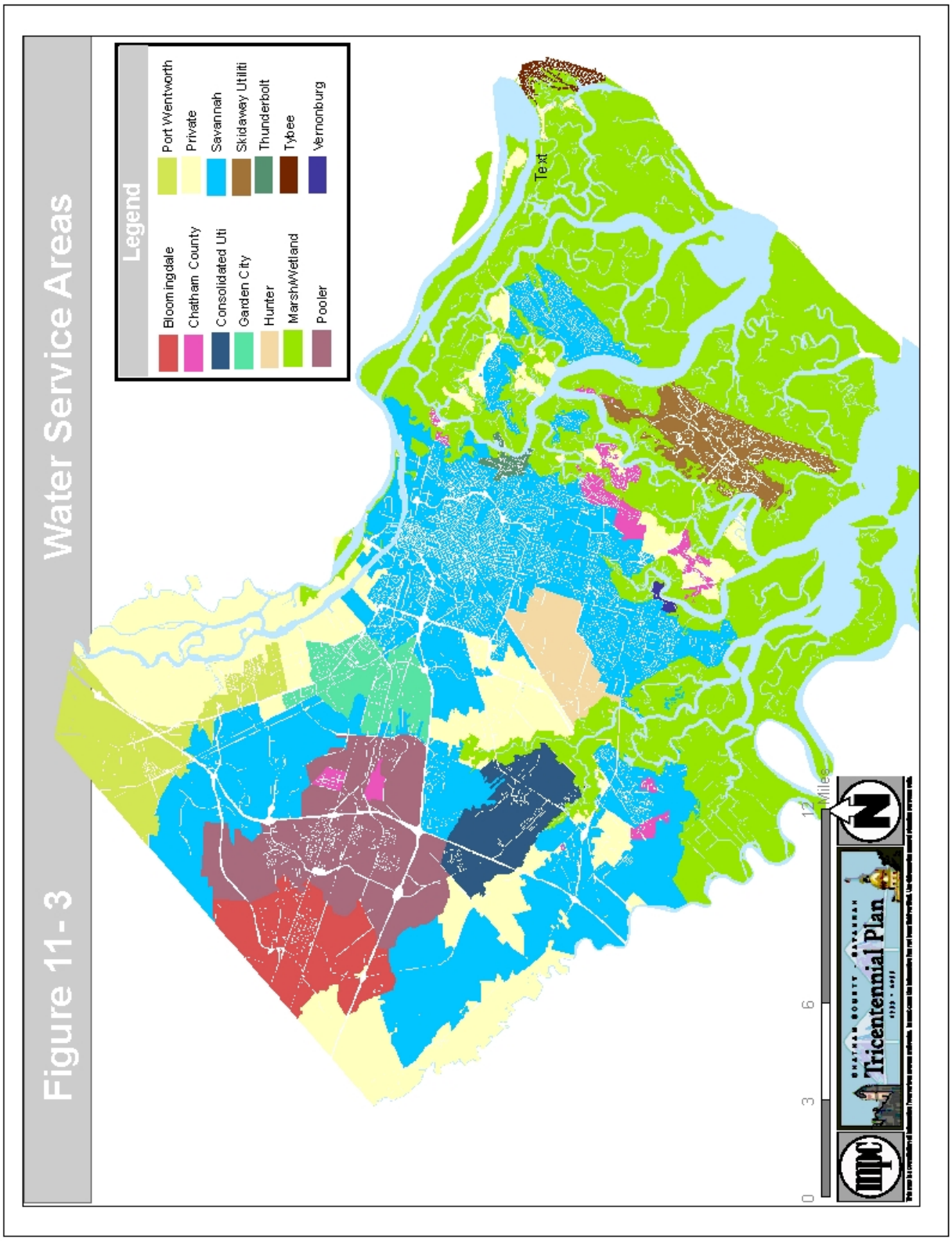

Water Service Areas
Legend
Port Wentworth
Private
Savannah
Skidaway Utilifi
Thunderbolt
Tybee
Vernonburg
Bloomingdale
Chatham County
Consolidated Uti
Garden City
Hunter
Marsh/Wetland
Pooler
Text
0
3
6
12
Miles
Tricentennial Plan

Figure 11- 3

11.4 Sewerage System and Wastewater Treatment

Approximately 90 percent of the population of Chatham County is served by wastewater collection and treatment systems operated by municipalities or major utility companies.

Table 11.1. Water Pollution Control Plants

WATER POLLUTION CONTROL PLANT (CAPACITY 1.0 MGD AND ABOVE)	PERMITTED CAPACITY (MGD)	AVERAGE DAILY FLOW (2005 MGD)	EXCESS CAPACITY (MGD)
Garden City	2.0	*	*
Savannah (President St. Plant)	27.0	*	*
Savannah (Travis Field)	1.0	*	*
Savannah (Windsor Forest)	4.5	*	*
Savannah (Georgetown)	2.45	*	*
Tybee Island	1.0	*	*
Bloomingdale/Pooler	1.0	*	*
Skidaway Island Utilities (LAS)	1.25	*	*
Hunter Army Air Base	1.5	*	*
Consolidated Utilities	*	*	*

* Data not yet available

A map showing the areas served by sewage systems in Chatham County is included as Figure 11-4.

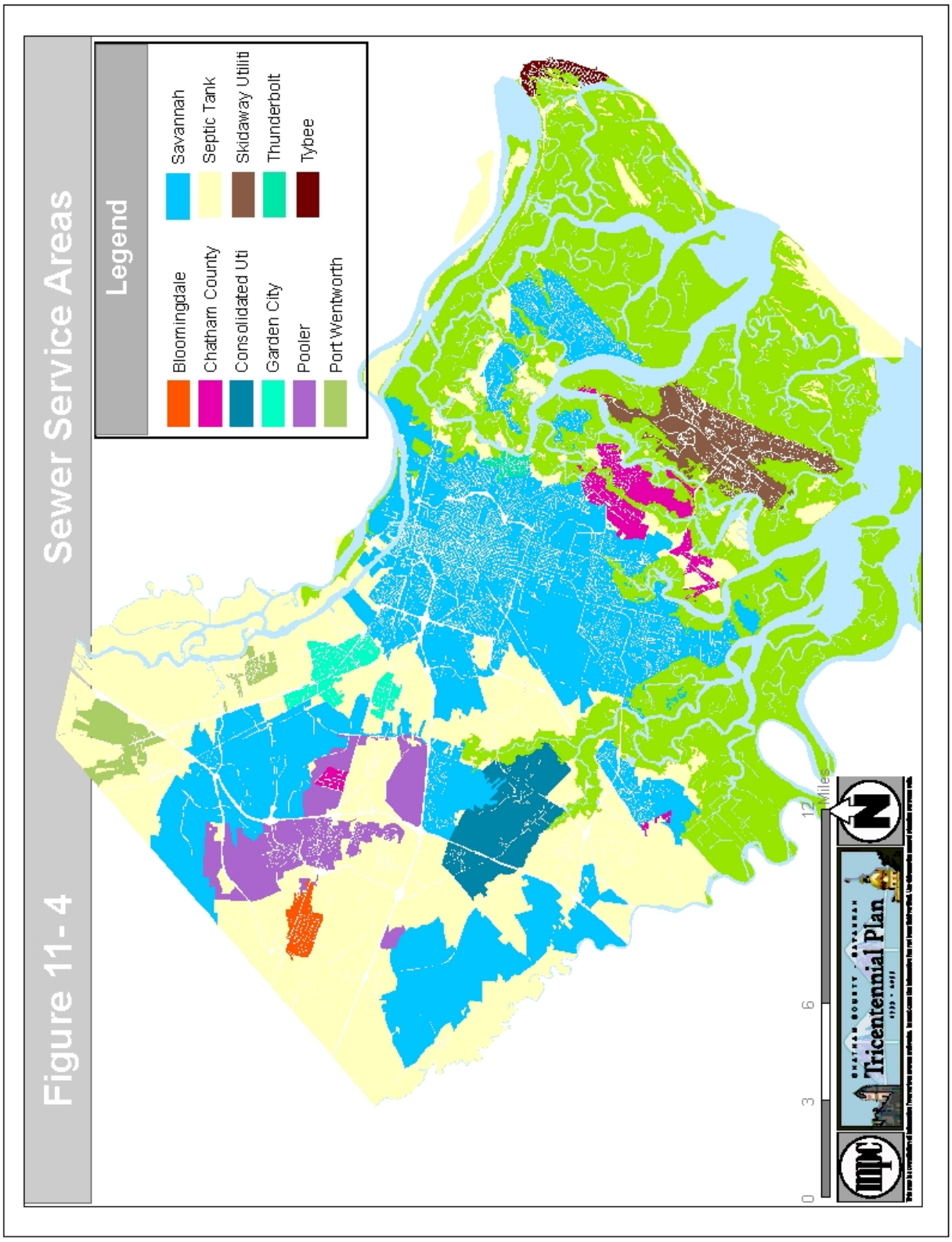


Figure 11- 4
Sewer Service Areas
Legend
Savannah
Septic Tank
Skidaway Utiliti
Thunderbolt
Tybee
Bloomingdale
Chatham County
Consolidated Uti
Garden City
Pooler
Port Wentworth
0
3
6
12
Miles
N
Tricentennial Plan

11.5 Other Facilities and Services

11.5.1 Fire Protection

Fire Protection is provided by the following volunteer and professional fire departments. The Insurance Service Office (ISO) rates fire protection in communities on a scale of one to ten with one being the highest rating a ten the lowest. The ISO rating is used by insurance companies to set rates and is an important gauge of a community's infrastructure.

Table 11.2. Fire Departments

DEPARTMENT	TYPE	NUMBER OF FIREFIGHTERS	ISO RATING
Bloomingdale	Volunteer	*	5
Garden City	Volunteer	*	5
Hunter Army Airfield	U.S. Army	*	*
Isle of Hope	Volunteer	*	*
Pooler	Volunteer	*	*
Port Wentworth	Volunteer	*	*
Savannah	Fulltime	*	2
Southside	Fulltime	*	2
Thunderbolt	Volunteer	*	5
Tybee Island	Volunteer	*	*

* Data not yet available

A map showing the areas served by various fire departments in Chatham County is included as Figure 11-5.

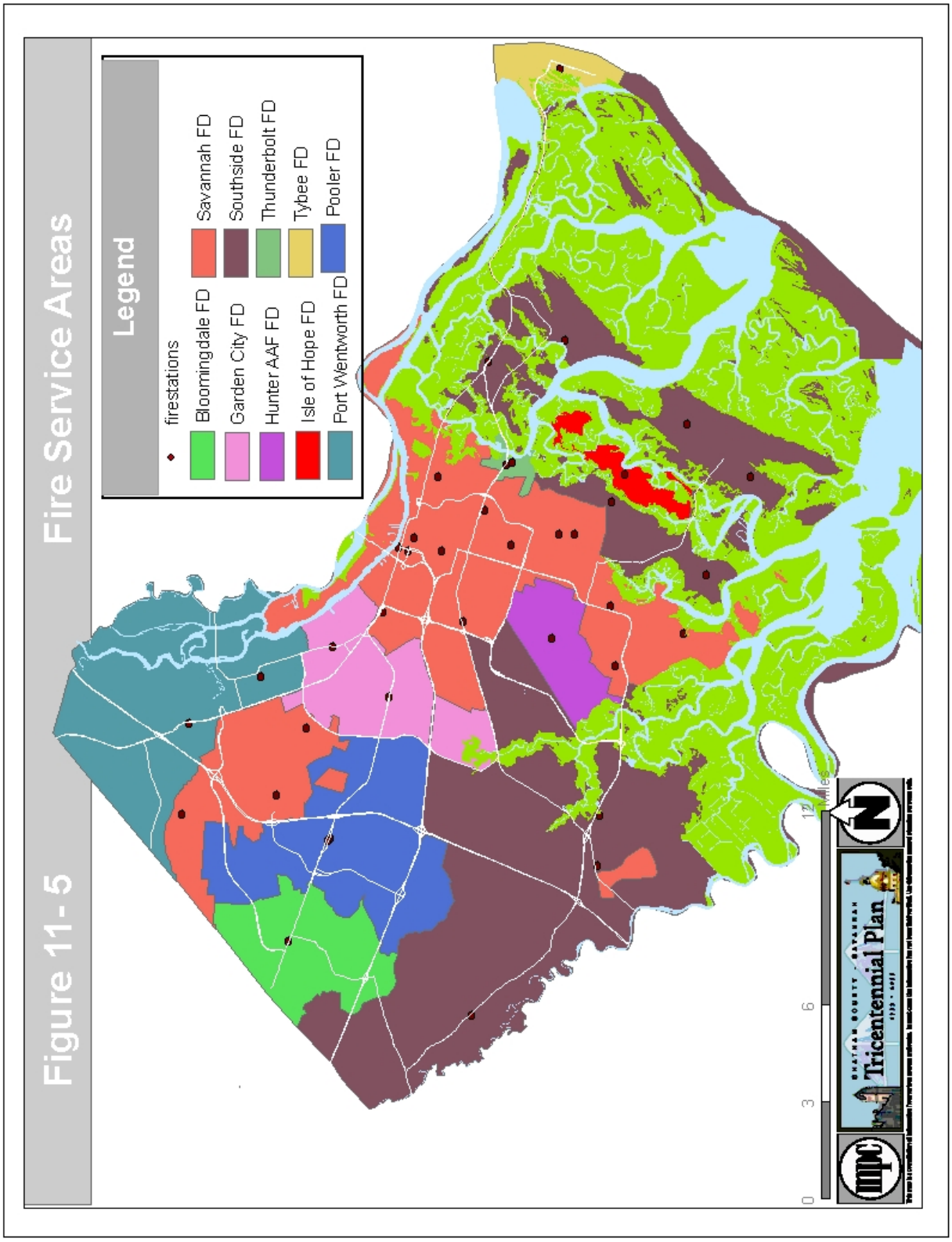

Fire Service Areas
Legend
firestations
Bloomingdale FD
Garden City FD
Hunter AAF FD
Isle of Hope FD
Port Wentworth FD
Savannah FD
Southside FD
Thunderbolt FD
Tybee FD
Pooler FD
0
3
6
12 Miles
Tricentennial Plan

Figure 11-5

11.5.2 Public Safety

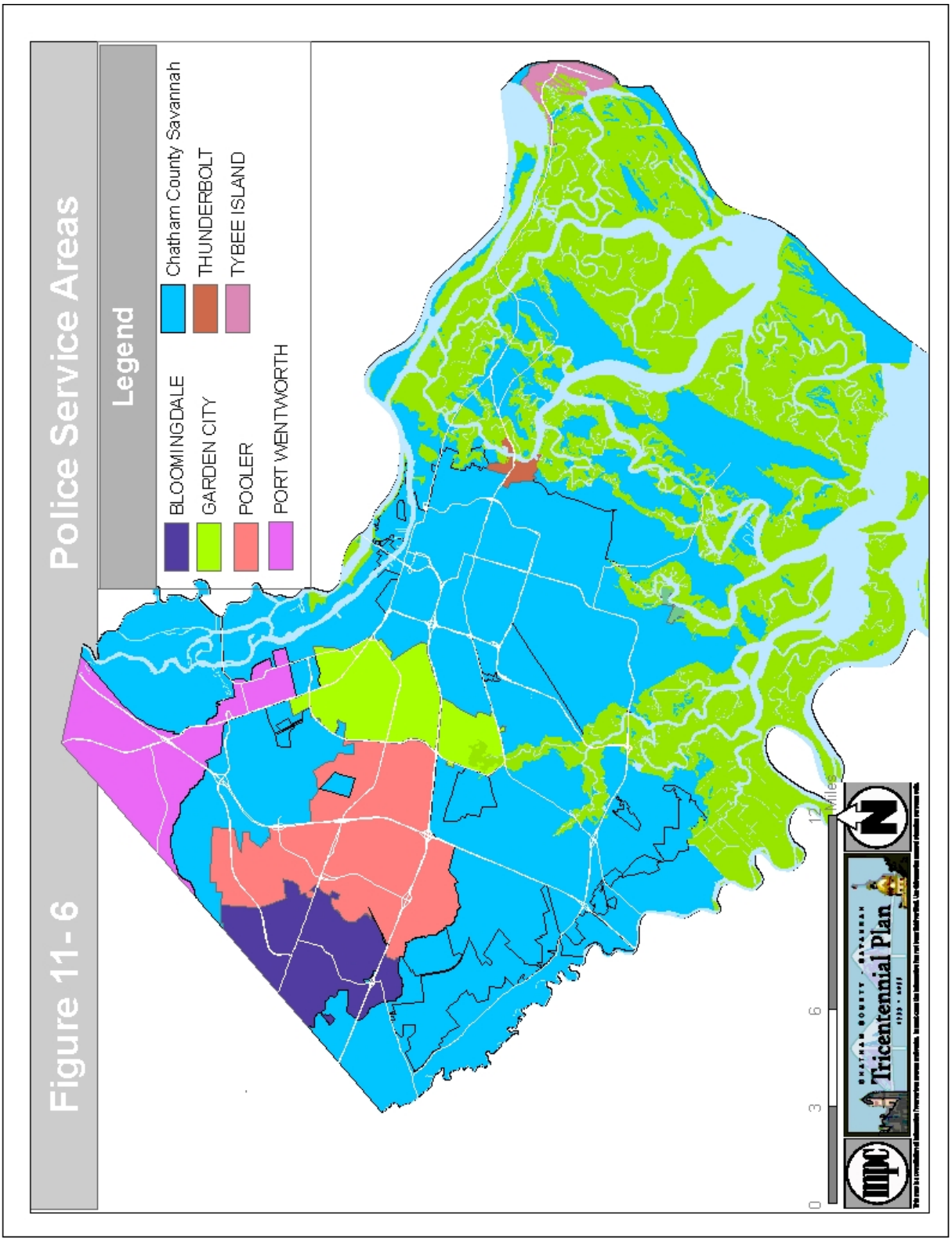
Police protection is provided by six police departments including a combined Chatham County – Savannah Municipal Department. All police departments have reciprocal agreements to provide the most efficient response.

Table 11.3. Police Departments

DEPARTMENT	NUMBER OF OFFICERS
Bloomingdale	*
Chatham County-Savannah	*
Garden City	*
Pooler	*
Port Wentworth	*
Thunderbolt	*
Tybee Island	*

* Data not yet available

A map showing the areas served by police departments in Chatham County is included as Figure 11-6.


Police Service Areas
Figure 11- 6
Legend
Chatham County Savannah
THUNDERBOLT
TYBEE ISLAND
BLOOMINGDALE
GARDEN CITY
POOLER
PORT WENTWORTH
0
3
6
12
Miles
N
Tricentennial Plan

11.5.3 Libraries

Live Oak Public Libraries serves Chatham, Effingham, and Liberty Counties. Figure 11-7 shows the service areas in Chatham County. The Chatham-Effingham-Liberty Regional Library *Long Range Facilities Plan* (February, 2002) includes a $62.6 million capital improvements program for Chatham County to be completed over a ten year period, contingent on funding. The program is prioritized as follows:

Table 11.4. Library Improvement Plan

PRIORITY	MAP AREA	BRANCH	AMOUNT (MILLION $)
1	B	Southeast Chatham	16.3
1	C	Southwest Chatham	13.0
2	D	West Chatham	6.5
2	F	Islands	5.4
3	G	Northwest Chatham	6.5
3	H	Northeast Chatham	3.9
3	I	Tybee Island	0.8
4	E	Ogeechee/Chatham	6.5
4	A	Carnegie, Phase 2	0.6
4	E	Forest City	0.9
4	B	Thunderbolt	0.7
5	A	Hitch	0.4
5	A	Kayton	0.4
5	A	Ogeechee	0.4
5	A	Ola Wyeth	0.2
5	A	W.W. Law	0.4

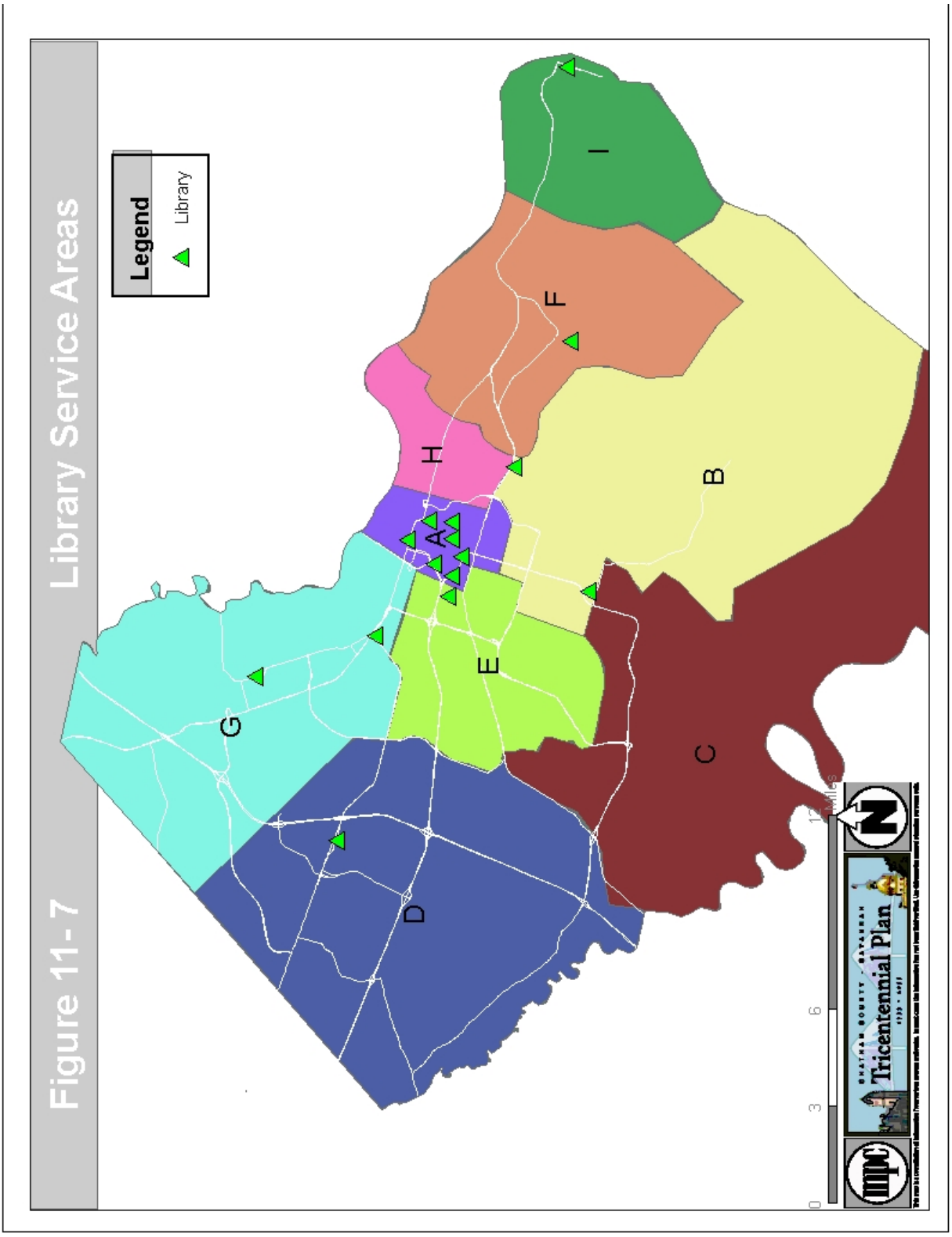


Figure 11- 7
Library Service Areas
Legend
Library
A
B
C
D
E
F
G
H
I
0
3
6
12 Miles
N
Tricentennial Plan

11.5.4 Stormwater Management

Stormwater Management Plans have been adopted by the municipalities in Chatham County as a requirement of the National Pollutant Discharge Elimination System (NPDES) administered by the State of Georgia Department of Natural Resources (DNR). Chatham County is the lead applicant , and the municipalities in the county are co-applicants who oversee their own plans. The management plans include:

- Routine water quality sampling and testing
- Calculation of pollutant loads
- Identification and elimination of illicit discharges
- Preparation of annual reports to the Georgia Environment Protection Division (EPD)
- Education and public awareness programs

The requirement for stormwater management plans and the Stormwater NPDES Permit Program are in response to community recognition that stormwater discharges into the surface waters represent a threat to the environment as serious as wastewater discharges. Because of the difficulty of identifying and managing non-point source pollution, public awareness and education programs are critical to preventing degradation of the surface waters. Current public education programs discourage discharge of trash, garden clippings, automobile washwater, used petroleum products, paints, and solvents into the storm system. The sampling and testing programs reflect the effectiveness of the education efforts.

Simultaneously with the public education programs, professional seminars encourage the engineering community to moderate conventional engineering practices of stormwater collection and end-of-pipe discharge with Low Impact Design (LID) methods of handling stormwater. Additionally, revisions to zoning ordinances are underway in Chatham County and Savannah to reduce the requirement for paved parking lots, to provide incentives for providing greenspace, and to limit the amount of impervious surface as a percentage of lot area for residential, commercial, and industrial properties.

Figure 11-8 shows the service areas for the stormwater collection systems.

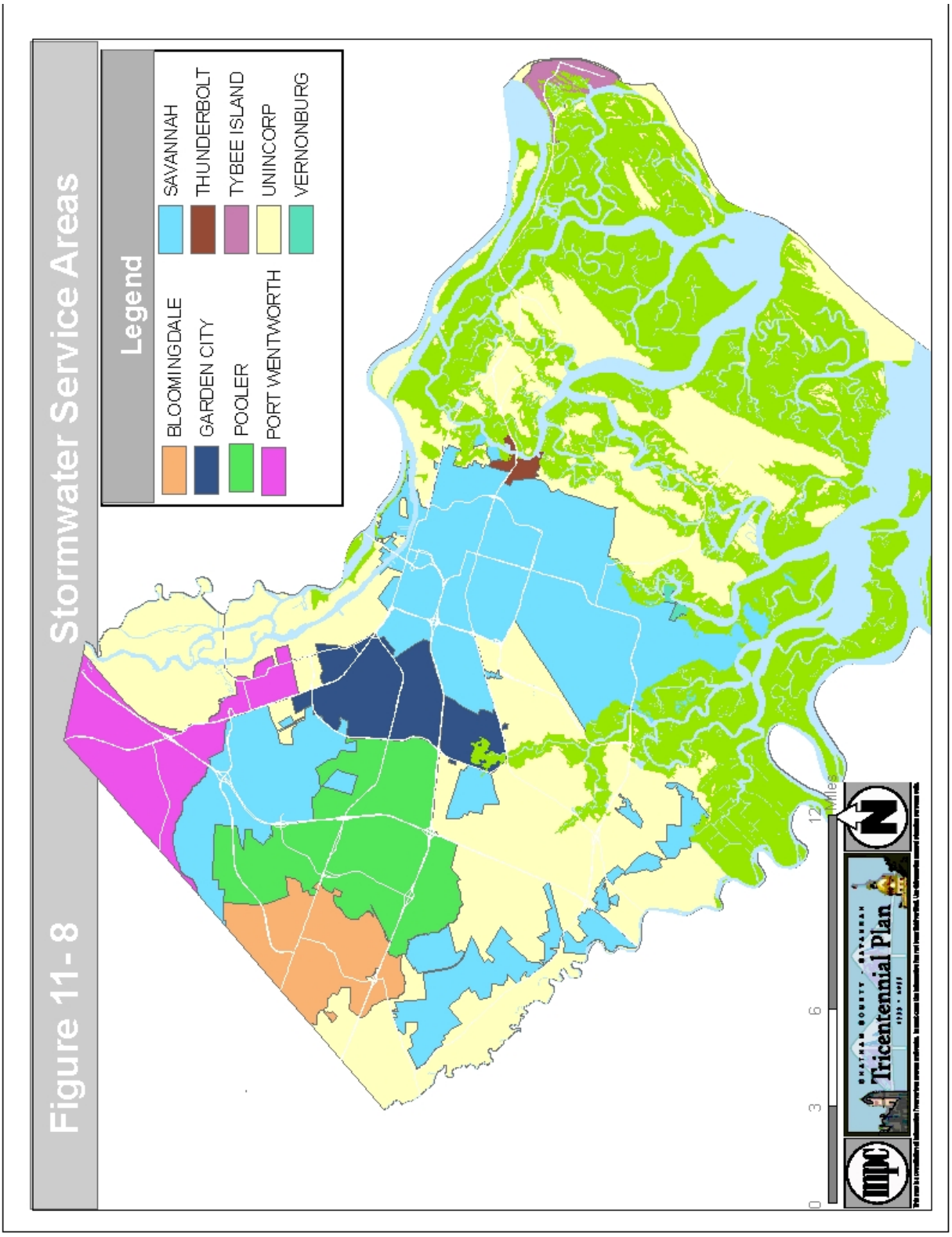


Figure 11-8
Stormwater Service Areas
Legend
SAVANNAH
THUNDERBOLT
TYBEE ISLAND
UNINCORP
VERNONBURG
BLOOMINGDALE
GARDEN CITY
POOLER
PORT WENTWORTH
0
3
6
12 Miles
N
Tricentennial Plan

11.5.5 Solid Waste Management

The City of Savannah's landfill currently has a _*_ year capacity. The operators of the Superior Sanitary Landfill estimate that their capacity is _*_ years, and the Republic Industrial landfill has a _*_ year capacity. The average lead time for approval of a new landfill is approximately ten years.

*Data not yet available.

A map showing the existing landfills in Chatham County is included as Figure 11-9.

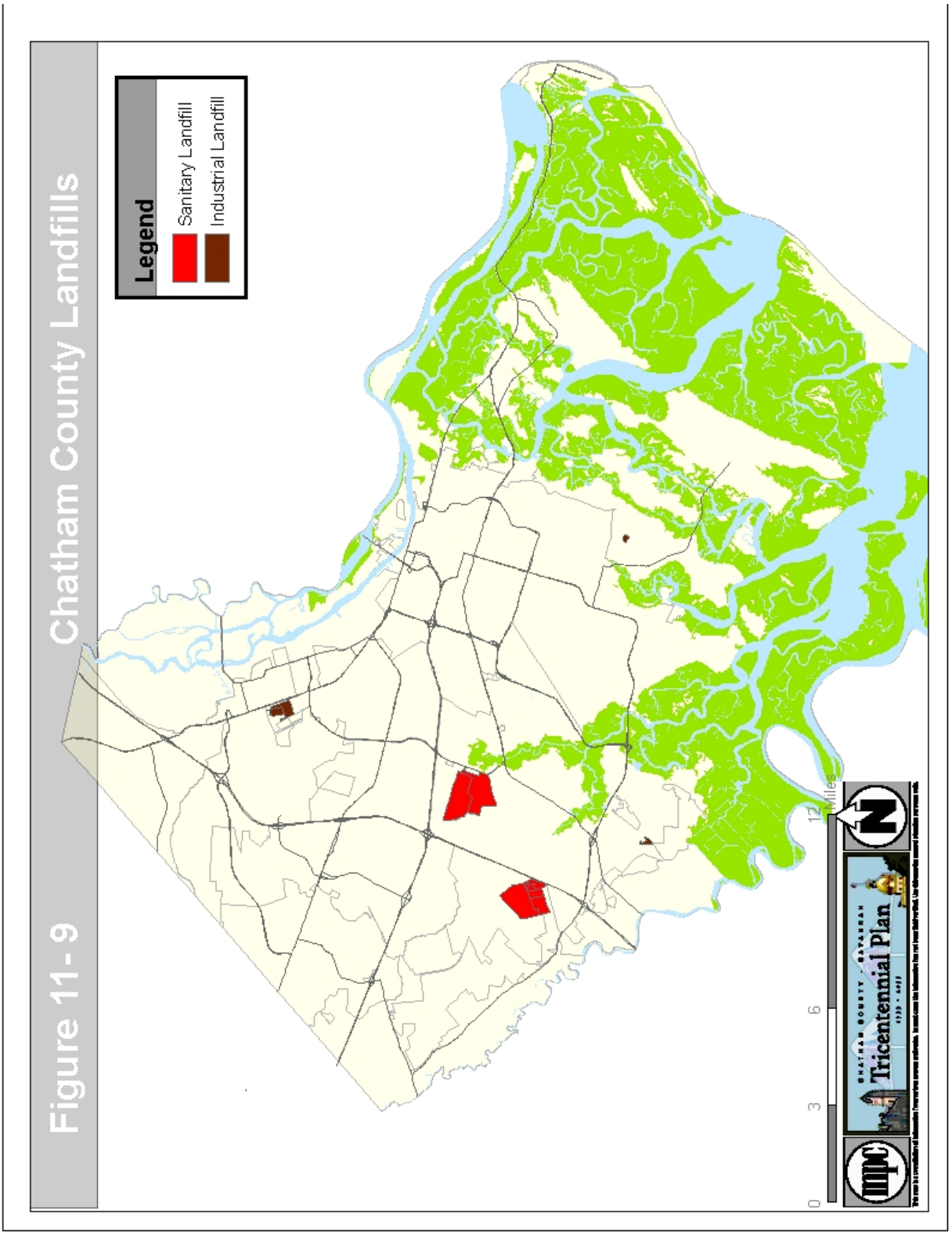


Figure 11- 9
Chatham County Landfills
Legend
Sanitary Landfill
Industrial Landfill
0
3
6
12
Miles
N
Tricentennial Plan

11.5.6 Parks and Recreation

There are approximately 13,400 acres of recreational area in Chatham County. Thirty-one percent of the total area is owned and maintained by governmental entities, including the County and five municipalities, the Federal Government, and one property (Oatland Island) owned by the Board of Education. Facilities adjacent to private and public schools are not included in the total. The remaining 66 percent is in private hands, including neighborhood associations, clubs, and individuals.

Table 11.5. Ownership of Parks and Recreational Land

OWNER	ACRES	PERCENT OF TOTAL
Chatham County Board of Education (Oatland Island)	83	0.6
Chatham County	1,340	10.0
Garden City	51	0.4
City of Savannah	1,516	11.3
Pooler	42	0.3
Port Wentworth	10	0.1
Tybee Island	7	0.1
United States of America	1,462	10.9
Private	8,885	66.3
TOTAL	13,396	100.0

Table 11.6. Distribution of Recreational Facilities by Municipality

MUNICIPALITY	ACRES	PERCENT OF TOTAL
Unincorporated Chatham County	7,983	59.6
City of Savannah	3,997	29.8
Thunderbolt	6	0.0
Tybee Island	51	0.4
Pooler	1198	8.9
Garden City	103	0.8
Port Wentworth	58	0.4
Bloomingdale	0	0.0
Vernonburg	0	0.0
TOTAL	13,396	100.0

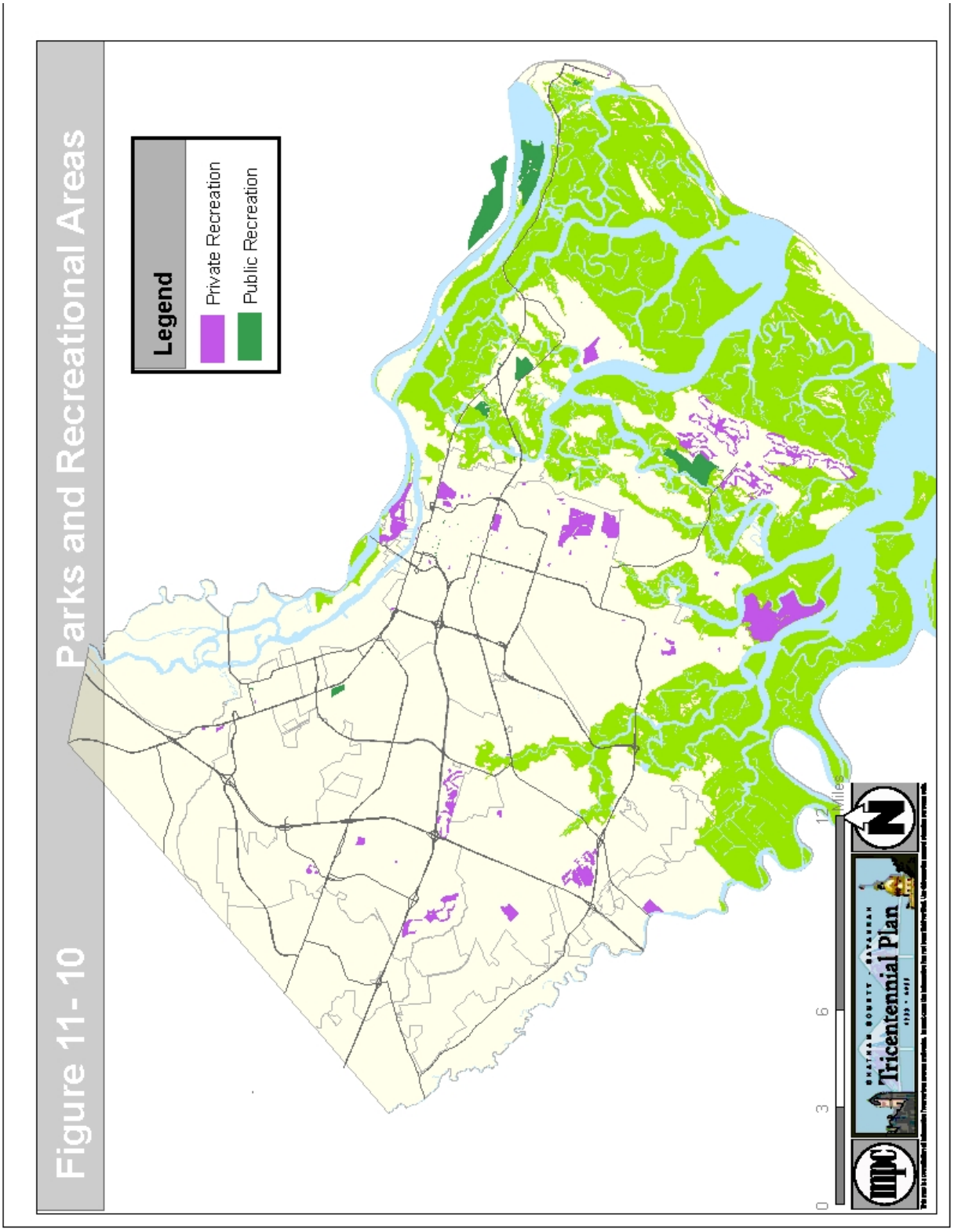


Figure 11- 10
Parks and Recreational Areas
Legend
Private Recreation
Public Recreation
0
3
6
12 Miles
N
Tricentennial Plan

11.6 Consistency with Service Delivery Strategy

The services to be provided by Chatham County and the City of Savannah as described in the Chatham County-Savannah Comprehensive Plan are consistent with the service delivery strategy agreed to by the municipalities within Chatham County (Chapter 12).

11.7 Issues and Opportunities

The most pressing issues in Chatham County are salt water intrusion into the Floridan Aquifer, the effect of stormwater runoff and septic tank leachate on the tidal marsh, the impact of the transportation system on the environment, and solid waste disposal.

Chatham County, in cooperation with the State of Georgia, is in the process of creating a state-wide water management plan that addresses many of the concerns of salt water intrusion into the aquifer. The findings of SCHEC presents an opportunity to create a bi-state solution to the problem. Addressing groundwater quality issues is critical to the continued growth of the coastal region.

The NPDES permitting and monitoring system for stormwater runoff is a basis for improving the quality of non-point source discharges into the waterways. Other areas of the country have created regional stormwater utilities to design, inspect, monitor, and operate stormwater collection and treatment facilities. Preservation and protection of the marsh ecosystem may provide the impetus for creation of an entity with regional responsibility for stormwater discharges.

Countywide transportation planning is currently the responsibility of the Chatham Urban Transportation Study (CUTS). As adjacent counties grow, transportation facilities within Chatham County are increasingly affected by the growth in Bryan, Effingham, Jasper, and Beaufort Counties. The opportunity to create a bi-state transportation planning agency has been in the forefront of transportation planning.

Facilities for solid waste disposal in Chatham County are currently adequate. Except for the City of Savannah's landfill, the future of solid waste is controlled by private interests whose responsibility is to the shareholders of their companies rather than to the residents of Chatham County. The opportunity to address long terms solutions to solid waste handling by an agency with a regional perspective whose primary responsibility is to Chatham County residents should be considered.

11.8 Assessment

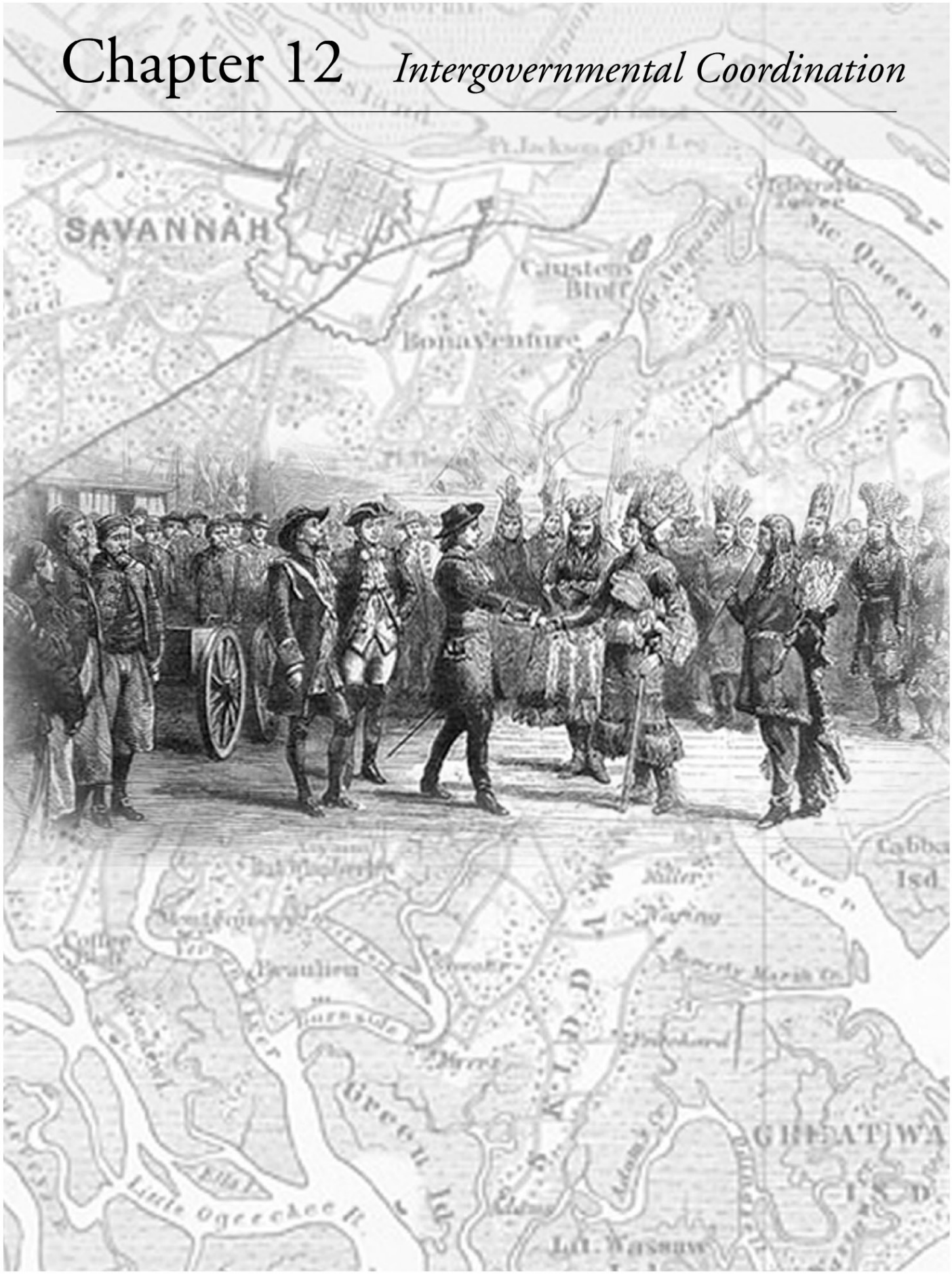
Recent growth in the coastal region has resulted in an increased awareness of the necessity for regional planning and cooperation. The recent merger of the Chatham County-City of Savannah police department; the Live Oak Library which includes facilities in Chatham, Effingham, and Liberty Counties; the work of the Chatham County Water Supply task force; discussions about the creation of a regional stormwater utility; and consideration of a bi-state transportation authority are evidence of the movement toward cooperation in addressing the opportunities afforded by growth.

11.9 Quality Growth Objectives

The Quality Growth Objective most pertinent to the community facilities and services provided in Chatham County is the objective for regional cooperation to preserve the regional identity of the Georgia Coast and South Carolina Low Country through planning for growth, maximizing employment opportunities, improving education, preserving open space, protecting the common heritage of the region, and minimizing the impact of transportation facilities on the environment.

Current programs to conserve groundwater, to reduce the impact of stormwater on the tidal marsh, to plan for additional solid waste capacity, and to provide efficient transportation systems with minimal impact on the environment support efficient growth and development patterns that will continue to enhance the life coastal residents.

Chapter 12 *Intergovernmental Coordination*



12.1 Introduction

The boundaries for use of community facilities and transportation corridors as well as the effects of land use often go beyond the legal boundaries of a county or municipal government. The purpose of this chapter is to inventory the existing intergovernmental coordination mechanisms and processes between the city of Savannah and unincorporated areas of Chatham County as well as between the city and other governmental entities and programs that have the potential of impacting the successful implementation of the Community Agenda.

A comprehensive review of the existing intergovernmental coordination facilities allows government entities the ability to identify opportunities and deficiencies in communication and cooperation, a process vital to ensuring quality planning on a regional and local level. This chapter will address the adequacy and suitability of existing coordination mechanisms to serve the current and future needs of Chatham County as well as the City of Savannah.

12.2 Regional and State Coordination

12.2.1 Coastal Georgia Regional Development Center

The Coastal Georgia RDC serves as the regional development center for the coastal area including Chatham County and the City of Savannah. The Coastal Georgia RDC serves 10 counties and 32 cities. The region encompasses the six coastal counties and four inland counties and has a total land area of over 5,110 square miles. In 2000 the population of the region was 562,207. Coastal Georgia is the second fastest growing region in the state.

The Coastal Georgia RDC is responsible for serving the public interest of the state by promoting and implementing the comprehensive planning process among its ten county region and with involvement in local and regional planning related to land use, transportation, recreation, historic preservation, natural resources, and solid waste. Chatham County and the City of Savannah are represented on the board of the Coastal Georgia RDC. The existing mechanisms of coordination between Chatham County, the City of Savannah, and the Coastal Georgia RDC are considered adequate and expected to remain constant through the planning period.

12.2.2 Georgia Department of Transportation

The Georgia Department of Transportation (GDOT) maintains and improves state and Federal highways in Chatham County and provides financial assistance for local road improvements. Chatham County and the City of Savannah coordinates closely with GDOT through the county's Metropolitan Planning Organization. This coordination is expected to continue throughout the planning period.

12.2.3 Georgia Department of Community Affairs

The Georgia Department of Community Affairs (DCA) has overall management responsibilities for the State's coordinated planning program and reviews plans for compliance with minimum planning standards. DCA provides a variety of technical assistance and grant funding opportunities to the county and city.

12.2.4 Georgia Department of Natural Resources

The Georgia Department of Natural Resources (DNR) is available to provide assistance and guidance to the county and city in a number of important areas including; water conservation, environmental protection, wildlife preservation, and historic preservation. It is the mission the Department of Natural Resources to sustain, enhance, protect and conserve Georgia's natural, historic and cultural resources for present and future generations, while recognizing the importance of promoting the development of commerce and industry that utilize sound environmental practices. The department has 9 divisions working to accomplish this mission: Environmental Protection Division, the Coastal Resources Division (CRD), the Georgia Greenspace Program, Historic Preservation Division, Parks Recreation and Historic Sites Division, Pollution Prevention Assistance Division, Wildlife Resources Division, Water Conservation Program and the Program Support Division.

The Environmental Protection Division (EPD) of the Georgia Department of Natural Resources is a state agency charged with protecting Georgia's air, land and water resources through the authority of state and federal environmental statutes. These laws regulate public and private facilities in the areas of air quality, water quality, hazardous waste, water supply, solid waste, surface mining, underground storage tanks, and others. EPD issues and enforces all state permits in these areas and has full delegation for federal environmental permits except Section 404 (wetland) permits.

The EPD protects and restores Georgia’s environment. We take the lead in ensuring clean air, water and land. With our partners, we pursue a sustainable environment that provides a foundation for a vibrant economy and healthy communities. The vision of the EPD is an environment that is healthy and sustainable. Natural resources are protected and managed to meet the needs of current and future generations.

The Coastal Resources Division has primary responsibility for managing Georgia's marshes, beaches, and marine fishery resources. Based in Brunswick, CRD administers permitting programs under the Coastal Marshlands Protection Act and Shore Protection Act; issues revocable licenses for use of state-owned water bottoms; monitors coastal water quality; and manages shellfish harvest areas. CRD conducts research; management and development activities associated with recreational and commercial fishery resources; represents Georgia on regional marine fishery boards and commissions; and builds boat ramps, artificial reefs, and fishing piers. CRD has primary responsibility for the Protection of Tidewater/Right of Passage Acts.

12.2.5 Georgia Ports Authority

Since 1945, Georgia's ports have served as magnets for international trade and investment, enriching the state's economy to benefit all Georgians. The Georgia Ports Authority is dedicated to providing customers with the most efficient, productive port facilities in the nation, and to creating jobs and business opportunities to benefit more than 8.6 million Georgians. The GPA is committed to maintaining its competitive edge through development of leading-edge technology, marketing and operations to move cargo faster. And, the

Authority is working hard to identify what must be done today to sustain growth, performance and security for tomorrow.

12.3 Local Governmental Coordination

A substantial portion of intergovernmental coordination is achieved through informal processes, such as the exchange of data between City and County government agencies. These informal processes are useful and effective, but formal mechanisms for intergovernmental coordination are also necessary to address some issues that cannot always be resolved through informal methods. The following sections will detail some of the many formal and informal coordination mechanisms that exist between Chatham County and local adjacent governments.

12.3.1 Local Governments in Chatham County

Chatham County is the most populous county in southeast Georgia and home to a diverse citizenry. Chatham County ranges from highly populated dense cities to sparsely populated rural areas. Located in southeast Georgia, Chatham County is bounded on the north by Effingham County, on the west by Bryan County, and on the east by Jasper County, S.C. Chatham County contains eight municipalities, including the historic city of Savannah. Chatham County's eight municipalities are Bloomingdale, Garden City, Pooler, Port Wentworth, Savannah, Thunderbolt, Tybee Island, and Vernonburg.

At the regional level, Chatham County lies at the heart of the 10-county regional planning area including Bryan, Bulloch, Camden, Effingham, Glynn, Liberty, Long, McIntosh, and Screven counties. As a member of the Coastal Georgia RDC, the regional planning and intergovernmental coordination agency, Chatham County participates in the collective process of planning for future of the Savannah metropolitan area. Chatham County's Board of Commissioner's chair and Mayors of one Chatham County municipalities serve on the Coastal Georgia RDC's Board.

12.3.2 Service Delivery Strategy

In 1997 the State passed the Service Delivery Strategy Act (HB489). This law mandates the cooperation of local governments with regard to service delivery issues. Each county was required to initiate development of a Service Delivery Strategy (SDS) between July 1, 1997 and January 1, 1998. Service Delivery Strategies must include an identification of services provided by various entities, assignment of responsibility for provision of services and the location of service areas, a description of funding sources, and an identification of contracts, ordinances, and other measures necessary to implement the SDS.

During the comprehensive planning process, the Board of Commissioner's chair met with representatives from each municipality to discuss Chatham County's Service Delivery Strategy (SDS).

The Service Delivery Strategy for Chatham County was adopted in March 1999. The City of Savannah is joining with Chatham County to revise and amend the county's Service Deliver Strategy by the fall of 2008. The provision of services in the city and county are

discussed in detail in the Community Facilities chapter. As the local governments meet to review and update the current Chatham County Service Delivery Strategy, each of the existing agreements listed here will be examined and evaluated.

- Utilities
- Public Safety
- Leisure Services
- Criminal Justice
- Health and Welfare
- Public Works
- Administration/Support
- Transportation
- Other Services

12.4 Other Local Authorities and Entities

12.4.1 Chatham County- Savannah Metropolitan Planning Commission

The Metropolitan Planning Commission is a joint planning agency for the City of Savannah and Chatham County. Each governmental body appoints seven members to the board. Two of these members are the City and County Managers. These fourteen members serve without pay and represent government, private enterprise, and citizens' interest groups. Commissioners are appointed for three year overlapping terms. MPC staff, headed by an Executive Director, research and evaluate issues and prepare information for the Board's consideration and action.

12.4.2 Savannah Economic Development Authority

The mission of the Savannah Economic Development Authority is to improve the standard of living for all persons living in Chatham County, Georgia by stimulating economic growth through the attraction of new investment, the creation of new jobs and the support of established businesses already in the area. An independently funded organization, SEDA can act in the best interests of both the client and the community without the hindrances often associated with publicly-funded operations.

12.4.3 Chatham Urban Transportation Study

As required by the Federal Department of Transportation, the local Metropolitan Planning Organization (MPO) was established by a Memorandum of Understanding (MOU) in 1963, and has grown and evolved to keep pace with federal transportation regulations. The MOU was subsequently updated in 1972 and 1996. Chatham Urban Transportation Study's first long range transportation plan was adopted in 1969, and has been maintained continuously through project amendments and periodic comprehensive updates. The CUTS is charged with reviewing all major traffic improvement plans for the Savannah Urbanized area. (See Chapter 10 —Transportation for more information regarding the MPO.)

12.4.4 Chatham County Emergency Management Agency

The Mission of the Chatham Emergency Management Agency is to protect lives and property from the threat of all types of major emergencies and disasters, both natural and manmade. This shall be accomplished by providing community-wide leadership, guidance, support and coordination in the areas of mitigation, preparedness, response and recovery.

12.4.5 Savannah-Hilton Head International Airport Authority

Savannah-Hilton Head International Airport is located in the Northeast corner of Chatham County. The presence of one of the region's busiest airports continues to have significant impact on the development and redevelopment potential of the county. Savannah / Hilton Head International Airport provides air service to Historic Savannah, Hilton Head Island and the Low Country, and the Golden Isles and Colonial Coast Region.

12.4.6 Chatham County Board of Education

The Board of Public Education, an elected body, is the policy-making branch of the school district's administration. The Board President is elected county-wide for a four year term. Eight board members, representing geographic districts coinciding with those of the Chatham County Commission, are also elected to four-year terms. The Board appoints the Superintendent of Schools, who is charged with implementing board policy and providing guiding stewardship for day-to-day administration of the school district.

The Board of Education oversees Savannah-Chatham County Public Schools, which serve the entire county and the municipalities. The school board through school system staff representation was involved in this comprehensive planning process and provided information regarding school capacity and facility conditions and anticipated needs (see Chapter 5 Community Facilities). During the comprehensive planning process it became evident that an increased level of coordination between the Board of Education and the County is needed specifically in the areas of new school locations, development of educational programs to respond to workforce needs, and joint use of facilities.

12.5 Private Entities

12.5.1 Savannah Area Chamber of Commerce

A non-profit membership organization, the Savannah Area Chamber of Commerce provides assistance to new businesses wishing to locate their establishments in the Savannah area. The agency's activities are focused in the areas of business recruitment and retention.

12.5.2 Savannah Electric

Savannah Electric is part of Southern Company, leaders in innovative energy technologies and one of the largest producers of electricity in the United States. Approximately 320,000 people in a five-county, 2,000 square-mile region receive electric service from Savannah Electric.

12.6 Assessment

An assessment process for intergovernmental coordination mechanisms in Chatham County was begun on November 9, 2005 when the MPC coordinated a workshop with county and municipal administrators. The following process was established at the meeting:

1) Agreement that we all parties stand to gain from a coordinated approach to planning as the County and all the municipalities face a 2008 deadline for comprehensive plan updates.
2) A commitment to meet regularly to discuss planning issues but specifically to begin no later the Fall of 2006 to identify intergovernmental coordination and service delivery strategies that require new approaches.
3) A schedule for reviewing the present Service Delivery Strategy (adopted by the County and all municipalities in 1999) to determine if all could agree to reaffirm that it stay in place until October, 2008 and to comprehensively update it as each municipality prepares to adopt its comprehensive plan.
4) A commitment to work together on the Community Facilities and Services and Intergovernmental Coordination components of each comprehensive plan.
5) Additionally, agreement on the desirability of a consolidated Future Land Use Map so that planners, investors, developers and others can see every possible development site in proper context, and so citizens will know that residential, commercial, industrial, and other development will be located to everyone's benefit.

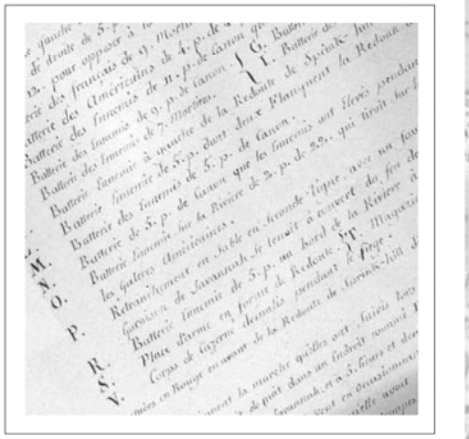
The process for achieving these points of agreement will cover a two year period from November, 2005 to December, 2007 with the goal of having draft documents prepared for review and adoption by all local governments by October, 2008, the deadline for adoption of all comprehensive plans in Chatham County. The coordination process is particularly important at this time since the nine local jurisdictions are likely to undertake their comprehensive plan updates (and therefore their Service Delivery Strategy review) at different times over the next 30 months. Some municipalities are also likely to adopt comprehensive plans in advance of the 2008 deadline in order to better address new growth challenges, particularly in the west Chatham County area.

12.7 Quality Growth Objectives

The Standards and Procedures for Local Comprehensive Planning require a review of Quality Community Objectives adopted by the Department of Community Affairs for consistent with local plans. The objective closely related to intergovernmental coordination is identified and discussed:

- *Regional Cooperation.* The policies and activities of the county and city are consistence with the intergovernmental coordination objective adopted by the Department of Community Affairs which states: regional cooperation should be encouraged in setting priorities, identifying shared needs, and finding collaborative solutions, particularly where it is critical to success of a venture, such as protection of shared natural resources.

Glossary



A

Accessory Dwelling Unit – A second residential living unit on the same lot as a primary residential unit; which may attached to the primary residential unit or in a separate structure.

Accessory Use – A use incidental to, and on the same lot as, a principal use, including storage facilities and similar supportive facilities.

Affordable Housing – Inexpensive dwellings affordable to those of modest income.

Alternative Mode – Any means of transportation other than private cars. Examples include walking, bicycling, and public transit.

Annual Average Daily Traffic (AADT) – an estimate of the total number of vehicles that travel on a particular road segment, in both directions, during a typical 24 hour day in a given year.

Aquifer – A water bearing stratum of permeable rock, sand, or gravel.

Assets – Individual, association and organizational skills, talents, gifts, resources and strengths that are shared with the community.

Asset Mapping – A process whereby a community's individual, association and organizational assets are identified and documented for community building uses. A visual map of resources is usually created from the identification process.

B

Back Barrier Island -- An island or tract of land, including marsh hammocks, that is located between the landward boundary of the barrier island complexes and the mainland.

Barrier Island Complex – A group of islands or tracts of land which border the ocean.

"Big Box" Retail – Large retail stores of over 35,000 square feet that draw customers from a large area and are typically surrounded by parking lots.

Brownfield – An abandoned, idled or under-used industrial or commercial site where expansion or redevelopment is complicated by real or perceived environmental contamination, such as groundwater or soil pollution.

Buffer or Buffer Strip -- Landscaped areas, fences, walls, berms, open spaces or any combination of these used to physically separate or screen one land use or piece of property from another. Buffers are commonly used to block noise or light.

Building Envelope -- The shape and dimensions (height, width, and depth) of a structure.

Built Environment -- The urban environment consisting of buildings, roads, fixtures, parks, and all other improvements that form the physical character of a city.

C

Capacity -- The potential for sharing assets, resources, gifts and talents. To reach capacity, people and organizations must be willing to share these assets for community building.

Capacity Building – The mobilization of individual and organizational assets from the community and combining those assets with others to achieve community building goals.

Chatham Area Transit Authority (CAT) -- Chatham County's public transit provider. CAT offers bus, ferry, and paratransit services.

Chatham County-Savannah Metropolitan Planning Commission (MPC) -- The joint planning agency for the City of Savannah and unincorporated Chatham County.

Chatham Urban Tranportation Study (CUTS) -- The designated Metropolitan Planning Organization (MPO) for the Savannah Urbanized Area and all of Chatham County. CUTS is responsible for local transportation planning and project selection.

Charrette -- An intensive design process in which all project stakeholders collaborate at the beginning of a project in order to develop a comprehensive plan or design.

Citizen Participation -- Allows decision-makers to obtain community input and contribution in the planning process. Conventional citizen participation has often been reactive, with an opportunity for public input only after the release of a draft community plan. An increasing number of urban planners and consultants are working to make citizen participation proactive, allowing citizens to provide input and guidance throughout the plan-making process. With proactive participation, citizens are vital contributors who define a community's development vision as well as identify implementation strategies. Among the numerous methods for citizen participation include public meetings and workshops; surveys and polls; focus groups; participation in online forums; interviewing; study circles; design charettes and visual preferences. (EPA)

Community Assessment -- All inclusive information gathering and sharing about the community: needs, resources, gaps, environment, economy, etc.

Community Building -- The process through which people and organizations from throughout the community come together to envision how their ideal community should look and begin to develop plans to mobilize all of the community's resources in order to achieve their visions.

Community Development -- Involves the ways, models and paths that communities, cities and services take to develop geographic communities or communities of interest physically, economically and socially.

Community Water System (CWS) -- Public water systems provide water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year. A public water system that supplies water to the same population year-round.

Comprehensive Plan -- The basic foundation for local planning. A document, or series of documents, it lays out a community's vision, long-term goals and objectives for guiding the future growth of the city. It describes where, how, and in some cases when development will occur, including land use changes and preparation of capital improvement programs. A comprehensive plan (also known as a master or general plan) helps cities reach goals such as the following: economic development (employment); efficient transportation; affordable and adequate housing; community and individual pride; and access to clean air, water and open space.

Congestion Management System (CMS) – A systematic way of monitoring, measuring and diagnosing the causes of congestion on a region's multi-modal transportation system.

Conservation Easement -- A voluntary restriction placed by a landowner on the use of his or her property. Used to protect resources such as historic structures, wildlife habitat, agricultural lands, natural areas, scenic views or open spaces. The landowner retains title to the property, and the easement is donated to a qualified conservation organization, such as a land trust, or a government agency.

Context Sensitive Design (CSD) -- A collaborative, interdisciplinary approach to the design of transportation corridors (highways in particular), in which stakeholders (from local officials and citizens to state interests) work together to balance objectives of mobility with those of safety, community aesthetics and environmental protection. It also emphasizes involving community stakeholders in the management and maintenance of transportation corridors. CSD shifts the emphasis from the street or the road and toward the way in which the street or road connects to the community, and makes the community a more economically stable, safe and productive. (Federal Highway Administration)

D

Demography -- The study of the size and composition of the human population.

Density -- The average number of families, persons or housing units per unit of land. Usually density is expressed "per acre". Gross density includes the area necessary for streets, schools and parks. Net density does not include land area for public facilities.

Diversity -- A balanced mix of people within a community with regard to income, race, ethnicity, age, and household characteristics.

E

Easement -- Access rights to a portion of a property for which the owner gives up his or her rights of development (such as a power line easement to a utility company).

Ecologically Sustainable Development (ESD) -- Involves using, conserving and enhancing a community's resources in order to maintain the ecological processes on which life depends while increasing the total quality of life, now and in the future.

Environmental Impact Assessment -- A detailed examination of the potential effects of proposed public works, used to inform government decision making.

Environmental Racism -- The placing of a disproportionate number of hazardous facilities in areas populated primarily by poor people and people of color.

Estuary -- A narrow, semi-enclosed coastal body of water which has a free connection with the open sea at least intermittently and within which the salinity of the water is measurably different from the salinity in the open ocean.

F

Façade -- The exterior walls of a building that can be seen by the public.

Facilitator -- A person or group who supports another person or group by assisting them in discovering, developing and realizing their own direction, goals and outcomes.

Functional Classification -- A transportation classification system that describes a road's role in the roadway system. The functional classification system in Georgia is based on population density (rural or urban) and describes roads as various types of arterials, collectors, and local streets.

G

GDOT – Georgia Department of Transportation

Gentrification -- The process whereby relatively affluent homebuyers, renters, and investors move into a neighborhood thus increasing property values, rents, or taxes resulting in an involuntary displacement of long-term residents and business owners, the loss of neighborhood diversity, or a change in the overall character of that neighborhood.

Geographic Information System (GIS) -- A computer mapping system that produces multiple "layers" (coverages) of graphic information about a community or region. For example, one layer might show the parcels, another layer might show areas zoned for commercial uses, another layer might show school sites, etc. It can be used for analysis and decision-making, and is composed of maps, databases and point information.

Grayfield -- A blighted area that is ready for redevelopment. The main difference between a grayfield and a brownfield is that a grayfield does not have substantial groundwater or soil pollution.

H

Hammock, or Marsh Hammock -- A small land mass or back barrier island/tract of land located between the landward boundary of the barrier island complexes and the mainland..

Historic District -- An area or group of areas designated by a local agency as having aesthetic, architectural, historical, cultural or archaeological significance that is worthy of protection and enhancement.

Household -- Either:
1. A group of two or more related or unrelated people who usually reside in the same dwelling, who regard themselves as a household, and who make common provision for food or other essentials for living or;
2. A person who makes provision for his/her own food and other essentials for living, without combining with any other person to form part of a multi-person household.

Household Size -- The number of persons per household in any given area.

Hydromorphic Functionality -- The action of being able to routinely develop a soil that tends to suppress aerobic factors (usually in the presence of excess water).

I

Inclusionary Zoning -- Inclusionary zoning requires that some portion of every new housing development beyond a given threshold size (e.g., 40 units) is offered at a price that will be affordable to low income residents. The specifics of inclusionary zoning programs differ across jurisdictions. Programs typically ask or require developers to contribute to a community's affordable housing stock in exchange for development rights or zoning variances. Some programs are mandatory, while others provide incentives. Some involve cash contributions to an affordable housing fund, while others involve the construction of affordable units within the development. Some waive regulatory requirements, such as parking space, or reimburse impact fees for developments.

Infill Development -- New residential development that occurs in established areas of the city or suburb, including vacant or underutilized lands. Infill can occur on long-time vacant lots or on pieces of land with dilapidated buildings, or can involve changing the land use of a property from a less to a more intensive one-from a parking lot to an office building. Among the variables in the definitions of infill development are whether the property must be surrounded by existing development or just within existing urban boundaries, whether infill projects must have a higher density than surrounding properties, and whether individual infill projects must be mixed use.

Infrastructure -- Describes public and quasi-public utilities and facilities such as roads, bridges, sewers and sewer plants, water lines, power lines, fire stations, etc. necessary to the functioning of an urban area.

Intermodal Transportation Systems – The mass transportation of freight or passengers, usually over long distances, and via more than one mode of transportation. The Port of Savannah, where freight is transferred between ships, trains and trucks, is an example of an intermodal transportation facility.

L

Landfill -- A disposal area where garbage is piled up and eventually covered with dirt and topsoil.

Land Use -- The manner in which land is used or occupied. See Volume I, Chapter 5 for definitions of land use categories.

Level of Service (LOS) -- An indicator of a transportation facility's overall operating efficiency. LOS categories range from A to F, with A representing free-flowing traffic conditions and F representing highly congested, stop-and-go traffic.

Low Impact Development (LID) -- Development with building and site designs that minimize environmental impacts through multiple, often natural systems rather than single, engineered systems. The term most often applied to stormwater management.

M

Marsh -- A tract of low-lying, soft, wet land commonly covered partially or wholly with water. It is usually found in a transition zone between land and water with grassy vegetation throughout.

Metropolitan Planning Commission (MPC) -- See "Chatham County-Savannah Metropolitan Planning Commission".

Metropolitan Planning Organization (MPO) -- A regional transportation planning agency charged by federal and state law to conduct comprehensive, coordinated, and continuous transportation planning. MPO's are required for all urbanized areas with populations exceeding 50,000.

Moratorium -- Legislative action that prevents a federal agency from taking a specific action or implementing a specific law.

Multi-Family -- A building that is designed to house more than one family. Examples include duplexes, condominiums and apartment buildings.

N

New Urbanism -- A set of site and building design principles that promote positive human interaction, create comfortable pedestrian and bicycle environments, and minimize land and resource consumption. (See www.cnu.org.)

Non-Community Water System – a non-community water system can fall into one of two categories. The first is a Non-Transient Non-Community Water System (NTNCWS): This is a public water system that regularly supplies water to at least 25 of the same people at least six months per year, but not year-round. Some examples are schools, factories, office buildings, and hospitals which have their own water systems.

The second category is a Transient Non-Community Water System (TNCWS): A public water system that provides water in a place such as a gas station or campground where people do not remain for long periods of time.

P

Public Realm -- Publicly owned or publicly accessible places, such as streetscapes, public parks, public facilities, and the pedestrian environment.

Public Transportation -- various forms of shared-ride services, including buses, vans, trolleys, and subways, which are intended for conveying the public.

Q

Quality of Life -- Those aspects of the economic, social and physical environment that make a community a desirable place in which to live or do business. Quality of life factors include those such as climate and natural features, access to schools, housing, employment opportunities, medical facilities, cultural and recreational amenities, and public services.

R

Redevelopment -- The conversion of a building or project from an old use to a new one.

Riparian Buffer -- Corridors of natural vegetation along rivers, streams, creeks, salt water marshes, lakes and ponds that cross a property boundary. Buffers are capable of protecting the adjacent waterways by providing a transition zone between upland development and adjoining surface waters that then offer a variety of environmental, aesthetic, and economic benefits.

Right-Of-Way -- The easement dedicated to a municipal use on either side of a publicly-owned street.

Risk Assessment -- Methods used to quantify risks to human health and the environment.

S

Setback -- Required by zoning, the minimum distance that must be maintained between two structures or between a structure and property lines.

Smart Growth -- A perspective, a method, and a goal for managing the growth of a community. It is a perspective that focuses on the long-term implications of growth and how it may affect the community, instead of viewing growth as an end in itself. The US Environmental Protection Agency (EPA) identifies the following 10 principles of smart growth:

1. Mix Land Uses
2. Take Advantage of Compact Building Design
3. Create a Range of Housing Opportunities and Choices
4. Create Walkable Neighborhoods
5. Foster Distinctive, Attractive Communities with a Strong Sense of Place
6. Preserve Open Space, Farmland, Natural Beauty, and Critical Environmental Areas
7. Strengthen and Direct Development Towards Existing Communities
8. Provide a Variety of Transportation Choices
9. Make Development Decisions Predictable, Fair, and Cost Effective
10. Encourage Community and Stakeholder Collaboration in Development Decisions

Sprawl -- The process in which the spread of development across the landscape far outpaces population growth. The landscape sprawl creates has four dimensions: a population that is widely dispersed in low-density development; rigidly separated homes, shops, and workplaces; a network of roads marked by huge blocks and poor access; and a lack of well-defined, thriving activity centers, such as downtowns and town centers. Most of the other features usually associated with sprawl -- the lack of transportation choices, relative uniformity of housing options or the difficulty of walking -- are a result of these conditions. (Smart Growth America)

State Transportation Improvement Plan (STIP) – A document maintained by GDOT that lists all programmed transportation improvements in the state that will utilize federal funds. The STIP is an agglomeration of the TIPs (Transportation Improvements Programs) that are produced locally by the state's various MPOs.

Stakeholders – People who are interested in, affected by or could possibly affect activities and outcomes related to a particular project.

Streetscape — The space between the buildings on either side of a street that defines its character. The elements of a streetscape include building frontage/facade; landscaping (trees, yards, bushes, plantings, etc.); ?sidewalks; street paving; street furniture (benches, kiosks, trash receptacles, fountains, etc); signs; awnings; street lighting.

Stormwater – Discharges generated by precipitation and runoff from land, pavements, building rooftops and other surfaces. Storm water runoff has the capabilities to accumulate pollutants such as oil and grease, chemicals, nutrients, metals, and bacteria as it travels across land.

Subdivision – The process whereby a parcel of land is divided into two or more parcels or alternatively multiple parcels are consolidate into one or more plans.

Sustainability – A concept and strategy by which communities seek economic development approaches that also benefit the local environment and quality of life. For a community to be truly sustainable, it must adopt a three-pronged approach that considers economic, environmental and cultural resources. Sustainable development provides a framework under which communities can use resources efficiently, create efficient infrastructures, protect and enhance the quality of life, and create new businesses to strengthen their economies. A sustainable community is achieved by a long-term and integrated approach to developing and achieving a healthy community by addressing economic, environmental, and social issues. Fostering a strong sense of community and building partnerships and consensus among key stakeholders are also important elements.

Sustainable Development – Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

T

TMDL – A calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources.

Toxic Waste – Garbage or waste that can injure, poison or harm living things, and is sometimes life-threatening.

Traffic Calming – Refers to the use of street design techniques (such as curb extensions, traffic circles and speed humps) for slowing and controlling the flow of automobile traffic.

Transit – See public transportation.

Transit Oriented Development (TOD) – A mixed-use community within walking distance of a transit stop that mixes residential, retail, office, open space and public uses in a way that makes it convenient to travel on foot or by public transportation instead of by car.

Transportation – Any means of conveying goods and people.

Transportation Planning – The system of improving the efficiency of the transportation network in order to enhance human access to goods and services.

U

Urban Areas – Generally characterized by moderate and higher density residential development (for example, 5 or more dwelling units per acre), commercial and industrial development.

Urban Growth Boundary – An Urban Growth Boundary (UGB) is a mapped line that separates land on which development will be concentrated from land on which development will be discouraged or prohibited. Facilities and services necessary for urban development

are typically located within the boundary, while service extensions outside the boundary are restricted.

Urban Planning – The system of managing and directing city growth.

Utilities – Companies (usually power distributors) permitted by a government agency to provide important public services (such as energy or water) to a region. As utilities are provided with a local monopoly, their prices are regulated by the permitting government agency.

W

Waste – Garbage, trash.

Water Quality – The level of purity of water; the safety or purity of drinking water.

Watershed – A region or area over which water flows into a particular lake, reservoir, stream, or river.

Wetland – Land where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface.

X

Xeriscape – A step-wise approach to water efficient landscaping that conserves water and protects the environment. The seven principles upon which Xeriscape landscaping is based are:
proper planning and design, soil analysis and improvement, appropriate plant selection, practical turf areas, efficient irrigation, use of mulches and appropriate maintenance.

Z

Zoning – Local codes regulating the use and development of property. The zoning ordinance divides the city or county into land use districts or "zones", represented on zoning maps, and specifies the allowable uses within each of those zones. It establishes development standards for each zone, such as minimum lot size, maximum height of structures, building setbacks, and yard size.