October 19, 2007

GEORGIA COASTAL COMPREHENSIVE PLAN

Assessment-Draft

Photos Courtesy of the Georgia Department of Economic Development

TABLE OF CONTENTS

Executive Summary 1
Potential Issues and Opportunities 4
Analysis of Regional Development Patterns 31
Consistency with Quality Community Objectives 42
Supporting Analysis of Data and Information 47
- Population 50
- Economic Development 54
- Housing 58
- Community Facilities and Services 60
- Transportation 62
- Natural Resources 64
- Historic Resources 69
- Land Use 70
- Intergovernmental Coordination 75

Appendix: Detailed Data and Information 78
Data 79
- Population 80
- Economic Development 82
- Housing 88
- Community Facilities and Services 91
- Natural Resources 92
- Historic Resources 106
- Land Use 113

Maps 118

EXECUTIVE SUMMARY

Executive Summary

Introduction

Georgia's coast is home to abundant natural resources, which attract visitors and new residents every day. These visitors and new residents fuel a strong economic engine. But, their continued interest in the coast threatens the very natural resources that attracted them here.

The population of the coastal region is projected to grow by close to 50% by 2030. Unless the residential, commercial and industrial development is guided by quality growth principles, we will lose our rural and maritime character to suburban-style sprawl, congested roads and fragmented greenspace. Fragile coastal resources can still be protected, if we plan for it now. Rapid population growth and residential development—and all the infrastructure and services they require—are proceeding without regard for the ability of local governments to provide those services. While no hurricanes have struck coastal Georgia in recent years, it is almost inevitable that we will be hit. Increasing residential development and decreasing forests and wetlands compromise our ability to withstand the effects of major storms, and exacerbate the effects of climate change and sea level rise.

The inevitable manmade storm can be managed through the identification of priorities, and empowerment of the implementation team. The Executive Order that initiated this process was the first step.

The Coastal Plan

The Governor ordered "that all state departments, agencies, boards, bureaus, commissions, authorities, councils and corporations that exercise programmatic or regulatory functions within the coastal region shall work together with the Department of Community Affairs in a spirit of mutual cooperation in the preparation and eventual implementation of this plan".

The plan shall:

- Build on the current Coastal Management Program, as well as relevant local and regional comprehensive plans.
- Develop an infrastructure review.
- Identify a course of action to resolve the competing interests of tourism and industrial development, housing and transportation, natural and cultural resources and land use.

Local comprehensive plans from the six coastal counties were used as reference material in the preparation of this Assessment. The Georgia Planning Act of 1989 requires that each local government must prepare, adopt and maintain a comprehensive plan that meets the Local Planning Requirements. The most current versions of the following local comprehensive plans were used in the preparation of the Georgia Coastal Comprehensive Plan: Bryan County; City of Pembroke; City of Richmond Hill; Camden County and Cities of Kingsland, St. Marys, and

Woodbine Joint Comprehensive Plan; Chatham County; City of Pooler; City of Port Wentworth; City of Thunderbolt; City of Tybee Island; City of City of Vernonburg; City of Garden City; Glynn County; City of Brunswick; Liberty County and Cities of Allenhurst, Flemington, Gum Branch, Hinesville, Midway, Riceboro and Walthourville Joint Comprehensive Plan; and, the McIntosh County and City of Darien Comprehensive Plan.

The Process

Regular meetings of the Coastal Comprehensive Plan Advisory Committee (CCPAC), stakeholders and the Technical Advisory Committees have yielded a wealth of information on issues and opportunities facing coastal community. Rising quickly to the surface were widespread concerns about the decline of indigenous industries (fishing), the effects of development near the marshes and in wetlands, public access to water resources, loss of cultural resources, under-prepared workforce—and the related problem of inadequate knowledge-based employment opportunities—affordable housing, lack of a regional transportation system, water—both quality and quantity—and the perception that competing, redundant efforts by local governments preclude a regional approach. Related to these issues are the opportunities that await us if we embrace quality growth, celebrate traditional industries, protect coastal and water resources for enjoyment by all, invest in education, welcome a variety of housing options, and demand cooperation and coordination among the many government agencies operating on the coast .

The Possibilities

Three development scenarios were presented to the CCPAC:

1. Current approach (regulations often amended by variances or not enforced adequately),
2. Current regulations with strict enforcement, and
3. Development according to quality growth principles.

A clear preference emerged for scenario three, as it showed that the projected population growth could be accommodated with a much reduced impact on open space, the transportation network and other infrastructure. This preference was underscored by the results of the Community Choices survey. Good design is important; development must look “right” and fit in.

Quality Growth Audit

Development regulations in all coastal jurisdictions were assessed for consistency with the Quality Community Objectives, to identify deficiencies as well as models. The audit will provide a roadmap for the implementation team as they seek to reward high performers and assist “needs help” governments. Technical assistance—coordinated among state agencies—will be the outcome of this endeavor.

Conclusion

The Assessment portion of the Coastal Plan provides a great deal of information. Without the concerted—and cooperative—efforts of local government officials, state agencies and non profit

organizations, this plan will fail to fulfill its promise. The Governor's directive to "work together… in a spirit of mutual cooperation in the preparation and eventual implementation of this plan" will not be easy. Organizational procedures will have to bend and change; additional financial resources will have to be found for infrastructure and service upgrades. Ultimately, coastal residents will be reminded that our coast is a public resource and that the privilege of living here comes with the responsibility to sustain the coastal system.

POTENTIAL ISSUES AND OPPORTUNITIES

Potential Issues and Opportunities

The identification of issues and opportunities is a required first step in preparing the Community Assessment. This exercise is intended to yield an all-inclusive list of issues and opportunities to be addressed in subsequent steps of the planning process. A comprehensive review of local and regional plans resulted in the list below. This list was further refined by the Coastal Comprehensive Plan Advisory Committee and through public involvement.

Issues	Opportunities
Economic Development	
Employment: • Too high proportion of low-paying jobs. • The community has seen a shift from higher paying manufacturing jobs to lower paying service jobs. • The region lacks sufficient jobs or economic opportunities for local residents. • The community does not have many jobs for skilled labor. • The community has few jobs for unskilled labor.	Employment: • Need to strengthen and enhance the local economic base. • Need to develop more high value, environmentally sound industry of all types. • Enhancement of the intensity of training and numbers of persons trained for high-skill levels of occupations would greatly strengthen the marketability of the community's labor force, especially for industries requiring large numbers of highly trained employees.
Education: • Lack of labor skills to support a diverse group of industries. • Perception of public school systems as underperforming can detract from economic development efforts. • The long history of low educational attainment for local residents in Coastal Georgia creates difficulties in raising expectations for local school systems.	Education: • Need to provide a quality education system – world class universities and training. • Healthcare – university research • Growth of population of engineering students at Georgia Tech. • Partner with local community colleges and technical colleges to provide satellite classes and courses for local citizens. • There is a good supply of professionals, technical information, and expertise available in the region.
Business: • Small and minority businesses are only a small portion of local economies. • Lack of communication between	Business: • Competitive tax and utility rates. • The regions high quality of life is a positive attraction to highest

Issues	Opportunities
Economic Development	
governments, authorities, businesses and citizens in planning and implementing economic development plans. • There has been a shift from locally owned retail stores to regional shopping centers, which has diminished the viability of many downtowns. • The region has a reputation among some developers as a tough place to do business. • The existing economic development program(s) do not have an entrepreneur support program. • Coastal Georgia faces competition from South Carolina and Florida to attract desired businesses.	concentrations of high income households in the region making it an ideal location for high-end retail. • Utilize the local chambers of commerce to promote the area's towns, counties, and local businesses. • Utilize airport, transit system, and other regional transportation initiatives to attract businesses to the area.
Fisheries Industry: • Declining coastal commercial fisheries industry: Jobs and livelihoods dependent upon the coastal fisheries industry are susceptible to a variety of factors from global economics to local droughts.	Fisheries Industry: • Seek state and local support for programs to maintain a viable coastal fisheries industry.
Silviculture Industry: • The traditional silviculture industry is threatened both from global economic factors to anti-forestry attitudes.	Silviculture Industry:
Manufacturing: • Decline of manufacturing industry: Many jobs have been lost due in part to competition with lower labor costs, lower taxes, and relaxed environmental regulations available in foreign countries or other states. This competition often translates to lower taxes and regulation important for local and regional quality of life.	Manufacturing: • Conversion of existing heavy industry; re-use and re-development of existing land uses. • Recruitment of growth industries that can use the skills of workers in declining industries: One possible opportunity to help stabilize the declining paper industry is the development of ethanol as an alternative fuel. • Job training: Provide support for programs that help build the skills of workers in declining industries to

Issues	Opportunities
Economic Development	
	transition to industries being recruited.
Tourism: • Lack of corridor management on I-95 and its interchange gateways: Neither state nor local governments have adequate resources to fund the landscaping or litter management programs necessary to maintain the scenic quality of corridors at levels that are maintained in Florida and parts of southern South Carolina. The difference in aesthetic character is becoming increasingly evident and threatens to place Georgia at a competitive disadvantage in its appeal to the subset of tourists for whom aesthetics and perceived quality of life are an important consideration in their decision-making about where to spend their time and money. • Lack of coordinated way-finding signage: Informational and directional signage along important corridor and gateway routes in the coastal region seems to lack the kind of deliberate visitor-friendly design that has been employed in neighboring Florida and Beaufort County, SC. Also, street signs, even at major intersections are small and difficult to read, especially at night. • Lack of funding to develop alternative scenic routes to I-95 for Florida-bound tourists: The East Coast Greenway and US 17 (Southern Passages: the Atlantic Heritage Coast) provide an opportunity to showcase the Georgia coast to the subset of tourists who have the time and money to spend in sightseeing. Yet state and local governments lack funding to pursue the development of these corridors and are falling behind neighboring Florida in the development of these attractions.	Tourism: • Tourist development can help tax collections and funding without new state and local tax increases. • Prioritize spending: Focus limited financial resources toward infrastructure improvements to sidewalks, lighting, and crosswalks along critical gateway intersections and corridors. • Partner with universities, DOT, or other entities to design a regional way-finding master plan. • Focus limited financial resources toward infrastructure improvements to sidewalks, lighting, and crosswalks along critical gateway intersections and corridors. • Promote the use and development of alternative routes through coordination of marketing for festivals and events related to the important natural, historic, and cultural resources of the coast. • Pursue funding support for implementation of the East Coast Greenway and Southern Passages development plans: The East Coast Greenway is a route that would have strong appeal to tourists who have leisure time and who are likely more able to spend time and money than the average tourist. A gateway to Georgia from Florida at St. Marys via passenger ferry service from Fernandina Beach would help form strong first and/or last impressions of Georgia that could translate to greater investment in Georgia. • Develop and adopt regulations that will create a level playing field for the development of all new billboards and

Issues	Opportunities
Economic Development	
• Outdoor Advertising: Billboards and signs provide an important service for tourists and residents. They also provide jobs within the outdoor advertising industry. Yet, a relative lack of billboard and signage regulation by local governments in Georgia compared to neighboring cities and counties in Florida and Beaufort County, SC again threatens to place Georgia at a competitive disadvantage in benefiting from spending and investment decisions of tourists and business and industry recruits for whom character and aesthetics of development are important.	signs that avoid placing the local governments and their businesses of coastal Georgia at a competitive disadvantage with those of neighboring states. • Seek methods to help the industry phase out non-conforming billboards, especially along critical corridors.
Miscellaneous: • Regional leadership: • Water consumption limits on industry, commercial, forestry, residential pose constraints for growth and development. • Similar limits on processing waste water can be a deterrent to economic growth and development. • "Me" people vs. "We" people: There is a general lack of community vision among local governments of the region and strategic plans for economic development that help guide growth in a manner that is mutually beneficial to all coastal Georgians. • Lack of access to undeveloped barrier islands constrains tourism potential.	Miscellaneous: • Regional Leadership: Support programs that encourage participation in existing regional leadership programs. • "We" people vs. "Me" people; "Big" Picture vs. "My" Picture: Develop effective public relations and public involvement to include all stakeholders in a way that promotes consensus building. • Marsh and barrier islands still preserved but enjoyed. • Barrier islands nationally recognized for pristine nature. • Access without automobiles to barrier islands. • Water taxis from St. Marys, Darien, etc. to barrier islands. • Creative and innovative access programs: Develop programs that facilitate a Cumberland Island type of access to other islands but limited to individuals who earn rights to such access via resource appreciation coursework available through curriculum offered in school, college,

Issues	Opportunities
Economic Development	
	and continuing education venues. Such unique approach to access to the protected barrier islands would foster a greater understanding and appreciation of the resource while providing a way for all people to enjoy the resource. • Develop or enhance collaboration between local economic development agencies and community based organizations. • Improve overall quality of life by preserving rural character, open space, developing greenways, and improving healthcare and education. • Downtown revitalization and infill. • Capture more of the retirement community. • Capitalize upon and enhance the natural environment.

Issues	Opportunities
Natural and Cultural Resources	
Marshlands: • Impacts from upland development: An increasing desire for unobstructed views of coastal marshlands and waterways is causing waterfront property owners to remove natural vegetation that buffers marshlands from the impacts of non-point source pollution from fertilizers, pesticides, oils and greases associated with upland development. • Impacts from erosion: Increased recreational boating activity threatens to damage or destroy marshland through wake-related wave erosion, particularly in the exposed marsh beds where marsh die-off was severe during the drought of 2004-05. • Impacts from dock construction: An increasing desire for private docks is causing damage from construction activity in the marsh, as well as subsequent impacts caused by shading of marsh grasses. The increased demand is also creating political pressure to relax protective regulatory measures established by the state's coastal marshlands protection legislation.	Marshlands: • Education about the value of marshlands for sustaining quality of life – including their role as nurseries for healthy sea life and the industries that depend on sea life; as well as their role in the production of oxygen. • Education about the economic value of buffers: It is possible to have both marsh views and buffers. In fact the market for buffered views may exceed that of un-buffered views, because a view of a buffered edge on the other side of the marsh can often be more valuable than a view of an un-buffered edge. • Local marsh edge buffer incentives: Create adequate incentives within the local development process for the preservation or creation of natural vegetated buffers along marsh edges. • Boater education. • Boating licenses. • Contractor Education.
Undeveloped Barrier Islands/Hammocks: • Impacts from unmanaged access: Recreational boaters are landing on the undeveloped islands and hammocks and creating unnecessary impacts that include leaving litter and debris that is both harmful to wildlife and inconsiderate of others who will follow. There are also reports of a growing practice of illegal harvesting of sea turtle eggs for black market trade. • Increasing pressure to relax regulation of development of hammocks: Market demand for coastal properties is raising	Undeveloped Barrier Islands/Hammocks: • Provide incentives for local governments to adopt regulations consistent with the recommendations of the Coastal Hammocks Advisory Committee. • Maintain natural state of undeveloped barrier islands and hammocks through conservation easements or acquisition.

Issues	Opportunities
Natural and Cultural Resources	
development pressures in coastal Georgia for any available properties on barrier islands and hammocks. • Impacts from invasive exotic plants and animals: Port-related activity worldwide poses a growing concern for the impacts from non-native plant and animal life into environments that provide no natural predators to manage the population of such species. A recent example in Georgia is the introduction via packing material at Port Wentworth of the Ambrosia Beetle from Asia, that has nearly extirpated Red Bay, arguably one of the region's most beautiful evergreen trees.	
Developed Barrier Islands/Hammocks: • Pressure to increase density and intensity of use: Increasing demand for coastal property is creating pressure to relax height and mass restrictions that help maintain the bucolic character of our developed barrier islands. Older smaller residences are being torn down for larger structures, often with multiple units. • Impacts to protective coastal dunes: Erosion in various places due to both natural and manmade causes threatens dunes from the ocean side of our protective dune systems at a time when property values are fostering development to encroach upon the dune systems from the other side. • Impacts of development on sea turtles: Lighting from development can disorient hatchling sea turtles and decrease their survival rates in the critical minutes between their hatching on the beach and reaching relative safety in the ocean. Also, sand materials used for beach re-nourishment that differ from original sand materials can impair sea turtle nesting.	Developed Barrier Islands/Hammocks: • Identify the types of existing units that merit protection for their consistency with the desired community character, and provide incentives that direct redevelopment activity to other properties. • Provide incentives for local governments to adopt night lighting ordinances that shine lights away from the beach, during sea turtle nesting season. • Provide incentives for the local governments involved in beach re-nourishment to require the use of beach materials that are similar to original beach materials. • Provide incentives for local governments to adopt regulations consistent with the recommendations of the Coastal Hammocks Advisory Committee.

Issues	Opportunities
Natural and Cultural Resources	
• Impacts from development of hammocks: Unregulated development of hammocks can impact numerous environmentally sensitive resources uniquely associated with coastal hammocks, including the adjacent protected marshlands.	
Estuarine/Tidal Rivers and Streams: • Impacts of pollution from septic tanks associated with residential development: Much of the growth in the coastal region is occurring along the borders of estuarine/tidal rivers and streams, away from cities and/or developments that provide public sewer systems. The proliferation of private septic tanks used to support this pattern of growth increases the risk of pollution and threatens the quality of water for swimming as well as for fishing and the entire commercial fisheries industry. • Impacts of pollution from recreational boating: Increased boating and marina activity on coastal tidal waters increases the amount of oils and greases, sewage, and litter that enters our estuarine waters, affecting the health of marine fisheries and other marine life important for regional and global quality of life. • Impacts to endangered species from boating activity: Increased port traffic, as well as increasing recreational boating activity is threatening the survival of endangered and beloved species such as the North Atlantic Right Whale and the West Indian Manatee. Meanwhile there is political resistance by many recreational boaters for boating regulation.	Estuarine/Tidal Rivers and Streams: • Develop incentives and disincentives to direct growth toward planned developments served by public water and sewer systems. • Clean marina program: Create incentives for all local governments adjacent to coastal waters to adopt standards consistent with the CRD's clean marina program [need to verify whose program that is]. • Education programs for school-age children and recreational boaters. • Incentives for speed limits on estuarine waters.
Freshwater Wetlands: • Development in Wetlands: The economics of development often value wetlands low enough to make them	Freshwater Wetlands:

Issues	Opportunities
Natural and Cultural Resources	
affordable for such land uses as auto and auto-related salvage yards, or other activities that can harm the environment and overall quality of life. Such activities are so prevalent that there is political resistance to regulate such activity, especially at the local level in the areas where this is a problem. Tires are a breeding ground for mosquitoes. • Local governments, where local land use decision-making authority resides, often leave wetland protection to state and federal governmental agencies. These agencies are not able to reject uses that are inherently harmful to wetlands, but that local governments do not prohibit in wetlands. [need a DNR expert's perspective here]	
Freshwater Rivers and Streams: • Water quality and quantity. • Impacts from inter-basin transfers: Population growth in the northern metro Atlanta region is creating demand for inter-basin transfers that can damage our environment and inhibit growth. • The economics of the timber industry is encouraging the harvesting of river bottom timber in a process that threatens to harm water quality and damage critical environmental resources on which many coastal ecosystems depend. • Impacts from exotic invasive species: Increased recreational boating activity increases the threat of the transport of harmful exotic plants and fishes (e.g., hydrilla, water hyacinth, and others identified at http://www.fws.gov/invasives/Index5A.html) into coastal waters.	Freshwater Rivers and Streams: • Educational programs for school age students and for recreational boaters.
Groundwater/Aquifer Resources: • Impacts from saltwater intrusion:	Groundwater/Aquifer Resources: • Revise comprehensive plans to reflect

Issues	Opportunities
Natural and Cultural Resources	
Increases in population and growth of water-consuming industries in the coastal region creates a political environment of competition and conflict among local governments, all of which works against the ability to coordinate the wise use of the region's groundwater resources for the benefit of all. • Impacts from point and non-point source pollution: There is a lack of capacity within many local governments of the region to regulate potentially harmful land use activities within the zones of influence of public groundwater wells. • Risks to private water wells: Local governments lack adequate capacity to regulate activities that can impact private wells, for which there a variety of contaminants that do not affect taste or odor. (e.g., Lead scavengers, etholene dibromide (EDB)). • Risk of contamination from aquifer injection: There is a market for a growing practice of injecting treated water into aquifers for storage for future withdrawal. This practice has been used in Florida and proposed in Georgia.	the policy recommendations of the Sound Science Initiative (http://ga2.er.usgs.gov/coastal/) and create incentives for compliance with the recommendations. • Wellhead Protection: Revise comprehensive plans to identify zones of influence to public wells and develop wellhead protection standards for the protection of all groundwater resources used for potable water. • Increase education available to about the information provided by such entities as the National Groundwater Trust (www.agwt.org/watertest.htm). • Require that such practice be done or not done consistent with the results of sound science analysis.
Clean Air: • Various industries within the coastal region emit each year into the atmosphere tons of chemical pollutants that can be dangerous to health of coastal residents, and that often detract from the bucolic characteristics that make the region attractive to quality growth and development. As pillars of many local economies, there is widespread political resistance to local and state regulation, or even to attempts at seeking win-win solutions that protect jobs and profits while	Clean Air : • Maintain and improve air quality. • No paper mill smells.

Issues	Opportunities
Natural and Cultural Resources	
mitigating the negative impacts.	
Historic Resources: • "Tear-down" and/or "extreme makeover" redevelopment in neighborhoods that potentially qualify for historic designation. • Impacts to scenic roadways from modern DOT standards: Canopied roads and landscaped memorial drives that define the character of many coastal communities are threatened by modern DOT design standards that preclude the ability to maintain the canopies and landscaping of these scenic drives.	Historic Resources: • Well-developed natural and historic resources. • Context Sensitive Design.
Cultural Resources: • Protection of culturally significant communities: Increasing value of coastal property is causing residents of communities such as Hog Hammock to divest their properties into the hands of people and developers who have little or no connection to the historic communities.	Cultural Resources: • Develop an Integrated Cultural Resources Management Plan (ICRMP). • Seek support for preservation through development of a coastal heritage museum.
Miscellaneous: • Protection of environmentally sensitive resources crucial to long term quality of life is inconsistent from one local government to another. • Competition among local governments for opportunities to grow their tax bases creates a natural disincentive for any one local government to adopt regulations that would drive developers to a neighboring jurisdiction.	Miscellaneous: • Develop a regional GIS/mapping system. • Educational improvements can lead to general improvements.

Issues	Opportunities
Housing	
Affordable Housing • Increasing land values in coastal counties are precluding the ability to develop affordable housing for low and moderate income workers. The costs, both in money and time, of transportation to inland areas where affordable workforce housing exists often offset or exceed the savings due to the lower costs of the inland area housing. • The proliferation of single use developments lacking the pedestrian friendly connections with existing adjacent development or opportunities for connections with future development increase the proportion of income that must be devoted to private transportation, especially in rural and suburban areas not served by public transportation. • The housing market is dominated by multi-family housing and high-end single family homes and land values are significantly higher than in surrounding areas, leaving few options for homebuyers. • The high cost of housing compared to surrounding jurisdictions has led to a shortage of homes for young professionals, middle-income families, and “empty-nesters”. • There is some community opposition to higher density and affordable housing. • There is a need for low to moderate income housing opportunities.	• Thriving older communities, live/work centers, technical centers within each community. • Modify the local planning and zoning regulatory framework of local governments within the region to foster the development of neo-traditional, mixed use developments that incorporate affordable workforce housing into the site plans via garden level or carriage house apartments, apartments above street-level retail and office etc., consistent with successful, traditional examples within the coastal Georgia region.
Financial Assistance • Lack of sufficient financial assistance programs to assist first time home buyers.	
Special needs • Escalating land values are precluding	

Issues	Opportunities
Housing	
the ability to develop housing for people with special needs. • Lack of special needs housing (elderly, handicapped, etc).	
Substandard Housing • Rehabilitation of properties is often hindered by heirs rights issue. • Lack of neighborhood design often creates subdivisions that do not have the qualities that foster re-investment throughout the housing life cycle. • Lack of adequate housing ordinances and regulations. • Poor maintenance of some housing in the downtown residential areas, especially among older renter-occupied units, as well as in some rural pockets. • Many community neighborhoods are in need of revitalization.	• Continue to utilize existing development regulations and procedures to implement safe, healthy and varied housing opportunities to the community.
Manufactured Housing • There are numerous areas containing abandoned or substandard manufactured housing units that create nuisances and safety hazards, and that, in turn discourage investment and reinvestment. • Manufactured housing is susceptible to damage and destruction from storm events that are common in the coastal Georgia region.	Manufactured Housing • Liberty County has developed a program that may serve as a model for the region.
Miscellaneous: • Many existing and new residential developments lack modern equivalents of the characteristics of neighborhood design and architectural style that have fostered reinvestment in neighborhoods and rehabilitation of housing units within many neighborhoods of the region that have the traditional versions of these characteristics.	Miscellaneous: • Partner with University System and private colleges and universities to develop standardized designs for residential development that is affordable across the spectrum of regional income levels and that consistent with and contains modern equivalents to traditional characteristics that have proven to foster reinvestment and appreciation

Issues	Opportunities
Housing	
• Gentrification: increasing property values in the region, and especially within older neighborhoods of the region's historic districts threatens to foster gentrification.	of long term value of housing. • Maintain economically and multi-culturally diverse neighborhoods. • Reduce costs of transportation for workforce demographic by requiring pedestrian connectivity of new development with adjacent existing or planned developments. • Provide incentives that help transform single use developments to mixed-use neighborhoods by locating small stores, such as local markets, within easy walking distance of residences. • Create rehabilitation programs, incentives programs for affordable infill housing, and readily available homebuyer education programs.

Issues	Opportunities
Transportation	
Highway • Lack of coordination of right-of-way acquisition. • Lack of coordination between land use and transportation: (see Land Use/Miscellaneous). • Impacts from capacity expansion: Increased development creates the need for capacity expansion, which often damages or destroys the character and quality of neighborhoods and historic streetscapes. (e.g., Tybee Road/Victory Drive, Frederica Road). • Hurricane evacuation: Growth creates a need for capacity expansion to accommodate hurricane evacuation, and these expansions often foster overdevelopment that absorbs the excess capacity and fuels a new round of capacity expansion. In addition, Florida evacuees often clog Georgia evacuation routes and prevent safe evacuation of Georgians. • Lack of adequate planning for parking: Historic districts developed before the automobile have too few parking spaces, while suburban malls often have too many parking spaces on too much asphalt. • Unattractive corridors: (see Economic Development/ Tourism).	Highway • Develop transportation concurrency management programs to manage potential impacts. • Improve east-west transportation routes • Parking garages: Replace surface lots with garages in downtowns and at regional activity centers. • Corridor Management: (see Economic Development/Tourism).
Rail • Non-signaled rail crossings: The number of accidents at such intersections is increasing. There are many substandard crossings in the coastal region. Local governments lack resources to provide adequate signalization. • Passenger service is limited and threatened by federal budget cuts that reduce quality of service and further	Rail

Issues	Opportunities
Transportation	
discourage the development of rail capacity for the region. Because freight transportation is more lucrative than passenger service, railroads are disinclined to accommodate the schedules of passenger trains.	
Rivers/Sea • Impacts of port development on natural resources: The economics of shipping is creating larger and larger ships, which in turn increases pressure on ports to accommodate the larger ships, often to the detriment of the local environment. In Georgia, the deepening of shipping channels poses threats to many sensitive resources important to coastal Georgia's quality of life. • Impacts of port development on highway infrastructure. • Lack of adequate cruise ship terminal(s): The cruise ship industry offers the potential for economic growth in tourism, as well as some potential negative impacts.	Rivers/Sea • Bulk freight to Andrews Island leaving downtown Brunswick full of mixed use development • Ports expansions including military port at Kings Bay – all with good ratings
Miscellaneous: • Lack of a regional transportation system. • Lack of adequate mass transit.	Miscellaneous: • Improve east-west corridors. • System of ferries from Jacksonville to Charleston to attract tourism. • Centers of density, nodes of development, public transportation options to include trams. • Interstates continue to be important. • Mass transit is here! • Monorail along I-95 corridor. • Transportation corridors are different – not like today. • Opportunities to address gridlock due to growth.

Issues	Opportunities
Facilities and Services	
Potable Water • Development outside the service boundary of public or private water systems requires a lower density than what is optimal for minimizing the costs of providing and maintaining public service to these areas at build out.	
Sewerage • Development outside the service boundary of public sewer systems or private package treatment plants requires a lower density than what is optimal for minimizing the ultimate costs of providing and maintaining public service to these areas at a future date.	Sewerage • Regional water/sewer authorities can reduce the cost to local governments to create and support their own, smaller systems.
Parks • Development often excludes adequate provision for parks and open space. • Escalating land values make open space less affordable for developers.	
Schools • Coordination of school facilities is not a part of the state's comprehensive planning program. • Lack of coordination between local governments and school boards: Decision-making about sites for new schools is often kept secret, even from local governments that are expected to provide services to the facilities. The price of land often causes school boards to locate new schools away from the population centers where children are located.	

Issues	Opportunities
Facilities and Services	
Miscellaneous: • Funding of infrastructure: Local governments lack the ability to pay for the infrastructure needed to accommodate current growth patterns.	Miscellaneous: • Defray the costs of service provision and maintenance through the adoption of impact fees, tap-on fees, etc. • Concurrency management: Consider adoption of local programs to require that water and sewer facilities necessary to maintain adopted levels of service be available at the time of the impacts of development.

Issues	Opportunities
Land Use	
Agriculture/Silviculture: • Timberland conversion: A downturn in the economics of the paper industry is causing much timberland to be divested, often in parcels of less than 100 acres that are developed in single use developments that have little or no connectivity or planned continuity with adjacent land uses. Resulting development patterns often fail to provide adequate consideration and planning for the cumulative impacts of development at ultimate build-out with regard especially to the protection of environmental resources and optimal use of community infrastructure. • Contemporary timber harvesting equipment and land clearing practices often damage or destroy the pastoral and natural characteristics of the land that attract visitors and prospective residents to coastal Georgia. Much of the native vegetation that enhances the aesthetic appeal of and forms much of the basis of the attraction for the region's most valuable real estate is being extirpated by such harvesting and land clearing activities. • Contemporary timber harvesting practices often lead to the clearing of wetland areas that provide important habitat for endangered species of plants and animals, as well as other species that provide biological and ecological diversity critical to the region's quality of life.	Agriculture/Silviculture: • Recruit country's best developers • Learning from best practices from national and international developers • Foster win-win partnerships between owners of large tract timber holdings and development companies that follow state-of-the-art quality growth principles in the development of large tracts. Examine and improve upon the examples of the Chattahoochee Hill Country villages in southwestern Fulton County and St. Joe Communities in the Florida panhandle. • Identify critical corridors important to both quality growth and environmental sustainability and provide increased incentives for land owners and developers in these areas to use the above-referenced Silviculture BMPs. • Modify Silviculture BMPs and provide regional incentives to plan for future development and conservation of the appropriate areas of each timber tract.

Issues	Opportunities
Land Use	
Residential Development: • Long term fiscal sustainability: Tax revenues generated by all but the highest price levels of residential development often fail to cover the costs that local governments must bear to provide the range of services required to support such development. • Quality/Character of development: Much of our new residential development is based on designs that come from catalogs that often do not relate well to or complement the traditional or historic styles of architecture along the coast. Also, much of the built environment has been shaped or formed by contractors who have little formal education or training in land development BMPs. • Site Planning: The economics of the development process often discourage or preclude preservation or conservation of on-site features of natural and environmental or historical and cultural resources. • Modern construction equipment used for residential development often damages or destroys the pastoral and natural characteristics of the land that attract visitors and prospective residents to coastal Georgia. Much of the native vegetation that enhances the aesthetic appeal of and forms much of the basis of the attraction for the region's most valuable real estate is being extirpated by the development of residential subdivisions, often replacing native vegetation with non-native species that do not relate well or complement the traditional coastal landscape.	Residential Development: • Analyze for the coastal region the current and projected levels of density for each price range of housing required to reduce the per unit costs of infrastructure and services to levels that will optimize the long term fiscal health of communities. • Encourage local governments to adopt policies that foster such densities for each price range of residential development. • Also encourage the adoption of policies that foster site designs and architectural style for each type of density for new developments that will encourage long-term reinvestment and rehabilitation of the residential properties. Look to the successful examples of reinvestment and rehabilitation associated with the densities of development and community site design of various historic districts in the coastal region from St. Augustine to Charleston. • Foster mixed use development. • Ambiance of mainland and inland counties blends with coastal flavor: clean, green space, well-planned, streetscapes. • Old European style development on Sea Island – attractive designs. • Increase education opportunities for members of the development community to learn about land development BMPs and provide incentives for the use of such BMPs • Modify the development process within as many local governments in the region as possible to create the opportunity for local TDR and PDR programs. Partner with existing local and regional industrial development authorities to create mixed-use parks

Issues	Opportunities
Land Use	
	that would be the receiving areas of transferred development rights. • Provide sufficient tax or regulatory incentives for the development community to consider conservation easements a viable option. • Encourage local governments to adopt land development regulations for Low Impact Development. • Encourage local adoption of tree regulations applicable to residential and commercial development requiring protection of native vegetation or replacement of mature specimens with approved native species or species that promote the traditional coastal landscape.
Commercial and Office Development: • Auto-dependent development patterns: The conventional development process that began after WWII and continues in many areas of the region today fosters the separation of land uses and does not accommodate nor plan for future accommodation of pedestrian or automobile connectivity with adjacent land uses. • Redevelopment of aging urban areas. • Urban Sprawl: Many corridors have developed into strips or ribbons of commercial sprawl with characteristic impacts related to traffic congestion, pedestrian safety, urban blight, etc. • Anywhere USA: The proliferation of corporate franchise and big box development, pre-fabricated metal buildings, auto sales lots, and outdoor billboard advertising has diminished the unique characteristics that distinguish the coastal Georgia region from anywhere else.	Commercial and Office Development: • Develop state incentives to encourage local adoption of land use policies and regulation of site plan design that foster pedestrian and auto connectivity. Rural areas without zoning may look to DCA's Model Code. • New re-development of existing areas can enhance older communities and preserve currently undeveloped land. • Corridor rejuvenation: Develop strategies for corridor rehabilitation to include grayfield redevelopment tools with maximum setback regulations for new development, guidelines for architectural style consistent with traditional coastal character, rear-lot or shared parking facilities, etc. [Exhibit] • Design Guidelines: Partner with public and private colleges and universities or other entities to create coastal-specific architectural design guidelines and/or blueprint catalogs for various types of commercial uses typically found along any commercial corridor. Encourage local governments to adopt

Issues	Opportunities
Land Use	
	the guidelines for high profile corridors.
Industrial Development: • Impacts on water and sewer infrastructure: Many communities in the region lack the capacity to analyze the fiscal impacts that prospective industries will have on infrastructure capacity that may ultimately costs taxpayers more than they receive in tax revenues and payroll benefits. This may be especially problematic for local governments in the highly competitive race to attract the jobs and tax revenues associated with industrial growth. • Impacts on environmental resources: Many communities in the region lack the capacity to analyze the impacts of industry on environmental resources and long term costs that taxpayers must pay for cleanup and restoration. Local governments often fail to consider in their decision-making process the potential threat of contamination from accidents related to flooding and storm surge. • Impacts on transportation infrastructure: The trucking activity associated with industrial uses, but particularly port-related development is generating congestion and other along coastal Georgia highways, at highway interchanges, as well as within neighborhoods and communities throughout our coastal region. • Impacts to coastal character and scenic vistas: Industrial activity can detract from or conflicts with the scenic character that is the engine for tourism and quality growth in the region stretching from Charleston to St. Augustine. One example is the developing liquefied natural gas storage complex on Elba Island and its impacts on scenic views from US 80. Other	Industrial Development: • Location criteria: Include steps in the land use decision-making process to consider potential impacts to coastal environment and quality of life when identifying future areas where industrial activity can be accommodated. Provide adequate incentives to draw industry to these preferred sites, and disincentives for location outside these areas. • Buffers regulations/incentives for industrial development

Issues	Opportunities
Land Use	
examples are the paper mills visible from I-95 both at Brunswick and at Riceboro. • Brownfield Redevelopment: Costs of environmental cleanup are a deterrent to re-investment. Smaller local governments lack the expertise to negotiate redevelopment plans to the best advantage of the community.	
Recreation: • Increasing costs of land for recreation: The escalating cost of land in the coastal region inhibits local government investment in recreation facilities and related services.	Recreation: • Levels of service: Consider creating regional levels of service for recreation that local governments can adopt and require as part of the development approval process. • Impact fees: Consider impact fees as a mechanism for the provision of adequate recreation facilities and services. • Concurrency management: Consider adoption of local programs to require that recreation facilities necessary to maintain adopted levels of service be available at the time of the impacts of development.
Conservation and Open Space: • Planning for Conservation and Open Space: The escalating cost of land creates a strong disincentive for the conservation of land. • Local governments lack the expertise to negotiate with developers for lands that can be devoted to conservation and opens space.	Conservation and Open Space: • Develop capacity to identify land to preserve. • Develop programs to advocate for well-planned green space infrastructure. • Direct more of the projected growth to PUDs, where conservation and open space can be incorporated into planning requirements. • Develop programs to encourage local government use of such tools as conservation easements and land banks for conservation and open space.

Issues	Opportunities
Land Use	
Miscellaneous: • Reactive vs. Proactive • Accelerated Growth can bring issues such as changes in traditional uses (forestry, agriculture, hunting). • Competition for development perceived to be necessary for building tax base inhibits local governments from adopting ordinances that are more stringent than neighboring local governments. • The intangible value of environmentally sensitive areas is not a factor in the development process. • The development process contains insufficient incentives to foster development that is consistent with local government comprehensive plans, the implementation of which often raises concerns about takings and private property rights. • Most local governments lack adequate planning and zoning expertise to manage the negative impacts of growth. • Alteration of Natural Hydrology: Development projects in the coastal region often include the construction of canals and ditches that alter the natural hydrology needed for biological and ecological diversity. Such practices are intended to alleviate the potential for flooding over the developed areas of the properties, but they in fact do not alleviate the potential for flooding but reduce the duration of the period of flooding. • Land use policies that foster rural and urban sprawl [see Transportation also]: Individuals and developers often seek and local governments permit the subdivision of property adjacent to rural state- or county-maintained roads and highways. State law, in turn, allows (or prohibits the denial of) access for each	Miscellaneous: • Proactive vs. Reactive • Accelerated growth has potential to bring benefits. • Seek region-wide support for regulations that protect all local governments experiencing similar levels of growth and similar types of impacts. • Develop programs that analyze the value of resources typically overlooked in the development decision-making process and establish mechanisms to factor costs associated with the impacts to these resources into the development process. • Develop effective public relations and public involvement that includes all stakeholders at appropriate stages of the decision-making process. • Consider development of programs that analyze the savings to taxpayers that can be realized by developing the community in a manner consistent with the comprehensive plan. Create incentives that pass these savings to developers based on the degree to which their developments are consistent with the comprehensive plan. • Projected growth rates translate into predictable numbers of housing units and square footage of commercial and office space that could be directed into planned developments that optimize both fiscal sustainability of local governments and developer profits. • Tighten the coordination between the review processes for 404 wetland permitting and local land use decision-making processes. Establish a Model Code ordinance that local governments can use. Create incentives for local adoption of such

Issues	Opportunities
Land Use	
lot along such roadway. This practice encourages residential development along rural two-lane roadways and highways that – at the time of initial development – function much like collector streets of a neighborhood or town, but that eventually transform with growth of the community into major arterials. This transformation creates stresses and pressures on the residential properties to convert to commercial or office uses for which they were not designed, often resulting in the inefficient, inappropriate development pattern known as ribbon commercial sprawl.	ordinances. • Create incentives for TDRs and PDRs that allow development to be directed to areas away from wetlands. Also create incentives for development to be directed to large tract PUDs where wetlands can be included in conservation areas of the development. • Encourage local governments to prohibit or provide disincentives for the subdivision of properties adjacent to rural roads and highways, and instead require or provide incentives for such subdivisions of property to be accomplished through a Planned Unit Development process. • Create good balance between second-home owners and full-time residents. • Region-wide Live Oak preservation ordinance.

Issues	Opportunities
Intergovernmental Coordination	
• Home rule: Despite all its benefits, home rule can create a competitive disadvantage for local governments that do not spend the extra money to plan for and/or regulate the impacts of development. • Different levels of current planning, regulation and resources. • Cities and counties often conflict over annexation issues due to revenue distribution and service delivery issues. • Land use issues among local governments with different or conflicting development regulations (or limited regulations) undermine the ability for all governments to effectively regulate development patterns. • The perceived idea that design or environmental regulations will drive away new development has limited the political will for such regulation. • As communities grow they may expand beyond their jurisdictional boundaries. The limited incentive for intergovernmental cooperation hinders development and can force disjointed land use patterns. • Limited incentives for cooperation reduce the effectiveness of multi-jurisdictional cooperation in order to conserve important historic, cultural and natural resources and remain fair to local landowners. • Competition among local governments for limited state and federal grant monies often fosters a competitive nature rather than cooperative. • Intergovernmental disputes over Service Delivery issues have created an atmosphere of conflict in some coastal communities.	• Cooperation between municipalities can provide the basis for reducing public costs (and taxes), sharing revenues, protecting environmentally sensitive areas, managing economic opportunities, maintaining local control of growth and development. • Intergovernmental agreements on issues of greenspace and open space can enhance nature-based tourism efforts around the region. • A unified corridor management plan along I-95 can provide opportunities for local governments to influence the coastal look of this important transportation route. • Multi-jurisdictional involvement is already underway for the Highway 17 corridor (Southern Passages) and can serve as a model for other asset-based cooperation. • The East Coast Greenway plan offers opportunities for intergovernmental cooperation in providing for recreational opportunities along the entire Georgia Coast. • The Coastal GA RDC provides regular opportunities for local elected officials to meet and consider regional approaches. Several existing standing committees (historic preservation, environmental protection, tourism development) provide vehicles for expanded cooperation across the region.

ANALYSIS OF

REGIONAL DEVELOPMENT PATTERNS

Analysis of Regional Development Patterns

In order to more fully understand the implications of coastal growth, three future development scenarios were created for the six-county area included in the Coastal Comprehensive Plan area. These development scenarios were used to inform the decision-making process and to more fully understand the implications of growth on land consumption, resource and fiscal impacts, and quality of life. The three scenarios included:

Scenario 1: Projection of existing trends to illustrate what the region would look like if the existing development patterns continue as they are today

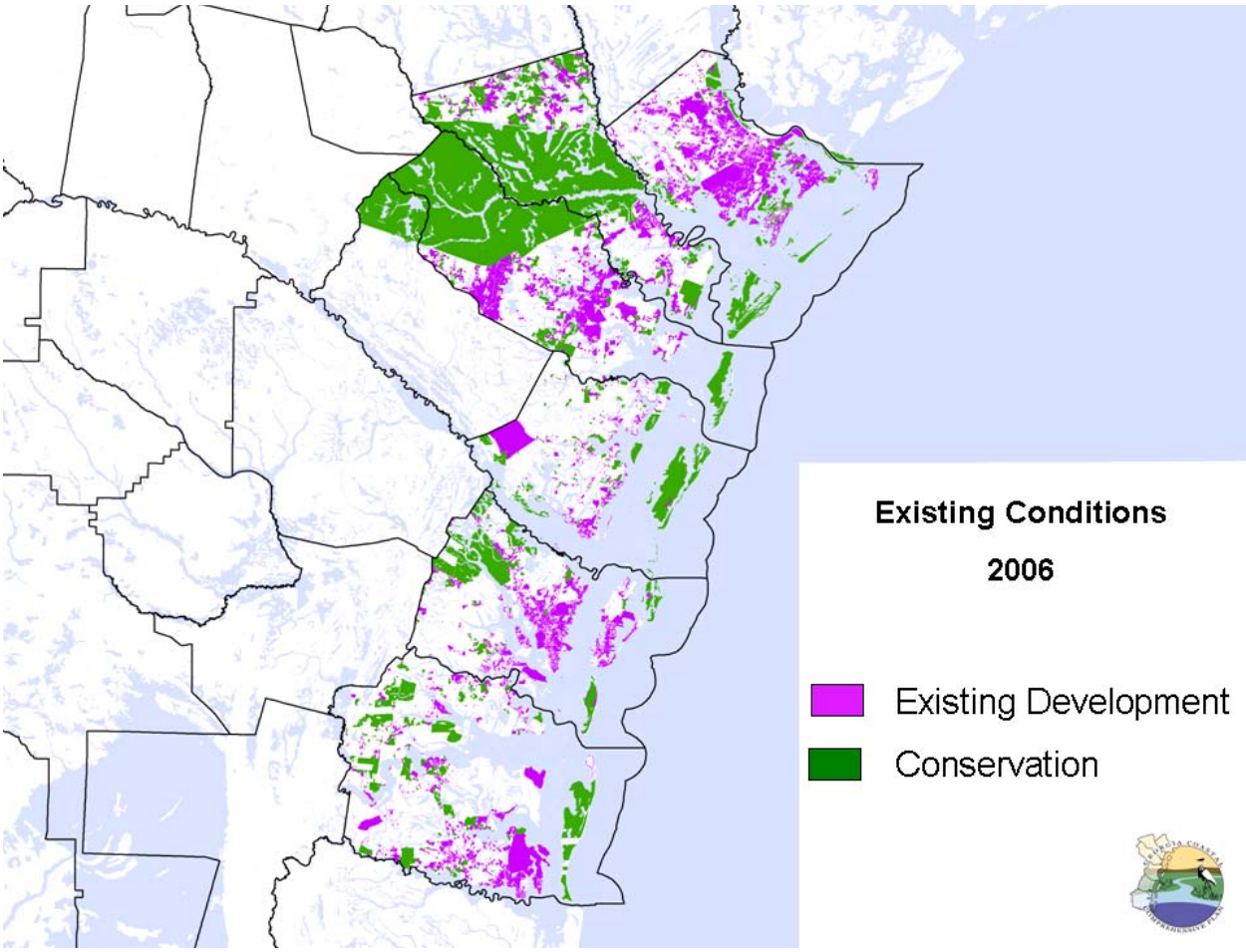
Scenario 2: Projection of growth based on the existing local regulations and ordinances to illustrate what the region would look like if the existing development patterns were constrained by the local ordinances and there were no variances

Scenario 3: Projection based on quality growth principles to illustrate what the region would look like if development patterns were based on the principles of quality growth. These principles included the clustering of development in nodes, particularly around existing communities, development occurring with existing infrastructure, buffer areas around sensitive environmental features, and a focus on increased densities and infill development.

These development scenarios were developed on both a regional (macro) scale for the six-county region as well as on a local (micro) scale to convey the various approaches of the scenarios. The regional scenarios were developed utilizing the methodology described below. Then, micro-scale scenarios were developed in order to identify the infrastructure needed for each scenario, cost estimates, and identification of impacts. Data generated from the analysis of the micro-scale scenarios was then extrapolated out to the regional scale to more fully understand implications for the region.

Regional Development Scenarios – Methodology

The following steps describe the methodology used for the development of the future scenarios, which were developed using a combination of Geographic Information Systems and visual surveys using aerial photography. The base map illustrating existing conditions is shown below.



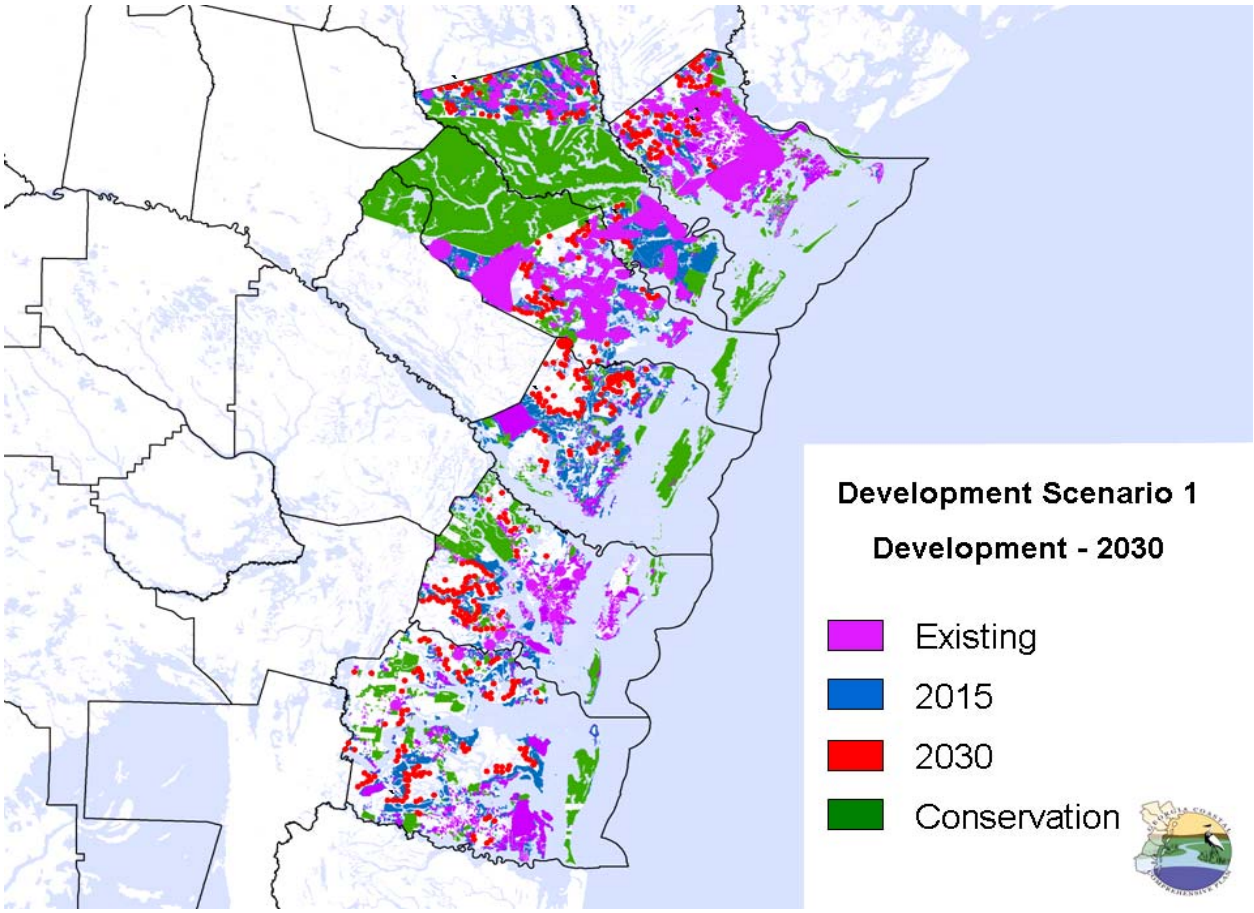
The existing population was identified to determine the existing densities within the region. The projected population growth for each county was identified. These population projections were collected from the population forecasts completed by Georgia Tech. The same population projections for each county, and therefore also the region as a whole, were used for all three scenarios.

Scenario 1

The first step in the development of the Scenario 1 was the identification of the developable land. Conservation areas, military installations, and the marsh areas were excluded from the developable land, although parcels adjacent to water bodies that were not identified wetlands were included as developable. This data was collected from existing land use information. In addition, approved DRIs were also included in the analysis.

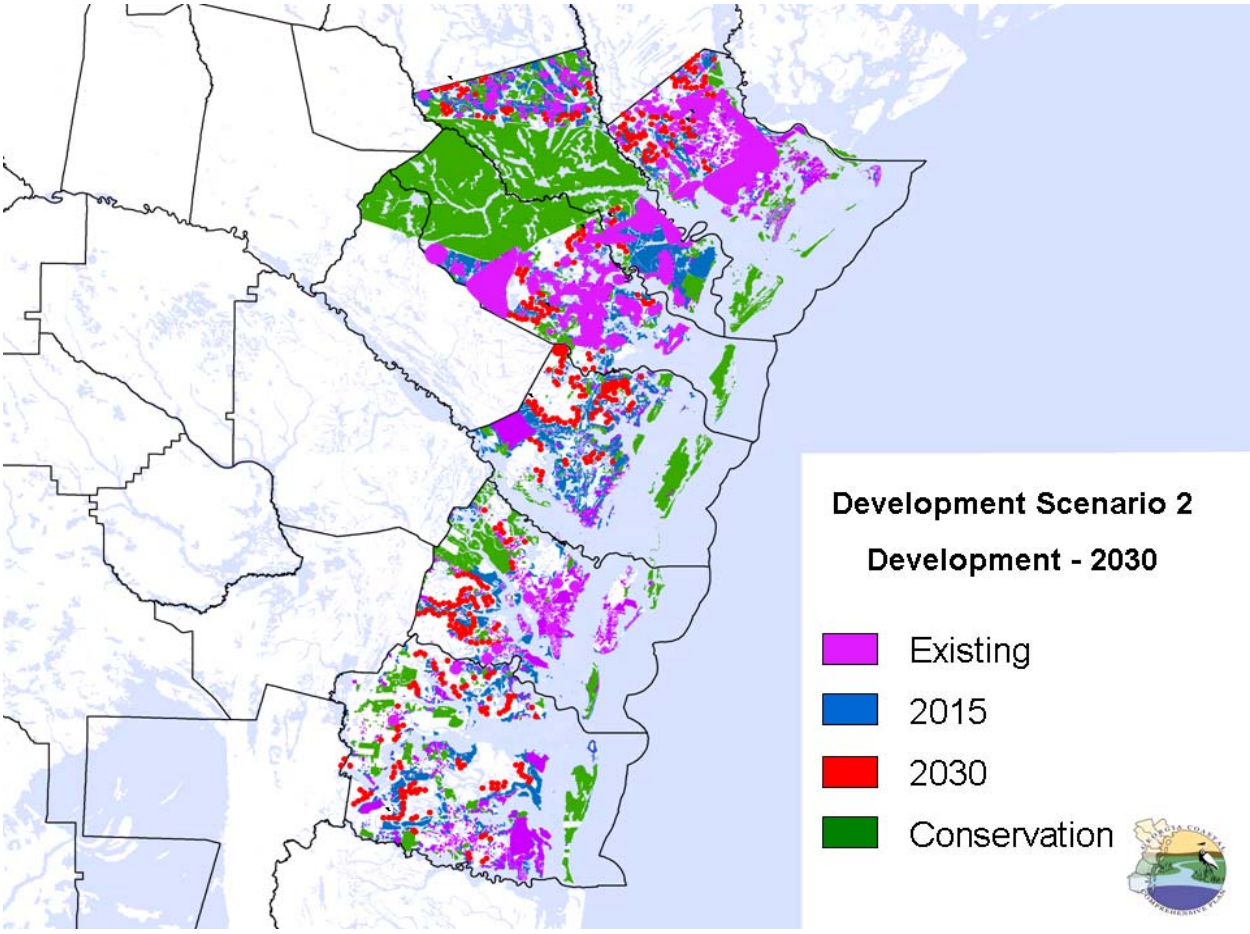
In this scenario, the existing densities were held into the future and matched with the population forecasts. This analysis determined if all of the developable land in the area was consumed. A hierarchy of developable land was identified as to which area would develop first, based on existing trends. The hierarchy included:

1) DRIs
2) Existing large parcels (ex. timber company holdings)
3) Land in proximity to water
4) Land in proximity to existing development
5) Land in proximity to existing infrastructure



Scenario 2

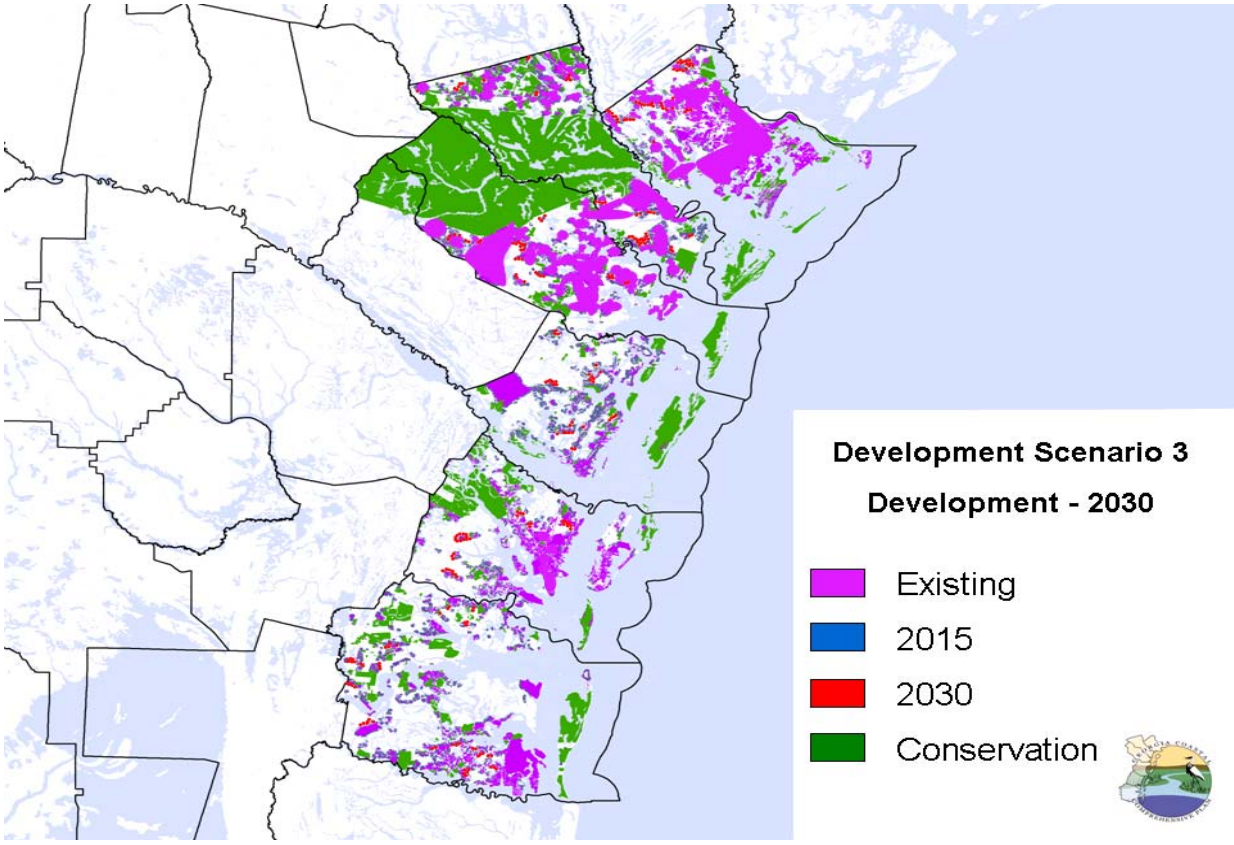
Scenario 2 used the same base information as Scenario 1, as well as the same hierarchy of developable land. The local regulations and ordinances were reviewed and any required buffers, density requirements, or other regulatory constraint was applied to the developable land. The population projections were again applied to the developable land along with the regulatory constraints. The results of this scenario did not differ significantly from the results of Scenario 1.



Scenario 3

As with the other two scenarios, the third alternative used the developable land and the population projections. However, in this scenario, quality growth principles were applied as the constraint. Critical environmental areas and resources were identified and buffered from development. Areas with existing infrastructure and those areas that already had development activities, such as crossroads communities were identified. Densities were allowed to increase within the growth centers and decreased outside of those areas. The hierarchy of developable land in this scenario included:

1) DRIs
2) Land in proximity to existing development
3) Land in proximity to existing infrastructure



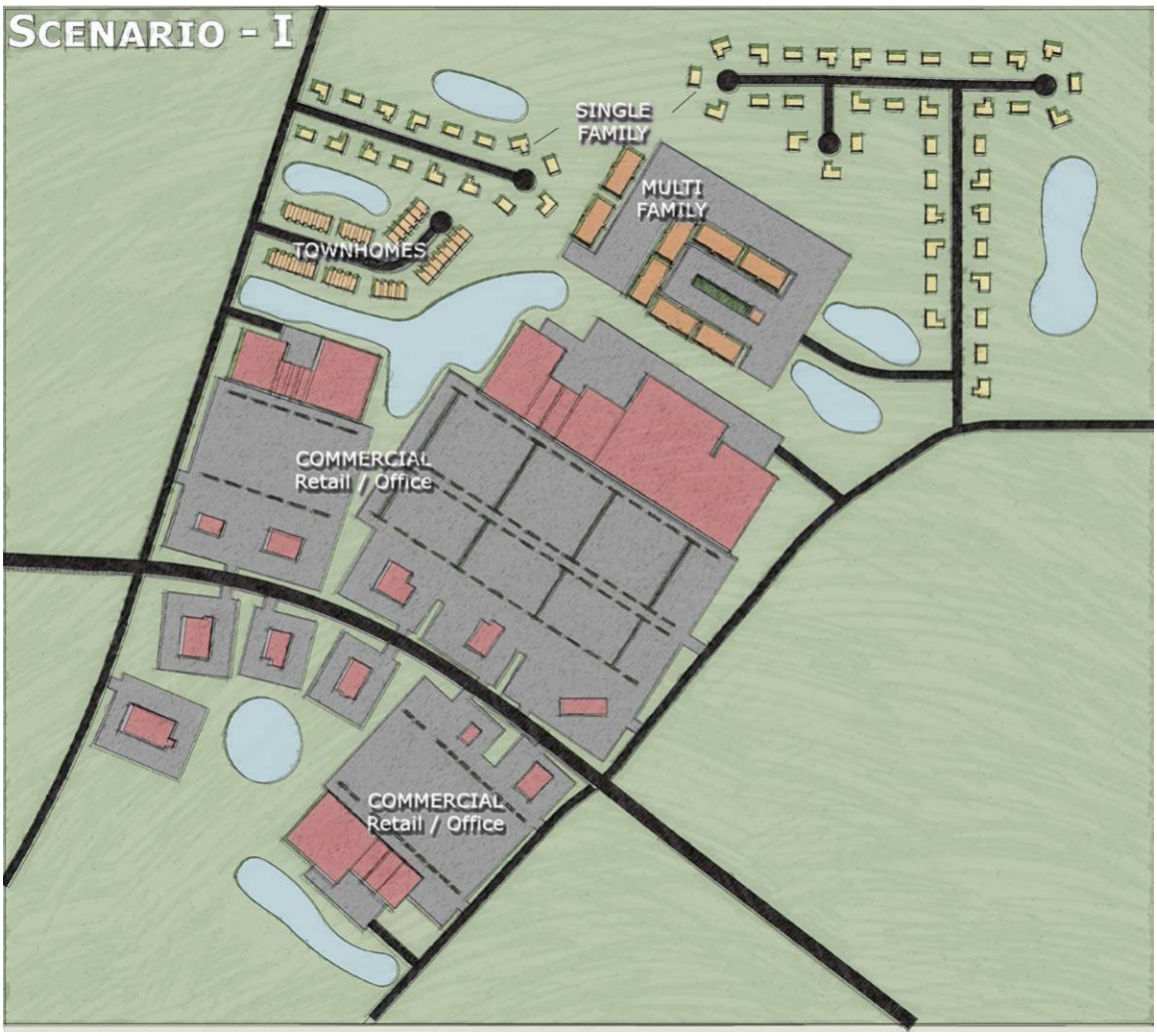
Site-specific Development Scenarios – Methodology

As indicated on the regional maps, Scenario1 and Scenario 2 produced very similar results. However, Scenario 3 projects a lower level of land consumption over the next 20+ years. In order to more fully understand the implications of these development patterns, site-specific plans for Scenario 1 and Scenario 3 were developed.

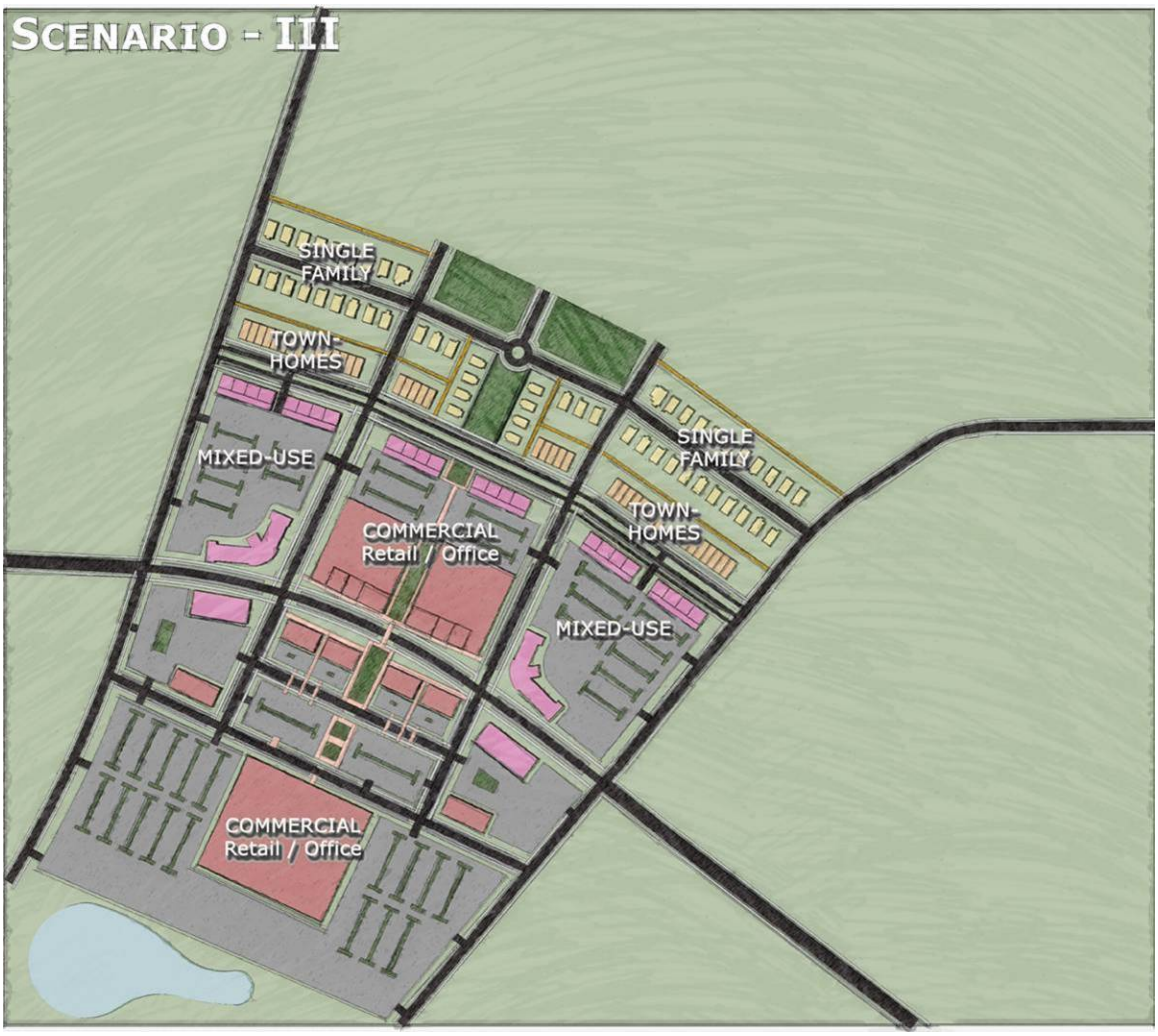
Each of the site-specific plans equal units of development, which includes:

- Residential, including detached single-family, townhomes, and rental units
- Commercial, including retail and office
- Parking
- Stormwater management facilities

Scenario 1 illustrates conventional auto-oriented suburban development, with separate and discreet uses. There are numerous access points with a lack of connectivity in both commercial and residential areas. Stormwater is managed through independent stormwater detention ponds. Community open space is not provided.



Scenario 3 illustrates quality growth principles through a pedestrian-oriented setting which includes mixed uses, a well-connected network for people, cyclists, and vehicles, and community open space. Low Impact Development (LID) stormwater management techniques such as bioretention areas in the parking lots and between buildings provide infiltration of stormwater. A regional stormwater pond is also provided to accommodate overflow for major storm events.



In addition to the differences from a site plan perspective, Scenario 1 and Scenario 3 also produce two very different street-level perspectives, as indicated below. In Scenario 1, the buildings are separated from the street by large expanses of parking placed directly in front of the stores. Scenario 3 brings the buildings closer to the street to enhance pedestrian accessibility and frame the street. On-street parking provides convenient access. Additional parking is provided through smaller lots and organized to provide shared parking resources.

Scenario I: Street-Level Perspective

In addition to the differences from a site plan perspective, Scenario 1 and Scenario 3 also produce two very different street-level perspectives, as indicated. In Scenario 1, the buildings are separated from the street by large expanses of parking placed directly in front of the stores. Scenario 3 brings the buildings closer to the street to enhance pedestrian accessibility and frame the street. On-street parking provides convenient access. Additional parking is provided through smaller lots and organized to provide shared parking resources.

Scenario III: Street-Level Perspective

After development of the site-specific scenarios, each scenario was evaluated in terms of impacts on land use, transportation, and fiscal impacts. The results are shown below.

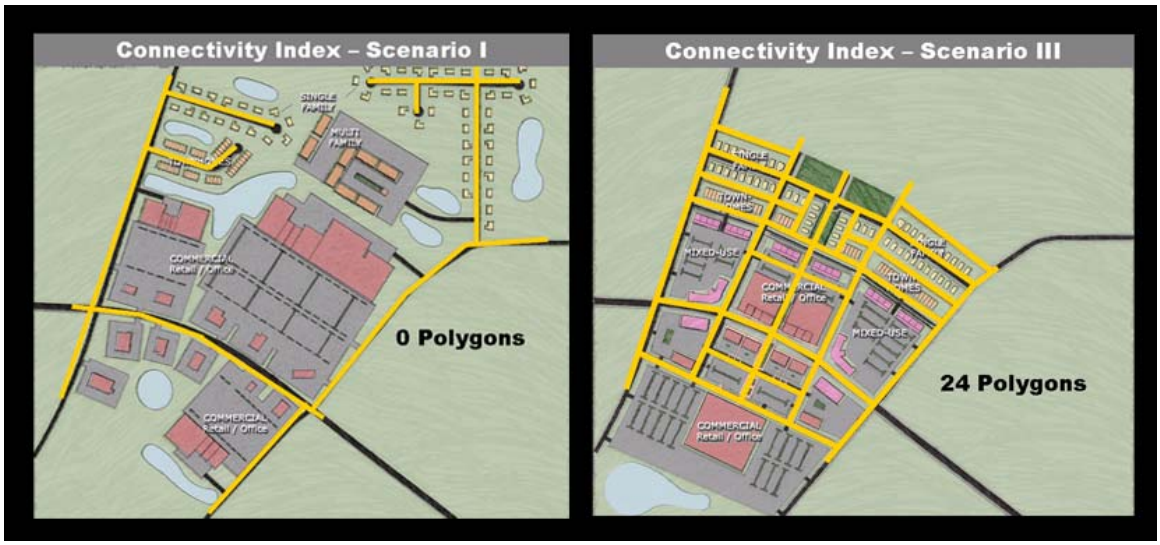
Land Use

Parameter	Scenario 1	Scenario 3
Land Consumed	120 acres	78 acres
Approximate Density	2 units per acre	4 units per acre
Configuration	Separated uses	Mixed use
	Auto-oriented	Pedestrian-oriented
Public Greenspace	Not provided	3.25 acres
Stormwater Management	Individual detention	Infiltration & regional detention

Transportation

A connectivity index quantifies connections in the street network by polygons to provide a measure of accessibility throughout the site. This analysis indicates that Scenario 1 results in a congested system, while mobility is maintained in Scenario 3.

Parameter	Scenario 1	Scenario 3
Connectivity Index	0	24
Modal Networks	Auto only	Multi-modal
Congestion Factors	No multi-modal networks	Multi-modal networks available
	Auto trips only viable option	Opportunities for pedestrians, cyclists, vehicles, transit, etc.
	No interparcel connections	Interconnected parcels
	No access management	Controlled access points



Fiscal Impacts

Each scenario was analyzed to develop a comparison of the cost to develop each scenario. This analysis is intended to provide a baseline comparison and does not necessarily include all development costs. Cost estimate parameters evaluated were land, public water, public sewer, roads, sidewalks, and parking. Infrastructure costs were based on information from the *2006 RS Means Guide for Construction Cost Data*.

Scenario 3: Site-Specific Impacts				
	Scenario 1		Scenario 3	
	Land Consumed (Acres)	Cost (Per unit)	Land Consumed (Acres)	Cost (Per unit)
Single-Family	29	$ 17,522 per unit	15	$ 13,742 per unit
Multi-Family	19	$ 6,757 per unit	13	$ 6,435 per unit
Commercial	64	$13,722 / 1,000 sq. ft.	50	$10,593 / 1,000 sq. ft.
TOTAL	**112**	**$7,720,047**	**78**	**$6,190,396**

By analyzing the current land use in the region, the per unit costs were extrapolated to the regional level to create estimates of land consumed and the cost of development for the implementation of each scenario in 2030. Overall land consumption also included provisions for the development of support infrastructure, such as regional transportation systems, and industrial development. As of 2006, existing development in the region consumed 226,000 acres. Scenario 1 consumes an additional 330,000 acres; scenario 3 consumes an additional 225,000 acres.

Scenario 1: Regional Impacts				
	Scenario 1		Scenario 3	
	Total Land Consumed (Acres)	Cost (in millions)	Total Land Consumed (Acres)	Cost (in millions)
Single-Family		$ 4,550,000		$ 4,680,000
Multi-Family		$ 2,910,000		$ 2,760,000
Commercial		$ 4,610,000		$ 3,100,000
TOTAL	**556,000**	**$12,707,000**	**451,000**	**$10,540,000**

During the comparative analysis of the scenarios, parameters regarding the total amount of development (i.e., number of units, square footage of commercial, etc.) were kept at a constant for the site-specific developments. This constant was carried forward on a regional basis to correlate with the population projections used for the regional scenarios. Due to the more compact development style of Scenario 3, less land is consumed for development both on a local scale and across the region. The site-specific plans represent an urban/suburban context which is not intended to be the only model for the region. However, demographics do support that an increasing percentage of the population is living in this setting than a rural setting, so this model was utilized to demonstrate the general growth patterns as discussed.

CONSISTENCY WITH

QUALITY COMMUNITY OBJECTIVES

Consistency with Quality Community Objectives

Introduction

A Quality Growth Audit was performed for each of the jurisdictions in the six-county coastal region. The purpose of the audit was to assess how well each jurisdiction incorporates quality growth principles into their land use regulations. The audit included questions from a broad range of planning and development issues related to land use, natural resources, transportation, housing, intergovernmental coordination, and community character. The results of the audit were also compared with draft performance standards to assess how each government would currently measure up to regional minimum standards. Through this analysis, the audit also provides a measure for achieving consistency and clarity in regulating development across the coastal region.

Methodology

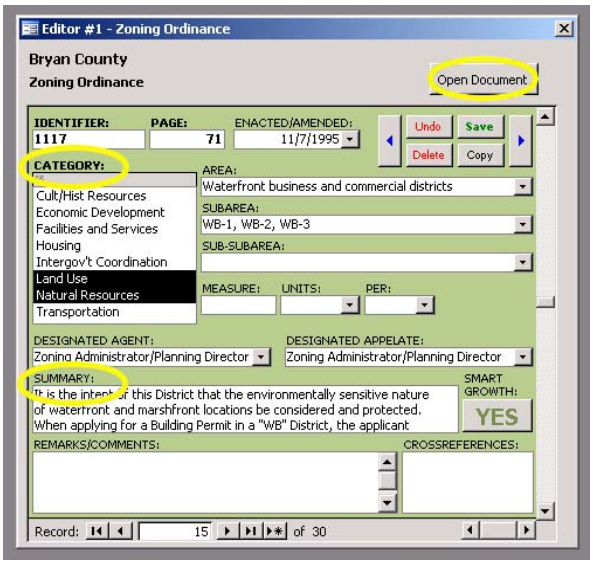
The Quality Growth Audit was conducted for the six counties and twenty-two cities included in the planning area. The methodology was structured so that the audit could be easily expanded to other jurisdictions as well.

Ordinance & Regulation Review Database

The initial phase of the Quality Growth Audit consisted of cataloguing zoning ordinances and subdivision regulations from each jurisdiction, with special attention given to items that contribute positively or negatively to quality growth. The data gathered from each of the ordinances was organized and stored in an Access template that includes a hyperlinked electronic file of the regulation (Figure 1). The catalog of ordinances contained in these files became the primary focus of the audit.

Figure 1

Figure 2



Within the software, the review catalogues each component of the ordinance needed (Figure 2). The interface prompts the reviewer to capture all of the relevant information, including the local government entity responsible for the implementation of that article. The ordinances are catalogued by issue category. Then a summary is provided, and quantifiable information, such as distance, number of units, etc. can be included where applicable. Items supporting quality growth are flagged as well. Finally, the information is linked back to the original source document for easy reference.

Local Government Interviews

In addition to the review of ordinances, the project team also conducted a series of local government interviews with representatives from each of the jurisdictions. City and county managers, planning directors and zoning administrators were interviewed regarding planning and implementation processes to supplement the review of the ordinances. Questions were related to development patterns, housing, natural resources, transportation, growth preparedness, and other relevant topics.

Audit Process

The format of the audit consists of a questionnaire, based primarily on *Smart Growth Audits* (Planning Advisory Service Report #512, 2002), published by the American Planning Association. These questions are adapted as needed for our region and supplemented with information based on two quality growth certification programs, LEED™-ND (Leadership in Energy and Environmental Design – Neighborhood Development), administered by the U.S. Green Building Council, and EarthCraft™ Coastal Communities, administered by Southface. The questions also incorporate recommendations identified in the Green Growth Guidelines, published by the Coastal Resources Division of Georgia Department of Natural Resources. Together, these resources provide evaluative and objective criteria with which to conduct the audit. The audit presents straightforward “yes / no” questions based on the fulfillment of minimum criteria, and assigns one or two points for “yes” answers. Two points are awarded for especially effective quality growth measures, such as those promoted through LEED™-ND. The audit also recognizes that quality growth is also frequently encouraged by innovative approaches and therefore provides points for innovation as well.

Performance Standards

During the development of the Coastal Comprehensive Plan, the Coastal Comprehensive Plan Advisory Committee (CCPAC) provided feedback on the development of performance standards for use by local governments. These standards were in an early draft format when the audit was concluded. The audit questions were cross-referenced with the latest available version of the performance standards to identify the criteria consistent with both minimum standards and excellence standards. Based on this cross-reference, local governments scoring a minimum of 32 points are consistent with the minimum standards. Local governments scoring a minimum of 38 points are consistent with the excellence standards.

The Results

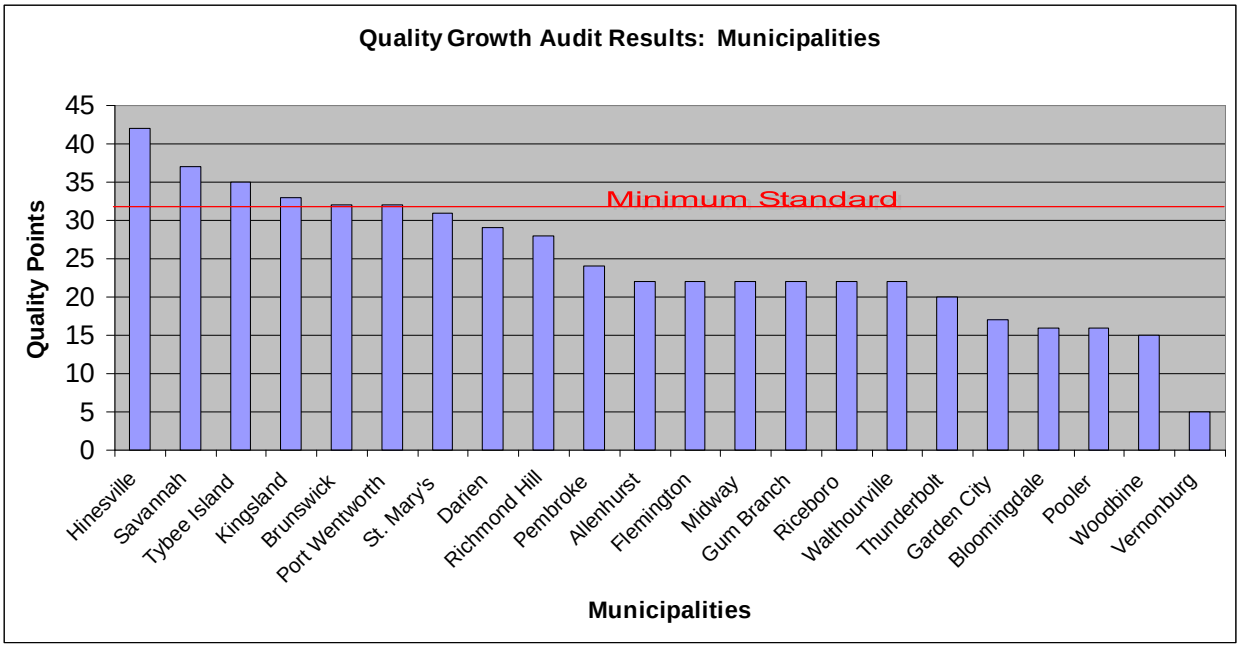
The results of the audit are shown on the following pages. The column on the far right indicates how the score of each local government compares with the performance standards. For those local governments which do not yet meet the minimum standard, the number indicates how far below the standard they currently rank.

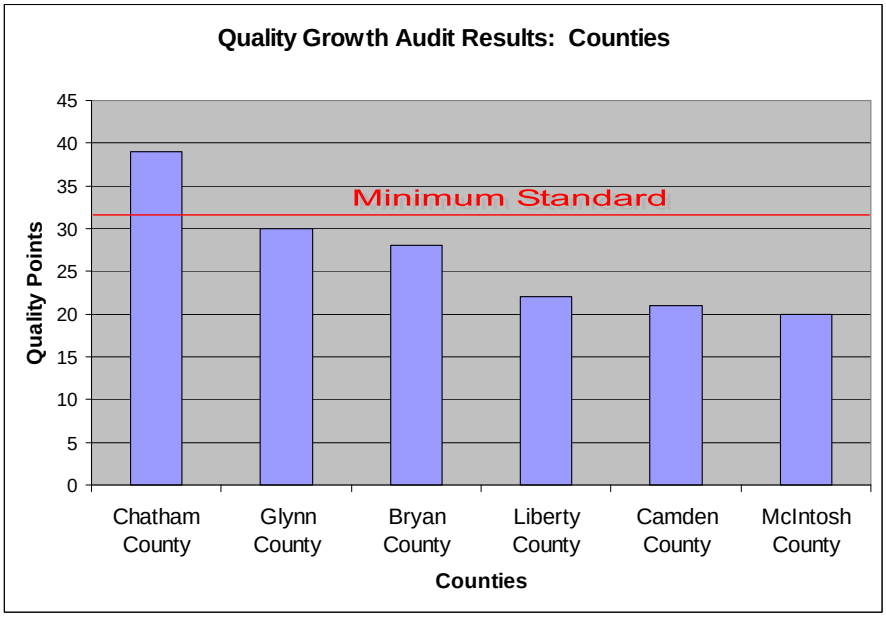
Municipal Results (Draft)

Municipality	Zoning Ordinance	Subdivision Regulations	Total	Performance Standard Ranking
Darien	33	17	50	Excellent
Savannah	29	15	44	Excellent
St. Mary's	22	19	41	Excellent
Hinesville	31	9	40	Excellent
Kingsland	23	15	38	Excellent
Tybee Island	27	8	35	Meets
Brunswick	21	11	32	Meets
Port Wentworth	19	13	32	Meets
Richmond Hill	15	16	31	-1
Allenhurst	15	12	27	-5
Flemington	15	12	27	-5
Midway	15	12	27	-5
Gum Branch	15	12	27	-5
Riceboro	15	12	27	-5
Walthourville	15	12	27	-5
Pembroke	15	9	24	-8
Thunderbolt	11	9	20	-12
Bloomingdale	10	9	19	-13
Garden City	9	8	17	-15
Pooler	7	9	16	-16
Woodbine	10	5	15	-17
Vernonburg	5	0	5	-27
Average Score	17	11	28	-6

County Results (Draft)

County	Zoning Ordinance	Subdivision Regulations	Total	Performance Standard Ranking
Chatham	33	14	47	Excellent
Glynn	27	7	34	Meets
Bryan	17	11	28	-4
Liberty	15	12	27	-5
Camden	21	5	26	-6
McIntosh	13	7	20	-12
Average Score	21	9	30	-5





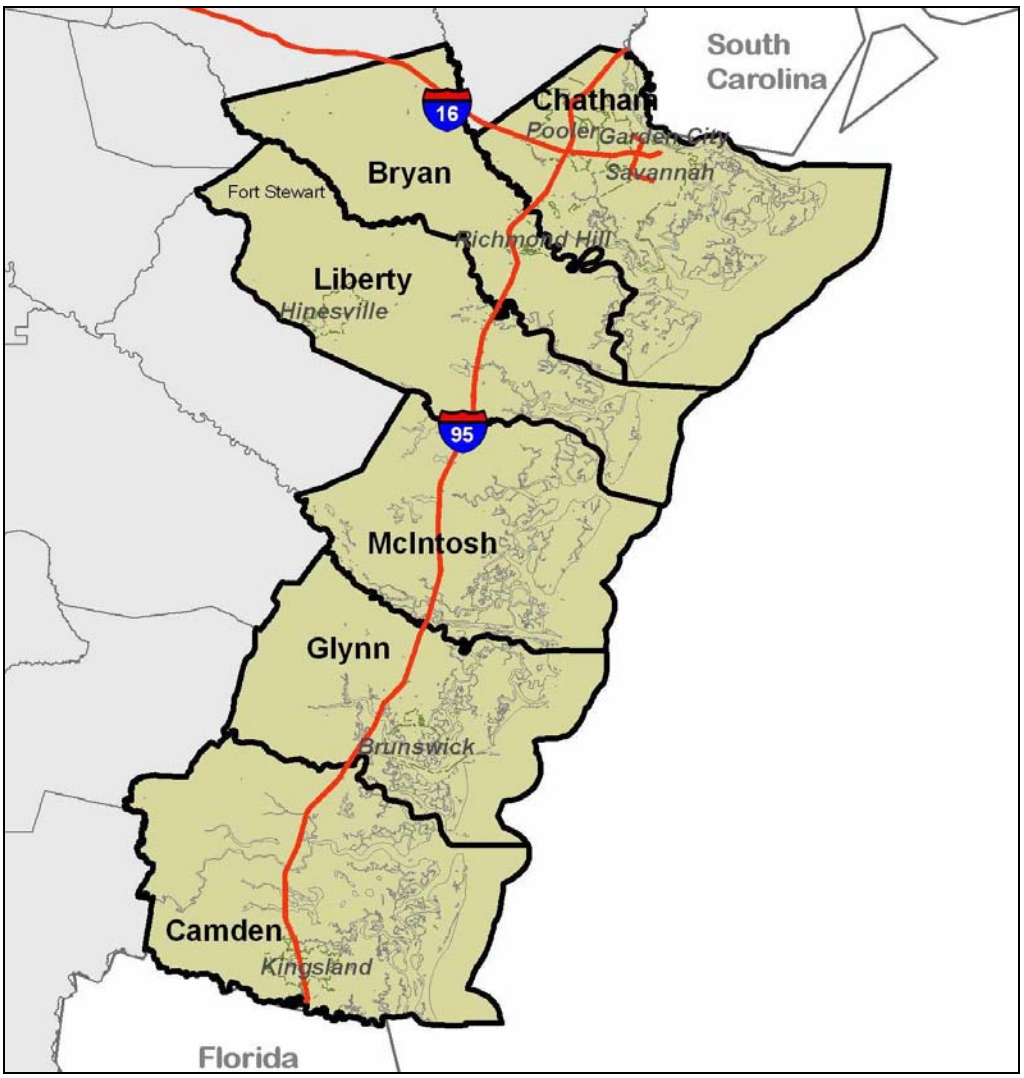
A total of seven (7) jurisdictions meet or exceed the draft minimum standards. These are the cities of Hinesville, Savannah, Tybee Island, Kingsland, Brunswick, and Port Wentworth, and a single county, Chatham. All of the jurisdictions will receive an individual report so that their elected officials and staff can interpret the strengths and weaknesses of their development policies for themselves. As a part of the Georgia Coastal Comprehensive Plan, this Quality Growth Audit will help give a fuller understanding of how local governments can work collectively to promote the region's sustainable future.

SUPPORTING ANALYSIS OF DATA AND INFORMATION

Supporting Analysis of Data and Information

Introduction

This Analysis is an introduction to Georgia's coastal region; it provides information about the challenges related to planning, land use, geography, demographics and the environment that the region faces. The Coastal Comprehensive Plan covers Georgia's six coastal counties: Bryan, Camden, Chatham, Glynn, Liberty and McIntosh. These counties comprise a major portion of the Coastal Georgia Regional Development Center's (CGRDC) ten-county region. This Analysis consists of relevant excerpts from the 2004 update of the *Coastal Georgia Regional Plan*, the current *Coastal Management Program* document, and other sources. There are sections devoted to population, economic development, housing, community facilities and services, transportation, natural and historic resources, land use, and intergovernmental coordination.



Source: Georgia Department of Community Affairs

This Analysis charts the changing landscape of the coastal region and the rise, and projected growth, of the coastal population. It also explores the reasons behind the recent surge in development, including: expansion of operations at ports and military bases, more favorable climate than neighboring states, low cost of living. Few of these conditions are subject to local control. However, the regulation of land use is almost exclusively a local control issue, and is therefore given a great deal of attention in the Regional Development Patterns and Quality Community Objective (local government development regulation audit) sections.

The objective nature of the data in the Analysis, which is drawn from existing reports, plans and databases and detailed in the Supporting Data section, provides a framework for analysis of the remainder of the document. In particular, the Issues and Opportunities identified by the Coastal Comprehensive Plan Advisory Committee (CCPAC), as well as input derived during stakeholders' meetings, should be viewed as a subjective "reality check".

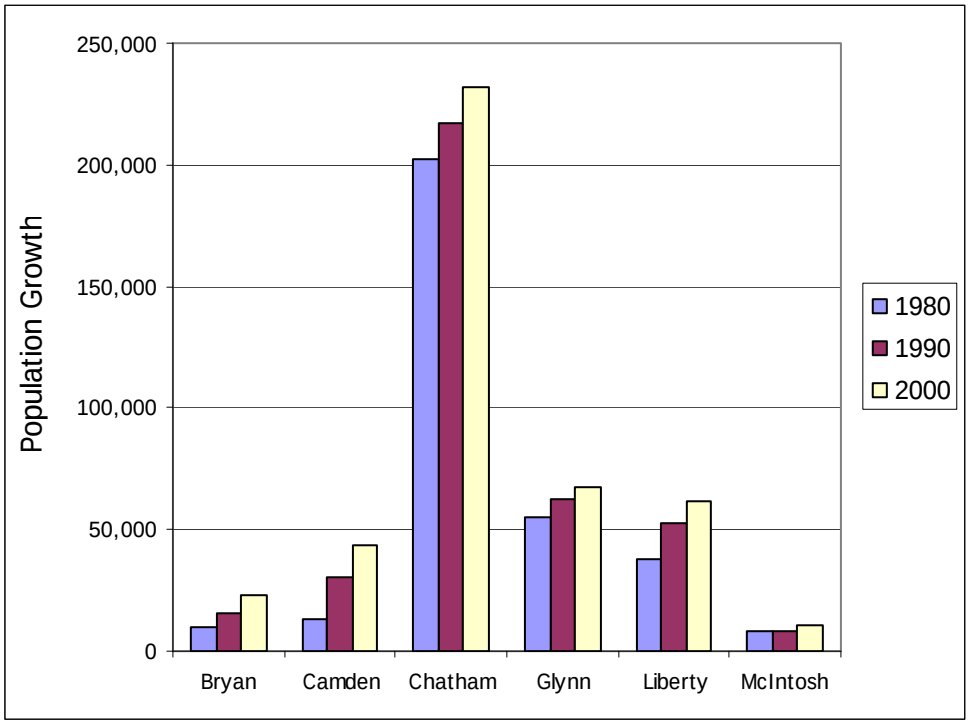
Objective data sources (e.g., Census and Georgia Tech Population Study) smooth over the unique characteristics, niche markets and population segments indigenous to the coastal region. Information derived from local sources, such as residents and local government representatives, paints a more nuanced picture of the coast. It is a place where seasonal visitors, military personnel, and year-round residents all celebrate the natural and cultural characteristics, while each impacts the land use patterns, infrastructure, and economy at a different level. However, even different levels or intensities of use still demand basic infrastructure such as roads, water and stormwater management. It is these universal issues that receive the most attention in the plan.

Population

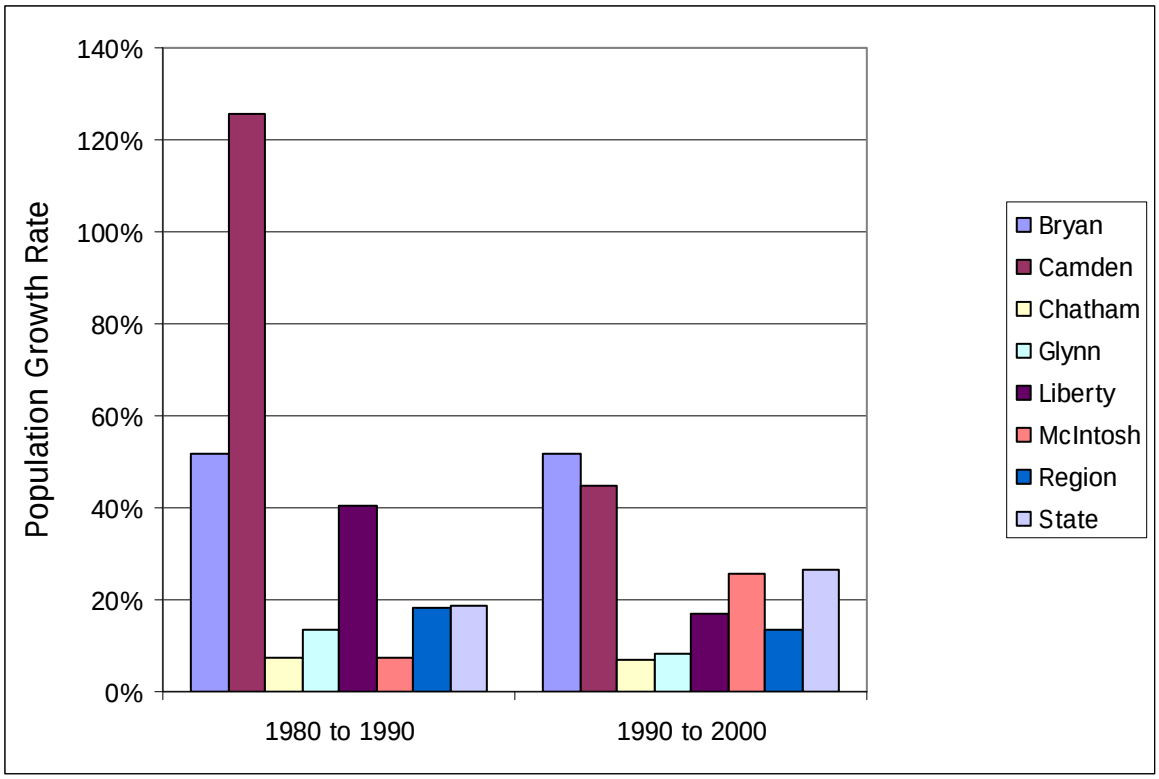
The coastal region's population has been increasing at a higher rate than the surrounding regions, the state of Georgia, and the United States. This is expected to continue. The high growth rate can be explained by the region's quality of life: the coastal natural resources, warm climate, and the wide range of employment opportunities (see Map A-1).

Continuing Growth

The coastal region's population rose by 18% (from 326,382 to 386,415) during the 1980s and by 14% (from 386,415 to 439,154) during the 1990s. As shown in Table A-1 and in the figure below, every county gained population during both decades.



The region is projected to grow by 20% by 2010 and an additional 11% by 2020. By 2030 the growth rate is expected to slow to 8% (see Table A-2). Some counties gained at a faster rate than others, and the bar chart below illustrates that it has been the less populated counties that have grown most rapidly, at least in terms of percentage growth. The projections up to 2030 suggest that this pattern will continue, with the highest growth rates expected in the suburban and rural counties.

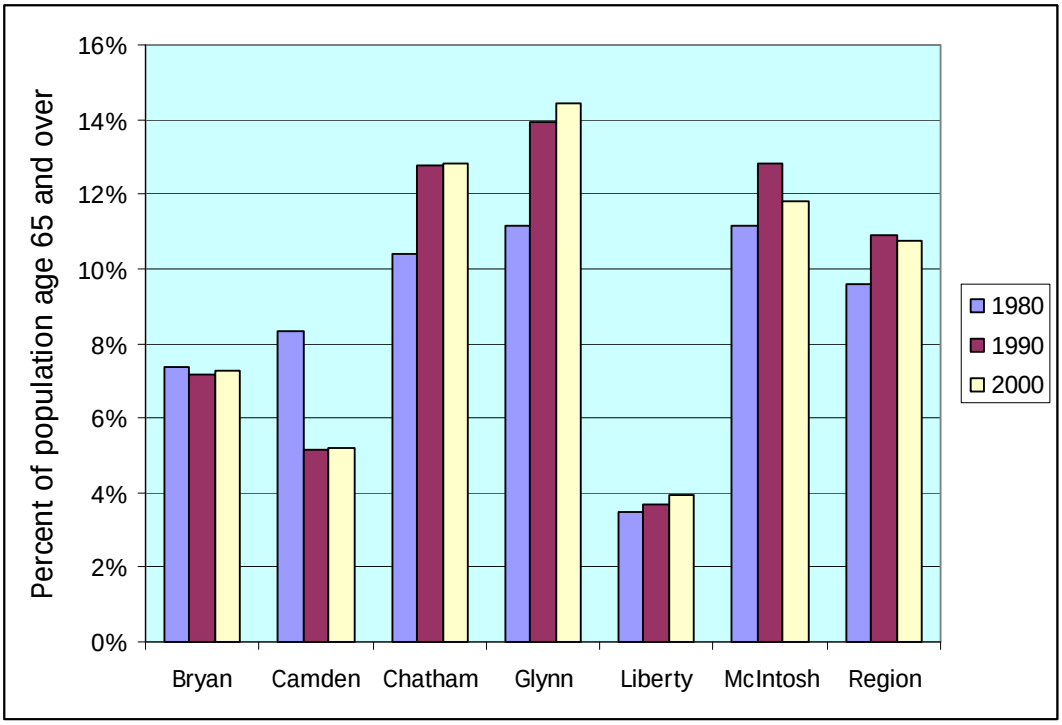


The rate of growth illustrated by the 2001 - 2006 U.S. Census estimates shown in Table A-3 is at variance with the projections developed in 2006 by the Center for Quality Growth and Regional Development (CQGRD) at the Georgia Institute of Technology. CQGRD projects that by 2030 the region's population will reach 633,000 as a result of in-migration.

The Maturing Population

The coastal region has been attracting retirees who are flocking to coastal Georgia from colder climates, or places with less appealing scenery or a lesser quality of life. Others are relocating from Florida to take advantage of a lower cost of living, fewer recent hurricanes, less traffic, and/or milder summer temperatures.

As shown in Table A-4 and the graph below, the percentage of residents age 65 and over has increased region-wide (at least from 1980 to 1990). Such a trend has implications for the region with regard to health care and other services such as recreation. The low figures for Liberty County from 1980 to 2000 and Camden County from 1990 to 2000 are attributable to the growing military presence.



Hispanics

Hispanics are the nation's largest and fastest growing minority group, growing from 22.4 million in 1990, to 42.7 million in 2005. According to the Census, Hispanics comprised just 1.7% of Georgia's population in 1990, and reached 5.3% (total: 435,227) in 2000. Census figures indicate that the growth in Georgia reached 17% between 2000 and 2002. As shown in Table A-5, the Hispanic population grew in Glynn and Chatham Counties by 13% and 30%, respectively, between 2000 and 2005.

Coastal Counties

Bryan County

The population of Bryan County stood at 23,417 at the 2000 census, having risen from 15,438 in 1990. The 2006 Census estimate places the population at 29,648. A population study performed by Georgia Tech indicates that the county's population is projected to expand rapidly by 96% to 45,986 people by 2030. Migration from Chatham County will drive much of this growth, especially in Richmond Hill. The city's population has increased in spectacular fashion, from 1,177 in 1980 to 6,959 in 2000. The city is largely a bedroom community, dependent on Chatham County and Savannah for employment and urban resources.

Camden County

Very rapid growth has taken place in Camden County, with a massive 126% rise in population during the 1980s and a 45% rise during the 1990s. The figures for the 1980s are largely attributable to the 1979 opening of the naval base, which brought in over 10,000 jobs as it

expanded during the decade. According to the U.S. Census, the 2000 population of 43,664 rose to just 45,118 by 2006. The Georgia Tech study indicates that the county's population could rise to 70,997 by 2030.

Chatham County

By far the most populous, historically established and highly developed county in the coastal region is Chatham County, with a population of 241,411 as of 2006. Chatham County is home to Savannah, the region's major city. Savannah is a hub of business and culture, with a population of 131,510. The other cities in the county, which are fairly small in comparison, are Bloomingdale, Garden City, Pooler, Port Wentworth, Thunderbolt, Tybee Island and Vernonburg. The county's population grew by 15% from 1980 to 2000, but it is expected to rise slightly more quickly over the next 20 years or so. Most of this growth is expected to occur in newly-annexed portions of Savannah and Pooler.

Glynn County

Growth in Glynn County has been slow relative to most of the coastal region but is still fairly strong, with a rise in population from 54,981 in 1980 to 67,568 in 2000 and 73,630 in 2006. Much of the county's growth has been driven by the in-migration of retirees, often to residential developments targeted to them. Brunswick's port continues to grow, and this economic catalyst could redefine population trends in the county. It is projected that the county's population will rise at a slightly faster rate in the future, reaching 100,483 by 2030.

Liberty County

The most dynamic population growth in Liberty County actually took place during the 1970s, when its population exploded by 114%. During the 1980s the population rose 40% and during the 1990s growth slowed to 17%. As of 2000, the county's population is 61,610 and Hinesville's population is 30,392. The bulk of the county's growth can be attributed to the presence of Fort Stewart, but retirees are also increasingly moving in. The Georgia Tech study indicates that the county's population will grow steadily to reach 89,163 by 2030.

McIntosh County

The smallest of the coastal counties in terms of population, McIntosh County does not possess any major employment generators. Infrastructure is generally lacking, there are large expanses of wetlands and forest, and the islands are not developed. However, the development of an outlet mall at I-95 has generated revenue and jobs for the county. In addition, the county has been receiving a significant influx of retirees. After growing fairly modestly during the 1980s, the county's population rose more briskly in the 1990s at a 26% rate to reach a figure of 10,847 as of 2000 and 11,248 by 2006. The Georgia Tech study indicates that the county's population will increase to 18,626 by 2030. The county's only city is Darien, the county seat, whose small population has held steady over the years.

Economic Development

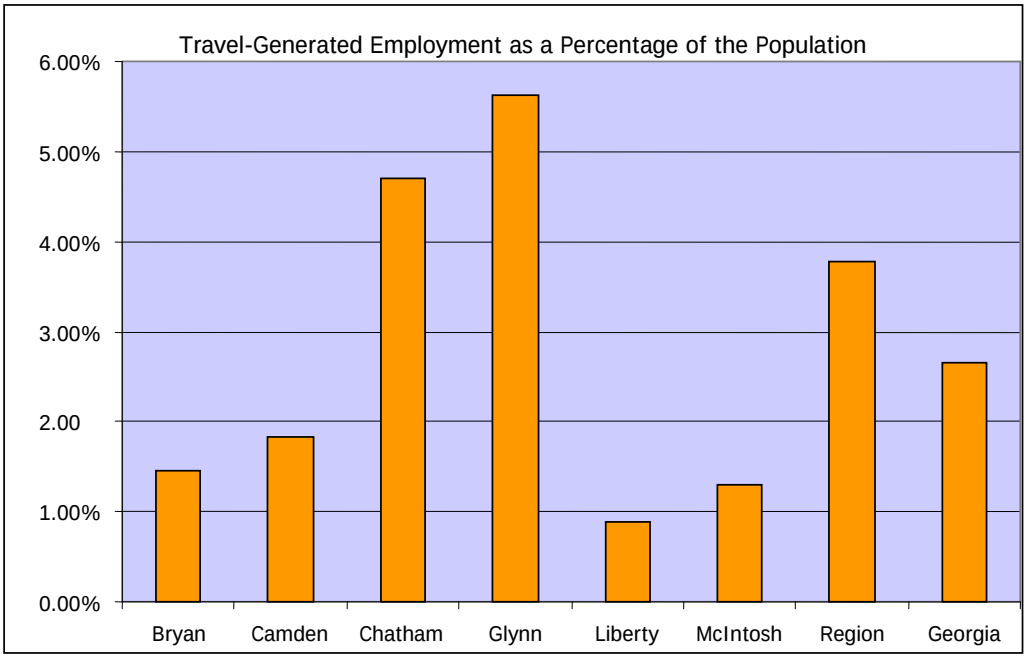
Georgia's coastal counties have experienced remarkable improvements in recent years in terms of the level and diversity of economic activity, due to the region's many assets for economic development, which include:

- Deepwater ports
- Major highway and rail facilities
- Industrial park sites served by water, sewer, rail and major highways
- Labor supply and job training
- Unique natural and historic features (beaches, shores, colonial history)
- Abundance of undeveloped land
- Reasonable housing costs
- Education and health facilities

Employment by Sector
As shown in Table B-1, growth in employment has varied widely among economic sectors.

Tourism and Travel

Tables B-6 and B-7 and the graph below show that travel in the coastal region generates expenditures of approximating $1.39 billion annually. It contributes $372 million to payroll, accounts for 16,600 jobs, and generates $58 million in state tax revenue and $42 million in local tax revenue.



Source: is *2005 Travel Profile – Georgia State, Visitors' Statistics & Travel Economic Impact, Regional Analysis,* Travel Industry Association of America for the GA Department of Economic Development.

Tax Credit Tiers

The six counties span the economic spectrum as reflected in their Job Tax Credit levels, which are based on unemployment rate; per capita income; and % residents with income below poverty level: Bryan (Tier 1); Camden, Chatham and Glynn (Tier 3), McIntosh (Tier 2) and Liberty (Tier 1).

Downtown Development

The downtowns of Pembroke, Darien, Brunswick and Woodbine all participate in the Main Street program. The Savannah Development and Renewal Authority (SDRA) focuses on the enhancement and improvement of both the business and the aesthetics downtown.

Impact of Retirees and Second Homes

The region has become attractive to retirees and second-home owners. The developed islands attracted the bulk of this in-migration, but Camden and McIntosh counties are gaining retirees as well. Real estate is the industry most directly affected by incoming retirees and second-home owners, but the service and health sectors also gain greatly.

Manufacturing

Though still an important part of the region's economy, manufacturing has declined somewhat, and is projected to continue to decline. Future manufacturing employment is expected to be oriented toward assembly, fabrication, and light industry, rather than basic production functions.

Military Facilities

Among the region's strongest economic engines are its military facilities, which bring in large numbers of residents and have positive impacts on local economies. Fort Stewart is the largest in the region, but Hunter Army Airfield (HAAF) and Kings Bay Naval Submarine Base are also important. In a proactive effort to improve relations among Fort Stewart/HAAF and neighboring jurisdictions, a Joint Land Use Study (JLUS) was initiated in 2004. The report identifies areas where development is unfavorable from the military's perspective, and also conservation and other options for affected landowners. A follow-up report on Economic Diversification identified strategies that Bryan County can pursue to reduce dependence on the base.

Earnings by Sector

Table B-2 shows the earnings for each sector of employment, illustrating which sectors provide major contributions to the coastal economy. While the service sector makes the biggest impact, a thoughtful comparison of Table B-1 with Table B-2 makes it clear that wages in that sector are significantly lower than in most others.

Ports and Logistics

The economic activities of ports and logistics are sizeable and growing. They provide some of the highest paying blue-collar jobs and are catalysts for a variety of indirect business activity, thus contributing to further economic diversification. In 2006, the ports supported approximately 275,968 jobs (7% of Georgia's jobs), and contributed $10.8 billion in income, $35.4 billion in sales and $1.4 billion in state and local taxes.

Regionally Significant Employers

Table B-3 lists manufacturing concerns employing more than 200 people, as well as military installations. The importance of the military bases, law enforcement training, aeronautics and paper production are clear. CGRDC's Comprehensive Economic Development Strategy provides further insights into the region's economy and the diverse nature of the components of the economic engine.

Forestry

Although forestry itself is a relatively small employer, the manufacture of paper and other forestry products employs over two thousand workers in six plants scattered along the coastal region. Many areas of timberland are converting to residential or commercial uses, often with extremely large developments planned (see Tables F-5 and F-6).

The Knowledge Economy

The region's economy has traditionally been in fairly basic "blue-collar" industries and sectors, such as manufacturing, tourism, ports, timber, fishing, the military, etc. This is not necessarily a good preparation for the burgeoning knowledge-based economy. However, the region has a reputation for a high quality of life, and Savannah is well-known for its culture and distinctive character. These factors could attract companies and entrepreneurs based in the high-tech or creative fields. The Creative Coast Initiative, a public-private nonprofit based in Savannah and founded in 2003, seeks to build upon this possibility.

Income

Both per capita and median household incomes have increased substantially over time in the coastal area, as indicated in Tables B-4 and B-5. However, this is true for the state of Georgia and the nation as well. Significant pockets of poverty remain in the region, particularly among racial minorities and female-headed households (see Map B-1).

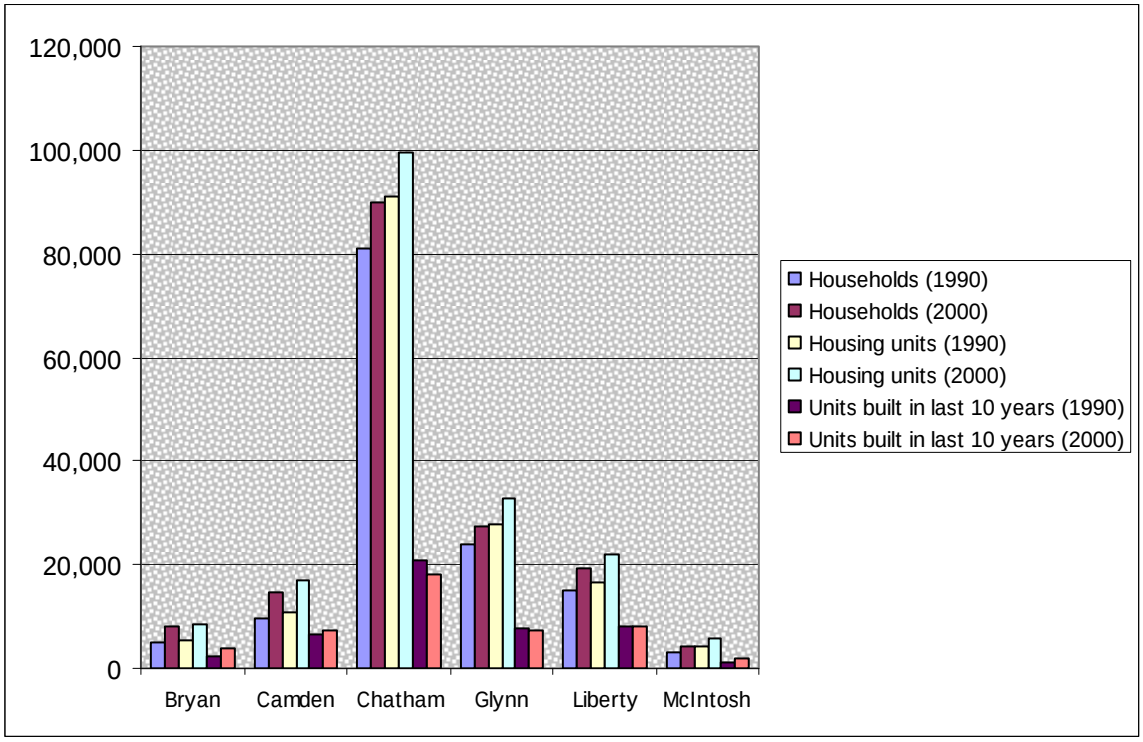
Economically Disenfranchised Groups / Underemployed Military Spouses

One unique group of the underemployed consists of the spouses of those assigned to military installations. A study funded by the Cooperative Extension Service, the U.S. Army, and the Georgia Research Alliance investigated the feasibility of implementing a telecommunications-based back-office industry for the Hinesville area near Fort Stewart. As the study makes clear, there are ample opportunities for data processing businesses in the area, and these could provide employment for military spouses among others.

Housing

Housing Types

Single-family units predominate throughout the region, while multifamily units constitute a higher percentage of the total units in the more urbanized counties. Tables C-1 and C-2 and the graph below illustrate the growth in the housing sector between 1980 and 2000.



Age and Condition of Housing

The counties undergoing the most rapid growth have the highest amount of relatively new housing. Condition varies throughout the region (see Tables C-2 and C-3).

Housing Values and Rents

The coastal communities have seen substantial increases in housing value, as can be seen in Table C-4.These increases, coupled with increases in property tax assessments, make existing housing far less affordable. The rising home values are accompanied by an equally steep rise in rents, as shown by Table C-5. High rents, like high house prices, reduce the supply of workforce housing. While high house prices and rents are to some extent a reflection of the real estate market, they are also caused by exclusionary zoning practices. The zoning codes in the coastal region often prevent houses from being built on small lots, and often limit multifamily construction.

Issues with Mobile and Manufactured Homes

Mobile or manufactured housing creates several problems. They are often built in unincorporated areas not served by public water and sewer systems, and this is potentially risky for both residents and the environment. In addition, most manufactured homes are taxed as personal property, at a rate that is substantially less than that of property appraised and taxed as real property. The cost of the services these residents require exceeds what they pay in taxes, which of course requires others to pay higher taxes.

Significant Housing Trends

Housing projections may be altered by a variety of intervening events such as changes in the troop strength at the region's military installations and economic changes that affect construction or financing for housing (see Table C-6).

Housing Authorities

Regionwide, affordable housing is provided by the Housing Authorities of Savannah, Brunswick and Hinesville. The Housing Authority of Savannah, the largest of the three, provides roughly 1,800 units for about 7,000 people, and also administers Section 8 payments to many more. The authority is currently working on the Fellwood Homes site, an ambitious mixed-income project occupying approximately 26 acres in west Savannah. The redevelopment project will incorporate sustainability principles in the approximately 200 mixed-income units and retail component. The Brunswick Housing Authority maintains several buildings of affordable housing and is involved with Section 8 assistance as well. The Hinesville Housing Authority maintains about 200 units

Community Facilities and Services

Water Supply and Treatment

The supply of water is a major issue along the coast, and new restrictions on municipal and private use of the Floridan Aquifer are imminent. This could limit development in general, and will probably restrict large-scale manufacturing in particular. Average per capita water use in the region is significantly lower than the state average, but industrial and recreational uses still consume a large portion of the permitted capacity drawn from the aquifer.

The most comprehensive public water supply and treatment facilities are in Chatham, Glynn and Liberty counties. In Chatham County, water is provided by the City of Savannah and other municipal and privately-owned systems. Glynn County provides water to Saint Simons Island and parts of the unincorporated area, the City of Brunswick serves the city and much of the county, and the Jekyll Island Authority serves the island. In Liberty County, the Development Authority and the City of Midway have worked to coordinate water service delivery to new commercial development, the City of Hinesville serves the adjacent city of Flemington, the City of Allenhurst is served by Walthourville, and Riceboro maintains its own facilities. Both McIntosh County and the City of Darien provide water service. Bryan County has an agreement with the City of Savannah to provide water in selected unincorporated areas, and the cities of Pembroke and Richmond Hill both provide water within their boundaries and to some unincorporated areas. In Camden County, public water service is limited to the municipalities, while the unincorporated areas rely on private systems and wells (see Map D-1).

Due to the 2006 Coastal Georgia Water and Wastewater Permitting Plan for Managing Salt Water Intrusion, coastal counties and cities are faced with the need to identify alternative sources for potable water and landscape irrigation. One promising approach is “purple pipe” systems, which promote conservation by utilizing treated recycled water for various outdoor uses, including irrigation.

Sewer Service

Chatham and Glynn counties operate sewer systems that serve portions of each county. In Chatham County sewage treatment is also provided by several municipal and private systems. Glynn County is also served by municipal and private systems. In Liberty County, the City of Hinesville serves Walthourville, Allenhurst and Flemington (see Map D-2).

Solid Waste Collection and Disposal

Solid waste disposal in the coastal region is proportional to that of the state. Table D-1 shows the current waste reduction goals by waste category. This approach is expected to allow local governments to target their recycling efforts more effectively.

Regionally Significant Recreational Facilities

The coastal region is home to several state and federal parks, numerous historic sites, and beaches, which provide miles of scenic public recreation. In addition, the extensive river network that empties into the Atlantic provides inland water-related recreational opportunities.

Ultimately, outdoor recreation has an enormous economic impact in Georgia—and particularly on the coast. Anglers, boaters, beachgoers and those visiting historic and cultural sites all contribute to local economy, while the presence of significant outdoor resources (i.e., parks and other natural resources) can have a positive impact on property values and local revenue.

Regionally Significant Educational Facilities

Growth in the region has caused overcrowding and other problems in the public schools. Some local governments have adopted special purpose local option sales taxes for education, or "E-SPLOSTs".

The region is making efforts to keep up with rising student numbers (see Tables E-1 and E-2) The higher figure for the state's funding per student is perhaps partly due to the distorting statistical effect of the Atlanta area, but it also reflects the need for coastal local governments to dedicate more resources to their schools. Many areas receive high growth because of their low taxes and natural resources. However, new residents put new strains on community facilities in general—and schools in particular--and thus create a need for higher taxes in the long.

The coastal region, at present, is adequately served by several institutions of higher education. Savannah is home to Savannah State University, Savannah Technical College (STC), Savannah College of Art and Design, and Armstrong Atlantic State University (AASU). STC has an additional campus in Liberty County near Hinesville. The Coastal Georgia Community College (CGCC) is a two-year college based in Brunswick, with a smaller satellite campus known as the Camden Residence Center located in Kingsland. The Brunswick Center of CGCC is a collaborative effort between CGCC, Georgia Southern University and AASU; it offers several bachelors and master's degrees.

Regionally Significant Libraries and Cultural Facilities

Existing library facilities are adequate to meet the present needs of the region, though future growth may strain their capabilities. Within the six coastal counties—with the exception of the Savannah area—there are few cultural facilities for theater, ballet, concerts, lectures, art galleries and museums. Georgia Southern University offers a full season at its Performing Arts Center, which draws attendees from a wide area, including coastal Georgia and South Carolina. Many of the coastal counties' comprehensive plans state the need for an auditorium to hold cultural and civic events. The cost of constructing and managing an auditorium has presumably prevented most of these local governments from meeting this need, so perhaps there is an opportunity to create regional facilities for this purpose.

Transportation

Road Network and Highway Corridors

There has been a substantial expansion of the road network in coastal Georgia, beyond what most other parts of the state have experienced. Statewide, the average number of road miles per county increased by 22 miles between 1994 and 2003. The increase in total road miles per coastal county was closer to 89 miles, with the majority of the region's new roads in recently-built subdivisions. Costs for road maintenance put a substantial burden on local governments.

There are two major highways in the coastal region, Interstates 16 and 95. Of the two, I-95 has the greater impact, passing as it does through all six counties and ultimately connecting the entire East Coast.

Public Transportation

The largest provider of public transportation in the region is the Chatham Area Transit (CAT) authority, which runs buses and shuttle services throughout that county. In addition, McIntosh County utilizes a private contractor, Silverhair Transportation, to provide public transit oriented primarily to the elderly. No other jurisdictions offer public transit; the problem may best be dealt with on a regional scale.

Airports

The region is currently served by seven airports that provide a variety of private and commercial aviation services. The Savannah-Hilton Head International Airport is the area's major airport, and is served by national and regional carriers. Glynco Jetport in Brunswick is served by Delta, and offers daily service to Atlanta. Jacksonville International Airport, though outside the region, is close enough to be used frequently.

Ports

The Georgia Ports Authority (GPA) operates facilities at Savannah and Brunswick. The Port of Savannah, by far the larger of the two, focuses on container shipping and is now one of the major ports of the East Coast. The Port of Brunswick concentrates on automobiles and wood products. Both have grown rapidly over the years, thanks to investments such as replacement of the Talmadge Bridge (Savannah) and Sidney Lanier Bridge (Brunswick), extensive modernizing efforts, and the continuing expansion of global trade networks. The success of the ports has inevitably placed additional stress on the region's roads and railroads.

Atlantic Intracoastal Waterway

The mainland areas of the six coastal counties are bordered on the east by the Atlantic Intracoastal Waterway (ICW). The ICW serves as an inland water route and a connector to the Atlantic Ocean for recreational and commercial boaters and fishermen, commercial barge traffic,

ferry operations, military boats and submarines. Running between Port Royal Sound, South Carolina, and Fernandina Beach, Florida, the ICW provides for a channel twelve feet deep at mean low water mark, and a bottom width of at least ninety feet. There are numerous tributary channels to the ocean. Anchorages and facilities exist along the waterway at wharves operated by the GPA and other terminal operators.

Railways

All of the coastal counties, except McIntosh, have access to freight rail. Railways in coastal Georgia are closely networked to ports and military installations. The region is served by the CSX (Seaboard Coastline), Norfolk Southern and Central of Georgia Railroads. Several small railways link industrial facilities to major railroads; these include the St. Marys Railroad connecting the Durango Paper Company (Gilman) site to the CSX corridor, and the Colonel's Island Railway connecting the Port of Brunswick to the CSX railway. With regard to passenger rail, Amtrak only provides service within the six counties to Savannah. However, there is an Amtrak station at Jesup in nearby Wayne County that is convenient to Glynn.

Evacuation

The Georgia Emergency Management Agency (GEMA) has primary responsibility for planning and coordinating an evacuation in the event of a major storm or hurricane (see Map F-8), and local government officials hold both the authority to order an evacuation and the responsibility for carrying it out. In the event of a major storm or hurricane, GEMA is to work with other state agencies, and with Federal Emergency Management Agency (FEMA), in the overall coordination and oversight of the evacuation. Local government officials hold both the authority to order an evacuation and the responsibility for carrying it out.

Three interstate highways have lane-reversal plans: I-95, I-75 and I-16. The lane reversal on I-16 expedites the evacuation of the Georgia coast, while the northbound interstates will support evacuations from Florida. The lane reversals on I-16 run from milepost 162 near downtown Savannah to milepost 52 in Dublin, a distance of 125 miles.

Sidewalks and Bike Lanes

The coastal region is sorely lacking in sidewalks, bike lanes and jogging paths. As such, residents and visitors are forced to use cars for even short trips. The resulting traffic congestion has a negative effect on public health, and reduces transportation and recreation options. The Coastal Regional *Bike and Pedestrian Plan* identifies potential routes, and advocates for the Coastal Georgia Greenway have garnered support for a bike path spanning the coastal counties from Savannah to St. Marys. With the success of many such bike trails nationwide and in Georgia—in particular the Silver Comet Trail in northwest Georgia—the economic tourism-related potential of such a route has become evident. The Coastal Georgia Greenway would tie into local paths as well (see Map E-1).

Natural Resources

Climate

The coastal region is classified as subtropical. It is favored by both latitude and proximity to the Atlantic Ocean, resulting in a moderate climate, though summer days can be extremely hot and humid. Winter temperatures are in the 50s during the day and the 40s at night, while summer temperatures are usually in the 80s - 90s during the day and the 70s at night. The temperature exceeds 90 degrees about 75 days a year, while freezing temperatures occur about 20 days a year and last only a few hours. Humidity is high, generally between 60% and 75%. Conditions are more moderate closer to the ocean—slightly cooler in summer and warmer in winter.

Annual rainfall is 50 inches, with slightly higher levels inland. Snow is rare and short-lived, although hail and freezing rain are not uncommon. Seasonally, rainfall is greatest between June and September, and as a result of this pattern there is a seasonally high water table in October, when the surficial aquifer is at its highest level. Surficial aquifers are recharged locally as the water-table fluctuates in response to drought or rainfall. There are about 75 days a year in which more than one-tenth of an inch of rain falls in the coastal counties.

Due to the contours of its shoreline, Georgia is relatively protected from the open ocean and has recently experienced less hurricane impacts than many other coastal areas. However, global climate change may increase the frequency and violence of storms and hurricanes. In addition, melting polar icecaps and sea level rise will have an impact on Georgia's forested coastal wetlands, due to the inland movement of salt water. The conversion of coastal forested areas to salt marsh would mean the loss of the pollutant filtering and fisheries-support currently provided by these areas. Most significantly, coastal forested wetlands reduce the energy of hurricane winds and wave action that damage both marsh systems and inland development.

Geology & Topography

The geological history of the region has created the string of ocean barrier islands, and marsh hammock islands (see Map F-3). The region is very flat, with minor exceptions, having the typical topography of the coastal plain found throughout the southeastern United States. The only notable exceptions are the dune ridges and river bluffs, where elevations may reach thirty feet or more above mean sea level. Elevations gradually increase inland, and the only natural contours are the remnants of prehistoric sea levels and associated movement of materials caused by ice formation and thawing. Due to the area's relative flatness, its rivers tend to meander, with many miles of bending and winding ox-bows.

Barrier Islands and Coastal Resources

All 100 miles of Georgia's ocean beaches are on the seaward faces of barrier islands; Table F-1 lists the approximate acreage and beach length of the largest islands. Given their attraction for commercial and residential uses, it is fortunate that ten of the eighteen major barrier islands are

in public ownership. Except for Jekyll Island in Glynn County, none of these publicly owned islands are accessible by car from the mainland. Jekyll Island is owned by the State of Georgia, and is operated as a state park (see Table F-15). By law, 65% of the island shall remain in its natural and undeveloped state, and accessible to all Georgians. The remaining undeveloped islands are designated for wildlife management, environmental research, and/or undeveloped recreational uses. Of the total land area of the fifteen largest barrier islands, about 65% is in public ownership (36% state and 29% federal).

Floodplains

Most of the coastal land area is within the 100-year floodplain, as determined by FEMA (see Map F-1) and depicted on the Flood Insurance Rate Maps (FIRMs). Most coastal jurisdictions participate in FEMA's National Flood Insurance Program (NFIP). The cities of Pembroke in Bryan County, and Gum Branch and Walthourville in Liberty County are currently not participating in the NFIP and have not had areas of Special Flood Hazard identified.

GDNR/EPD - Water Supply and Treatment

The 2006 Coastal Georgia Water and Wastewater Permitting Plan for Managing Salt Water Intrusion was developed by the Environmental Protection Division (GDNR/EPD). The plan emphasizes water conservation, water reclamation and reuse, and wastewater management, and will continue to guide the GDNR/EPD water management strategy until the adoption of the Comprehensive Statewide Water Management Plan. Implementation of the plan means that local governments must require all new all new developments to incorporate reuse water lines ("purple pipe"). The Cities of Hinesville and Midway have already implemented this requirement.

Soils

Most of the region's soils have been sampled, analyzed, and classified by the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS). According to NRCS findings, the majority of the coastal area is either poorly-suited or only marginally-suited for development, due to the drainage characteristics of soil types. Recent research at the University of Georgia's Department of Crop and Soil Science on the extent of soils suitable for septic systems is illustrated in Table F-2, with additional information in Maps F-6 and F-7.

Plant and Animal Habitat

The coastal region has an abundant marsh, estuarine, riverine and forest habitat that is home to diverse flora and fauna. A number of the region's native plants and animals are endangered or threatened at the state and/or federal levels. Table F-3 shows the U.S. Fish and Wildlife Service's current list of threatened and endangered species in Georgia.

Scenic Areas, Major Parks, and Recreation Areas

There are many areas in the coastal region that contain important natural resources or scenic beauty and therefore have been protected in some fashion. Map F-4 shows the location of

major conservation areas, and Table F-4 identifies the Heritage Trust Preserves, the State Wildlife Management Areas and State and Federal Parks and Historic Sites.

Additional Areas

Agriculture

Prime agricultural land has always been a scarce commodity in the coastal region, as the high water table and wetlands that exist in so many areas are not conducive to farming. Table F-5 shows the changes in the number of farms over time in the coastal counties, while Table F-6 shows changes in the acreage devoted to farming in the coastal counties.

A sharp decline in the number of farms is noted in all six coastal counties during the years 1978 to 1987, with a slight upswing during the period 1987 to 1997. This may be due to the 1991 introduction of the Georgia Conservation Use Assessment program (see Supporting Data: Reference, CUA), which provided a tax incentive for the retention of farmland. Another drop in the number of farms is evident during the period 1997 to 2002 for Camden (-24.19%) and Bryan (-17.72%) counties. This is in stark contrast to increases in Chatham (16%), Glynn (9.26%), Liberty (19.30%) and McIntosh (18.18%) counties. Over the same period, the number of farms in the state decreased by 0.06%.

Forestry

Coastal Georgia has an enormous area of land used for commercial forests. Much of the region is ideal for forestry for the very reason it is not suitable for farming: high water levels. Table F-7 shows the acreage of timberland in major landowner categories for each coastal county and for the state in 2004. Bryan, Camden and Liberty counties are the leaders in terms of acreage, but it is actually Bryan County that has the highest percentage of its land dedicated to forestry. Only Chatham has less than 50% forested. Over one third of the forested land in Bryan County is federally-owned, while the remainder is in private hands. However, in the remaining counties, private ownership is by far the largest category. In addition to all of this commercial timberland, local governments and the state and federal government hold 13% of the land and 23% of forested land in the coastal counties.

Table F-8 shows the change over time (1989-2004) of the percent of forested land in the coastal counties and the state. There has been a slow decline in timber acreage during the study period. The coastal counties' acreage devoted to timber and forestland constitutes just 4.6% of the state's total.

Impact of Hazardous and Toxic Waste

Table F-9 shows the volume of toxic chemicals released, as well as the proportionate share by population of the number of coastal county sites listed on the GDNR/EPD Hazardous Site Inventory. The region's share of the state's total environmental burden, when measured in terms of the release of toxic chemicals compared to population, is almost two times its share of the

population. In terms of the number of sites, the region has more than two times the number of sites compared to its share of the state population (see Table F-10).

Impact of Solid Waste

Efforts to reduce the risk of ground water contamination by landfills are supported by "Subtitle D" regulations implementing the Federal Resource Conservation and Recovery Act (RCRA). The risks from solid waste are especially troubling in the coastal region, where high water tables, vast areas of wetlands interlacing uplands, and numerous abandoned wells create a potential for contamination of both ground and surface water. As shown by Table F-11, solid waste generation has risen significantly in the region, more or less in parallel with population growth. This will probably continue, though recycling may mitigate the situation somewhat. Table F-12 lists currently operating landfills in the coastal counties, Table F-13 shows closed landfills and Table F-14 shows Inert Landfills operating in the coastal counties.

Impact of Port and Channel Maintenance

Shipping channels and harbors serving the world-class ports in Savannah and Brunswick require extensive dredging in order to achieve the depths required to accommodate increasingly large oceangoing vessels. The millions of cubic yards of material removed in these operations are placed in spoil areas approved by the U.S. Army Corps of Engineers.

Dredging and the depositing of discarded dredge materials have raised concerns about various environmental consequences, especially because of toxic industrial pollutants that are sometimes found in the dredged sediments. Another concern is the effect that significantly deepened channels have on conditions in adjacent shore and water-bottom areas. Changes in the hydraulics of water movement created by dredging are alleged to cause significant increases in the scouring effects that produce erosion of both shorelines and the bottoms of nearby rivers and creeks. These changes in water movement and salinity can also affect marine and estuarine habitat.

Impact of Water Access, Boating and Commercial Fishing

The recreational use of coastal waters for boating and fishing appears to be increasing at a much faster rate than population growth. Table F-16 shows the increase over time in registrations. There are many ways that these activities cause harm to environmental resources, including contamination from motor lubricants, increased shoreline erosion caused by vessels, and damage to marine or estuarine habitat due to the construction and use of dock facilities.

Commercial fishing activities, primarily shrimping, disturb water bottoms in near-shore areas through the use of trawl nets that destroy vegetation and increase turbulence. These effects are considerably less significant, however, than those caused by port and channel dredging and maintenance.

Coastal Management Program

The Georgia Coastal Zone Management Program (CZMP) is a coordinated framework to address environmental issues in the coastal region. In general it does not consist of additional regulations, but rather seeks to provide technical assistance, public education and monitoring. The state joined the Federal Coastal Zone Management Program in 1998, thus the Georgia CZMP is federally-approved, enabling it to qualify for certain grants and other funding. This also allows the program to administer certain projects, officially monitor particular conditions, and carry out some regulations. The program applies to eleven coastal counties (the six that this document addresses, and also Brantley, Charlton, Effingham, Long and Wayne) and is administered by the DNR/CRD.

The Georgia CZMP is engaged in several activities at present: water quality monitoring (including the National Shellfish Sanitation Program for the state), technical assistance to local governments and other entities (including information on Best Management Practices), carrying out the Coastal Incentive Grant (CIG) program, reviewing federal permits, licenses and projects, issuing marsh permits and shore permits, executing leases for state-owned water bottoms, supporting the control of nonpoint source pollution (as part of the federal Coastal Nonpoint Source Program), and engaging in general outreach and education.

Historic Resources

The historic and cultural resources along the coast reflect the almost 300 years of growth and development since the first settlement. In November 1732, Oglethorpe and 114 men, women and children boarded the good ship Anne for their voyage to the new world. After brief stops in Charleston and southern South Carolina, Oglethorpe and his followers landed at Yamacraw Bluff on February 12, 1733, and there established their new town. The General had laid this town out with precision, in a pattern of streets interspersed with public squares. Savannah thus became the first planned community in Georgia, if not the nation.

The influence of Oglethorpe and the Trustees waned over the next few years, and by 1750, they returned their charter to the King, making Georgia a royal colony, under the rule of the King, until the colony declared its independence along with its 12 sister colonies at the beginning of the Revolution in 1775. Georgia's coastal communities have played important roles throughout not only the State's history, but also nationally as reflected by the many historic and cultural resources that are to be found in all six counties. Tables G-1, G-2, G-3 and G-4, as well as Map F-5, all show historic resources across the region.

It is these resources, plus the many others that have not yet received any sort of designation, that are vital pieces of the region's history and that create the strong heritage tourism industry along the Georgia Coast. As a group, they provide the basis for a region-wide tourism program within several historic contexts: from Colonial times through early settlements, and into the 19th and 20th centuries. Heritage tourism provides a large part of the economic base of each of the counties and the region as a whole, particularly in Chatham and Glynn counties. By marketing these resources, whether in historic downtowns or neighborhoods and house museums or landscapes, communities can enhance their appeal to tourists.

Tourism and Coastal Resources

Tourism creates a powerful incentive to protect and maintain the natural and historic resource of the coast, for it is these resources that draw visitors to the region in the first place. Tourism is a vital component of the coastal economy, and therefore one should not perceive environmental protection and economic development as inevitably being in conflict. Rather, in this case they are mutually supporting; if the region's vibrant natural and historic resources were to be damaged or diminished, tourism would be reduced dramatically. This linkage between resources and tourism has always existed, but at present it is even more pronounced because popular awareness of the environment has grown. Special niches such as "eco-tourism" and "heritage tourism" now also exist.

Land Use

Bryan County

Much of Bryan County's recent growth is a result of migration from Chatham County. Bryan County does not have any barrier islands, and thus lacks true oceanfront beaches. The county is physically divided by the property of Fort Stewart. The northwestern part of the county, centered on the county seat of Pembroke, is growing slowly. The southeastern portion, centered on Richmond Hill, has largely become a "bedroom community" for people who work in Chatham County. The industrial park at Pembroke is a relatively small site, while the much larger Interstate Centre, straddling I-16 is home to large manufacturing and warehousing concerns. Richmond Hill also receives some tourism, as a result of its location near Fort McAllister and historic resources related to Henry Ford. In addition, the city enjoys the benefit of its location on I-95 and U.S. 17; the former is, of course, the more important transportation corridor, but a portion of the latter was recently widened to four lanes. Land use in the coastal counties is illustrated in Maps G-2 and G-3.

Camden County

Camden County is undergoing rapid residential development, mainly due to the Kings Bay Naval Submarine Base. The three cities of St. Marys, Kingsland and Woodbine have been expanding their boundaries through annexation. Spillover growth from the Jacksonville metropolitan area, just over the border in Florida and accessible via I-95, is also a factor. In recent years, the county learned a lesson on the importance of economic diversification when Durango Paper Company (formerly known as Gilman Paper Company), once the county's largest employer, ended its operations. This unexpected event left many local residents seeking employment elsewhere in the county and beyond. Nevertheless, growth continues largely unabated; in fact, the county was for a brief period one of the fastest growing counties in the nation. In a proactive planning effort, several Camden County organizations commissioned an Economic Diversification Study - Infrastructure Management Report that reviewed the county's infrastructure, with particular emphasis on water/wastewater, transportation and stormwater. The report emphasizes the importance of considering countywide needs and the cumulative effects of planning decisions on infrastructure (see Supporting Data: References, Economics).

Chatham County

Chatham County is, by most measures, the most important county in the coastal region. The City of Savannah, the dominant metropolis of the Georgia coast, is primarily urban; while the county's other municipalities are essentially suburban. The county is the most highly populated of the coastal counties, and it is also the largest in terms of land area. Much of Chatham County's importance is due to excellent transportation facilities such as I-95 and I-16, Savannah International Airport, the Georgia Ports Authority, and freight and passenger rail services. The county also possesses higher educational institutions such as Savannah State University,

Savannah College of Art and Design and Armstrong Atlantic State University. Savannah is justly renowned for its historic and cultural character, but it also uses aggressive economic development incentives to attract business and industry. These factors have dictated much of the land use in the county.

Glynn County

Glynn County is the second-largest of the six coastal counties in terms of population, and possesses a strong tourism, manufacturing and industrial base. The county has a Chamber of Commerce, Convention & Visitors Bureau, and Development Authority. A strong economic factor in the county is the tourism industry, driven primarily by Jekyll Island, St. Simons Island and Sea Island. The county has two large industrial parks: Colonel's Island Industrial Park, the primary activity of which is automobile processing, is a 6,500 acre facility served by rail and shipping and is immediately adjacent to I-95; and Naval Air Station (NAS) Glynco, which is home to high tech industries and the Federal Law Enforcement Training Center (FLETC), which is the largest such training center in the U.S. Brunswick, the county's only city, is home to a growing port, which is operated by the Georgia Ports Authority.

Liberty County

Liberty County, and its county seat of Hinesville, has seen rapid growth due to the expansion of the 3rd Infantry Division (Mechanized) at Fort Stewart. The fort consists of approximately 275,000 acres and is the largest military base east of the Mississippi River in terms of land area. The population of Hinesville is about 31,000, making it the second largest city in the region after Savannah. Of the county's other municipalities, Midway, Riceboro and Walthourville are growing at a modest rate, while Allenhurst, Flemington and Gum Branch remain steady. The land use and development patterns of Midway and Riceboro are influenced by their proximity to I-95, while Walthourville has grown by providing affordable housing to Fort Stewart enlistees. The Liberty County-Hinesville Chamber of Commerce and the Industrial Development Authority have done an excellent job of recruiting industry and business, including warehouse and distribution centers, diversifying the economic base of the community so that it does not rely entirely on the military base.

McIntosh County

McIntosh County is experiencing growth and development, particularly around the outlet shopping mall at Hwy 251 and I-95. The fishing industry, which has historically been a mainstay in McIntosh County, also generates income and employment. Due to the seasonal nature of the fishing industry, however, the shrimp fleet out of Darien does not offer high-paying long-term employment. Many county residents are employed by business and manufacturing facilities located in Glynn County. Recently the areas in and around Darien have become a "bedroom community" to some extent, due to the city's unique image as a small fishing village and its convenient access to I-95 and U.S. 17.

Regionally Significant Developments

There are a substantial number of regionally significant residential and industrial developments currently projected or underway in the coastal area. These will put further stress on the environmental resources, transportation networks, and community facilities of the counties where they are located. Such projects are known as Developments of Regional Impact (DRI), a technical term for projects above a certain size for which a regional review is conducted (see Table H-1 and Map G-1).

Conversion of Forest Land to Residential, Commercial and Industrial Uses

Over half of the coastal region is classified as commercial forestland (see Table F-7). Some of this land is held by small private landowners who sell their timber to pulp and paper companies, while vast acreage is owned by major paper manufacturers. Much of the land is being converted to other uses (usually residential but also commercial and industrial), which is a major shift in the existing patterns of land use.

Public Ownership of Coastal Lands

With two military bases, several wildlife management areas, a National Seashore and vast areas of state-managed tidal wetlands, public areas constitute approximately 34% of the region's total land area. The proportion varies significantly from county to county.

Development Constraints on Barrier Islands

Only three of Georgia's eight largest barrier islands are accessible by land via causeways. The remaining five islands are either publicly owned or are managed by various public agencies while remaining privately owned. State and national research and wildlife protection being carried out on these islands make them unique and significant, with an active constituency among naturalists, environmentalists and university research proponents, as well as their counterparts in state and federal agencies. Furthermore, federal law now discourages further development of barrier islands by restricting the use of federal subsidies (grants, loans and flood insurance protection) for the construction of roads, bridges and residential and commercial buildings on previously undeveloped islands.

Housing Quality

Many newer residential developments, especially in areas adjacent to Richmond Hill, Savannah and Brunswick, are targeted to the retirement and second-home markets. Much of the older housing, meanwhile, is in need of repair or simply substandard; this is especially the case in rural unincorporated areas. Many low-to-moderate income households are unable to acquire or retain ownership in conventional housing, and thus are turning to the manufactured housing market, particularly in McIntosh County. Some such households alternately choose to deal with the issue by moving further inland, resulting in longer commutes and greater congestion.

Development of Land Closer to Industrial Uses

As available buildable land becomes more scarce, marginal industrial land—areas that builders, developers and consumers previously avoided—tends to be developed. This has already occurred in Chatham County, where prime buildable land is in short supply and development is taking place on the western edge of the metropolitan area, formerly considered too close to industry for other uses.

Sprawl and "Leap-Frog" Development in Metropolitan Areas

Land development for non-industrial uses near metropolitan areas sometimes fails to happen on large buildable parcels that are ideal for the purpose, because they are being held for price speculation or because of exclusionary zoning. Extending public water supply, sewerage systems, and other public services to the more distant sites is often difficult and expensive. When private systems are substituted, their operating standards may not match the higher standards of public systems, and community health and environmental quality often suffer.

Smaller Lot Sizes and Fewer Amenities

The proliferation of residential DRIs is an indication of not only the desirability of the coastal region, but also of an expansion of moderately-priced, workforce housing. These developments are mainly located in close proximity to the Savannah job market (Pooler, Port Wentworth, South Effingham County and Richmond Hill), and often feature smaller lot sizes and fewer amenities. The result has been the development of a variety of lower-cost housing types built at a higher density, such as townhouses, patio homes, and zero-lot line houses. These styles are also popular with many seniors and second-home owners.

Mobile Homes and Manufactured Homes

A large segment of the region's housing stock is mobile or manufactured homes (see Table C-1 and C-6). However, resistance to these housing types is increasing. Reasons for this include the limited property taxes they generate and the negative image many people have of them. Since manufactured homes are the most affordable option in the region, such resistance to them may help push the coast's workforce housing further inland.

More Large-Scale Mixed-Use Developments

As real estate values and building costs continue to rise, the economies of scale for large land developments become more evident, and it is in the best interests of the community for such projects to be mixed-use. These usually have a positive effect on local infrastructure. An increasing number are planned to allow for public amenities such as schools and recreation. In addition, the placement of commercial uses close to residential dwellings can decrease traffic congestion and promote walking or biking. As with the workforce housing, these developments are often located in close proximity to Savannah (New Hampstead), Hinesville (Independence) and Richmond Hill (Genesis Pointe).

Resort-Style Development

Affluent retirees and second-home owners are increasingly coming to the Georgia coast. Resort-style developments have capitalized on that demand, but these often have a negative impact on the environment. In addition, the rising demand has reduced the affordability of housing in the region, driving out some longtime residents and making the economic situation more difficult for those that remain.

Intergovernmental Coordination

There are certain problems and issues confronting the coastal region that can best be dealt with in a coordinated manner, rather than by individual governments or entities acting in isolation. By the same token, many opportunities exist that can best be grasped by cooperative action as opposed to separate efforts. In some cases, local governments already work together, either on an informal basis or through jointly-controlled agencies. In other cases, the state or federal government formulates regulations and standards, which may be recommended or mandatory depending on the situation. In addition, there are many governmental agencies and authorities that act on a regionwide basis. All of these approaches fall under the broad category of intergovernmental coordination.

"Leap-Frog" Growth

"Leap-frog" development is often caused by the differing policies of various local governments, as suburbs close to a city choose to restrict growth while those further out seek to encourage it. The result is often an illogical pattern of development that causes environmental harm and traffic congestion. A more consistent approach, in which local government policies work in harmony throughout an entire region or metropolitan area, can yield better results.

Protection of the Environment

Environmental problems are another challenge that often requires regional action to be dealt with successfully. Otherwise polluters or noxious land uses will migrate to those areas where standards are lowest. Because ecosystems such as watersheds do not respect local government borders, the need for coordination is especially acute.

Coastal Management Program

The Georgia Coastal Management Program is administered by the GDNR/CRD. It is a coordinated effort to deal with environmental issues in the coastal region, and thus works extensively with local governments, other local actors, various state agencies, and the federal government. Among other activities, the program provides technical assistance, engages in outreach and education, performs monitoring, and administers federal grants.

Economic Development

Cooperation is also important in promoting economic development. Local governments often lack the resources to promote their economic potential on a nationwide or global basis, but a larger entity can do so. Tourism is the most relevant example of this for the coastal region. Local governments can also partner effectively so as to create the framework for economic development, such as by building a business park or improving an educational institution. Acting alone, small local governments generally lack the resources to carry out such projects. All six of the counties' development authorities participate in joint development authorities (JDA):

Chatham, Bryan and Liberty counties are members of the 16-county Middle Coastal Unified Development Authority (MCUDA). Camden, Glynn and McIntosh counties are members of the 6-county Southeast Georgia JDA.

Coastal Georgia Greenway

Coordination is vital in planning, developing and maintaining community facilities that serve the residents of more than just one locality. The Coastal Georgia Greenway will stretch along the entire Georgia coast, linking to networks in Florida and South Carolina. Obviously such a challenge can only be met by a tremendous amount of local cooperation, action at the regional level, and coordination between local and regional actors.

Hurricane Evacuation

In the event of a hurricane or major storm, significant intergovernmental coordination is necessary. GEMA has the main responsibility for planning and coordinating evacuations, but local governments must handle most of the actual work. Federal, state, and local agencies coordinate through all phases of the evacuation process. The Federal Highway Administration works regionally with GDOT, GEMA, and their counterparts in other affected states as the Evacuation Liaison Team (ELT). This work is disseminated to local jurisdictions through conference calls. The State Operations Center decides when to deploy the Evacuation and Re-entry Branch (ERB), which is composed of representatives of a number of state agencies. The ERB coordinator works with the local Emergency Operations Centers.

Ports

The investment required for operations, maintenance and expansion of the ports of Savannah and Brunswick is tremendous, and necessitates an overarching Port Authority. The orchestration of port-related activity requires a regional approach, in which the authority, as well as the state and local agencies, have common goals. Indeed, intergovernmental coordination can cross state lines. In March of 2007, the governors of Georgia and South Carolina jointly announced the plan to form a bi-state port authority that would build a port just north of Savannah, in Jasper County, South Carolina.

Military Bases

There are two important military bases in the coastal region, Fort Stewart/HAAF and Kings Bay Naval Submarine Base, both of which have a tremendous impact on land use, economics, transportation and demographics in the entire region. Local governments and the military must make extra efforts to work together, because the issues they face are often interlinked and decisions made by one group can have a large effect on the other. Implementation of the JLUS by affected local governments is just one way of strengthening the relationship.

Service Delivery Strategy

The service delivery strategy is a document that all the local governments of a particular county must agree upon. The strategy simply specifies how certain services and related facilities are provided over the entire area of the county, including both incorporated and unincorporated areas. Services that are commonly included in the strategy include water, sewer, solid waste, road maintenance, jails, police, fire, E-911, EMS, economic development, animal control, etc. The strategy is where intergovernmental coordination and cooperation—whether formal or informal—is often specified and described.

APPENDIX: DETAILED DATA AND INFORMATION

Appendix: Detailed Data and Information

Introduction

The purpose of this appendix is to present extensive data, in the form of tables and maps, as an additional resource to readers of this document. These tables and maps would be too burdensome if shown in the body of the document, as they would interfere with the flow of the text, but they are constantly referenced there so that the reader has the option of turning to this document and examining them. The detail and precision of this document are essential to the overall document, providing the basis upon which analysis, comprehension, ideas and proposals are built upon.

Population Data Tables

Table A-1: CQGRD Population Projections

Population	1980	1990	2000	2010 projection	2020 projection	2030 projection
Bryan	10,175	15,438	23,417	35,203	41,746	45,986
Camden	13,371	30,167	43,664	58,251	65,453	70,997
Chatham	202,226	216,935	232,048	262,138	286,869	307,472
Glynn	54,981	62,496	67,568	81,368	92,121	100,483
Liberty	37,583	52,745	61,610	75,656	82,856	89,163
McIntosh	8,046	8,634	10,847	14,262	16,939	18,626
Region	326,382	386,415	439,154	526,878	585,984	632,727

Source: *Georgia Coast 2030: Population Projections for the 10-County Coastal Region* (Center for Quality Growth and Regional Development at the Georgia Institute of Technology, 2006), http://www.coastalgeorgiardc.org/docs/cgrdc_population_report_101806.pdf

Table A-2: CQGRD Projected Growth Rates

	1980 - 1990	1990 - 2000	2000 - 2010	2010 - 2020	2020 - 2030
Bryan	52%	52%	50%	19%	10%
Camden	126%	45%	33%	12%	8%
Chatham	7%	7%	13%	9%	7%
Glynn	14%	8%	20%	13%	9%
Liberty	40%	17%	23%	10%	8%
McIntosh	7%	26%	31%	19%	10%
Region	18%	14%	20%	11%	8%

Source: *Georgia Coast 2030: Population Projections for the 10-County Coastal Region* (Center for Quality Growth and Regional Development at the Georgia Institute of Technology, 2006), http://www.coastalgeorgiardc.org/docs/cgrdc_population_report_101806.pdf

Table A-3: Census Estimates 2001 - 06

Population	2001	2002	2003	2004	2005	2006
Bryan	24,246	25,071	26,138	27,468	28,575	29,648
Camden	44,477	45,203	44,300	44,973	45,751	45,118
Chatham	233,126	234,981	235,624	237,705	238,039	241,411
Glynn	68,500	69,233	70,068	70,696	71,639	73,630
Liberty	59,775	60,681	59,510	60,320	60,688	62,571
McIntosh	11,072	10,943	10,971	11,066	11,000	11,248
Region	441,196	446,112	446,611	452,228	455,692	463,626

Source: U.S. Census: American Factfinder, T1. Population Estimates (2006 Population Estimates).

Table A-4: Maturing Population

Percent of population age 65 and over	1980	1990	2000
Bryan	7.4%	7.2%	7.3%
Camden	8.3%	5.1%	5.2%
Chatham	10.4%	12.8%	12.8%
Glynn	11.1%	13.9%	14.4%
Liberty	3.5%	3.7%	3.9%
McIntosh	11.2%	12.8%	11.8%
Region	9.6%	10.9%	10.8%

Source: U.S. Census

Table A-5 Hispanic Population

	2000	2005	% change
Bryan	465	*	
Camden	1,585	*	
Chatham	5,403	6,098	13%
Glynn	2,019	2,899	30%
Liberty	5,022	*	
McIntosh	99	*	

Source: U.S. Census. * 2005 data not available for this geography

Economic Development Data Tables

Table B-1: Regional Employment by Sector 2001 – 2006

Sector	1980	1990	2000	2005 projection	2010 projection	2020 projection
Farm	699	432	362	351	335	305
Forestry, Agricultural Services, Other	2,164	1,955	2,789	2,906	3,004	3,241
Mining	64	75	122	128	134	143
Construction	9,249	16,009	15,203	15,760	16,093	16,757
Manufacturing	26,199	25,393	23,247	22,567	22,125	21,823
Trans., Comm. & Public Utilities	11,517	12,593	13,497	13,675	13,813	14,048
Wholesale Trade	5,928	6,980	7,597	8,048	8,380	9,127
Retail Trade	26,482	38,387	49,881	53,463	57,270	65,268
Finance, Insurance & Real Estate	10,353	10,600	13,814	14,478	15,176	16,768
Services	31,421	53,015	76,541	84,998	94,188	114,739
Federal Civilian Government	6,509	9,495	9,410	9,623	9,828	10,177
Federal Military Government	21,570	21,343	26,490	26,900	27,228	27,597
State & Local Government	18,841	22,557	27,670	29,340	30,977	34,444
Total	170,996	218,834	266,623	282,237	298,551	334,437

Source: Woods and Poole Economics, Inc.
Adapted from CGRDC (Coastal Georgia Regional Development Center) *Regional Plan Update 2004* to include six coastal counties

Table B-2: Regional Earnings by Sector 1980 – 2020

Sector	1980 (000)	1990 (000)	2000 (000)	2005 projection (000)	2010 projection (000)	2020 projection (000)
Farm	$7,665	$3,484	$2,502	$2,581	$2,602	$2,682
Forestry, Agricultural Services, Other	$30,159	$30,818	$44,501	$48,327	$52,046	$60,789
Mining	$13,518	$578	$2,206	$2,330	$2,447	$2,682
Construction	$246,634	$473,479	$435,804	$462,452	$483,292	$526,861
Manufacturing	$970,694	$1,020,837	$1,205,084	$1,251,796	$1,305,735	$1,437,319
Trans., Comm. & Public Utilities	$363,625	$435,422	$511,507	$537,757	$563,653	$616,626
Wholesale Trade	$173,351	$215,627	$270,454	$293,801	$313,142	$356,297
Retail Trade	$400,501	$524,999	$748,352	$820,983	$899,808	$1,072,855
Finance, Insurance & Real Estate	$146,941	$209,673	$343,730	$381,071	$420,644	$511,167
Services	$589,387	$1,217,571	$1,873,633	$2,213,460	$2,603,548	$3,557,171
Federal Civilian Government	$273,632	$407,115	$503,712	$535,681	$568,889	$636,875
Federal Military Government	$663,183	$746,026	$1,101,103	$1,169,203	$1,237,252	$1,370,806
State & Local Government	$433,629	$634,617	$889,697	$973,249	$1,059,139	$1,249,722
Total	$4,312,920	$5,920,251	$7,932,277	$8,692,687	$9,512,203	$11,401,850

Source: Woods and Poole Economics, Inc.
Adapted from CGRDC *Regional Plan Update 2004* to include six coastal counties.

Table B-3: Major Employers of 200 or more Employees (2007)

County	Employer	Type of Business	# Employees
Bryan	Board of Education	Education and Administration	797
	Board of Commissioners	Government	460
Camden	(3) Kings Bay Naval Base	Military Defense	12,500
	Lockheed	High-Tech Defense	440
Chatham	(3) Hunter Army Airfield	Military Defense	4,891
	Gulfstream Aerospace	Aircraft Manufacture	5,000
	International Paper	Paper; corrugated products	970
	Great Dane Trailers, Inc.	Transportation Equipment	675
	Brasseler	Dental Instruments	400
	Derst Baking	Baking	434
	Georgia Pacific	Plywood & Paneling	1,420
	Global Ship Systems	Yachts	390
	JCB	Excavators & Loaders	360
	Savannah Morning News	Newspaper	418
	Savannah Sugar	Sugar/Molasses	377
	Tronox	Titanium Dioxide, Gypsum	314
Glynn	Koch Cellulose	Pulp & Paperboard	806
	Sea Island Company	Resort	937
	King & Prince Seafood	Seafood Processing	582
	(3) FLETC	Law Enforcement	673
Liberty	Fort Stewart Army Base	Military Defense	Mil - 22,000
			Civilian - 3,356
	Hysil Manufacturing	Gift Wrap	200
	Interstate Paper	Kraft Linerboard	249
McIntosh	None over 200 employees		

Source: Georgia Manufacturing Directory, http://www.georgiafacts.net/net/location/statefacts.aspx?s=3014.0.5.3013; The Center for Land Use Interpretation (GA), http://ludb.clui.org/tag/Military/GA/; and Comprehensive Economic Development Strategy - 2005, CGRDC. Adapted from CGRDC Regional Plan Update 2004 to include six coastal counties.

Table B-4: Per Capita Income Trends

	1970	1980	1990	2001	2002	2003	2004
Bryan	$2,486	$5,214	$13,015	$25,732	$25,885	$26,323	$27,566
Camden	$2,785	$7,707	$11,875	$21,789	$22,578	$23,392	$24,231
Chatham	$3,481	$8,432	$17,664	$28,526	$29,116	$30,146	$31,691
Glynn	$3,316	$8,798	$17,478	$29,259	$29,629	$30,210	$32,049
Liberty	$2,564	$7,046	$8,257	$17,818	$18,154	$20,045	$21,471
McIntosh	$2,089	$5,087	$10,884	$18,253	$19,125	$19,597	$20,725
Region	$2,717	$6,748	$12,698	$23,563	$24,081	$24,952	$26,289

Source: 2001-2004 from 2007 Georgia County Guide. Georgia Statistics System: Cross Sectional Analysis - http://www.georgiastats.uga.edu/crossection.html, "Economics, "Per Capita Income". 1970-1990, CGRDC.

Adapted from CGRDC Regional Plan Update 2004 to include six coastal counties.

Table B-5: Median Household Income

	1999	2003
Bryan	$48,345	$51,620
Camden	$41,056	$43,164
Chatham	$37,752	$36,775
Glynn	$38,765	$38,742
Liberty	$33,477	$34,019
McIntosh	$30,102	$29,912
Region	$38,250	$39,039
Georgia	$42,433	$42,421

Adapted from CGRDC *Regional Plan Update 2004* to include six coastal counties. Source: 2007 Georgia County Guide. Georgia Statistics System: Cross Sectional Analysis - http://www.georgiastats.uga.edu/crossection.html, "Economics, "Per Capita Income".

Table B-6: Economic Impact of Domestic Travel in Georgia - 2005

	Travel Expenditures	Travel-Generated Payroll	Travel-Generated Employment (number of people)	Travel-Generated Employment as % of Population	State Tax Revenue Generated	Local Tax Revenue Generated
Bryan	$29,430,000	$6,610,000	340	1.45%	$1,150,000	$880,000
Camden	$67,960,000	$14,630,000	800	1.83%	$2,610,000	$2,030,000
Chatham	$920,500,000	$256,450,000	10,930	4.71%	$38,590,000	$27,800,000
Glynn	$290,500,000	$80,350,000	3,800	5.62%	$12,160,000	$8,780,000
Liberty	$74,410,000	$11,040,000	550	0.89%	$2,630,000	$2,220,000
McIntosh	$11,460,000	$2,640,000	140	1.29%	$440,000	$340,000
Region Total	$1,394,260,000	$371,720,000	16,560	N/A	$57,580,000	$42,050,000
Region Average	$232,376,667	$61,953,333	2,760	3.77%	$9,596,667	$7,008,333
Georgia Total	$16,572,500,000	$6,158,400,000	217,000	N/A	$779,100,000	$498,100,000
Georgia Average	$104,229,560	$38,732,075	1,365	2.65%	$4,900,000	$3,132,704

Source: is *2005 Travel Profile – Georgia State, Visitors' Statistics & Travel Economic Impact, Regional Analysis,* Travel Industry Association of America for the GA Department of Economic Development.

Table B-7: Employment in the Leisure and Hospitality Sector

	Bryan	Camden	Chatham	Glynn	Liberty	McIntosh	Region
1990	385	965	11,378	5,923	848	247	19,746
1991	412	1,036	11,003	5,755	1,013	220	19,439
1992	427	1,160	11,622	5,005	1,018	198	19,430
1993	442	1,310	12,153	5,041	1,054	196	20,196
1994	509	1,330	12,713	5,389	1,089	193	21,223
1995	629	1,378	13,882	5,782	1,068	279	23,018
1996	698	1,393	14,496	5,936	1,120	314	23,957
1997	662	1,598	14,701	5,543	1,166	556	24,226
1998	621	1,702	15,303	6,001	1,275	399	25,301
1999	719	1,665	15,634	6,032	1,512	421	25,983
2000	680	1,760	16,137	6,326	1,442	403	26,748
2001	660	1,798	15,568	6,522	1,476	437	26,461
2002	647	1,932	16,056	6,552	1,571	569	27,327
2003	633	2,174	16,349	7,888	1,519	556	29,119
2004	675	2,142	16,520	7,807	1,755	603	29,502
2005	746	2,338	17,165	8,220	1,645	422	30,536

Source: is the Georgia Statistics System, drawing upon the data of the *Georgia County Guide* (available online at http://www.georgiastats.uga.edu/timeseries1.html)

Housing Data Tables

Table C-1: Type of Housing

1990	Bryan	Camden	Chatham	Glynn	Liberty	McIntosh	Region
Households	5,070	9,459	81,111	23,947	15,136	3,186	137,909
Total Units	5,549	10,885	91,178	27,724	16,776	4,276	156,388
Single family	63%	57%	64%	66%	46%	57%	62%
Multifamily	5%	20%	29%	21%	25%	3%	25%
Mobile home/other	32%	23%	7%	14%	28%	40%	13%
2000							
Households	8,089	14,705	89,865	27,208	19,383	4,202	163,452
Total Units	8,675	16,958	99,683	32,636	21,977	5,735	185,664
Single family	65%	63%	68%	64%	55%	53%	65%
Multifamily	9%	18%	27%	22%	20%	3%	23%
Mobile home other	25%	19%	6%	13%	25%	44%	13%

Source: U.S. Census of Population and Housing, 2000: SF1-H1, SF3-P15 & SF3-H30.Adapted from CGRDC *Regional Plan Update 2004* to include six coastal counties.

Table C-2: Age of Housing 1990 - 2000

1990	Bryan	Camden	Chatham	Glynn	Liberty	McIntosh	Region
Total Units	5,549	10,885	91,178	27,724	16,776	4,276	156,388
One year old	7%	13%	2%	3%	5%	5%	4%
2 - 5 years old	23%	28%	11%	11%	20%	10%	14%
5 – 10 years old	14%	20%	10%	14%	23%	11%	13%
11 – 20 years old	24%	16%	19%	23%	32%	32%	21%
21 – 30 years old	12%	8%	15%	19%	9%	17%	15%
31 – 40 years old	7%	7%	18%	15%	5%	12%	15%
41 – 50 years old	5%	3%	12%	9%	4%	6%	10%
over 50 years old	7%	3%	9%	8%	2%	4%	7%
2000							
Total Units	8,675	16,958	99,683	32,636	21,977	5,735	185,664
One year old	7%	4%	3%	4%	3%	4%	3%
2 - 5 years old	17%	17%	7%	11%	18%	14%	11%
5 – 10 years old	20%	22%	8%	8%	16%	13%	11%
11 – 20 years old	25%	32%	18%	21%	30%	24%	22%
21 – 30 years old	14%	10%	17%	18%	21%	19%	17%
31 – 40 years old	6%	6%	13%	15%	7%	12%	12%
41 – 50 years old	3%	5%	15%	12%	3%	7%	11%
over 50 years old	8%	5%	19%	12%	3%	8%	14%

Source: U.S. Census of Population and Housing, 1990: SF3-H1; SF3-H25. 2000 Census: SF1-H1; SF3-H34Adapted from CGRDC Regional Plan Update 2004 to include six coastal counties.

Table C-3: Condition of Housing

1980	Bryan	Camden	Chatham	Glynn	Liberty	McIntosh	Region
Total Units	3,511	5,380	77,485	22,358	10,800	3,643	123,177
Units w/o plumbing	8%	6%	2%	2%	6%	11%	3%
Units w/o kitchen	7%	6%	2%	2%	5%	9%	3%
Units w/o heat	1%	1%	0%	0%	0%	1%	0%
Units served by shallow	8%	3%	1%	1%	5%	11%	2%
1990							
Total Units	5,549	10,885	91,178	27,724	16,776	4,276	156,388
Units w/o plumbing	3%	1%	1%	0%	0%	2%	1%
Units w/o kitchen	2%	1%	1%	0%	0%	2%	1%
Units w/o heat	1%	0%	0%	0%	0%	0%	0%
Units served by shallow	5%	3%	1%	2%	3%	11%	2%
2000							
Total Units	8,675	16,958	99,683	32,636	21,977	5,735	185,664
Units w/o plumbing	1%	2%	1%	1%	1%	2%	1%
Units w/o kitchen	1%	2%	1%	1%	1%	1%	1%
Units w/o heat	1%	0%	0%	0%	1%	1%	0%
Units served by shallow well	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: U.S. Census of Population and Housing, 2000:; SF3-H40, SF3-H47.
"N/A": means information not available.

Table C-4: Median Property Value

Median Property Value	1980		1990		2000	
County	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**
Bryan	$30,000	4	$70,200	1	$115,600	1
Camden	$28,900	5	$66,700	3	$85,300	4
Chatham	$36,100	3	$63,300	4	$95,000	3
Glynn	$36,700	2	$67,200	2	$114,500	2
Liberty	$36,900	1	$60,400	5	$79,800	6
McIntosh	$19,000	6	$37,500	6	$81,700	5
Georgia	$36,900		$71,300		$111,200	

Source: U.S. Census of Population and Housing, 2000: SF3.Adapted from CGRDC Regional Plan Update 2004 to include six coastal counties

Table C-5: Median Rent

Median Rent	1980		1990		2000	
County	**Rent**	**Rank**	**Rent**	**Rank**	**Rent**	**Rank**
Bryan	$108	5	$226	5	$450	3
Camden	$142	2	$352	1	$462	2
Chatham	$133	4	$296	3	$475	1
Glynn	$141	3	$295	4	$417	5
Liberty	$185	1	$345	2	$428	4
McIntosh	$101	6	$170	6	$274	6
Georgia	$153		$344	-	$505	

Source: U.S. Census of Population and Housing, 2000: SF3, H56.
Adapted from CGRDC *Regional Plan Update 2004* to include six coastal counties

Table C-6: Projected Type of Housing

Year 2020	Bryan	Camden	Chatham	Glynn	Liberty	McIntosh	Region	Georgia
Households	14,127	25,197	107,373	33,730	27,877	6,234	214,538	3,929,140
Units	14,927	29,104	116,693	42,460	32,379	8,653	244,216	4,568,375
Single Family (SF)	10,057	19,652	86,175	26,765	20,635	4,158	167,442	3,173,101
SF % of units	67%	68%	74%	63%	64%	48%	69%	69%
Multifamily (MF)	1,830	4,683	26,130	10,261	4,928	292	48,124	836,093
MF % of units	12%	16%	22%	24%	15%	3%	18%	18%
Mobile home/other (MH)	3,040	4,769	4,388	5,434	6,816	4,203	28,650	559,181
MH % of units	20%	16%	4%	13%	21%	49%	12%	12%

Source: U.S. Census of Population and Housing, 2000: SF3-H1; SF3-H30; SF1-P15. Household numbers (1990-2020) supplied by Woods & Poole.
Adapted by the Coastal Georgia RDC from Woods & Poole and U.S. Census data

Community Facilities and Services Data Tables

Table D-1: Per Capita Municipal Solid Waste (MSW) Disposal Rate/MSW Reduction Goal

Commodity	Actual 2004 Lbs/Person	Projected 2012 Lbs/Person	Projected % 2012	Projected 2017 Lbs/Person	Projected % 2017
Glass	0.153	0.140	8%	0.140	8%
Paper	1.181	1.000	15%	0.850	15%
Metal	0.228	0.198	13%	0.186	18%
Plastic	0.663	0.560	16%	0.530	20%
TOTAL	2.23	1.99	11%	1.71	23%

Source: DCA Office of Environmental Management

Table E-1: Student Teacher Ratio

	Student-Teacher Ratio
Bryan	15.7
Camden	14.7
Chatham	13.9
Glynn	14.1
Liberty	15.5
McIntosh	15.9
Coastal 6 Total	12.4
State	15

Sources: NCES/CCD, 2004-5 data, http://nces.ed.gov/ccd/districtsearch/

Table E-2: Spending per Student

	Per FTE Instruction
Bryan	$4,569
Camden	$5,414
Chatham	$5,529
Glynn	$6,082
Liberty	$5,170
McIntosh	$4,979
Coastal 6 Total	$2,705
State	$5,415

Sources: GA Dept. Education, 2006 Financial Data Collection System; http://app.doe.k12.ga.us/ows-bin/owa/fin_pack_revenue.entry_form

Natural Resources Data Tables

TableF-1: Barrier Islands

Island	Approximate Acreage	Approximate Miles of Beach
Tybee	1,500	3.4
Little Tybee	1,600	3.0
Wassaw	2,500	6.0
Ossabaw	11,800	9.5
St. Catherine's	7,200	11.0
Wolf Island + (Egg and Little Egg)	5,126	-
Blackbeard	3,900	7.5
Sapelo	10,900	5.6
Little St. Simons	2,300	6.5
Sea	1,200	3.8
St. Simons	12,300	3.8
Jekyll	4,400	8.0
Little Cumberland	1,600	2.4
Cumberland	15,100	16.9
Total	81,426	88.3

Source: Coastal Zone Management Program.

Table F-2: Acreage Suitable for Septic Systems

	Bryan and Chatham		Non-urban	Liberty and Long		Non-urban	McIntosh		Camden and Glynn		Non-urban
	Acres	%	%	Acres	%	%	Acres	%	Acres	%	%
Conventional	34,464	6.3	7.7	69,805	11.9	11.9	16,470.00	6.1	20,098.00	2.9	3.0
Drip	39,173	7.1	8.7	114,311	19.5	19.6	28,102.50	10.3	49,566.25	7.3	7.3
Mound	118,538	21.5	26.4	39,961	6.8	6.8	18,418.50	6.8	123,134.10	18.1	18.1
Unsuitable	256,799	46.7	57.2	360,534	61.5	61.7	208,789.00	76.8	487,066.40	71.4	71.6
Urban	101,257	18.4	-----	1,373	0.2	-----	-----	-----	1,991.25	0.3	
Total	550,230	100.0	100.0	585,984	100.0	100.0	271,780.00	100.0	681,856.00	100.0	100.0

Source: Department of Crop and Soil Science, University of Georgia

Table F-3: Endangered Species

U.S. Fish & Wildlife Service	Bryan	Camden	Chatham	Glynn	Liberty	McIntosh
Mammal						
Northern Right whale (Eubalaena glacialis) E/E	X	X	X			X
Humpback whale (Megaptera novaeangliae) E/E	X	X	X	X	X	X
West Indian manatee (Trichechus manatus) E/E	X	X	X	X	X	X
Round Tailed Muskrat (Neofiber alleni) */T		X				
Bird						
Bald eagle (Haliaeetus leucocephalus) T/E	X	X	X	X	X	X
Bachman's Warbler (Vermivora bachmanii) E/E	X	X	X	X	X	X
Wood stork (Mycteria americana) E/E	X	X	X	X	X	X
Piping plover (Charadrius melodus) T/T	X	X	X	X	X	X
Red cockaded woodpecker (Picoides borealis) E/E	X	X	X	X	X	X
Gull-billed Tern (Sterna nilotica) */T		X	X	X		X
Kirtland's Warbler (Dendroica kirtlandii) E/E				X		
Invertebrate						
Altamah spinymussel (Elliptio spinosa) #/E						X
Reptile						
Eastern indigo snake (Drymarchon corais couperi) T/T	X	X	X	X	X	X
Loggerhead sea turtle (Caretta caretta) T/T	X	X	X	X	X	X
Hawksbill Sea Turtle (Eremochelys imbricate) E/E	X	X	X	X		X
Kemp's Ridley sea turtle (Lepidochelys kempii) E/E	X	X	X	X	X	X
Green Sea Turtle (Chelonia mydas) T/T	X	X	X	X	X	X
Leatherback sea turtle (Dermochelys coriacea) E/E	X	X	X	X	X	X
Gopher tortoise (Gopherus polyphemus) */T	X	X	X	X	X	X
Amphibian						
Flatwoods Salamander (Ambystoma cingulatum) T/T	X		X		X	X
Fish						
Shortnose sturgeon (Acipenser brevirostrum) E/E	X	X	X	X	X	X
Plant						
Georgia plume (Elliottia racemosa) */T	X					
Narrowleaf Obedient Plant (Physostegia leptophylla) */T	X		X		X	X
Pondspice (Litsea aestivalis) */T	X	X		X		X
Ball-moss (Tillandsia recurvata) */T		X		X		
Climbing Buckthorn (Sageretia minutiflora) */T		X	X	X		X
Hartwrightia (Hartwrightia floridana) */T		X				
Wagner spleenwort (Asplenium heteroresiliens) */T		X				
Pondberry (Lindera melissifolia) E/E			X			
Buckthorn (Sideroxylon thornei) */E					X	

Source: U.S. Fish and Wildlife Service, Georgia Ecological Services Field Office, http://www.fws.gov/athens/endangered/counties_endangered.html
Federal/State; * - No Federal Status; # - Candidate Species; E - Endangered list; T - Threatened list

Table F-4: Preserves, WMAs and State and Federal Sites

Heritage Trust Preserve	Location
Ossabaw Island	Chatham County
Richmond Hill Wildlife Management Area	Liberty, Bryan and McIntosh counties
Wormsloe Historic Site	Chatham County
Little Tybee Island/Cabbage Island	Chatham County
Altamaha River Corridor	McIntosh, Wayne and Long counties
Wildlife Management Areas	**Location**
Altamaha WMA	McIntosh County
Richard J. Reynolds WMA	McIntosh County
Ossabaw Island WMA	Chatham County
Paulk's Pasture WMA	Glynn County
Richmond Hill WMA	Bryan and McIntosh counties
Sansavilla WMA	Glynn County, also Wayne County
State / Federal Parks and Historic Sites	**Location**
Crooked River State Park	Camden County
Fort McAllister Historic Site	Bryan County
Skidaway Island State Park	Chatham County
Fort King George Historic Site	McIntosh County
Hofwyl-Broadfield Plantation Historic Site	Glynn County
Fort Morris Historic Site	Liberty County
Richmond Hill State Park & Fort McAllister State Historic Site	Bryan County
Sapelo Island Reserve and Reynolds Mansion	McIntosh County
Cumberland Island National Seashore	Camden County
Fort Pulaski National Monument	Chatham County
Fort Frederica National Monument	Glynn County

Table F-5: Number of Farms

County	# of Farms, 1978	# of Farms, 1987	# of Farms, 1997, rev.	# of Farms, 2002	# of Farms, % Change 1997-2002
Bryan	109	62	79	65	-17.72%
Camden	61	54	62	47	-24.19%
Chatham	86	51	50	58	16.00%
Glynn	62	48	54	59	9.26%
Liberty	62	41	57	68	19.30%
McIntosh	34	23	33	39	18.18%
GEORGIA	51,405	43,552	49,343	49,311	-0.06%

Source: 2007 Georgia County Guide and the 2006 Farm Gate Survey - http://www.georgiastats.uga.edu/crossection.html, "Agriculture, "Farm Characteristics".

Table F-6: Acreage in agriculture; Land in Farms

County	Acres, 1992	Acres, 1997, rev	Acres, 2002	% total Land, 2002	% Change 1997-2002
Bryan	15,948	29,744	17,155	6.07%	-42.32%
Camden	17,944	21,224	12,389	3.07%	-41.63%
Chatham	8,518	9,393	9,080	3.24%	-3.33%
Glynn	9,681	10,323	7,594	2.81%	-26.44%
Liberty	15,583	23,085	15,935	4.80%	-30.97%
McIntosh	8,003	5,757	11,306	4.08%	96.39%
GEORGIA	10,025,581	11,262,838	10,744,239	28.99%	4.60%

Source: 2007 Georgia County Guide and the 2006 Farm Gate Survey - http://www.georgiastats.uga.edu/crossection.html, "Agriculture, "Farm Characteristics".

Table F-7: Forest Land and Ownership, 2004

County	Forest Acreage (000)	% of Total Land Area	Total Land Area (000)	Other Federal, Acres (000)	State, Acres (000)	Local & Municipal, Acres (000)	Private, Acres (000)
Bryan	218.3	77.2	282.7	83.8	.	.	134.6
Camden	263.7	65.4	403.1	4.9	.	.	258.7
Chatham	96.8	34.5	280.4	.	19.4	5.2	72.2
Glynn	138.8	51.4	270.3	.	1.1	5.1	132.6
Liberty	234.6	70.6	332.2	108.6	.	.	126
McIntosh	166.7	60.1	277.4	5	22.2	.	139.5
GEORGIA	24,151.00	65.2	37,059.80	688	311.1	226.2	22064.8

Source: 2007 Georgia County Guide and the 2006 Farm Gate Survey - http://www.georgiastats.uga.edu/crossection.html "Natural Resources", "Land Area, Forestland".

Table F-8: % Forest Land over Time

County	% of all land 1989	% of all land 1997	% of all land 2004	# acres (000), 2004
Bryan	82.7%	78.3%	77.2%	218.3
Camden	76.7%	68.7%	65.4%	263.7
Chatham	34.2%	32.2%	34.5%	96.8
Glynn	58.5%	55.2%	51.4%	138.8
Liberty	74.1%	71.6%	70.6%	234.6
McIntosh	62.8%	60.9%	60.1%	166.7
GEORGIA	65.10%	65.90%	65.20%	37059.8

Source: 2007 Georgia County Guide and the 2006 Farm Gate Survey - http://www.georgiastats.uga.edu/crossection.html, "Natural Resources", "Land Area, Forestland".

Table F-9: Hazardous Waste Sites (2006) and Permitted Toxic Chemical Release (2004)

County	1- Hazardous Site Inventory	2 - Toxic Chemical Release (lbs/day)	3 - Population
Bryan	1	63	29,648
Camden	2	161,884	45,118
Chatham	43	7,084,636	241,411
Glynn	15	2,363,605	73,630
Liberty	3	711,584	62,571
McIntosh	2	498	11,248
Region	66	10,322,270	463,626
State	454	118,864,819	9,363,941
Region's % Share	8.59%	8.68%	4.95%

Source: Adapted from CGRDC *Regional Plan Update 2004*. 1-2006 EPD Hazardous Site Inventory; 2 – *The 2006 Georgia County Guide*; 3 – U.S. Census, 2006 Estimates.

Table F-10: Hazardous Site Inventory (HIS), July 2007

HSI ID SITE and NAME	
Bryan	
10646 Bryan Co. US 280 Mill Creek MSWLF	
Camden	
10093 U.S. Naval Submarine Base, Kings Bay	10647 Camden County Vacuna Road LF
Chatham	
10003 CSX Transportation - Savannah (Tremont Road)	10415 Savannah Electric - Plant Kraft
10018 Atlantic Wood Industries	10434 Savannah Paint Manufacturing
10045 Colonial Terminals, Plant #1	10440 Blue Ribbon Dry Cleaners
10091 Travis Field/Savannah International Airport	10464 Vopak Terminal Savannah
10095 Central of GA RR/Bernuth-Lembcke Site	10497 Southeastern Family Homes, Inc.
10098 Colonial Terminals, Plant #2	10521 Hunter Army Airfield - MCA Barracks
10101 CSX Transportation - Powell Duffryn	10553 Georgia Air National Guard/Savannah/Site 8
10105 Hunter Army Airfield	10555 Georgia Air National Guard/Savannah/Site 10
10114 Union Camp Corp - Former Amoco Property	10579 Abercorn & Largo Development
10128 Atlanta Gas Light Company - Savannah MGP Site	10590 Central of Georgia Railroad Company - Battlefield Park
10162 Ashland Chemical Company	10591 Southern Motors of Savannah, Inc.

HSI ID SITE and NAME	
10179 Kerr McGee - Deptford Tract	10600 Colonial Terminals, Inc.- 1100 West Lathrop Property
10208 139 Brampton Road	10611 CSXT Depriest Signal Shop
10241 Union Camp Corp - Allen Blvd Landfill	10641 Kerr McGee Pigments, Inc.
10255 Union Camp Corp - Hwy 17 Disposal Site	10649 Chatham County Landfill
10351 ARAMARK Uniform Services	10696 Hercules, Inc.
10364 Circle K Store #7703 (Former)	10698 Natrochem, Inc. - Central of Georgia
10371 Southern States Phosphate & Fertilizer Co.	10764 Martha's Dry Cleaner
10372 Truman Parkway, Phase II	10788 Southside Cleaners
10395 Hunter Army Airfield, Fire Training Area	10789 Dry Clean, USA
10406 McKenzie Tank Lines, Inc.	10820 Abercorn Common
	10849 Toto Distribution (Former)
Glynn	
10006 Hercules 009 Landfill - NPL Site	10251 Chemresol
10028 Escambia Treating Company - Brunswick	10282 4th Street Landfill (Brunswick Airport)
10058 Hercules Inc.	10317 T Street Dump
10069 Atlanta Gas Light Company - Brunswick MGP Site	10587 STSE, Inc.
10144 LCP Chemicals - NPL Site	10619 Georgia Pacific - Former Chlorate Plant, Brunswick
10156 Federal Law Enforcement Training Center	10665 Glynn Co. - Cate Road C&D MSWLF
10242 Terry Creek Dredge Spoil Area	10769 Lanier Shopping Plaza
	10804 Cork's Fabricare
Liberty	
10420 Daniels Cleaners	10708 Busby Cleaners
10672 Liberty County - Limerick Road MSWLF	
McIntosh	
10325 Butler Island	10675 McIntosh County - King Road MSWLF

Source: EPD - http://www.gadnr.org/epd/Files_PDF/gaenviron/hazwaste/listco.pdf

Table F-11: Solid Waste Generation 1992-2002 (Tons per Year)

County	1992	1994	1996	1998	2000	2002	Increase
Bryan	12,046	12,548	13,043	13,544	14,046	14,675	21.8%
Camden	30,603	32,453	34,727	36,135	36,823	37,336	22.1%
Chatham	401,748	416,478	431,304	460,163	460,990	475,874	18.5%
Glynn	66,280	73,577	78,592	81,325	84,058	86,384	30.3%
Liberty	29,452	34,071	36,381	38,690	41,000	43,310	47.1%
McIntosh	11,291	1,135	11,657	11,779	11,900	12,162	7.7%
Region	551,420	570,262	605,704	641,636	648,817	669,741	21.5%

Adapted from CGRDC *Regional Plan Update 2004*. Original source was *Coastal Georgia Regional Solid Waste Management Plan* (1994)

Table F-12: Landfills operating in Coastal Counties (FY 2006)

	Facility Name	Dominion	Remaining Capacity (CY)	Average Daily Tons	Rate Of Fill (CYD)	Years Remaining
Camden	Camden Co-SR110 MSWL	P	1,761,903	223	447	14.0
	Camden Co - S.R. 110 C/D/I Waste Landfill	P	23,031,586	666	740	100.0
Chatham	Savannah-Dean Forest Rd (SL)	P	2,121,158	352	704	10.0
	Chatham Co-Thomas Ave (L)	P				
	Superior Landfill & Recycling Center	PC	3,959,727	1220	1627	9.0
	Savannah Regional Industrial Landfill, Inc	CI	3,423,179	876	1298	9.0
Glynn	Eller-Whitlock Ave (L)	PC	78,358	13	27	9.0
Liberty	US Army - Ft Stewart Main Cantonment (SL)	P	862,832	47	94	33.0
	US Army-Ft Stewart Main Cantonment (L)	P	117,728	0	0	1,280.0
McIntosh	McIntosh Co - King Rd (SL)	P	669,281	53	106	20.0

Source: DCA Office of Environmental Management.
P – Public; PC – Private Commercial; CI - Commercial Industrial

Table F-13: Closed landfills

Facility Name	Date Ceased Accepting Waste
Bryan	
Bryan Co - US 280/Mill Creek (SL)	04-Apr-94
Bryan Co - SR 144 Spur Ph 1 (L)	24-Aug-89
Bryan Co - SR 144 Spur Ph 2 (L)	13-Oct-95
Camden	
US Navy - King Bay Ph 1 (L)	07-Dec-87
Camden Co - Vacuna Rd Ph 2 (SL)	27-Sep-92
US Navy - Kings Bay Ph 3 (L)	01-Apr-92
Chatham	
Savannah - Bacon Park (L)	29-Dec-87
Chatham Co - Chevis Rd (L)	13-Sep-00
Chatham Co - I 16 Bloomingdale (L)	08-Apr-94
Superior Sanitation - Little Neck Rd (SL)	09-Jun-95
Port Wentworth - Augustine Creek (L)	21-Jul-88
Tybee Island - Polk Ave/Van Horne Dr (L)	03-Feb-88
Chatham Co - Sharon Park (L)	20-Apr-99
Chatham Co - SR 367 Wilmington Island Ph 2 (L)	08-Apr-94
Carter - Quacco Rd (L)	30-Nov-87
Crosby - Quacco Rd (L)	30-Oct-90
Glynn	
Jekyll Island Auth - Old Plantation Rd (L)	01-Jul-91
Glynn Co - Cate Rd (SL)	07-Nov-97
Glynn Co - Frederica Academy SSI (L)	28-Oct-87
Brunswick - Dolphin St (L)	16-Mar-87
Hutcheson - Petersville Rd (L)	25-Oct-90
Merritt - SR 303/US 341 (L)	20-Jul-88
Glynn Co - Cate Rd (L)	07-Nov-97
Liberty	
Liberty Co - Limerick Rd (SL)	30-Sep-93
Liberty Co - CR 194 #3 (L)	02-Jun-88
Liberty Co - Limerick Rd (L)	23-Dec-98
Liberty Co - Wells Rd (L)	18-Jun-91
McIntosh	
Darien - SR 251 W (L)	29-May-79
DNR - Sapelo Island #2 (L)	01-Mar-88

Source: DCA Office of Environmental Management.

Table F-14: Inert Landfills

Permit Number	Facility Name
Bryan	
PBR-015-08IL	R. B. Baker Construction, Inc
PBR-015-01IL	Charles L. Stafford Us17/Ga144
PBR-015-04IL	Bryan Co Commission Board
PBR-015-05IL	R.B. Baker Construction, Inc. #1
PBR-015-06IL	R. B. Baker Construction Inc
PBR-015-07IL	Raybon Kangeter, Private Il
PBR-015-03IL	Bryan County Board Of Commissioners
Camden	
PBR-020-01IL	Naval Submarine Base
PBR-020-03IL	City Of Kingsland Refuse Rd./Louis Williams Ave.
PBR-020-04IL	Luther Marion Lambert Old Jefferson Road
PBR-020-06IL	Timothy Norton
PBR-020-02IL	Rhone-Poulene Ag Company
Chatham	
PBR-025-33IL	Wilson Machinery
PBR-025-12IL	Devory Dowdy Staley Avenue
PBR-025-13IL	Neal A. Wittkamp Rose Dhu Road
PBR-025-14IL	Joe Rowland/Clark Hughes
PBR-025-15IL	Millard And/Or Jewel Wheeler
PBR-025-18IL	Jewell G. Wheeler
PBR-025-19IL	Simon Holdings, Inc.
PBR-025-23IL	City Of Tybee Island
PBR-025-11IL	A.L. Wilkes Mohawk Street
PBR-025-34IL	R.B. Baker Construction, Inc.
PBR-025-32IL	Norfolk-Southern Corp.-Real Estate Development
PBR-025-43COL	Windsor Forest Wastewater Treatment Plant
PBR-025-36IL	Quick Lock Center
PBR-025-27IL	Harry L. King
PBR-025-24IL	City Of Tybee Island Inert Landfill-Walter Brown
PBR-025-28IL	Lackerson
PBR-025-31IL	Theodore Gordon
PBR-025-39IL	Skidaway Island State Park
PBR-025-35IL	Porter Contracting Co. Inc
PBR-025-02IL	City Of Tybee Island - Robinson Ave.
025-056D(L)	Chatham Co Thomas Ave
025-051D(SL)	City Of Savannah Dean Forest Road
PBR-025-45IL	Hunter Army Airfield
PBR-025-04IL	W.J. Bremer, Jr. East President Street

Permit Number	Facility Name
PBR-025-05IL	James H. Wrenn GA Highway 204
PBR-025-06IL	APAC Georgia, Inc. SR204
PBR-025-07IL	Shuman Construction Co., Inc. US 17 S
PBR-025-08IL	The Branigar Organization, Inc.
PBR-025-09IL	Georgia Ports Authority Hutchinson Island Inert
PBR-025-10IL	David C. Mark East 64th Street
Glynn	
PBR-063-231IL	Daniels Construction And Demolition, Inc.
PBR-063-22IL	Vernon D. Taylor
PBR-063-32IL	Jekyll Island Authority #1
PBR-063-31IL	Jekyll Island Authority #2
PBR-063-26IL	Quality Development & Rentals Co. Inc.
PBR-063-20IL	Oyster Shell Construction
PBR-063-16IL	Dan O'Quinn
PBR-063-30IL	Drigger's Construction Company
PBR-063-03IL	Calsilite Manufacturing Corp., Inc. Line St.
PBR-063-20IL-A	Bert Branson
PBR-063-06IL	Glynn Co-Glynco Jetport
PBR-063-04IL	Glynn Co-Anderson
PBR-063-02IL	Daniels Construction & Demo
PBR-063-07IL	Anderson
PBR-063-08IL	Glynn Co-Brunswick
PBR-063-09IL	Glynn Co-Merritt
PBR-063-10IL	Glynn Co-Sears, SR 27 (L)
PBR-063-11IL	Campbell's Clearing And Equipment Co.
PBR-063-15IL	Seaboard Construction Company
PBR-063-05IL	Brunswick Pulp & Paper
Liberty	
PBR-089-03IL-A	GA Power Co/Operating Dept
PBR-089-13IL	R. B. Baker Construction, Inc.
PBR-069-33IL	Margaret Road
PBR-089-16IL	Fort Stewart Rubble
PBR-089-15IL	Fort Stewart Yard Waste
PBR-089-12IL	Midway Equipment Rental (Coastal Excavators, Inc.)
PBR-089-10 OSTT	Interstate Paper LLC
PBR-089-09IL	David McDonald Rentals
PBR-089-04IL	Paul Krebs Construction Co. SR 119
PBR-089-02IL	B M &J Contractors -Shaw Road
PBR-089-05IL	Jack P. Morgan-Hornes Subdivision
PBR-089-03IL	Fort Stewart

Permit Number	Facility Name
PBR-089-32IL	Fort Stewart 3rd Infantry Division
McIntosh	
PBR-098-03IL	Rowe's Land Clearing And Paving
PBR-098-01IL	McIntosh Co-King Rd
098-011(L)	McIntosh Commission Board King Road

Source: DCA Office of Environmental Management.

Table F-15: Coastal Resources

Location	Description
Jekyll Island	A state-owned and managed by the Jekyll Island Authority. It is the sixth largest of Georgia's barrier islands. With about 4,400 acres of uplands, the island is maintained and protected from development by state legislation passed in 1950. State law requires that it be maintained as 35% developed and 65% undeveloped. The island is used for a variety of active, passive, residential, recreational and educational purposes. In 1978, the Jekyll Island Club Historic District was designated a National Historic Landmark
Gray's Reef	The Sanctuary is a seventeen square (nautical) mile section of Gray's Reef. Established under Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, it was designated a National Marine Sanctuary in January 1981. Gray's Reef lies 35 miles northeast of Brunswick in waters ranging from 50 to 72 feet deep. It is one of the largest, near shore, live-bottom reefs on the nation's east coast, with an unusual mixture of tropical and temperate species. The reef serves research, educational, and recreational fishing functions.
The Sapelo Island National Estuarine Research Reserve	Created in 1972 and received its designation in 1976, the second in the nation. Approximately 6,000 acres in area, the reserve occupies almost one-third of the island, which is the fourth largest of Georgia's barrier islands and one the most pristine. The reserve includes unspoiled coastal salt marsh, maritime forest, tidal creeks, beach and dunes within the Duplin River estuary. The property is used for basic research as well as public education and compatible low-impact recreation. The University of Georgia's Marine Institute operates a major research center open to qualified scientists from throughout the world who study both biological and geological processes.
Altamaha River, a Nature Conservancy, "bioreserve" project	This entails detailed study, inventory and assessment of resources, land ownership and activities. The efforts of the Nature Conservancy will result in a management plan and a conservation program, with special attention to the most important and/or threatened resources within the corridor. The organization is working with landowners to implement improved methods for resource management, including the protection of land through conservation easements.

Table F-16: Boat Registration

County	2000	2001	2002	2003	2004	2005	2006	2007	% Increase 2000-07	* *ALT-2007*	% Increase 2000-07
Bryan	2,638	2,685	2,825	3,005	3,081	3,111	3,176	3,199	21.27%	*3,486*	32.15%
Camden	2,416	2,535	2,560	2,723	2,750	2,869	2,865	2,795	15.69%	*3,291*	36.22%
Chatham	13,079	13,145	13,112	13,435	13,245	12,856	12,532	11,938	-8.72%	*13,673*	4.54%
Glynn	5,323	5,459	5,578	5,757	5,761	5,712	5,605	5,420	1.82%	*6,261*	17.62%
Liberty	2,160	2,199	2,266	2,360	2,416	2,416	2,452	2,357	9.12%	*2,690*	24.54%
McIntosh	1,738	1,903	2,005	2,108	2,105	2,147	2,132	2,072	19.22%	*2,368*	36.25%
Region total	27,354	27,926	28,346	29,388	29,358	29,111	28,762	27,781	1.56%	31,769	16.14%

Source: Data from boat registration history table; * - Data from current (Summer 2007) boat registration table, Department of Natural Resources-Wildlife Resources Conservation Center.

Historic Resources Data Tables

Table G-1: Coastal Georgia National Register of Historic Places listings

Resource Name	Address	Listed
BRYAN		
Bryan County Courthouse	College St., Pembroke	6/14/1995
Fort McAllister	10 mi. E of Richmond Hill via GA 67	5/13/1970
Glen Echo	2 mi. (3.2 km) E of Ellabelle on GA 204	1/9/1978
Kilkenny	E of Richmond Hill on Kilkenny Rd.	2/14/1979
Old Fort Argyle Site	Address Restricted (Savannah)	3/31/1975
Pembroke Historic District	Centered on US 280 and Main St., Pembroke	12/8/2004
Richmond Hill Plantation	E of Richmond Hill on Ford Neck Rd.	1/30/1978
Seven Mile Bend	Address Restricted (Richmond Hill)	4/11/1972
Strathy Hall	SE of Richmond Hill	1/21/1979
CAMDEN		
Camden County Courthouse	4th and Camden Aves., Woodbine	9/18/1980
Crooked River Site (9CAM118)	Address Restricted, St. Marys	12/23/1985
Duck House	Cumberland Island, St. Marys	2/13/1984
Dungeness Historic District	Address Restricted, St. Marys	2/13/1984
Greyfield	Cumberland Island, Camden County	7/24/2003
High Point-Half Moon Bluff Historic District	NE of St. Marys on Cumberland Island, St. Marys	12/22/1978
Kingsland Commercial Historic District	Area surrounding S. Lee St., between King and William Sts., Kingsland	3/17/1994
Little Cumberland Island Lighthouse	N end of Little Cumberland Island, St. Marys	8/28/1989
Main Road	Cumberland Island, St. Marys	2/13/1984
McIntosh, John Houstoun, Sugarhouse	Ga. Spur 40, 6 mi. N of St. Marys	4/2/1992
Orange Hall	311 Osborne, St. Marys	5/7/1973
Plum Orchard Historic District	Address restricted, St. Marys	11/23/1984
Rayfield Archeological District	Address Restricted, St. Marys	2/13/1984

Resource Name	Address	Listed
St. Marys Historic District	Roughly bounded by Waterfront Rd., Norris, Alexander, and Oak Grove Cemetery, St. Marys	5/13/1976
Stafford Plantation Historic District	Address Restricted, St. Marys	11/23/1984
Table Point Archeological District	Address Restricted, St. Marys	11/23/1984
Woodbine Historic District	Jct. of Bedell Ave. and 3rd and 4th Sts., Woodbine	5/12/1999
CHATHAM		
Ardsley Park-Chatham Crescent Historic District	Roughly bounded by Ardsley Pk., Chatham Crescent, Bull St., Baldwin Pk. and Ardmore, Savannah	8/15/1985
Bethesda Home for Boys	S of Savannah at Ferguson Ave. and Bethesda Rd., Savannah	9/12/1973
Bonaventure Cemetery	Bonaventure Rd., 1 mi. N of US 80, Savannah	2/2/2001
Central of Georgia Depot and Trainshed	W. Broad and Liberty Sts., Savannah	12/8/1976
Central of Georgia Railroad: Savannah Shops and Terminal Facilities	W. Broad St. and Railroad Ave., Savannah	6/2/1978
Central of Georgia Railway Company Shop Property	Between W. Jones St. and Louisville Rd., Savannah	3/5/1970
Charity Hospital	644 W. 36th St., Savannah	5/2/1985
CSS GEORGIA (ironclad)	Address Restricted, Savannah	2/10/1987
Cuyler--Brownville Historic District	Roughly bounded by Anderson Ln., W. 31st St., Montgomery St., Victory Dr., Ogeechee Rd., and Hopkins St., Savannah	2/13/1998
Daffin Park--Parkside Place Historic District	Bounded by Victory Dr., Waters Ave., Bee St. and 51st Street Ln., Savannah	5/12/1999
Davenport, Isaiah, House	324 E. State St., Savannah	9/22/1972
Drouillard--Maupas House	2422 Abercorn St., Savannah	5/13/1991
Eastside Historic District	Roughly bounded by E. Broad, Cedar, Gwinnett and Anderson Sts., Savannah	11/7/2002
Federal Building and U.S. Courthouse	Wright Sq., Savannah	6/7/1974
First Bryan Baptist Church	575 W. Bryan St., Savannah	5/22/1978
Lebanon Plantation	SW of Savannah	11/29/1979
Fort Pulaski National Monument	17 mi. W of Savannah, Cockspur Island	10/15/1966
Fort Screven Historic District	Tilton, Butler, Van Horn, Railroad and Alger Aves., and Pulaski Rd., Tybee Island	5/25/1982

Resource Name	Address	Listed
Gordonston Historic District	Roughly bounded by Skidaway Rd., Goebel Ave., Gwinnett St., and Pennslyvania Ave., Savannah	10/11/2001
Green-Meldrim House	Macon and Bull Sts., Savannah	1/21/1974
Hill Hall at Savannah State College	Savannah State College campus, Thunderbolt	4/23/1981
Hodgson, W. B., Hall	501 Whitaker St., Savannah	3/25/1977
Isle of Hope Historic District	Roughly bounded by Skidaway River, Parkersburg Rd., Island, Cornus, and Noble Glen Drs., Savannah	9/7/1984
Laurel Grove-North Cemetery	W. Anderson St., Savannah	8/4/1983
Laurel Grove-South Cemetery	37th St., Savannah	9/6/1978
Savannah Victorian Historic District	Roughly bounded by Gwinnett, Price, Anderson, and Montgomery Sts.	12/11/1974
Low, Juliette Gordon, Historic District	10 Oglethorpe Ave., E., 330 Drayton St., 329 Abercorn St., Savannah	10/15/1966
Massie Common School House	207 E. Gordon St., Savannah	4/13/1977
Mulberry Grove Site	Address Restricted, Port Wentworth	7/17/1975
New Ogeechee Missionary Baptist Church	751 Chevis Rd., Savannah	8/8/2001
Nicholsonville Baptist Church	White Bluff Rd.	5/22/1978
Ossabaw Island	7 mi. S of Savannah, bounded by the Atlantic Ocean, Bear R., Ogeechee R., and St. Catherine's Sound, Savannah	5/6/1996
Owens-Thomas House	124 Abercorn St., Savannah	5/11/1976
Savannah and Ogeechee Canal	Roughly along I-95, between the Savannah and Ogeechee Rivers	8/11/1997
Savannah Historic District	Bounded by E. Broad, Gwinnett, and W. Broad Sts. and the Savannah River	11/13/1966
Savannah Victorian Historic District (Boundary Increase)	Bounded by Gwinnett, Anderson and 31st Sts., Savannah	5/20/1982
Scarbrough, William, House	41 W. Broad St.	6/22/1970
Sea View Apartments	7 18th St., Tybee Island	4/22/2003
Slotin Building	101 W. Broad St., Savannah	3/24/1983
St. Bartholomew's Church	Cheves Rd., Chatham	6/17/1982
St. Philip AME Church	613 W. Broad St., Savannah	8/2/1984
Sturges, Oliver, House	27 Abercorn St., Savannah	7/14/1971
Telfair Academy	121 Barnard St., Savannah	5/11/1976

Resource Name	Address	Listed
Thomas Square Streetcar Historic District	Roughly bounded by Anderson Ln., 42nd St., Victory Dr., E. Broad St., and Martin Luther King, Jr. Blvd., Savannah	7/29/1997
Two Pierpont Circle	2 Pierpont Cir., Savannah	4/4/1990
Tybee Island Back River Historic District	Along Chatham Ave., from Tybee River to Venetian Dr., Tybee Island	8/5/1999
Tybee Island Strand Cottages Historic District	Along Butler Ave., between 12 St. and 14th St., Tybee Island	4/2/1999
U.S. Customhouse	1--3 E. Bay St., Savannah	5/29/1974
Vernonburg Historic District	Dancy Ave., Rockwell Ave. and S. Rockwell Ave., Vernonburg	6/22/2000
Wild Heron	15 mi. SW of Savannah off U.S. 17, Savannah	12/16/1977
Wormsloe Plantation	Isle of Hope and Long Island, Savannah	4/26/1973
GLYNN		
Ballard School	323 Old Jesup Hwy., Brunswick	10/27/2004
Brunswick Old Town Historic District	Roughly bounded by 1st, Bay, New Bay, H and Cochran Sts., Brunswick	4/26/1979
Colored Memorial School and Risley High School	1800 Albany St., Brunswick	11/7/2002
Faith Chapel	Old Plantation Rd., Jekyll Island	7/14/1971
Fort Frederica National Monument	12 mi. N of Brunswick	10/15/1966
Hamilton Plantation Slave Cabins	Address Restricted, St. Simons Island	6/30/1988
Hofwyl-Broadfield Plantation	N of Brunswick on U.S. 17	7/12/1976
Horton-duBignon House, Brewery Ruins, duBignon Cemetery	Riverview Dr., Jekyll Island	9/28/1971
Jekyll Island Club	Between Riverview Dr. and Old Village Blvd., Jekyll Island	1/20/1972
King and Prince Hotel	201 Arnold Rd., St. Simons Island	1/12/2005
Needwood Baptist Church and School	US 17, 1 mi. S of Hofwyl-Broadfield Plantation State Historic Site., Brunswick	12/17/1998
Rockefeller Cottage	331 Riverview Dr., Jekyll Island	7/14/1971
St. Simons Lighthouse and Lighthouse Keepers' Building	600 Beachview Dr., St. Simons Island	4/13/1972
Strachan House Garage	414 1/2 Butler Ave., Glynn	7/3/1997
US Coast Guard Station--St. Simons Island	4201 First St., St. Simons Island	4/1/1998

Resource Name	Address	Listed
LIBERTY		
Bacon-Fraser House	208 E. Court St., Hinesville	4/18/1985
Bowens, Eddie, Farm	660 Trade Hill Rd., Seabrook	10/25/2004
Cassel's Store	Off U.S. 82, McIntosh	8/5/1983
Dorchester Academy Boys' Dormitory	8787 East Oglethorpe Highway (US 84), Midway	6/23/1986
Flemington Presbyterian Church	Off Old Sunbury Rd., Flemington	6/17/1982
Fort Morris	Address Restricted, Midway	5/13/1970
Liberty County Courthouse	Courthouse Sq., Hinesville	9/18/1980
Liberty County Jail	302 S. Main St., Hinesville	8/18/1992
Midway Historic District	Jct. U.S. 17 and GA 38, Midway	3/1/1973
Ripley, Sam, Farm	1337 Dorchester Village Rd., Midway	10/27/2004
St. Catherine's Island	10 mi. off the GA coast between St. Catherines Sound and Sapelo Sound, South Newport	12/16/1969
Woodmanston Site	SW of Riceboro off Barrington Rd., Riceboro	6/18/1973
MCINTOSH		
Behavior Cemetery	S end of Sapelo Island, 1.25 mi W of Hog Hammock	8/22/1996
D'Antignac House	Address Restricted, Crescent	12/16/1977
First African Baptist Church at Raccoon Bluff	E side of Sapelo Island, approximately 2 mi. N of Hog Hammock	9/6/1996
Fort Barrington	NW of Cox	9/27/1972
Fort King George	E of U.S. 17, Darien	12/9/1971
Hog Hammock Historic District	E side of Sapelo Island, Hog Hammock	9/6/1996
Ridge, The	Old Shell Rd. GA 99, Ridgeville	4/18/1985
Sapelo Island Lighthouse	S end of Sapelo Island, S of University of Georgia Marine Institute	8/26/1997
Vernon Square-Columbus Square Historic District	Roughly bounded by Market, Trumbull, Rittenhouse and Ft. King George Dr., Darien	3/14/1985
West Darien Historic District	Bounded by 8th St., US 17, Darien River, and Cathead Creek,	9/17/2001

Table G-2: Listing Of National Historic Landmarks in coastal counties

Landmarks	Location
Central Of Georgia Railroad Shops/Terminal	Savannah, Chatham County
Dorchester Academy Boys' Dormitory	Midway, Liberty County
Fort James Jackson	Savannah, Chatham County
Green- Meldrim House	Savannah, Chatham County
Jekyll Island	Jekyll Island, Glynn County
Low, Juliette Gordon, Historic District	Savannah, Chatham County
Owens Thomas House	Savannah, Chatham County
St. Catherine's Island	Liberty County
Savannah Historic District	Savannah, Chatham County
Scarbrough, William, house	Savannah, Chatham County
Telfair Academy Of Arts And Sciences	Savannah, Chatham County

Table G-3: National Register listings with National Significance

Site	Period of Significance
Woodmanston Site at the LeConte Plantation Riceboro;	(1750 to 1824)
Fort Barrington in McIntosh County	(1750 to 1874 with particular significance during the War of 1812)
Old Fort Argyle Site	(c1700 until 1749)
CSS Georgia	Ironclad used during the War Between the States.

Table G-4: Historic Properties

State owned historic sites in region	Fort King George- Darien (SP)
	Fort McAllister- Richmond Hill (SP)
	Fort Morris- Midway (SP)
	Hofwyl-Broadfield Plantation- Brunswick (SP)
	Wormsloe – Savannah
	Sapelo Island Reserve and Reynolds Mansion
Federal historic properties	Cumberland Island National Seashore
	Fort Pulaski National Monument
	Fort Frederica National Monument
State parks w/historic associations	Fort King George- Darien
	Fort McAllister- Richmond Hill

Land Use Data Tables

Table H-1: Proposed Developments of Regional Impact (DRI) from July 2004 - June 2007

Project Name	Type	Jurisdiction	Residential (Units)	Commercial (Acres)	Commercial (Sq. Ft.)	Industrial (Sq. Ft.)	Date Initiated
Orafol	I	Bryan				220,000	4/22/05
Hidden Creek	H	Bryan	140				7/19/05
Belfast Lake Subdivision	H	Bryan	180				7/19/05
Tivoli Estates	H	Bryan	145				8/9/05
Georges Bluff Subdivision	H	Bryan	490				9/14/05
Interstate Centre South	I	Bryan					9/16/05
South Bryan County WWTP	WWTP	Bryan					1/17/06
River Marsh Marina	MU	Bryan	185				3/8/06
NorthPoint-Bryan Co	W&D	Bryan				400,680	4/12/05
Interstate Center II	I	Bryan				5,300,000	11/21/06
Daniel Siding Development	MU	Bryan					1/26/07
Interstate center Expansion	I	Bryan					2/20/07
JF Gill Tract	H	Bryan					5/21/07
BLT Project	MU	Bryan					5/21/07
Blichton Crossing	MU	Bryan - Pembroke					12/8/06
Love's Travel Stop (8 diesel pumps and 85 truck spaces)	TS	Bryan - Richmond Hill					1/26/05
White Oak Village	H	Bryan - Richmond Hill	224				2/7/05
Ford Park of Commerce	C	Bryan - Richmond Hill		63			4/15/05
Elbow Swamp Subdivision	H	Bryan - Richmond Hill	500				6/2/05

Project Name	Type	Jurisdiction	Residential (Units)	Commercial (Acres)	Commercial (Sq. Ft.)	Industrial (Sq. Ft.)	Date Initiated
Elbow Swamp Subdivision	H	Bryan - Richmond Hill	450				8/15/05
River Place Plantation	H	Camden					9/16/04
Riverfront Estate	H	Camden	294				9/16/04
Tuscan Landing	H	Camden	125				9/17/04
River Place Plantation Subdivision (resubmitted)	H	Camden	154				12/20/04
Bridge Pointe at Jekyll Sound	MU	Camden	1,000	10			6/3/05
The Landings	MU	Camden	5,600	180	250,000		7/28/05
Timberland Estates	H	Camden	232				10/11/05
Maiden Creek Landing	H	Camden	318				1/5/06
Timberland Estates	H	Camden	100				2/14/06
Lakes at Spring Bluff	H	Camden	1,045				9/22/06
Riverfront Estates	H	Camden					12/5/06
Lake Oleander West	H	Camden					12/21/06
Lake Forest Phase IV	H	Camden - Kingsland	164				12/10/04
Bay Tree Plantation	H	Camden - Kingsland	391				5/25/05
Laurel Landing	H	Camden - Kingsland	1,102				6/2/05
Harriet's Bluff	H	Camden - Kingsland	1,310				6/2/05
Westhaven Subdivision	H	Camden - Kingsland	730				7/14/05
Fiddler Cove	H	Camden - Kingsland	644	68			7/27/05
Waters Edge	H	Camden - Kingsland	159				9/19/05
Winding Cove	H	Camden - Kingsland	254				10/26/05
Marsh Landing @ Crooked River	H	Camden - Kingsland	249				12/7/05
Lake Victoria	H	Camden - Kingsland	230				12/14/05
Scrubby Bluff	H	Camden - Kingsland	1,007				1/31/06

Project Name	Type	Jurisdiction	Residential (Units)	Commercial (Acres)	Commercial (Sq. Ft.)	Industrial (Sq. Ft.)	Date Initiated
Bay Tree	H	Camden - Kingsland	312				6/15/06
Cypress Point	H	Camden - Kingsland	273				6/15/06
Kingsland West	H	Camden - Kingsland	236				6/15/06
Waters Edge	H	Camden - Kingsland	159				8/31/06
Kingsland Plantation	H	Camden - Kingsland					2/9/07
South Grove Multifamily Development	H	Camden - Kingsland					3/29/07
Driggers Kingsland Southern Tract	MU	Camden - Kingsland					5/29/07
Winding River	H	Camden - St Marys	572				3/31/05
Kings Bay Pro 3 Townhomes	H	Camden - St Marys	250				12/2/05
The Paddocks	H	Camden - St Marys	477				8/29/05
Cannon Forrest	H	Camden - St Marys	391				10/31/05
Timucua/Tamarac	MU	Camden - St Marys	312		425,000		3/28/06
Osprey Cove	H	Camden - St Marys	181				6/30/06
Durango	MU	Camden - St Marys	3,020		250,000		7/6/06
Sail Cove	C	Camden - St Marys					3/2/07
Satilla River Bluffs	MU	Camden - Woodbine	2,546		586,200		8/29/05
NorthPort	W&D	Chatham				4,104,000	4/6/05
Hutchinson Island Silo	H	Chatham	500				5/16/05
Quacco Rd	H	Chatham	426				5/23/06
Newton Tract	H	Chatham	800				11/10/06
Pilot Travel Center	TS	Chatham					6/25/07
Wynn-Capallo Tract	MU	Chatham - Pooler	800	70			1/21/05
Savannah Quarters	MU	Chatham - Pooler	3,600	450			2/23/05
LogistiCenter	W&D	Chatham - Pooler				1,000,000	8/28/06
Wal-Mart & Lowes	C	Chatham - Pooler					4/26/07
Dean Forest Business Park	I	Chatham - Pooler					6/16/07
Anderson Tract	W&D	Chatham - Port Wentworth				2,000,000	10/28/04

Project Name	Type	Jurisdiction	Residential (Units)	Commercial (Acres)	Commercial (Sq. Ft.)	Industrial (Sq. Ft.)	Date Initiated
Southern Region Industrial Realty	W&D	Chatham - Port Wentworth				4,212,500	1/25/05
Wentworth Station	MU	Chatham - Port Wentworth		103	1,000,000		7/13/05
Newport	H	Chatham - Port Wentworth	842				4/13/06
Rice Creek	MU	Chatham - Port Wentworth	545		200,000		7/17/06
New Hampstead	MU	Chatham - Savannah	8,500		1,120,000		1/25/05
McGregor Park	H	Chatham - Savannah	626				10/12/05
Spivey Tract Hutchinson Isl.	MU	Chatham - Savannah	1,900		30,000		10/17/05
Trade Port	W&D	Chatham - Savannah				749,050	11/7/05
Johnson-Tennenbaum Tract	W&D	Chatham - Savannah				1,512,500	11/9/05
Belford	MU	Chatham - Savannah	2,210		196,900		2/12/06
Tradeport (see 952)	W&D	Chatham - Savannah				126,200	8/2/06
Sustainable Fellwood	MU	Chatham - Savannah					1/29/07
Ft Argyle Village	MU	Chatham - Savannah					4/5/07
Calvary Campus & Community	MU	Chatham - Savannah					4/5/07
Bradley park	MU	Chatham - Savannah					6/20/07
Hermitage Island	H	Glynn	1,250	12			8/16/05
Exit 29 WWTP	WWTP	Glynn					8/30/05

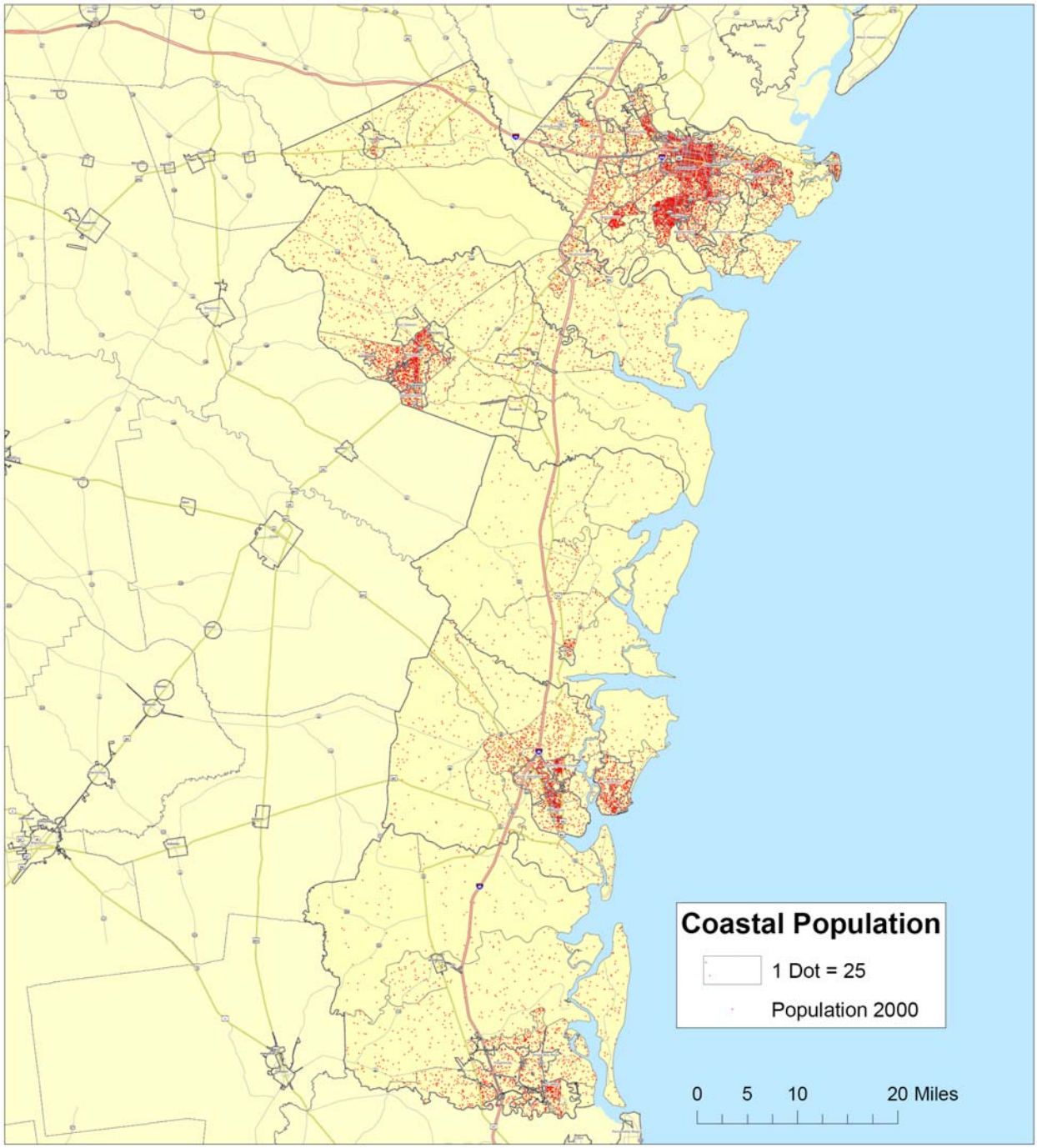
Project Name	Type	Jurisdiction	Residential (Units)	Commercial (Acres)	Commercial (Sq. Ft.)	Industrial (Sq. Ft.)	Date Initiated
Hopewell Creek	MU	Glynn	1,900		200,000		3/23/06
Satilla Forest	MU	Glynn	3,100		100,000		9/15/06
Liberty Harbor	H	Glynn - Brunswick	1,800	110	300,000		9/8/05
CAP Brunswick	C	Glynn - Brunswick			550,000		11/8/05
Crossgate	H	Guyton	129				6/29/06
RAF Project (Target)	W&D	Liberty				1,530,722	7/16/04
Liberty Gateway at Martin Plantation	MU	Liberty	956		6,000		11/13/06
Independence	MU	Liberty - Hinesville	10,800		2,000,000		11/30/04
WWTP Hinesville	MU	Liberty - Hinesville					3/3/06
Dryden & Zechman Project	MU	Liberty - Hinesville					8/22/06
Fraser Master Plan	MU	Liberty - Hinesville		41			8/22/06
Midway Ready Mix	CP	Liberty - Midway					4/21/05

Q: Quarries, Asphalt & Cement Plants
TS: Truck Stop
WHF: Waste Handling Facility
H: Housing
I: Industrial
WWTP: Waste Water Treatment Plant
MU: Mixed use
CP: Cement Plant
W&D: Wholesale & Distribution
C: Commercial

Source: Georgia Department of Community Affairs (http://www.dca.state.ga.us/DRI/Submissions.aspx

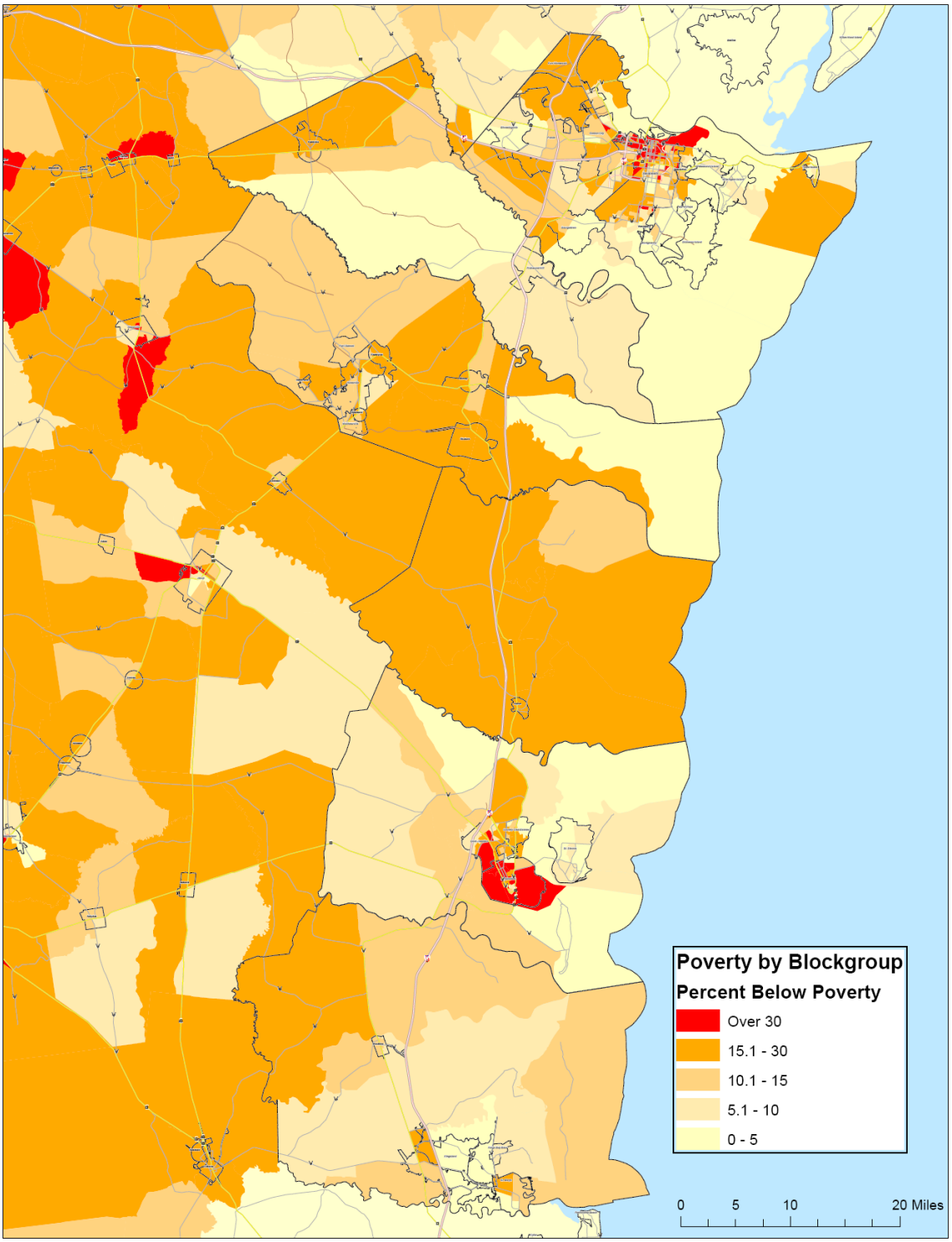
Supporting Data: Maps

Map A-1: Population by Block Group Dot Density Map (2000 Census)



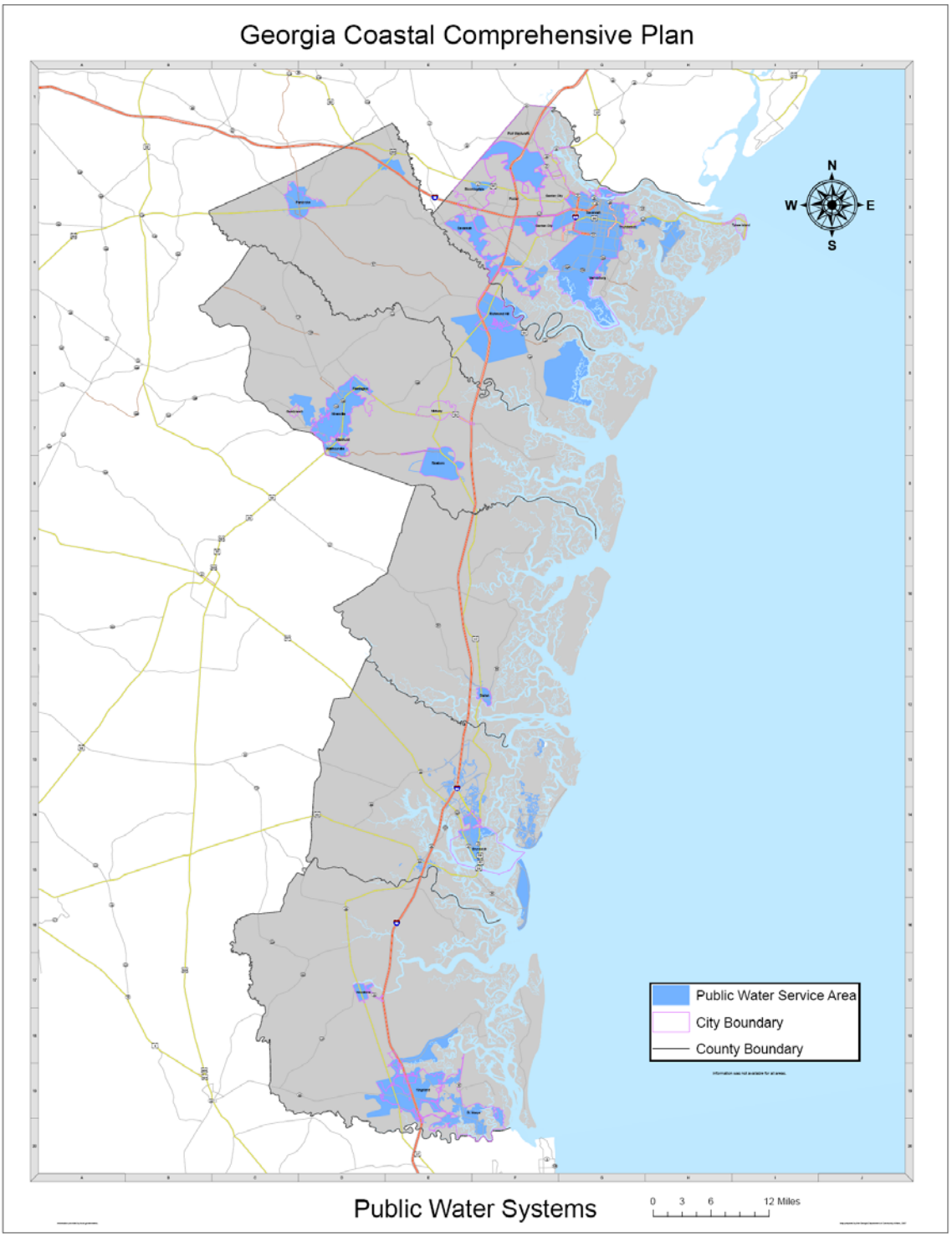
Source: Georgia Department of Community Affairs (http://www.georgiaplanning.com/coastal.htm)

Map B-1: Percent below Poverty by Block Group (2000 Census)



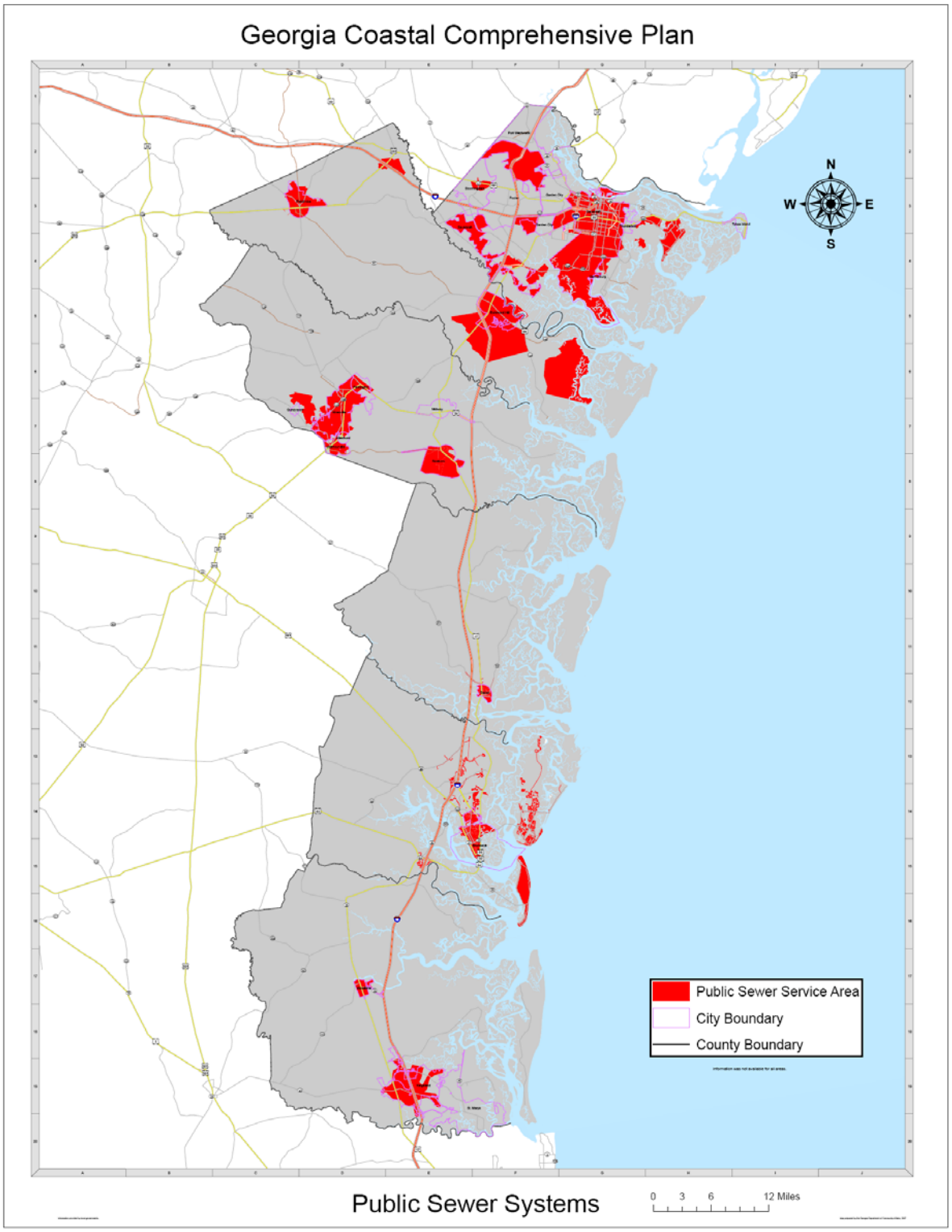
Source: Georgia Department of Community Affairs
(http://www.georgiaplanning.com/coastal.htm)

Map D-1: Public Water Systems



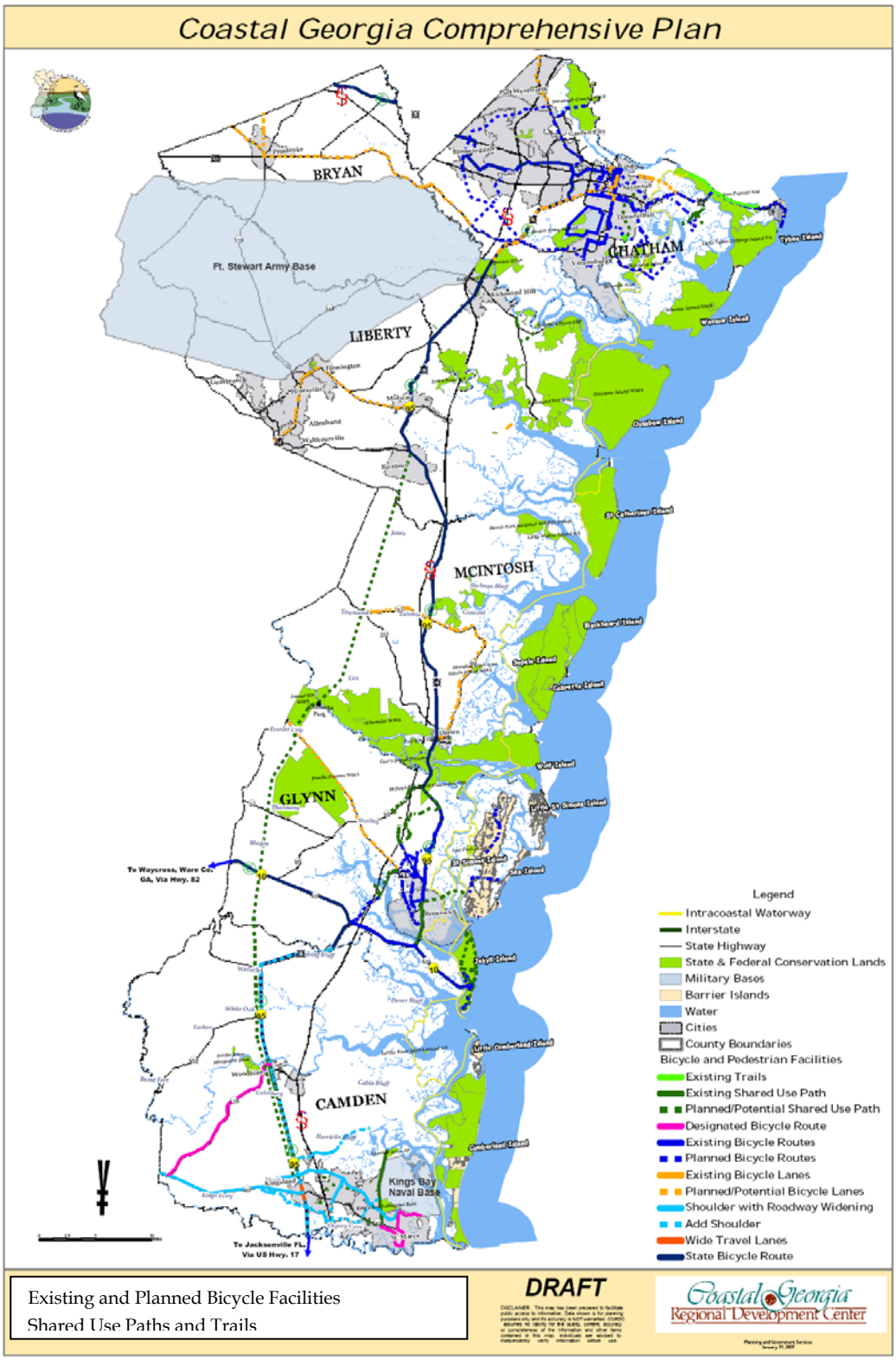
Source: Georgia Department of Community Affairs
(http://www.georgiaplanning.com/coastal_map.htm)

Map D-2: Public Sewer Systems



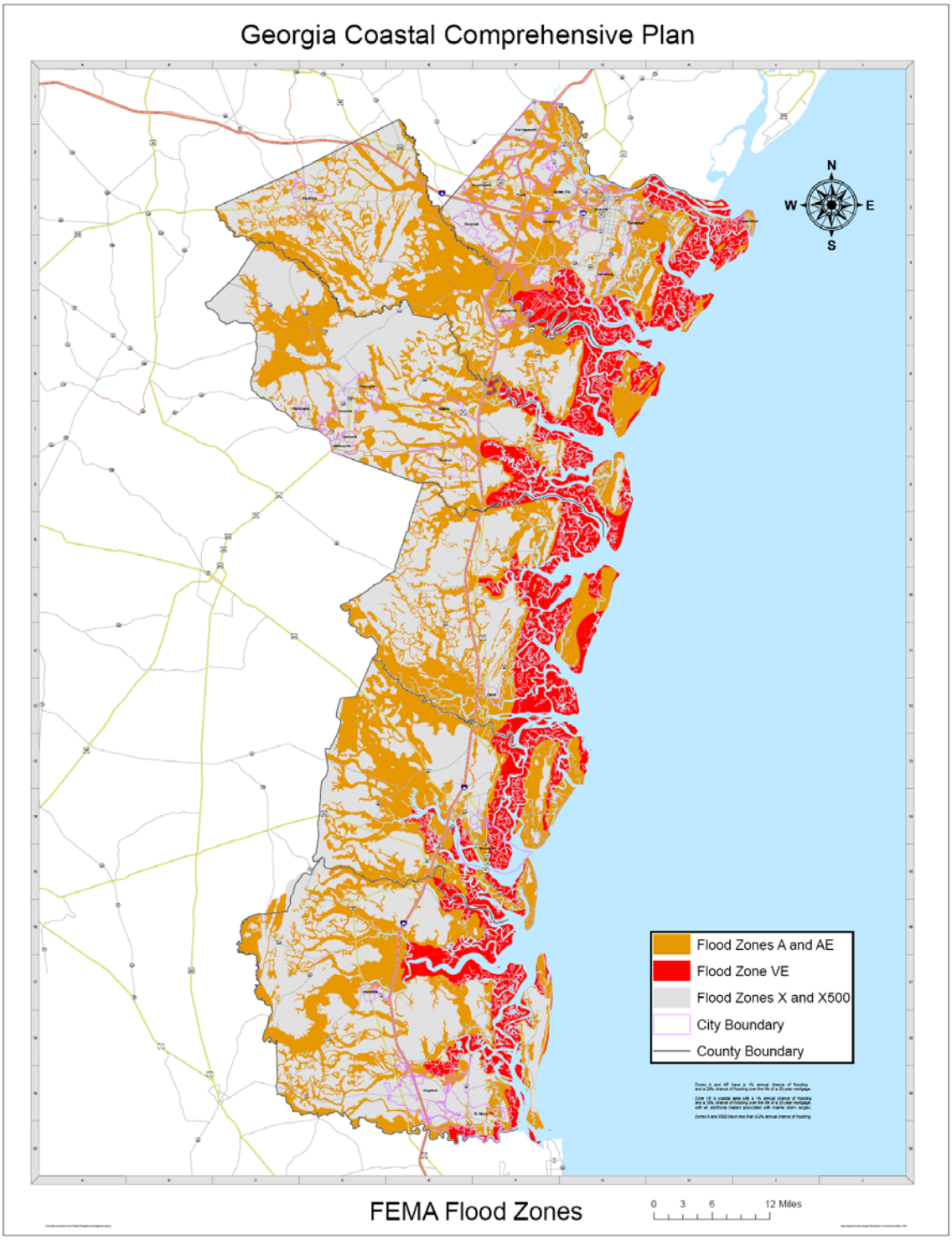
Source: Georgia Department of Community Affairs
(http://www.georgiaplanning.com/coastal_map.htm)

Map E-1: Existing and Planned Bicycle/Pedestrian Facilities



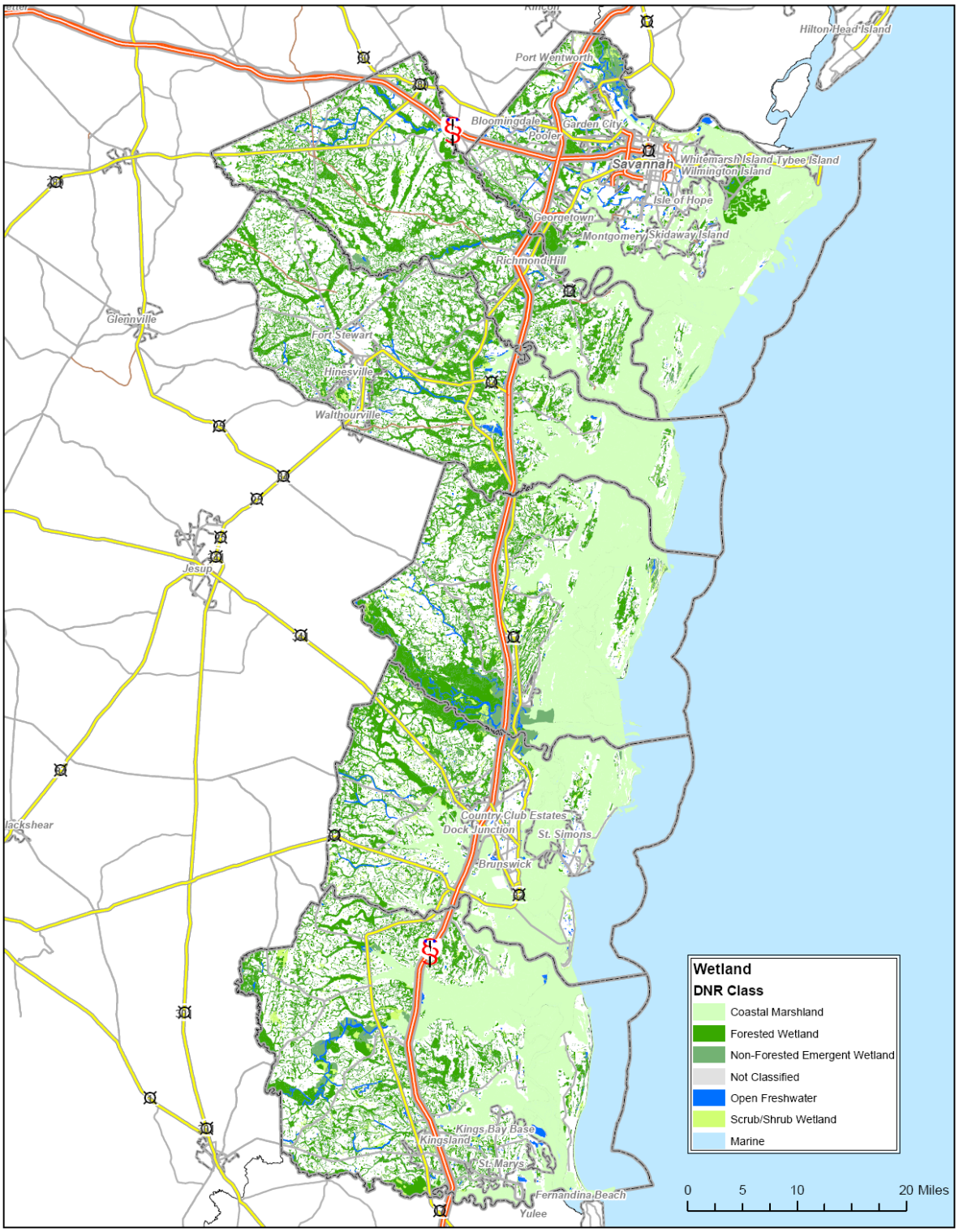
Source: Coastal Georgia RDC (http://www.georgiaplanning.com/coastal_map.htm)

Map F-1: FEMA Flood Zones



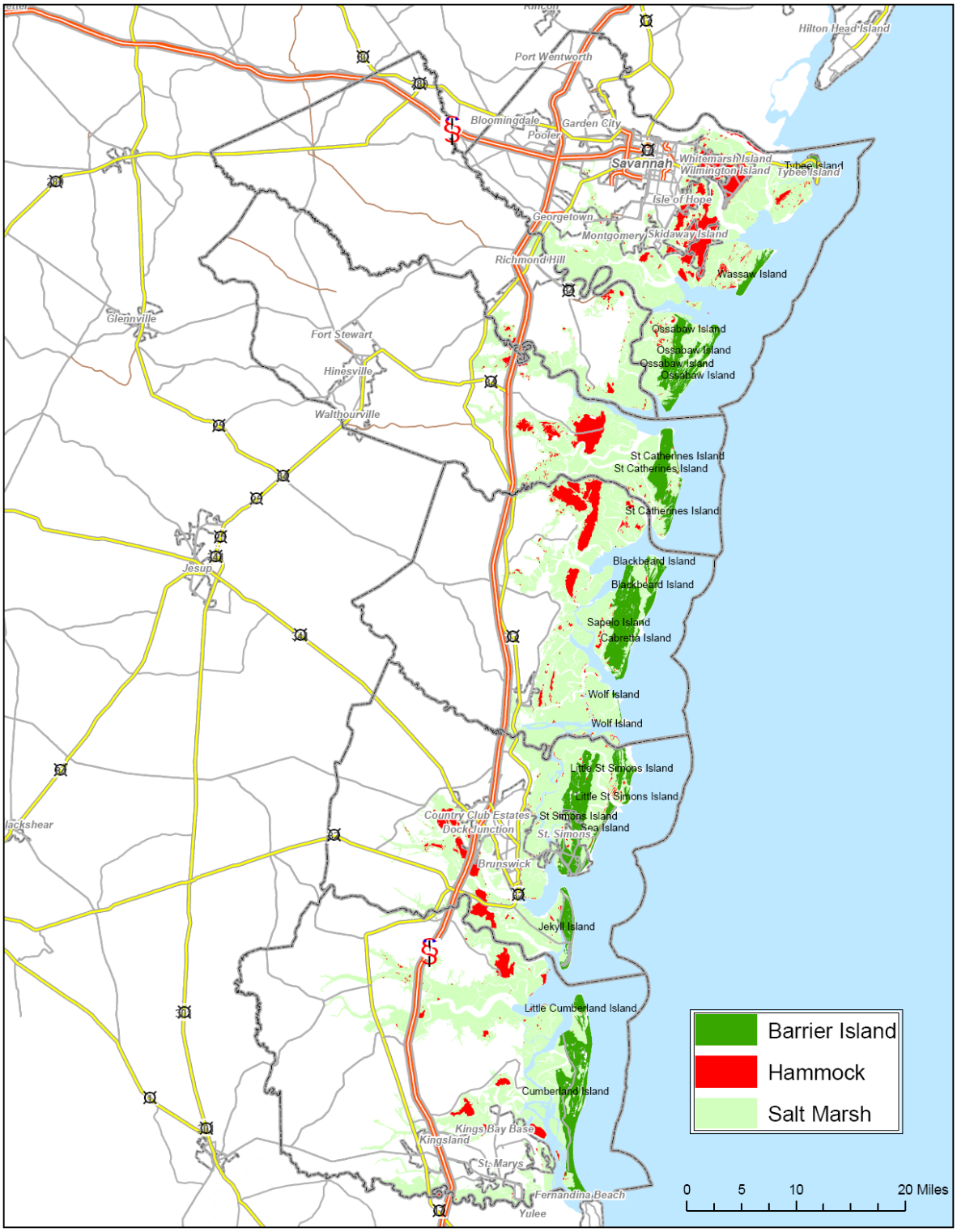
Source: Georgia Department of Community Affairs
(http://www.georgiaplanning.com/coastal_map.htm)

Map F-2: Wetlands



Source: Georgia Department of Community Affairs (http://www.georgiaplanning.com/coastal.htm)

Map F-3: Barrier Islands and Hammocks

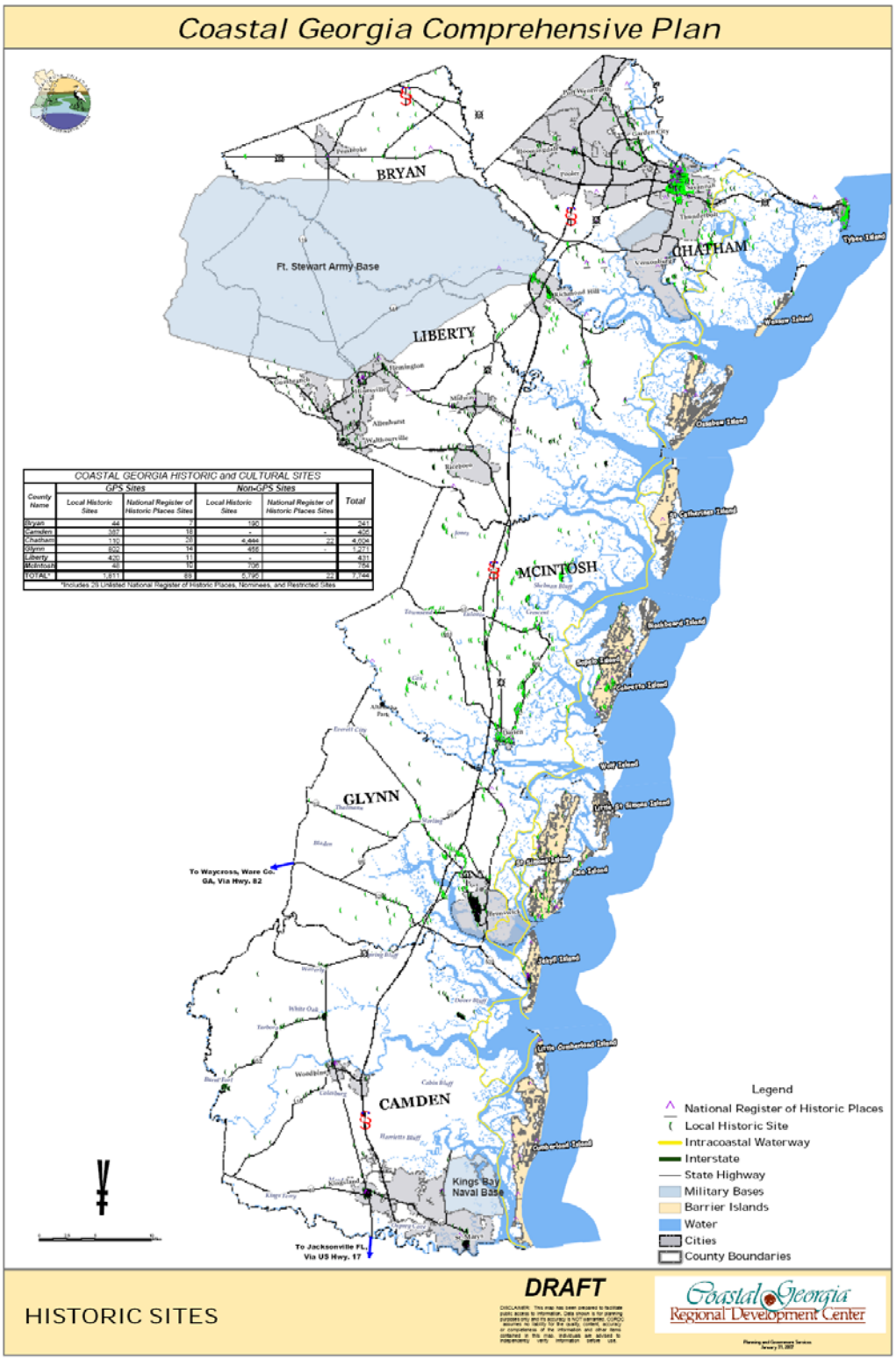


Source: Georgia Department of Community Affairs (http://www.georgiaplanning.com/coastal.htm)

Map F-4: Conservation Areas (Existing)

Source: Georgia Department of Community Affairs (http://www.georgiaplanning.com/coastal.htm)

Map F-5: Historic Sites



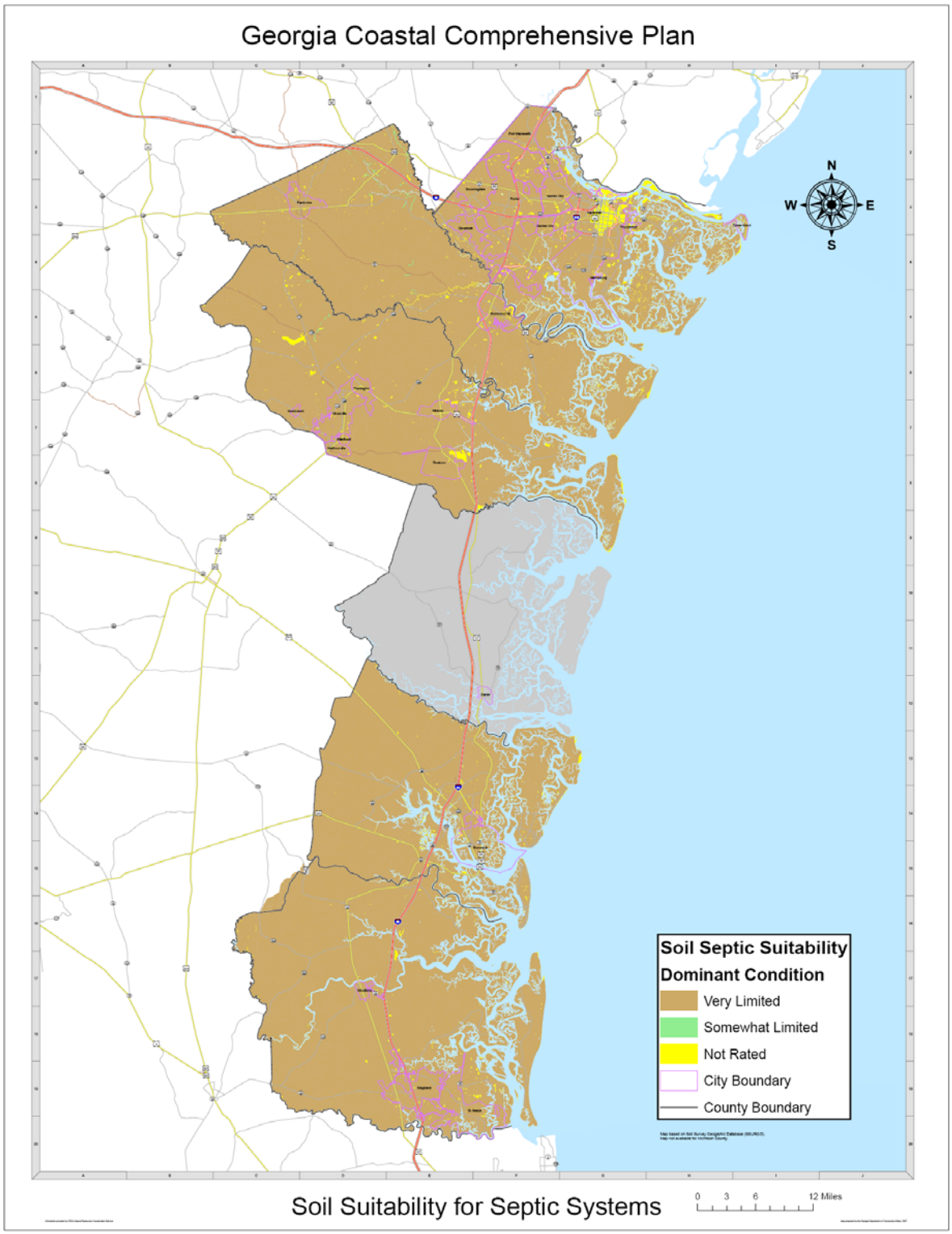
COASTAL GEORGIA HISTORIC and CULTURAL SITES

County Name	GPS Sites: Local Historic Sites	GPS Sites: National Register of Historic Places Sites	Non-GPS Sites: Local Historic Sites	Non-GPS Sites: National Register of Historic Places Sites	Total
Bryan	44	7	190	-	241
Camden	387	18	-	-	405
Chatham	130	28	4,444	22	4,624
Glynn	802	14	455	-	1,271
Liberty	420	11	-	-	431
McIntosh	48	15	706	-	754
TOTAL*	1,831	93	5,795	22	7,744

*Includes 28 Unlisted National Register of Historic Places, Nominees, and Restricted Sites

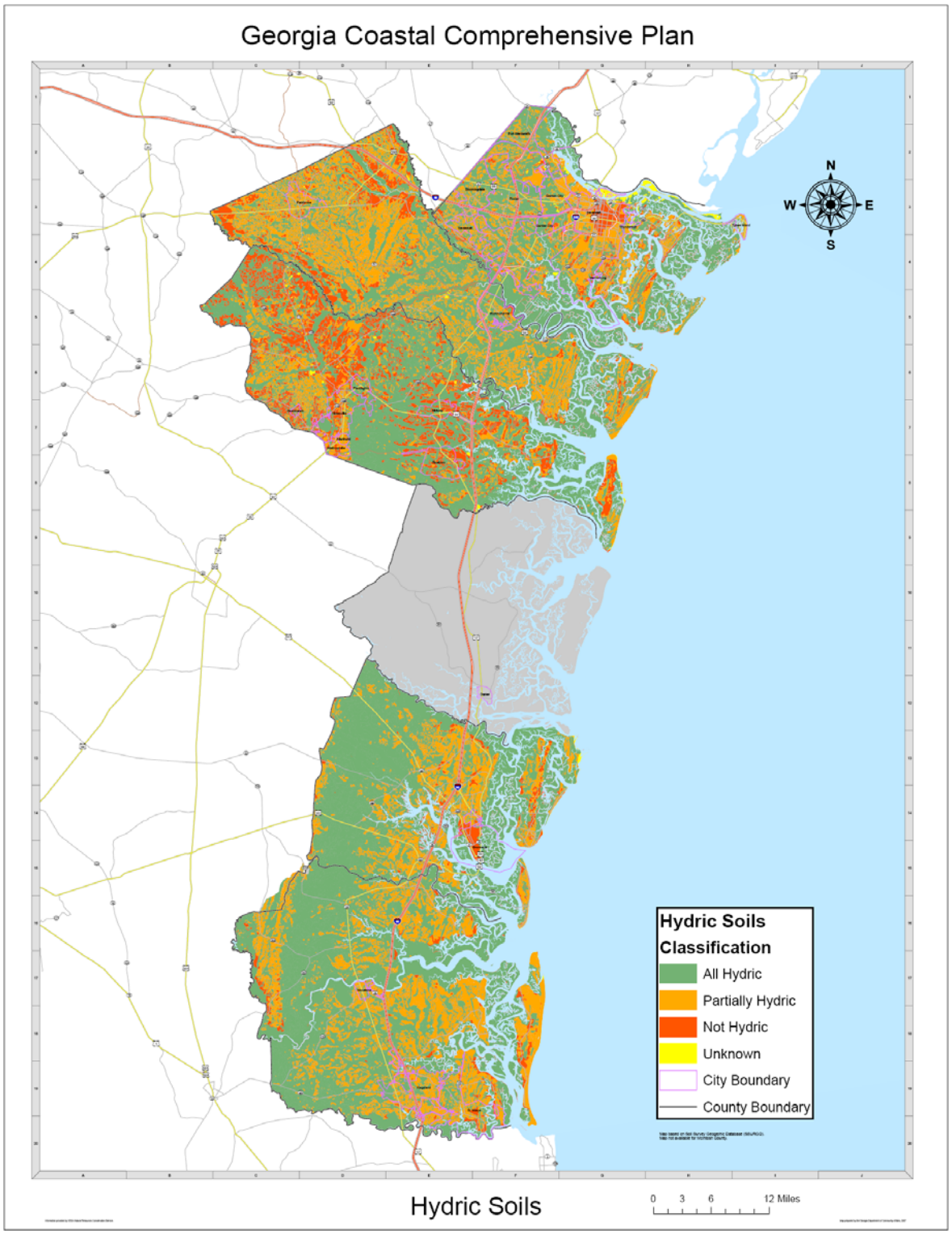
Source: Coastal Georgia RDC (http://www.georgiaplanning.com/coastal_map.htm)

Map F-6: Soil Suitability for Septic Systems



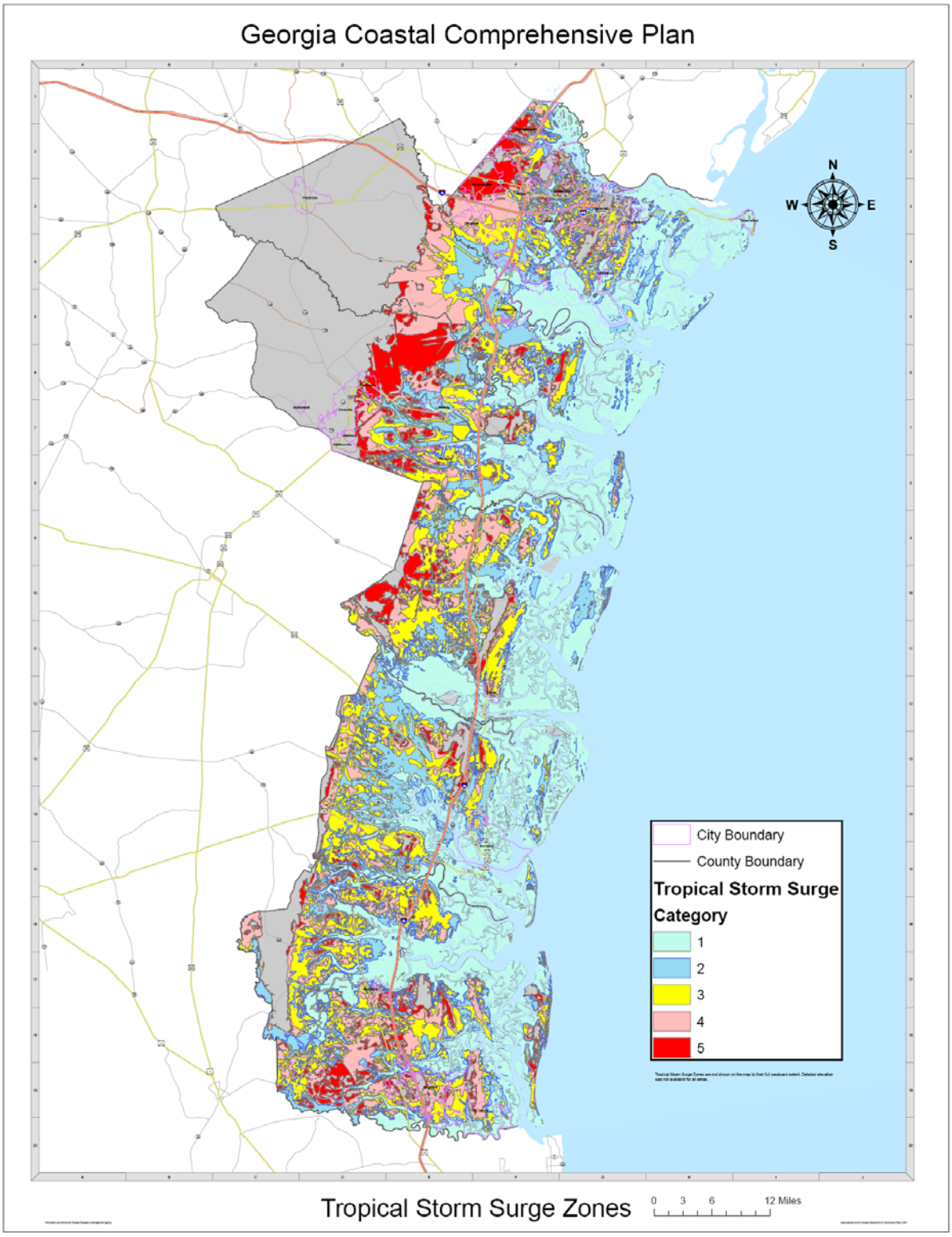
Source: Georgia Department of Community Affairs
(http://www.georgiaplanning.com/coastal_map.htm)

Map F-7: Hydric Soils



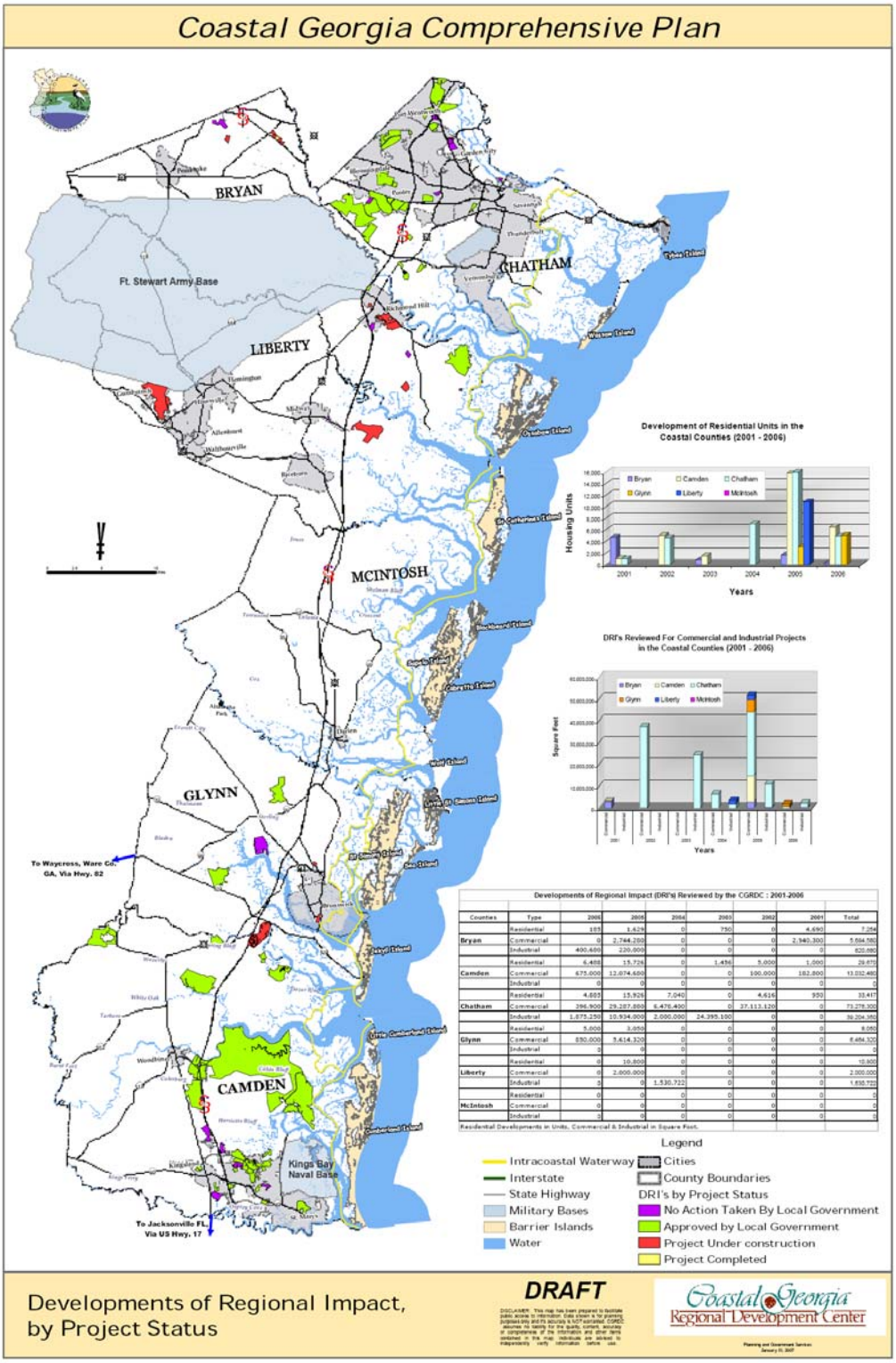
Source: Georgia Department of Community Affairs
(http://www.georgiaplanning.com/coastal_map.htm)

Map F-8: Tropical Storm Surge Zones



Source: Georgia Department of Community Affairs
(http://www.georgiaplanning.com/coastal_map.htm)

Map G-1: Proposed Developments of Regional Impact (DRI) from 2001 to 2006



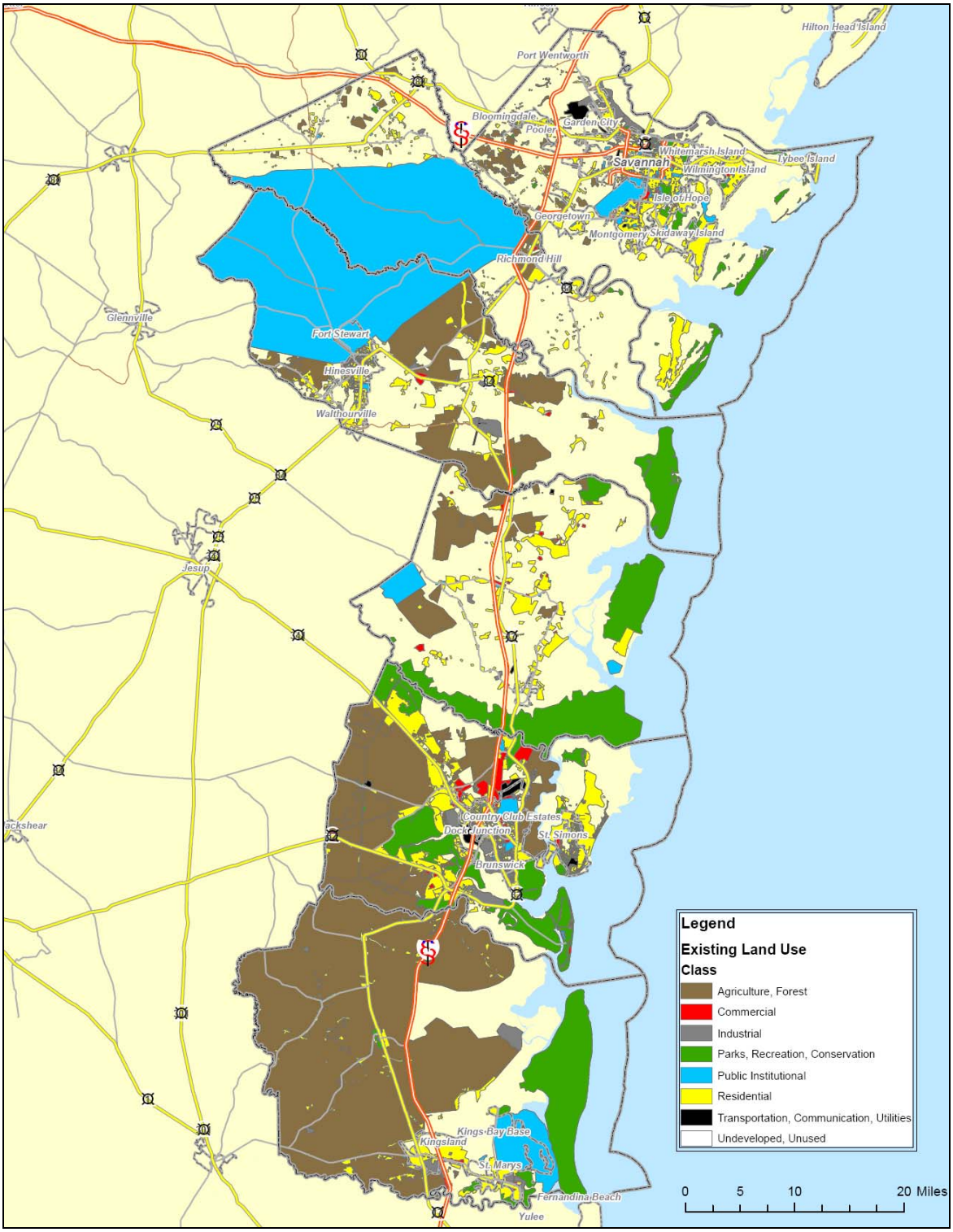
Developments of Regional Impact (DRI's) Reviewed by the CGRDC : 2001-2006

Counties	Type	2006	2005	2004	2003	2002	2001	Total
	Residential	103	1,629	0	750	0	4,690	7,204
Bryan	Commercial	0	2,744,200	0	0	0	2,940,300	5,684,500
	Industrial	400,600	220,000	0	0	0	0	620,600
	Residential	6,488	15,726	0	1,436	5,000	1,000	29,650
Camden	Commercial	675,000	12,074,600	0	0	100,000	182,800	13,032,400
	Industrial	0	0	0	0	0	0	0
	Residential	4,603	13,926	7,040	0	4,626	920	33,417
Chatham	Commercial	396,900	29,287,800	6,476,400	0	37,113,120	0	73,278,300
	Industrial	1,875,250	10,934,000	2,000,000	24,395,100	0	0	39,204,350
	Residential	5,000	3,050	0	0	0	0	8,050
Glynn	Commercial	850,000	5,614,320	0	0	0	0	6,464,320
	Industrial	0	0	0	0	0	0	0
	Residential	0	10,800	0	0	0	0	10,800
Liberty	Commercial	0	2,000,000	0	0	0	0	2,000,000
	Industrial	0	0	1,530,722	0	0	0	1,530,722
	Residential	0	0	0	0	0	0	0
McIntosh	Commercial	0	0	0	0	0	0	0
	Industrial	0	0	0	0	0	0	0

Residential Developments in Units, Commercial & Industrial in Square Feet.

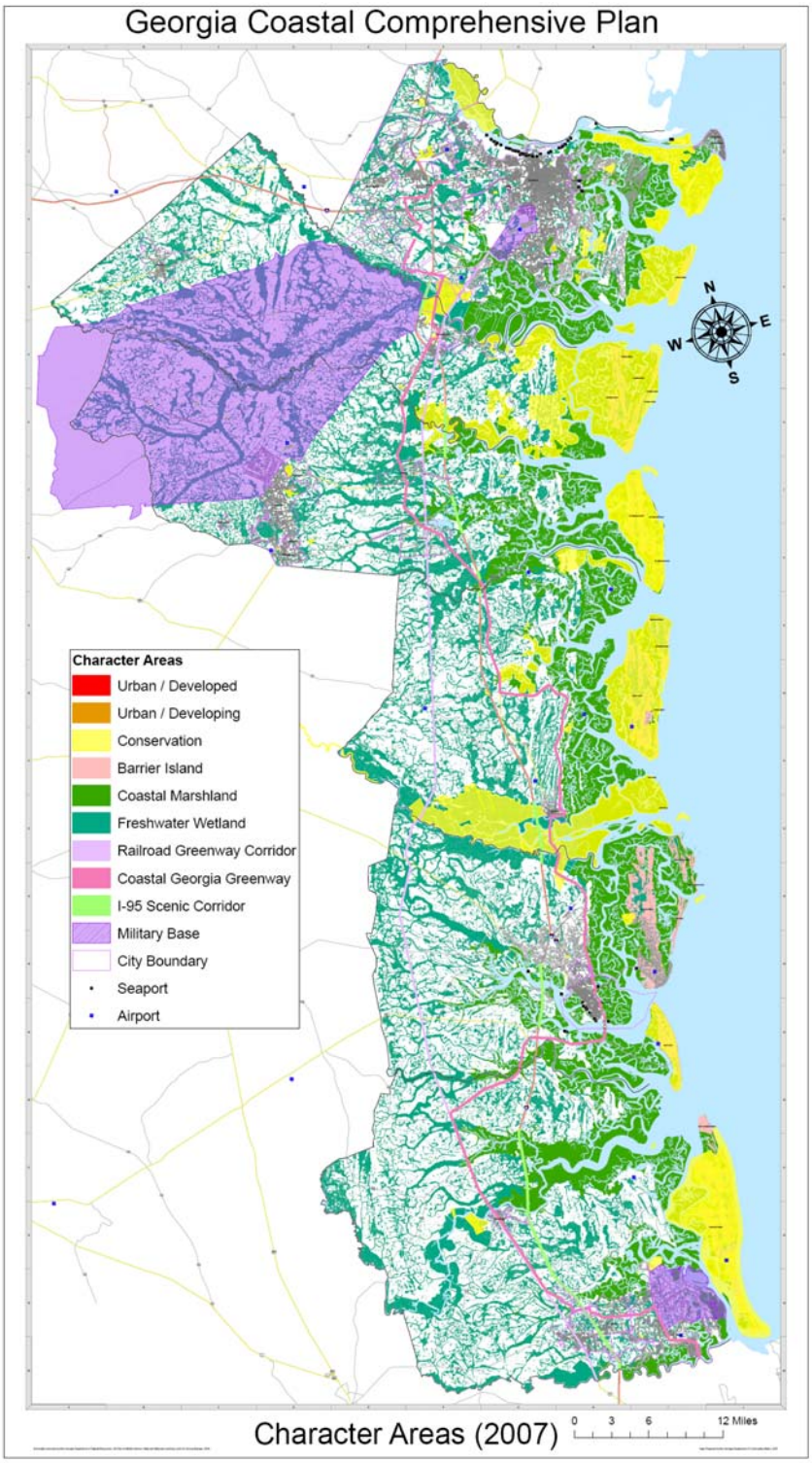
Source: CGRDC (http://www.georgiaplanning.com/coastal_map.htm)

Map G-2: Existing Land Use



Source: Georgia Department of Community Affairs (http://www.georgiaplanning.com/coastal.htm)

Map G-3: Character Areas



Source: Georgia Department of Community Affairs (http://www.georgiaplanning.com/coastal_map.htm)

This plan was funded in part by a grant from the Coastal Management Program of the Georgia Department of Natural Resources (DNR) and the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA).

This report was prepared by the Georgia Department of Community Affairs under award #NA05NOS4191212 from the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration. The statements, finds, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of DNR or NOAA.

Plan development assistance provided by Lott + Barber Architects and Reynolds, Smith & Hills, Georgia Conservancy and Coastal Georgia Regional Development Center.

Many thanks to the Georgia Electric Membership Corporation for their assistance throughout this planning process. Facilitation services provided by Pat Merritt, Community Development Manager, Georgia EMC.

Cover photos Courtesy of the Georgia Department of Economic Development.