TOWN OF BEAUFORT
NORTH CAROLINA

CORE LAND USE PLAN

Adopted by the Beaufort Town Board: December 11, 2006

Certified by the Coastal Resources Commission:

Prepared by:

The preparation of this report was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration

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SECTION I INTRODUCTION AND EXECUTIVE SUMMARY

1.1 Purpose

Land development generally involves a series of decisions by both private individuals and the public sector. In order to promote the public interest in the land development process, the North Carolina Coastal Area Management Act (CAMA) requires that local governments prepare, adopt, and keep current a land use plan. The land use plan is intended to provide a framework that will guide local governmental officials as they make day-to-day and long-range decisions that affect land development. The land use plan will also be used by state and federal agencies in making project consistency, project funding, and CAMA permit decisions. Section 4.9 provides specific information concerning use of the future land use plan in guiding decisions about future development.

CAMA regulations require that an update be made of land use plans every five years. The Town of Beaufort's previous land use plan was updated and certified in1997. The update is designed to ensure that all current land development issues are reviewed and reflected in the land use plan. Also, the Coastal Resources Commission (CRC) recently adopted revised planning guidelines which include requirements not addressed in the town's 1997 plan. The land use plan update also provides an opportunity to evaluate policy statements and to determine their effectiveness in implementing the land development objectives of the community.

The study area for this land use plan update is the Beaufort Planning Jurisdiction which includes the Town of Beaufort and its extraterritorial planning and zoning jurisdiction (see Figure 1, General Location Map). The plan includes both a short term (5-10 year) and long term (20-year) evaluation of land use and land development. Implementation activities are based upon a five-year action plan.

The goals and objectives of the land use plan are to:

- Identify and analyze new and emerging land use issues and concerns.
- Reexamine existing land use policies to determine their effectiveness.
- Revise existing land use policies and develop new policies that address current land use and land development issues and concerns.
- Reexamine the existing land use maps to determine what revisions are necessary to address new land use issues and concerns as well as revised and newly developed policy statements.
- Further develop implementation strategies and an implementation schedule.
- Promote a better understanding of the land use planning process.
- Promote citizen involvement in the process of preparing the updated land use plan.

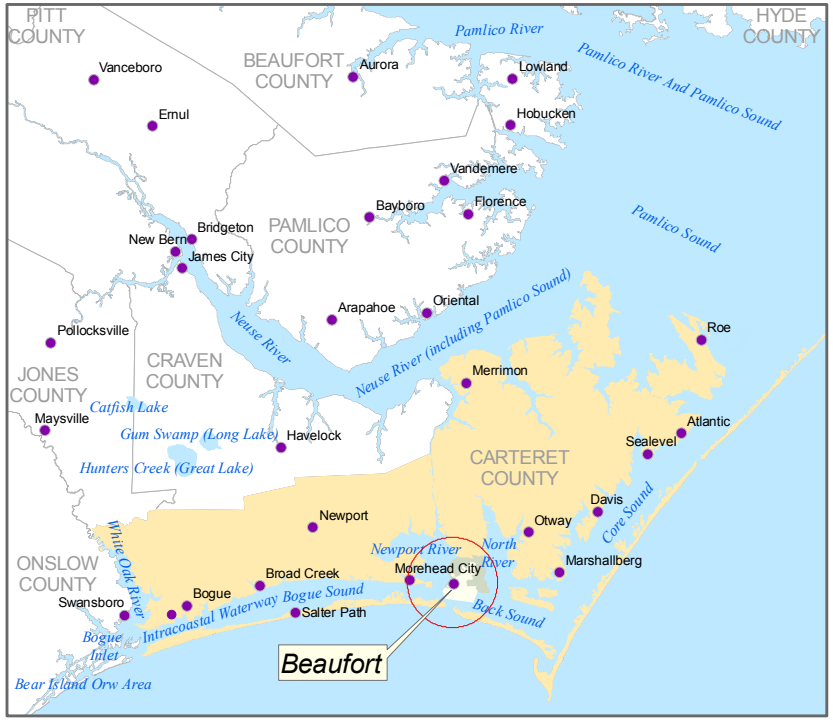
BEAUFORT, NC

THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE

November 22, 2004

Figure 1: General Location

The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.



1.2 Overview of the Plan

This land use plan update for Beaufort follows the methodology recommended by CAMA in its Land Use Planning Guidelines (Subchapter 7B of the North Carolina Administrative Code). This Plan is organized to adhere to the format outlined in Subchapter 7B. In addition to requirements for land use plan format and content, the guidelines also require that the land use plan update process include a variety of educational efforts and participatory techniques to assure that all segments of the community have a full and adequate opportunity to participate in all stages of the preparation of the land use plan. A formal Citizen Participation Plan was developed to involve, inform and educate a broad cross-section of the community's populace.

An Advisory Committee representing a cross-section of the community was appointed to serve as the body responsible for guiding the land use plan formulation effort. The Advisory Committee served in a review and advisory capacity to the elected officials of the Town of Beaufort and to the project planning consultant, The Wooten Company. The Advisory Committee met on a periodic basis with the planning consultant and local staff to assist the planning consultant in defining land use and development issues and concerns, review draft land use plan components prepared by the planning consultant, provide recommendations regarding land use plan content, and provide general input. The public involvement activities undertaken during the preparation of this plan are described in the Citizen Participation Plan, a copy of which is provided in Appendix I. No written comments, including comments regarding the review of the preliminary draft land use plan by adjoining jurisdictions, were received by the Town of Beaufort.

Section I of the plan includes introductory material and an executive summary of the plan document. It is possible that this section of the plan can be reformatted into a simplified brochure that could be utilized for general public informational purposes.

Section II of this land use plan involves an analysis of community concerns and aspirations in Beaufort including existing and emerging conditions related to population, economy, land use, water quality, and transportation. Key planning issues are identified in Section II. These issues concern public access, land use suitability, infrastructure, natural hazards, and water quality. How these issues are implicated with the future use of land is identified as well. A vision statement, included in Section II, sets the tone for the community's goals and desires for the future.

Through an analysis of existing and emerging conditions in **Section III**, an assessment of the general suitability of land for development and a discussion of physical limitations for development, fragile land and water areas, and areas with resource potential are provided. The analysis of conditions is particularly useful in preparing the land classifications, goals and objectives, and the future land use map which is discussed in Section IV. Section III also contains an evaluation of the 1997 Land Use Plan policy statements and evaluates the consistency of the policies with local land use and development ordinances. Action Plan implementation techniques designed to address land development and growth management issues are reviewed. The efficacy of the current policies in creating the desired land use patterns and protecting natural systems is evaluated. The policy statements were developed based upon the previously described analysis of existing conditions, land use trends, and constraints to land development as well as citizen input obtained through the town's public participation process.

A plan for the future is developed in **Section IV**. Land use goals and objectives and development policies are created as the basis of the plan. Consistency of the future policies and an analysis of the impact of these policies on the management topics are provided in Section IV. A statement of

local support for Areas of Environmental Concern (AECs) expresses the intent of Beaufort to develop in a manner that is cognizant of sensitive environmental areas. The future land use map described in Section IV assists local planning officials in the implementation of the land development policy statements. The future land use map provides a basic framework for identifying the future use of land and illustrates the town's policies as to where and to what density it wants growth to occur. The future land use map also delineates where the town wants to conserve natural and cultural resources. Section IV provides a description of the land uses proposed within each future land use classification. The future land use map presented in this section graphically illustrates the land classification system as applied to the Beaufort Planning Jurisdiction. Section 4.9 provides information concerning use of the future land use map in guiding decisions about future development.

Tools for managing land development are outlined in **Section V** of the plan. A description of the specific management tools that the Town of Beaufort will utilize to implement the plan are provided in Section V as is a five-year implementation plan and schedule. This section of the plan also includes a description of the public participation activities that will be used to monitor implementation of the land use plan.

1.3 Executive Summary

1.3.1 Summary of Land Use Issues

The major land use and development issues identified during the preparation of this land use plan update that will affect Beaufort during the next ten year period include the following (not presented here in any priority order):

Land Use Compatibility

- Control of strip commercialization along US 70 East and NC 101 North.

Infrastructure Carrying Capacity

- Coordination of the development/improvement of the Beaufort sewage treatment system with Carteret County's plans and policies for the development of sewage treatment system(s)
- Annexation of portions of the extraterritorial jurisdiction to meet the extent of water and sewer utilities provided by the Town of Beaufort
- Construction of a new bridge on US 70 at Gallants Channel to alleviate disruptions to east-west traffic
- Creation of a stormwater ordinance and system improvements

Natural Hazard Areas

- The effects of sea level rise on the Town of Beaufort

Water Quality

- Improvements to stormwater system to protect water quality
- Improvements to wastewater treatment facilities and increased capacity

Areas of Environmental Concern

- Protection of Areas of Environmental Concern

- Protection of the Rachel Carson National Estuarine Sanctuary which includes Carrot Island, Town Marsh, and Bird Shoal
- The impact of offshore drilling on the Town of Beaufort
- Stormwater runoff

Areas of Local Concern

- Redevelopment/visual improvement of the US 70-Cedar Street area dependent upon US 70 relocation/bridge projects
- Management of the new US 70 corridor if a realignment is ultimately approved
- Removal of substandard dwelling units through enforcement of the town's minimum housing code
- Continued protection of the National Historic District, Beaufort Historic District, and the waterfront area
- Establishment of a Growth Management Plan
- Development of service sector to support tourism
- Establishment of a comprehensive annexation plan
- Implementation of redevelopment/revitalization projects to eliminate substandard housing
- Continued protection of the town's historic district
- Continued expansion of the Michael J. Smith Airport
- Maritime Museum Expansion
- Maintain the integrity and compatibility of land uses adjacent to the Beaufort Historical Association (BHA) restoration site

1.3.2 Summary of Data Collection and Analysis

The data analyzed in Section III were collected from a wide variety of sources (see Appendix A, Index of Data Sources) including published documents, governmental and private organizations, and individuals. Printed and digital map data were utilized in the preparation of this section of the plan. The major conclusions resulting from the data collection and analysis include:

Population

- The estimated 2003 population of the Beaufort corporate area is 3,810 and approximately 5,000 for the Beaufort planning jurisdiction.
- In 2003, the municipal population of Beaufort, one of eleven incorporated municipalities within Carteret County, comprised approximately 6.3 percent of the total county population.
- Between 1980 and 2000, the Town of Beaufort lost population. Beaufort's population growth rate has been considerably lower than that for Carteret County and the State of North Carolina.
- The town's growth rate since 1990 is lower than other coastal North Carolina communities of similar size.
- Beaufort's age distribution is similar to that of Carteret County but differs from the statewide averages in that the town contains a higher proportion of the 65 and older population.
- Beaufort contains a more racially diverse population than does Carteret County as a whole.

- The estimated 2000 seasonal population of Beaufort is 2,041. The 2000 peak population, which is the sum of the permanent population and the seasonal population, is estimated to be 5,812.
- The median age in Beaufort, in the year 2000, was 42.7 years.
- Beaufort's 2000 population density was 1,375 persons per square mile. In comparison, some regional population densities in 2000 were: Swansboro 1,165, Atlantic Beach 831, Morehead City 1,508, and Newport 456.
- Projections indicate that the peak population (total of the permanent and seasonal population) for the Beaufort planning jurisdiction will increase to 9,409 in 2010 and 9,893 in 2020. Complete population projections are provided in Section 3.1.4.

Housing

- Building permit data since 1998 indicate that Beaufort has averaged about 44 new residential dwellings per year—approximately 87 percent of those were single-family dwellings.
- The majority (47.1 percent) of seasonal units in Beaufort is composed of seasonal single family dwellings. Seasonal dwellings comprise approximately 12 percent of the town's total housing stock. Transient marina slips account for just over 30 percent of all seasonal housing units.

Economy

- Employment in Beaufort is based largely in the services and trade sectors. The single largest employment industry sector is the arts, entertainment, recreation, accommodations and food services category which made up 18 percent of the total 2000 employment.
- Travel and tourism related employment is an important component of the Carteret County economy.

Natural Constraints for Development

- Fragile areas within the Beaufort planning jurisdiction that could easily be damaged or destroyed by inappropriate or poorly planned land uses include: floodplains, freshwater marshes, saltwater and brackish marshes, beneficial non-coastal wetlands, and estuarine waters.
- Overall, for septic tank use, the soil types in the town's jurisdictional area have substantial limitations. Over 92 percent of the Beaufort planning jurisdiction contains soils that are rated as having severe limitations for septic tank absorption fields.
- The waters in the Beaufort area are classified as SA, SC, HQW, and ORW. The majority of the waters in the Beaufort planning jurisdiction are classified as SA. Waters in Taylor's Creek and Town Creek are classified as SC.
- Approximately 41 percent of the Beaufort planning area is within the 100-year floodplain. An additional 24 percent of the town's planning area is within the 500-year floodplain.
- Approximately three fourths of the Beaufort planning area is susceptible to flooding from a Category 1 and Category 2 hurricane. The entire

Beaufort planning jurisdiction land area is subject to flooding from a storm surge resulting from a Category 4 and Category 5 hurricane.

- Non-coastal wetlands account for approximately 15 percent of the total Beaufort land area.
- The NC Marine Fisheries Division has identified Turner Creek as the only primary nursery area within the Beaufort planning area.
- The Rachel Carson Estuarine Research Reserve is the most significant natural heritage area within Beaufort.
- Based upon the environmental conditions assigned to each land class as delineated in the Environmental Conditions Composite Map, the overwhelming majority (94.6%) of the land area in the Beaufort planning jurisdiction falls into Class III, serious hazards and limitations. Class II lands (moderate hazards and limitations) account for approximately 5.4 percent of the Town's land area.
- The 2004 North Carolina 303(d) Impaired Waters List includes portions of the Newport River, Wading Creek, Gable Creek in subbasin 03-05-03 and portions of Back Sound and the North River, Gibbs Creek, Turner Creek, and Davis Bay in subbasin 03-05-04. The impaired use is shellfish harvesting and the reason for the listings is elevated fecal coliform levels.
- According to the *White Oak River Basinwide Water Quality Management Plan* prepared by the NC Division of Water Quality, Water Quality Section in September, 2001, the activities that contribute to the closure of shellfish harvesting areas include, but are not limited to, construction, urban stormwater runoff, failing septic systems, and agricultural activities.

Existing Land Use

- The predominant land use in Beaufort is residential, accounting for approximately 22 percent of the total land area of the town's planning jurisdiction and almost 51 percent of the total developed acreage.
- Approximately 40% of the town's planning jurisdiction contains undeveloped land.
- Most of the recent development in Beaufort has been primarily low density residential in nature. Recent nonresidential development has occurred principally adjacent to the major highway corridors, particularly US Highway 70.
- Projections indicate that some 1,300 acres of additional residential land will be needed to accommodate the anticipated growth through 2025.
- The Land Suitability Map (see Figure 7) classifies land as High Suitability, Medium Suitability, Low Suitability, and Least Suitable. In general, over two-thirds of the Beaufort planning jurisdiction is within the higher suitability ratings (High and Medium Suitability).

Community Facilities

- The Town's existing water treatment plant design will not meet current and future demands. Projected water system capital improvements, including a new treatment facility; additional wells; and additional storage facilities, total $10.6 million.
- The Town's sewer collection system experiences excessive inflow and infiltration during heavy rains. Currently, the Town is operating under a

Special Order by Consent for a 4-year period. During this time period, sewer flow allocation is restricted by the SOC. Short term growth potential will be impacted by the restrictions of the SOC.

- The most significant transportation improvements project currently underway in Beaufort is the proposed replacement of the Gallants Channel drawbridge and the realignment of US 70.

1.3.3 Summary of Policy Statements

The formulation of land use and development policies is based upon a review and analysis of policy statements contained in the 1997 Beaufort CAMA Land Use Plan (see Appendix H for a summary of policies from this former plan); an evaluation of identified concerns and aspirations (Section II) and the needs and opportunities identified in the analysis of existing and emerging conditions (Section III); input from the Land Use Plan Advisory Committee, local planning board, and elected officials; and input obtained through citizen participation efforts including public informational meetings, public forums, and Land Use Plan Advisory Committee meetings.

Updated policy statements have been formulated which address the following topics:

- Public access to public trust waters
- Land use compatibility
- Infrastructure carrying capacity
- Natural hazard areas
- Water quality
- Areas of environmental concern
- Areas of local concern

The Town of Beaufort supports state and federal law regarding land use and development in Areas of Environmental Concern (AECs). Specific policy statements have been developed that support the general use standards of the North Carolina Administrative Code (15 NCAC 7H) for development within the estuarine system (see Section 4.1). No policy statements have been developed which exceed the requirements of CAMA regarding land use and development within AECs.

1.3.4 Summary of Future Land Use Projections

The Future Land Use Map for the Beaufort planning jurisdiction encompasses the Beaufort corporate limits and the Town's extraterritorial planning and zoning jurisdiction. The Town's Future Land Use Map classifications include the following categories and subcategories:

- Residential
  - Low Density Residential
  - Medium Density Residential
  - High Density Residential
- Commercial
  - General Commercial
  - Downtown Commercial
- Mixed Use
- Public and Institutional

- Industrial
- Conservation/Open Space

The Low Density Residential classification is intended to delineate lands where the predominant land use is low density detached residences. The residential density within this classification is generally 2 or less dwelling units per acre. The majority of the lands classified as Low Density Residential are located on primarily in the northern, northeastern, and eastern portions of the Town's planning jurisdiction.

The Medium Density Residential classification is intended to delineate lands where the predominant land use is higher density single-family residential developments and/or two-family developments. The residential density within this classification is generally 3 to 5 dwelling units per acre. The majority of the properties classified as Medium Density Residential are generally located immediately surrounding the Beaufort downtown area as well as north and east of the downtown area.

The High Density Residential classification is intended to delineate lands where the predominant land use is higher density single-family residential developments and/or multifamily developments. The residential density within this classification is generally 6 to 16 dwelling units per acre. The properties classified as High Density Residential are located in the northeastern portion of the Town's planning jurisdiction along the US Highway 70 North corridor.

The General Commercial classification is intended to delineate lands that can accommodate a wide range of retail, wholesale, office, business services, and personal services. Areas classified as General Commercial may also include some heavy commercial uses as well as intensive public and institutional land uses. The properties classified as General Commercial are located along the Town's major road corridor--US Highway 70.

The Downtown Commercial classification is intended to delineate properties that can accommodate a variety of retail, office, business services, and personal services. Areas classified as Downtown Commercial may also include some public and institutional land uses. The Downtown Mixed Use classification specifically includes waterfront tourist-oriented land uses. The properties classified as Downtown Commercial are located in the Front Street commercial district and the downtown waterfront area. The core of the Downtown Commercial area is generally bounded by Taylor's Creek on the south, Orange Street on the west, and Pollock Street on the east.

The Mixed Use classification is intended to delineate areas where there is potential to redevelop the existing properties and adjoining vacant land, particularly for multiple land uses. The properties classified as Mixed Use are located adjacent to Town Creek (2 sites), at the former Beaufort Elementary School site, adjacent to the Cedar Street-Carteret Avenue area, and along Lennoxville Road at the site of the Atlantic Veneer Corporation and Beaufort Fisheries industries.

The Public and Institutional classification is intended to delineate large land areas that are used for intensive public and educational purposes. Land uses within this classification include primarily government buildings and service facilities, public recreational facilities, and public educational facilities. The properties classified as

Public and Institutional are scattered throughout the Town's planning jurisdiction. The largest individual property within the Public and Institutional classification includes the Michael J. Smith Field and airport facilities located in the western section of Beaufort.

The Industrial classification is intended to delineate lands that can accommodate industrial and manufacturing establishments. Some heavy commercial uses as well as services and businesses which support industrial land uses are also appropriate land uses within the Industrial classification. The properties classified as Industrial are along Lennoxville Road at Carteret Avenue in south central Beaufort and along the east side of NC Highway 101 directly across from the airport property.

The Conservation/Open Space classification is intended to delineate areas where traditional land uses are not desirable or expected to develop. Land development may, however, include public building and facilities necessary to support existing land uses within the areas classified as Conservation/Open Space. Conservation/Open Space areas that are delineated on the Future Land Use Map include Town Marsh, Carrot Island (including the portion of the Rachel Carson Estuarine Reserve lands within the Beaufort planning jurisdiction), marshland in Davis Bay, and the county-owned Town Creek wetlands area.

Generally, growth and land development is anticipated to occur in all future land use categories except for the Conservation/Open Space classification. The type and intensity of projected development varies within each future land use map classification. Future Land Use projections are delineated in Figure 8.

The land use patterns depicted on the Future Land Use Map are consistent with the analysis of natural systems and the analysis of land suitability.

The north central portion of the Town's planning jurisdiction and the areas adjacent to the Newport River, North River and Taylor's Creek shorelines contain the greatest concentrations of natural constraints, primarily floodplains and wetlands. Major undeveloped areas with significant natural constraints and low suitability ratings within the Beaufort jurisdiction are designated as Conservation/Open Space on the Future Land Use Map.

The projected residential land needs through 2025 can mostly likely be met with the estimated amount of available developable acreage in the current Beaufort planning jurisdiction.

1.3.5 Summary of Implementation Strategies

In order to implement the policies outlined in the Land Use Plan Update, the Beaufort Town Board and Planning Board will utilize the policy statements as one of the bases for decision-making when land development requests are made. Policy statements will be taken into consideration when reviewing rezonings, zoning text amendments, special use permits, and subdivision plats. The Beaufort Board of Adjustment will also review policies outlined in this plan prior to making decisions on variances and special use permit requests.

Beaufort will continue to administer and enforce its land use regulatory tools particularly the Zoning Ordinance, Subdivision Regulations, and Flood Damage Prevention

Ordinance. The town will review the current regulatory tools to eliminate inconsistencies which may exist between the tools and the policies outlined in this plan. In order to assist with the implementation of the updated Land Use Plan, amendments to the zoning ordinance regarding residential boat docks and piers and commercial marinas are anticipated. The development of a stormwater management ordinance is also expected.

Major capital improvements that will assist with Plan implementation include an estimated $10.6 million of water system improvements, $15.6 million of wastewater system improvements, and $372,000 of public water access facilities improvements.

The town will ensure a continuous planning process by conducting periodic reviews of the Land Use Plan's policies and implementation strategies. This review will be the responsibility of the Beaufort Planning Board which will coordinate such reviews with the Town Board.

SECTION II COMMUNITY CONCERNS AND ASPIRATIONS

This section of the Plan is organized in accordance with the requirements of Subchapter 7B .0702(b). Section II includes a description of the dominant growth-related conditions that influence land use, development, water quality, and other environmental concerns within the Beaufort planning jurisdiction. Descriptions of the land use and development topics most important to the future of the town as well as a community vision statement are also provided in Section II.

2.1 Significant Existing and Emerging Conditions

2.1.1 Land Use

A. General Development Trends

Beaufort is located on a peninsula that is bordered on the east by the North River, on the south by Taylor's Creek, and on the west by the Newport River. The southern tip of the peninsula contains relatively compact development generally south of Town and Turner Creeks. Future expansion of Beaufort is anticipated mainly north of this area along and between the US Highway 70 and NC Highway corridors. However, infill development and redevelopment of existing developed properties are also expected to accommodate future growth.

Most of the recent development in Beaufort has been primarily low density residential in nature. Recent nonresidential development has occurred principally adjacent to the major highway corridors, particularly US Highway 70. The Taylor's Creek and Newport River waterfronts are essentially built-out within the town limits. Growth and development within the Beaufort corporate area has been slow over the last two decades.

In November 2004, the Beaufort corporate area was expanded by some 650 acres to include a planned unit development, The North River Club. This proposed development, located between US 70 and NC 101, potentially will include 1,500 mixed density dwelling units, 30 acres of commercial use, and a golf course.

The North Carolina Maritime Museum has proposed expanding the Maritime Museum to a site located on Gallants Channel. An associated maritime village has also been proposed for this site. Mixed residential and commercial uses, including marine uses along waterfront areas, have potential at the other sites throughout Beaufort.

B. Land Suitability and Natural Constraints on Development

The entire Beaufort planning jurisdiction has significant soil limitations for septic tank drainfields. Also, approximately 42 percent of the land area in the planning jurisdiction lies within the 100-year floodplain designation based upon Flood Insurance Rate Maps prepared by FEMA.

C. Housing Trends

Residential growth in Beaufort has been modest in recent years. The town has averaged approximately 44 new residential dwelling per year since 1998—approximately 87 percent of those were single-family dwellings. Single-family residences are the predominant housing type in Beaufort. Multi-family residences, however, comprise a growing proportion of the housing stock, accounting for about 27 percent of all housing units in 2000. Seasonal housing units account for about 13 percent of the town's total housing stock.

2.1.2 Economic Conditions

A. General Economic Conditions

Employment in Beaufort is based largely in the services and trade sectors of the economy. Manufacturing employment is not a major component of the local economy. The vast majority of jobs in Beaufort will most likely be provided by the non-manufacturing sector for the foreseeable future. Travel and tourism is an increasingly important sector of the economy.

The downtown Beaufort waterfront area is a viable commercial area of the community. Most of the general commercial development in Beaufort is located immediately adjacent to the US Highway 70 corridor.

B. Population Growth

The estimated 2003 population of the Beaufort corporate area is 3,810 and approximately 5,000 for the Beaufort planning jurisdiction. In 2003, the municipal population of Beaufort, one of eleven incorporated municipalities within Carteret County, comprised approximately 6.3 percent of the total county population.

Between 1980 and 2000, the Town of Beaufort lost population. Beaufort's population growth rate has been considerably lower than that for Carteret County and the State of North Carolina. The town's growth rate since 1990 is also lower than other coastal North Carolina communities of similar size.

The estimated 2000 seasonal population of the Town of Beaufort is 2,041. The 2000 peak population, which is the sum of the permanent population and the seasonal population, is estimated to be 5,812. Seasonal population represents approximately 35 percent of the peak population.

2.1.3 Transportation

The most significant transportation improvements project currently underway in Beaufort is the proposed replacement of the Gallants Channel drawbridge and the realignment of US 70.

A citizen's committee appointed by the Beaufort Town Board of Commissioners in December 2004 recommended that the existing drawbridge be replaced with a new four-lane drawbridge and that Cedar Street continue to be the designated route of US Highway 70. An official route has been determined and engineering work has begun. Right of way acquisition is scheduled to begin in 2008. This project will have significant impacts on land use and future development patterns in Beaufort.

2.1.4 Infrastructure

The Town of Beaufort provides water and sewer service to the corporate area and to some portions of the ETJ on the immediate periphery of the town. The sewer system also extends beyond the corporate limits via remote pump stations connected to the primary system by force mains. Such service is provided to Jarrett Bay Industrial Park, Parker Boats, East Carteret High School, Duke Marine Laboratories, and Eastman Creek subdivision.

There are plans for the construction of a new wastewater treatment facility in 2009. The Town's sewer collection system experiences excessive inflow and infiltration during heavy rains. Because of the need for necessary improvements, the Town is operating under a Special Order by Consent imposed by the State for a 4-year period. During this time period, sewer flow allocation is restricted to a total of 300,000 gpd for new growth within the corporate limits which is distributed according to a local sewer allocation policy. Short term growth potential will be impacted by the restrictions of the SOC.

Improvements to the Town of Beaufort's water treatment facility are also needed to accommodate current and future demand.

2.1.5 Water Quality

A. Stormwater Management

The existing stormwater drainage facilities within the Town of Beaufort consist of a system of piping, catch basins, and drainage ditches and swales. Currently, much of the stormwater conveyed by the system is discharged into Taylor's Creek.

Beaufort is in the process of exploring the benefits a stormwater management plan and land use regulations would provide in directing further development of its stormwater system. There is concern that as new land is developed the increased stormwater rate of runoff will overload existing stormwater structures.

2.1.6 Other Environmental Concerns

A. Providing Accessibility while Protecting Public Trust Waters

Increased demand for private boat docks and piers as well as commercial marinas is anticipated. Maintaining water quality, scenic vistas, and compatibility with the current waterfront character while meeting the demand for more boating facilities is a primary concern.

2.2 Key Planning Issues

The major land use and development issues identified during the preparation of this land use plan update include the following (not presented here in any priority order):

Land Use Compatibility	• Management of strip commercialization along US 70 East and NC 101 North. • Redevelopment of existing properties along the Taylor's Creek waterfront. • Compatibility of development in the vicinity of the airport. • Managing infill development in established residential areas. • Redevelopment/visual improvement of the US 70-Cedar Street area dependent upon the US 70 relocation/bridge project. • Management of a new US 70 corridor if realignment is ultimately approved.
Infrastructure Carrying Capacity	• Improving the treatment capacities of the town's water and sewer systems. • Coordination of the development/improvement of the Beaufort sewage treatment system with Carteret County's plans and policies for the development of sewage treatment system(s). • Extension of water and sewer utilities into newly developing portions of the town's extraterritorial jurisdiction. • Construction of a new bridge on US 70 at Gallants Channel to alleviate disruptions to east-west traffic.
Water Quality	• Stormwater runoff impacts. • Improvements to the town's wastewater treatment facility. • Stormwater management plan and ordinance.
Natural Hazard Areas	• The effects of sea level rise on the Town of Beaufort. • Hazard mitigation plan strategies.
Areas of Environmental Concern	• Protection of Areas of Environmental Concern. • Protection of the Rachel Carson National Estuarine Sanctuary which includes Carrot Island, Town Marsh, and Bird Shoal.

Areas of Local Concern	• Removal of substandard dwelling units through enforcement of the town's minimum housing code. • Continued protection of both the historic district and the downtown waterfront area. • Establishment of a growth management plan. • Development of service sector to support tourism. • Establishment of a comprehensive annexation plan. • Implementation of redevelopment/revitalization projects to eliminate substandard housing. • Expansion of the Michael J. Smith Airport. • Maritime Museum Expansion. • Beaufort Historical Association (BHA) restoration site.

2.3 Vision Statement

Beaufort values its rich maritime history and the picturesque landscape which this history provides. These historical assets and the shoreline setting are the cornerstones of an important tourist industry. As the town develops, these assets will be maintained and protected. At the same time, the town will pursue development within its jurisdiction as well as within the utility services area that is consistent with the 15A NCAC 7H minimum use standards for AEC's. It is the town's intention to protect its valuable maritime and historical resources. Industrial development will be encouraged within the town's jurisdiction as well as within the utility services area and outside of the AEC's. Finally, it is a priority of the town to carefully control growth and development which is expected to occur between the west bank of the North River and east bank of the Newport River.

SECTION III ANALYSIS OF EXISTING AND EMERGING CONDITIONS

This section of the Plan is organized in accordance with the requirements of Subchapter 7B .0702(c). The purpose of this section is to provide a sound factual and analytical base to support the land use and development policies formulated in this Plan. Specific elements of Section III include

- Population, housing, and economic analysis
- Natural systems analysis
- Environmental conditions analysis
- Land use and development analysis
- Community facilities analysis
- Land suitability analysis
- Review of the current CAMA Land Use Plan

3.1 Population Housing and Economy

3.1.1 Population Analysis

- The estimated 2003 population of the Beaufort corporate area is 3,810 and approximately 5,000 for the Beaufort planning jurisdiction.
- In 2003, the municipal population of Beaufort, one of eleven incorporated municipalities within Carteret County, comprised approximately 6.3 percent of the total county population.
- Between 1980 and 2000, the Town of Beaufort lost population. Beaufort's population growth rate has been considerably lower than that for Carteret County and the State of North Carolina.
- The town's growth rate since 1990 is lower than other coastal North Carolina communities of similar size.
- Beaufort's age distribution is similar to that of Carteret County but differs from the statewide averages in that the town contains a higher proportion of the 65 and older population.
- Beaufort contains a more racially diverse population than does Carteret County as a whole.
- The estimated 2000 seasonal population of Beaufort is 2,041. The 2000 peak population, which is the sum of the permanent population and the seasonal population, is estimated to be 5,812.
- The median age in Beaufort, in the year 2000, was 42.7 years.
- Beaufort's 2000 population density was 1,375 persons per square mile. In comparison, some regional population densities in 2000 were: Swansboro 1,165, Atlantic Beach 831, Morehead City 1,508, and Newport 456.
- Projections indicate that the peak population (total of the permanent and seasonal population) for the Beaufort planning jurisdiction will increase to 9,409 in 2010 and 10,084 in 2025. Complete population projections are provided in Section 3.1.4.

A. Permanent Population Growth Trends

Beaufort's population growth has fluctuated since 1980 and its rate of growth is below that of Carteret County and the statewide average. Population decreases were experienced between 1980 and 1990 and between 1990 and 2000. The following table provides a comparison of the town's recent growth trends with those of the county and the state.

Table 1
Population Size and Growth Rates
Beaufort, Carteret County, and the State
1980-2003

	Population Size			
	1980	**1990**	**2000**	**2003**
Beaufort	3,826	3,808	3,771	3,810
Carteret County	41,092	52,553	59,383	60,574
North Carolina	5,880,095	6,628,637	8,046,962	8,418,090

	Population Growth Rates		
	1980-1990	**1990-2000**	**2000-2003**
Beaufort	-0.47%	-0.97%	1.0%
Carteret County	27.9%	13.0%	2.0%
North Carolina	13.0%	21.4%	4.6%

Sources: U.S. Census of Population, 1980-2000; NC State Data Center

In 2003, the municipal population of Beaufort, one of eleven incorporated municipalities within Carteret County, comprised approximately 6.2 percent of the total county population.

The following table provides a comparison of Beaufort's population growth rates with those of selected municipalities in coastal North Carolina.

Table 2 *Comparison of Beaufort's Population Growth Rate with Selected Municipalities in the Region*						
Municipality	**County**	**1980**	**1990**	**2002**	**1980-1990 % Change**	**1990-2002 % Change**
Alliance	Pamlico	616	681	798	10.55%	17.18%
Atlantic Beach	Carteret	941	1,938	1,780	105.95%	-8.15%
Bayboro	Pamlico	759	733	743	-3.43%	1.36%
Beaufort	***Carteret***	***3,826***	***3,808***	***3,787***	***-0.47%***	***-0.55%***
Cape Carteret	Carteret	944	1,013	1,243	7.31%	22.70%
Cedar Point	Carteret	479	628	950	31.11%	51.27%
Emerald Isle	Carteret	865	2,434	3,564	181.39%	46.43%
Havelock	Craven	17,718	20,300	22,463	14.57%	10.66%
Indian Beach	Carteret	54	153	93	183.33%	-39.22%
Jacksonville	Onslow	18,259	30,398	68,356	66.48%	124.87%
Maysville	Jones	877	892	993	1.71%	11.32%
Morehead City	Carteret	4,359	6,046	7,726	38.70%	27.79%
New Bern	Craven	14,557	17,363	23,415	19.28%	34.86%
Newport	Carteret	1,883	2,516	3,428	33.62%	36.25%
Oriental	Pamlico	536	786	870	46.64%	10.69%
Pine Knoll Shores	Carteret	646	1,360	1,534	110.53%	12.79%
Richlands	Onslow	825	996	909	20.73%	-8.73%
Swansboro	Onslow	976	1,165	1,457	19.36%	25.06%
Trenton	Jones	294	230	240	-21.77%	4.35%

Source: *U.S. Census Bureau; North Carolina State Data Center, Office of State Budget and Management, 2003*

B. Population Characteristics

1. Age Characteristics

Beaufort's age distribution is similar to that of Carteret County but differs from the statewide averages in that the town contains a higher proportion of the 65 and older population. Beaufort's 65 and over population in 2000 comprised approximately 20% of the population while the county and state were at 17% and 12% respectively. .

Table 3 Age Distribution 2000				
		Beaufort	Carteret County	North Carolina
Age Category	Number	% of Total	% of Total	% of Total
Under 18 Years School Age	690	18.3%	20.7%	24.4%
18-24 Years College Age	276	7.3%	6.4%	10.0%
25-64 Years Working Age	2,059	54.6%	55.6%	53.5%
65+ Years Retirement Age	746	19.8%	17.2%	12.0%
Totals	3,771	100.0%	100.0%	100.0%

Source: North Carolina State Data Center, Office of State Budget and Management, 2003.

2. Distribution of Males and Females

Beaufort contains a higher proportion of females than does Carteret County and the State.

Table 4 Distribution of Males and Females in the Total Population 2000					
	Male	Percent	Female	Percent	Total
Beaufort	1,533	43.5%	1,995	56.5%	3,528
Carteret County	29,041	48.9%	30,342	51.1%	59,383
North Carolina	3,940,711	49.0%	4,108,602	51.0%	8,049,313

Source: US Census, 2000

3. Racial Characteristics

Beaufort contains a more diverse population than does Carteret County as a whole. Racial composition data for Beaufort indicate that 79.5% of the population is white and 20.5% all other races. The town's minority population is higher than the Carteret County average but lower than the statewide average.

Table 5 Race and Hispanic or Latino Origin 2000						
	Beaufort		Carteret County		North Carolina	
Race Category	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
White	2,804	79.5%	53,443	90.0%	5,802,165	72.1%
Black/African American	617	17.5%	4,191	7.1%	1,734,154	21.5%
American Indian/Alaska Native	7	0.2%	341	0.6%	100,956	1.3%
Asian	28	0.8%	253	0.4%	111,292	1.4%
Hawaiian/Pacific Islander	0	0.0%	29	0.0%	3,699	0.0%
Other Race	31	0.9%	392	0.7%	185,138	2.3%
Two or More Races	41	1.2%	734	1.2%	111,909	1.4%
Total	3,528	100.0%	59,383	100.0%	8,049,313	100.0%
Hispanic or Latino Origin	62	1.8%	929	1.6%	372,964	4.6%

Source: US Census, 2000

4. Components of Population Change

In migration of population accounted for the majority of Carteret County's growth between 1990 and 2000 resulting in over 88 percent of the total increase in population. While Carteret County's 1990 to 2000 migration rate was among the highest in the region, it was below the statewide average of 15.1 percent.

Table 6 Components of Population Change Carteret County and North Carolina 1990 to 2000		
	Carteret County	**North Carolina**
Population Change	6,976	1,416,865
Births	6,438	1,054,045
Deaths	5,660	638,171
Natural Increase	778	415,874
Net Migration	6,198	1,000,991
Migration Rate[1]	11.8%	15.1%

Source: NC State Data Center

[1]Natural increase is the difference between total births and total deaths. Net migration is the difference between total population change and natural increase. Migration rate is the difference between in-migration and out-migration expressed as a percentage of the base year total population. It is calculated by dividing net migration by the base year total population.

5. Income Characteristics

Beaufort's 2000 per capita income of $19,356 was approximately 95 percent of the statewide per capital income of $20,307. The 2000 per capita income level in Carteret County of $21,260 was 104.7 percent of the North Carolina average. Beaufort's median household income of $28,763 was considerably lower than the Carteret County average of $38,344 and the North Carolina average of $39,184. Carteret County's 2000 median household income of ranked it as 38th statewide.

According to data from the 2000 U.S. Census, the percentage of families below the poverty level in Beaufort was 13.3 % compared to the statewide rate of 9.0% and the Carteret County rate of 8.0%.

3.1.2 Housing Stock

The predominant housing type in Beaufort is the single-family detached dwelling. Of the 2,191 housing units in Beaufort, approximately 66% are single-family detached dwellings. Beaufort has a much higher number of multifamily dwellings (596) than manufactured housing units (136). They represent 27.20% and 6.21% of the housing stock, respectively. Slightly more than 56 percent of housing units are owner-occupied and almost 44 percent are renter-occupied. Beaufort's proportion of multifamily housing is higher than both the Carteret County and statewide averages.

Table 7
Housing by Structure Type
Beaufort
2000

Type of Structure	No.	% of Total
Single-Family		
1 Unit Detached	1,417	64.67%
1 Unit Attached	42	1.92%
Multi-Family		
2-4 Units	351	16.02%
5-9 Units	143	6.53%
10+ Units	102	4.65%
Manufactured Home	136	6.21%
TOTAL UNITS	**2,191**	**100.00%**

Table 8
Comparison of Housing by Structure Type
2000

	Beaufort	Carteret County	North Carolina
Single-Family	66.59%	59.72%	67.48%
Multi-Family	27.20%	14.54%	16.11%
Manufactured Home	6.21%	25.74%	16.41%
TOTAL	**100.00%**	**100.00%**	**100.00%**

Source: U.S. Census, 2000.

Household population of housing units in Beaufort in 2000 was 2.07 persons per unit while the household population for the county and state were 2.31 and 2.49 persons per

unit respectively. Beaufort had a homeowner vacancy rate (0.6%) in 2000 that was lower than both the county (2.92%) and the state averages (1.2%). The rental vacancy rate in Beaufort (3.40%) is lower than the county average (5.39%) but higher than the state average (2.6%). The 2000 Census reported 407 vacant units and 241 intended for seasonal use. Appendix C provides a summary of housing characteristics for the Town of Beaufort, Carteret County, and the State.

According to the 2000 Census, the median value of owner-occupied homes in Beaufort is $112,900 which is higher than both the county and state medians of $106,400 and $95,800 respectively.

A. Building Permits Issued and Subdivision Lots Created

Town data indicates that 263 permits were issued for new residential dwellings since 1998. Of those permits, 229 were issued for single-family detached dwellings and 34 were issued for mobile homes. Building permit data since 1998 indicate that Beaufort has averaged about 44 new residential dwellings per year—approximately 87 percent of those were single-family dwellings.

Table 9
Residential Building Permits
Beaufort

Year	SFR	Mfg. Homes	Total
1998	32	8	40
1999	41	5	46
2000	37	6	43
2001	27	6	33
2002	30	3	33
2003	62	6	68
Total	229	34	263
Average	38.2	5.7	43.8
Percent	87.1%	12.9%	100.0%

Source: Town of Beaufort

Subdivision lot approvals in Beaufort since 1998 have resulted in the creation of an average of 14 new building lots per year.

Table 10 Subdivision Lots Beaufort			
Year	**Residential**	**Nonresidential**	**Total**
1998	0	0	0
1999	48	0	48
2000	97	0	970
2001	0	0	
2002	90	0	90
2003	0	0	0
2004	52	0	52
Total	287	0	287
Average	41.0	0.0	41.0

Source: Town of Beaufort

B. Seasonal Housing

In 2000, seasonal dwelling units constitute 12.6% of the town's total housing stock. The majority (47.1 percent) of seasonal dwelling units in Beaufort is composed of single family seasonal dwelling units. Single family seasonal dwelling units comprise approximately 12 percent of the town's total housing stock. Transient marina slips account for just over 30 percent of all seasonal dwelling units. Hotel, motel, and bed and breakfast rooms comprise the remainder of the town's total seasonal dwelling units

Table 11 Seasonal Housing 2000		
Town of Beaufort	**Total Seasonal Housing Units**	**% of Seasonal Housing W/I Jurisdiction**
Seasonal Dwellings	277	47.1%
Hotel, Motel, B&B	132	22.5%
Campsites	0	0.0%
Transient Marina Slips	179	30.4%
Totals	588	100.0%

Source: US Census, 2000

3.1.3 Local Economy

Employment in Beaufort is based largely in the services and trade sectors. The single largest employment industry sector is the arts, entertainment, recreation, accommodations and food services category which made up 18 percent of the total 2000 employment. Manufacturing employment accounted for just over 7 percent of total employment in the 2000 census. The vast majority of jobs in Beaufort will most likely be provided by the non-manufacturing sector for the foreseeable future.

Table 12 Employment by Industry Town of Beaufort 2000		
Total	**Percent**	**Industry**
40	2.4%	Agriculture, Forestry, Fishing, Hunting, and Fishing
165	10.1%	Construction
124	7.6%	Manufacturing
291	17.8%	Wholesale and Retail Trade
74	4.5%	Transportation, Warehousing, and Utilities
53	3.2%	Information
52	3.2%	Finance, Insurance, Real Estate, Rental and Leasing
152	9.3%	Professional, Scientific, Management, Administrative, and Waste Management
216	13.2%	Educational, Health and Social Services
294	18.0%	Arts, Entertainment, Recreation, Accommodation and Food Services
111	6.8%	Other Services, except Public Administration
64	3.9%	Public Administration
1636	100.0%	Total

Source: US Census, 2000

Travel and tourism related employment is an important component of the Carteret County economy. In 2002, the NC Department of Commerce estimated that tourism generated an economic impact of $206.87 million. More that 3,720 jobs were directly attributable to travel and tourism.

The Naval Depot and the Marine Corps Air Station at Cherry Point is also a major employer of Carteret County residents. According to data from the Business Performance Office at the Marine Corps Air Station, 1,763 civilian employees at Cherry Point (31%) reside in Carteret County. Out of a total payroll of $357,584,693 for the four-county region of Carteret, Craven, Jones and Pamlico Counties, Carteret County civilian employees earn approximately $110,851,255. The following table presents employment data for employment by major sector for Carteret County. Employment by sector for Carteret County is provided to gain a better sense of employment trends in the region.

Table 13 *Carteret County* *Employment by Industry Sector*	
Sector	**Persons Employed**
Service Professions	8,346
Finance/Insurance/Real Estate	2,710
Retail	7,671
Wholesale	996
Transportation	1,147
Manufacturing	1,945
Construction	2,996
Mining	15
Agricultural/Forestry/Fishing/Other	1,329

Source: Federal Agency Data: Bureau of Economic Analysis

The total valuation of real, personal, and public service company property in Beaufort totaled $373,038,454.00 in 2003. Real property constitutes approximately 90 percent of the town's total valuation. Beaufort comprised approximately 5 percent of the total Carteret County valuation.

Table 14 Valuations and Tax Rates for 2002 - 2003		
	Total Assessed Valuation	**Tax Rate (per $100)**
Carteret County	7,330,795,475	$0.42
Atlantic Beach	826,469,876	$0.23
Beaufort	***373,038,454***	***$0.36***
Bogue	37,752,442	$0.05
Cape Carteret	181,239,601	$0.23
Cedar Point	160,316,119	$0.05
Emerald Isle	1,361,208,559	$0.185
Indian Beach	163,317,742	$0.16
Morehead City	899,596,917	$0.38
Newport	161,283,726	$0.43
Peletier	34,048,700	$0.05
Pine Knoll Shores	538,823,834	$0.17

Source: NC Department of Revenue, Tax Research Division

3.1.4 Permanent and Seasonal Population Projections

A. Permanent Population Projections

Projections provided by the NC State Data Center indicate that the Carteret County population will continue to increase through the next several decades but at a slower rate. This projected trend of decreased growth rates also holds true for the neighboring counties as well as the entire state. The following table provides projected population figures for the County, the Town of Beaufort and the Beaufort planning jurisdiction.

Table 15 Permanent Population Projections								
	US Census 2000	**Certified Estimate**	**Projections**					
		July 2002	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**
Carteret County	59,383	60,064	62,435	65,019	67,128	69,056	70,406	71,427
Beaufort Corporate Area	3,771	3,787	5,245	5,462	5,639	5,801	5,914	6,000
Beaufort Planning Jurisdiction	4,954*	4,974*	6,891	7,177	7,409	7,622	7,771	7,884

**Planning Jurisdiction Estimates by The Wooten Company.*

Sources: US Census, 1970-2000. 2002 Certified Population Estimates, NC State Data Center, October 2003. County Population Growth 2000-2030, NC State Data Center, April 2006.

Permanent population projections for Beaufort are based upon the average rate of growth and the ratio of the town's population to Carteret County's population for the 1970-2000 period. Appendix L provides more detailed information regarding population projections.

B. Seasonal and Peak Population Projections

The estimated 2000 seasonal population of Beaufort is 2,041. The 2000 peak population, which is the sum of the permanent population and the seasonal population, is estimated to be 5,812.

Table 16
Peak Population

Beaufort Corporate	Total	PPH	Pop
Seasonal Dwelling Units	277	4	1,108
Hotel, Motel, B&B	132	3	396
Campsites	0	0	0
Transient Marina Slips	179	3	537
Totals	588		2,041
Seasonal Population 2000	2,041		
Permanent Population 2000	3,771		
Peak Population 2000	5,812		
Peak to Permanent Ratio	154.12%		

Sources: US Census Summary File 3, Table H1, Housing Summary and Table H33, Population by Units in Structure by Tenure. Estimates by The Wooten Company.

Based upon the estimated 2000 seasonal and peak population as delineated above and the assumption that the ratio of seasonal population to permanent population will remain constant, the following projections have been prepared for the Beaufort corporate area and for the Beaufort planning jurisdiction.

Table 17
Seasonal and Peak Population Projections

	2005	2010	2015	2020	2025	2030
Beaufort Corporate Area						
Permanent Population	5,245	5,462	5,639	5,801	5,914	6,000
Seasonal Population	2,839	2,956	3,052	3,140	3,201	3,247
Peak Population	8,084	8,418	8,691	8,940	9,115	9,247
Beaufort Planning Jurisdiction						
Permanent Population	6,891	7,177	7,409	7,622	7,771	7,884
Seasonal Population	3,729	3,884	4,010	4,125	4,206	4,267
Peak Population	10,620	11,061	11,419	11,747	11,977	12,151

Source: The Wooten Company, April 2006

3.2 Natural Systems Analysis

Subchapter 7B .0702(c)(2) requires that the land use plan describe and analyze the natural features and environmental conditions within the Beaufort planning jurisdiction and to assess their capabilities and limitations for development. Section 3.2 provides an inventory of natural features; a description of a composite map of environmental conditions that shows the extent and overlap of natural features; and an assessment water quality, natural hazard, and natural resource conditions and features and their limitation or opportunity for land development.

3.2.1 Inventory of Natural Features

The inventory of natural features includes a description of Areas of Environmental Concern (AECs), soil characteristics, water quality classifications and use support designations, flood hazard areas, storm surge areas, non-coastal wetlands, water supply watersheds, and other environmentally fragile areas. Fragile areas within the Beaufort planning jurisdiction that could easily be damaged or destroyed by inappropriate or poorly planned land uses include: floodplains, freshwater marshes, saltwater and brackish marshes, beneficial non-coastal wetlands, and estuarine waters.

A. Areas of Environmental Concern

Areas of environmental concern (AEC) include coastal wetlands, estuarine waters and estuarine shoreline, and public trust areas. Coastal wetlands are defined as any marshes subject to regular or occasional flooding by lunar or wind tides. Estuarine waters are defined by the Coastal Management Act as all the waters of the Atlantic Ocean within the boundary of North Carolina and all the water of bays, sounds, rivers, and tributaries thereto seaward of the dividing line between coastal fishing waters and inland fishing waters. Public trust areas include waters and submerged lands in the coastal region where the public has rights of use and/or ownership, including rights of navigation and recreation.

Since Beaufort is located on a peninsula, areas of environmental concern virtually surround the town. The shorelines of Newport River, North River, and Taylor Creek and their estuarine waters and salt marshes comprise the majority of AECs in Beaufort. The estuarine shoreline considered to be an AEC in the Beaufort area is all shorelands within 75 feet landward of the mean high water level, or normal water level, of the estuarine waters and (ii) for those shorelands adjacent to Outstanding Resource Waters (ORW), 575 feet landward of the mean high water level, or normal water level, of the estuarine waters. All of these areas are subject to stricter regulations controlling development. Priority is, however, given to the conservation of the ORW AECs.

CAMA standards for estuarine shoreline development generally require that (i) the development not cause significant damage to estuarine resources; (ii) the development not interfere with public rights of access to or use of navigable waters or public resources; (iii) the development preserve and not weaken natural barriers to erosion; (iv) impervious surfaces not exceed 30 percent of the lot area located within the AEC boundary; (v) the development comply with state soil erosion, sedimentation, and stormwater management regulations; and (vi) the development comply with the CAMA Land Use Plans. Specific CAMA development standards for AECs can be found in 15 NCAC 7H. Additional use standards for development projects within the ORW estuarine shoreline include (i) having no stormwater

collection system and (ii) providing a buffer zone of at least 30 feet from the mean high water line. Specific CAMA development standards for AEC's can be found in 15 NCAC 7H.

B. Soil Characteristics

The majority of soils in Beaufort's planning jurisdiction are hydric soils. Hydric soils often contain an abundance of moisture and generally lack oxygen. Soils such as Leon sand, Leon-Urban sand complex, and Tomotley fine sandy loam are the predominant soils and they are hydric. Other soils that are not entirely hydric, yet include hydric soils or have wet spots, are Augusta loamy fine sand and Mandarin-Urban land complex. All of these soils present limitations to development, particularly, where a septic system is needed. Generally, many soil limitations can be overcome with special engineering considerations. For instance, a severe limitation precluding septic systems can be overcome by extending public sewer to the affected area. While engineering can often work around problems presented by soil conditions, there are soils and habitats that are not suited for development regardless of engineering capabilities. Soil conditions should be taken into consideration when planning for land use.

Generally, most of the soils in the Beaufort planning jurisdiction have limitations for many urban uses due to wetness, low strength, and restricted permeability. Overall, for septic tank use, the soil types in the town's jurisdictional area have substantial limitations. Over 92 percent of the Beaufort planning jurisdiction contains soils that are rated as having severe limitations for septic tank absorption fields. Additionally, septic systems are not permitted within the corporate limits of the town, allowing them only in the ETJ. Site-specific soil analyses are required by the Carteret County Environmental Health Services to evaluate the suitability of a particular parcel for a septic system. Centralized sewer facilities are needed to support intensive urban development. The following table describes the soils within the Beaufort planning jurisdiction and the specific limitations for septic system use.

Table 18
Soils in the Beaufort Planning Jurisdiction

Symbol	Soil Description	Acres	Percent	Limitation for Septic Systems
Ap	Arapahoe fine sandy loam	1257.4	26.5%	Severe: wetness/poor filter
Tm	Tomotley fine sandy loam	684.6	14.4%	Severe: wetness
AaA	Altavista loamy fine sand-0 to 2 percent slopes	477.3	10.1%	Severe: wetness
Ag	Augusta loamy fine sand	469.0	9.9%	Severe: wetness
Ln	Leon sand	453.9	9.6%	Severe: wetness/poor filter
Nd	Newhan fine sand-dredged-2 to 30 percent slopes	281.5	5.9%	Severe: poor filter/slope
CH	Carteret sand-frequently flooded	238.4	5.0%	Severe: flooding/ponding/poor filter
StA	State loamy fine sand-0 to 2 percent slopes	227.4	4.8%	Moderate: wetness
Lu	Leon-Urban land complex	128.7	2.7%	Severe: wetness/poor filter
Mc	Mandarin-Urban land complex	127.0	2.7%	Severe: wetness/poor filter
w	Water	113.2	2.4%	N/A
Mn	Mandarin sand	63.4	1.3%	Severe: wetness/poor filter
Cu	Corolla-Urban land complex	54.2	1.1%	Severe: wetness/poor filter
WaB	Wando fine sand-0 to 6 percent slopes	43.6	0.9%	Severe: poor filter
CnB	Conetoe loamy fine sand-0 to 5 percent slopes	27.5	0.6%	Slight
KuB	Kureb sand-0 to 6 percent slopes	23.5	0.5%	Severe: poor filter
De	Deloss fine sandy loam	20.7	0.4%	Severe: wetness
WuB	Wando-Urban land complex-0 to 6 percent slopes	15.9	0.3%	Severe: poor filter
ByB	Baymeade fine sand-1 to 6 percent slopes	12.6	0.3%	Severe: poor filter
Se	Seabrook fine sand	7.2	0.2%	Severe: wetness/poor filter
HB	Hobucken muck-frequently flooded	6.7	0.1%	Severe: flooding/ponding
Mu	Murville mucky sand	6.5	0.1%	Severe: ponding/poor filter
	Totals	4740.3	100.0%	

Source: Natural Resources Conservation Service, USDA.

Specific soil limitations data for sewage disposal, dwellings, and small commercial buildings are provided in Appendix D.

Hydric soils are soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to support the growth and reproduction of hydrophytic vegetation. Hydrophytic vegetation along with hydric soils and wetland hydrology are considered the three essential characteristics of wetlands.

Consequently, the presence of hydric soils is one indicator of probable wetlands locations. The precise location of wetlands must, however, be determined through field investigation. Soils that are classified as hydric are also delineated in Appendix D.

More detailed data regarding the criteria for defining hydric soils as well as information regarding measures for mitigating particular soils limitations can be obtained at the local office of the Natural Resources Conservation Service.

C. Water Quality Classifications and Use Support Designations

Water Quality Classifications. All surface waters in North Carolina are assigned a primary water quality classification by the North Carolina Division of Water Quality under the authority of the Environmental Management Commission. Classifications are designations applied to surface water bodies that define the best uses to be protected within these waters, as required by the Clean Water Act. The most common primary classification within North Carolina is Class C, which protects waters for the propagation of aquatic life and for secondary recreation. Other primary freshwater classifications provide for additional levels of protection for uses consisting of water supplies (Class WS-I through Class WS-V) and for primary recreation (Class B). Saltwater primary classifications are denoted as SC, SB, and SA.

In addition to the primary classification, one or more supplemental classifications may be assigned to specific surface waters to provide additional protection to waters with special uses or values. North Carolina's supplemental classifications include NSW (nutrient sensitive waters), Tr (trout waters), HQW (high quality waters), ORW (outstanding resource waters), and Sw (swamp waters).

All primary and secondary water quality classifications are described in the following table:

Table 19 *North Carolina Water Quality Classifications*	
Freshwater Primary Classifications	
Classification	Best Usage of Waters
C	Aquatic life propagation and maintenance of biological integrity (including fishing, and fish), wildlife, secondary recreation, agriculture and any other usage except for primary recreation or as a source of water supply for drinking, culinary, or food processing purposes. All freshwaters shall be classified to protect these uses at a minimum.
B	Primary recreation (which includes swimming on a frequent or organized basis) and any other best usage specified for Class C waters.
WS I - WS V	Source of water supply for drinking, culinary, or food-processing purposes for those users desiring maximum protection of their water supplies and any best usage specified for Class C waters.
Saltwater Primary Classifications	
Classification	Best Usage of Waters
SC	Aquatic life propagation and maintenance of biological integrity (including fishing, fish and functioning primary nursery areas (PNAs)),wildlife, secondary recreation, and any other usage except primary recreation or shellfishing for market purposes.
SB	Primary recreation (which includes swimming on a frequent or organized basis) and any other usage specified for Class SC waters.
SA	Shellfishing for market purposes and any other usage specified for Class SB or SC waters.
Supplemental Classifications	
Classification	Best Usage of Waters
HQW	High Quality Waters. Waters which are rated as excellent based on biological and physical/chemical characteristics through Division monitoring or special studies, native and special native trout waters (and their tributaries) designated by the Wildlife Resources Commission, primary nursery areas (PNAs) designated by the Marine Fisheries Commission and other functional nursery areas designed by the Marine Fisheries Commission.
NSW	Nutrient Sensitive Waters. Waters that experience or are subject to excessive growths of microscopic or macroscopic vegetation. Excessive growths are growths which the Commission determines impair the use of the water for its best usage as determined by the classification applied to such waters.
ORW	Outstanding Resource Waters. Unique and special surface waters of the state that are of exceptional state or national recreational or ecological significance that require special protection to maintain existing uses.
Sw	Swamp Waters. Waters which are topographically located so as to generally have very low velocities and other characteristics which are different from adjacent streams draining steeper topography.
Tr	Trout Waters. Waters which have conditions that shall sustain and allow for trout propagation and survival of stocked trout on a year-round basis.
Source: NC Division of Water Quality	

The waters in the Beaufort area are classified as SA, SC, HQW, and ORW. The majority of the waters in the Beaufort planning jurisdiction are classified as SA. Waters in Taylor's Creek and Town Creek are classified as SC. Appendix E includes a listing of the water quality classifications for the various water bodies in the Beaufort area. The following table summarizes some of the major characteristics and development regulations for SA, SC, HQW, and ORW waters.

Table 20
Overview of SC, SA, HQW, AND ORW Water Quality Classifications

Saltwater Quality Characteristics			**Stormwater Control***	
Classification	**Best Uses**	**Erosion and Sedimentation Control Rules**	**Low Density Option**	**High Density Option**
Division of Water Quality: Primary Classifications				
SC	•Aquatic life propagation; and •Secondary Recreation	•Standard erosion protection and sedimentation control required for projects greater than 1 acre. •Required to manage 10-year storm runoff. •Refer to NC Division of Land Resources	•30' minimum buffer. •30% maximum built-upon area.	•Systems must control runoff from 1.0" of rainfall and be designed for 85% TSS removal. •Refer to Stormwater Management Rules 15A NCAC 2H .1000 for specific design information.
SA	•Commercial shellfish harvesting; •Primary recreational activities; and •SC Best Uses. •All SA waters are HQW.	•The Sedimentation Control Commission has as many as 5 increased design standards for projects in all HQW zones. See Sedimentation Control Rules for Design Standards in Sensitive Watersheds (15A NCAC 4B.0024).	•30' minimum buffer. •25% maximum built-upon area.	•Systems must control runoff from 1.5" of rainfall and be designed for 85% TSS removal. Refer to Stormwater Management Rules 15A NCAC 2H .1000 for specific design information.
Division of Water Quality: Supplemental Classifications				
High Quality Waters (HQW)	•Excellent quality saltwater. •All SA waters, ORW, and PNAs are also HQW	The Sedimentation Control Commission has as many as 5 increased design standards for projects in all HQW zones. See Sedimentation Control Rules for Design Standards in Sensitive Watersheds (15A NCAC 4B.0024).	•Stormwater management measures are the same as the primary classification requirements. •Refer to the Stormwater Management Rules for specific stormwater control requirements in the 20 coastal NC counties.	
Outstanding Resource Waters (ORW)	•Excellent quality saltwater; and •Outstanding Fish Habitat or fisheries; or •High existing recreation; or •Special Federal or State designation; or •Part of a State/National Park/Forest; or •High ecological/ scientific significance. •ORW are also HQW.	The Sedimentation Control Commission has as many as 5 increased design standards for projects in all HQW zones. See Sedimentation Control Rules for Design Standards in Sensitive Watersheds (15A NCAC 4B.0024).	New developments located within 575' of the mean high water level of ORW class waters must meet, at a minimum, the Low Density Options specified in the Coastal Stormwater Management Rules for SA class waters. Specific stormwater control strategies for protecting ORW class saltwaters are developed during the process to reclassify waters with the ORW supplemental classification.	

**Stormwater controls are applicable only when a CAMA Major Development Permit or a Sedimentation and Erosion Control Permit is required and the impacted area is more than one acre in size.*

Source: General Overview of North Carolina Tidal Saltwater Classification System, DCM.

Use Support Designations. Surface waters are classified according to their best intended uses. Determining how well a waterbody supports its uses (use support status) is an important method of interpreting water quality data and assessing water quality. Surface waters are currently rated supporting and impaired. These ratings refer to whether the classified uses of the water (such as water supply, aquatic life protection and recreation) are being met. For example, waters classified for fish consumption, aquatic life protection and secondary recreation (Class C for freshwater or SC for saltwater) are rated Supporting if data used to determine use support meet certain criteria. However, if these criteria were not met, then the waters would be rated as Impaired. Waters with inconclusive data are listed as Not Rated. Waters lacking data are listed as No Data.

In previous use support assessments, surface waters were rated fully supporting (FS), partially supporting (PS), not supporting (NS) and not rated (NR). FS was used to identify waters that were meeting their designated uses. Impaired waters were rated PS and NS, depending on their degree of degradation. NR was used to identify waters lacking data or having inconclusive data. The 2002 Integrated Water Quality Monitoring and Assessment Report Guidance issued by the EPA requested that states no longer subdivide the impaired category. In agreement with this guidance, North Carolina no longer subdivides the impaired category and rates waters as Supporting, Impaired, Not Rated or No Data.

In the White Oak River Basinwide Water Quality Plan, which was prepared by the NC Division of Water Quality in September 2001, the waters within subbasin 03-05-03 and 03-05-04 were rated as follows:

Table 21
Use Support Ratings for Monitored Waters

Subbasin 03-05-03

Use Support Category	Fully Supporting	Partially Supporting	Not Supporting	Not Rated	Total
Aquatic Life/Secondary Recreation	0 mi 31,113.4 ac	0	0	21.6 mi 0 ac 25 coastal mi	21.6 mi 31,113.4 ac 25 coastal mi
Fish Consumption	0	25 coastal mi	0	0	25 coastal mi
Primary Recreation	22,895.0 ac 25 coastal mi	0	0	0	22,895.0 ac 25 coastal mi
Shellfishing Harvesting	0 26,683 ac	2.0 mi 2,763 ac	15.7 mi 4,700 ac	0	17.7 mi 34,146 ac
Aquatic Life/Secondary Recreation	4.4 mi 37,705.8 ac	0	0	0 mi 40.6 ac	4.4 mi 37,746.4 ac
Fish Consumption	0	0	0	0	0

Primary Recreation	33,283.9 ac	0	0	0	33,283.9 ac
Shellfishing Harvesting	0 mi. 27,642 ac	2.7 mi 10,132 ac	0 mi 1,403 ac	0	2.7 mi 39,177 ac
Coastal mi =miles of Atlantic coastline					

Source: *White Oak River Basinwide Water Quality Plan, September 2001*

D. Flood Hazard Areas

The 100-year floodplain is land subject to a one percent or greater chance of flooding in any given year. Generally, the parcels adjacent to the shorelines of the Newport River, North River, Taylor's Creek, Town Creek, and Turner Creek are the areas within the 100-year floodplain. The eastern side of the Beaufort peninsula is the most expansive area of floodplain. Approximately 41 percent of the Beaufort planning area is within the 100-year floodplain. An additional 24 percent of the town's planning area is within the 500-year floodplain. Floodplains are delineated in Figure 2.

National Flood Insurance Program repetitive loss claims in Carteret County are in the range of $2.5 million to $25 million according the Federal Emergency Management

Agency and the Federal Insurance Administration. The definition of a repetitive loss property used by the Federal Insurance Administration is: "any insured structure with at least two flood insurance losses, each of at least $1,000, in any rolling 10-year period". During this 10-year period, Beaufort had 5 repetitive loss properties with 11 reported losses at a cost of $582,070.00.

E. Storm Surge Areas

Maps delineating hurricane surge inundation areas have been provided to the Town of Beaufort by the Division of Coastal Management. Storm surge is the rise in sea level caused by water being pushed towards land by hurricane winds. The storm surge inundation areas are based upon National Hurricane Center model maps and have been recompiled by the North Carolina Center for Geographic Information and Analysis. Surge inundation areas have been mapped to illustrate the extent of hurricane-induced flooding based upon slow moving (forward velocity less than 15 mph) and fast moving (forward velocity greater than 15 mph) category 1 and 2, category 3, and category 4 and 5 hurricanes. Storm surge areas for fast moving hurricanes are shown in the Figure 2. The areas subject to storm surge inundation delineated on this map are based upon the most intense storm intensity and storm speed. Under this worst-case scenario, the entire Beaufort planning jurisdiction land area is subject to flooding from a storm surge. More detailed storm hurricane surge maps are available for review in the offices of the Town of Beaufort Zoning Administrator.

BEAUFORT, NC

Figure 2
Environmental Composite & Natural Features

THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE

November 24, 2004

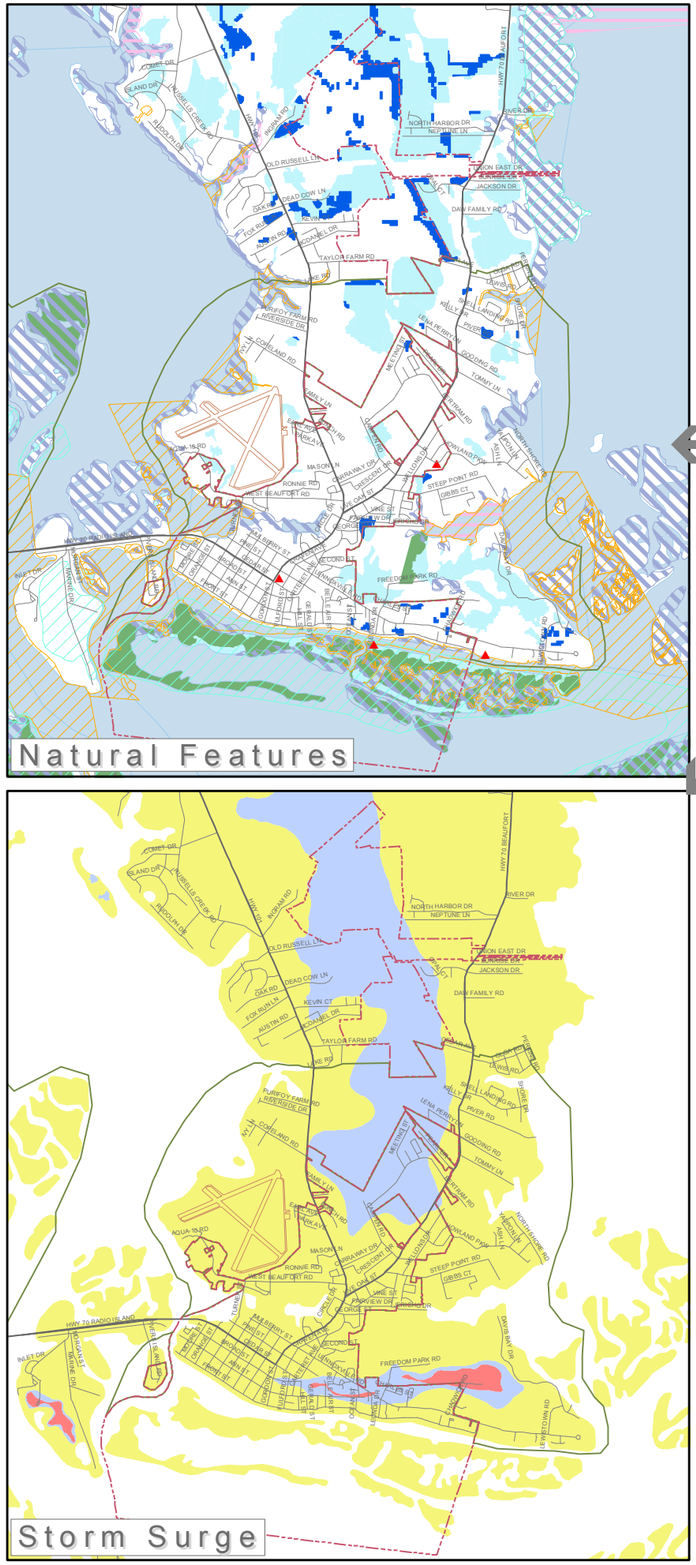
Environmental Conditions Composite

- Beaufort City Limits
- Beaufort ETJ
- Water Bodies
- Class I: Minimal Hazards & Limitations
- Class II: Moderate Hazards & Limitations
- Class III: Serious Hazards & Limitations

0 0.125 0.25 0.5 0.75 1 Mile

The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.

1 inch equals 2,850 feet



Wetlands & Other Natural Features

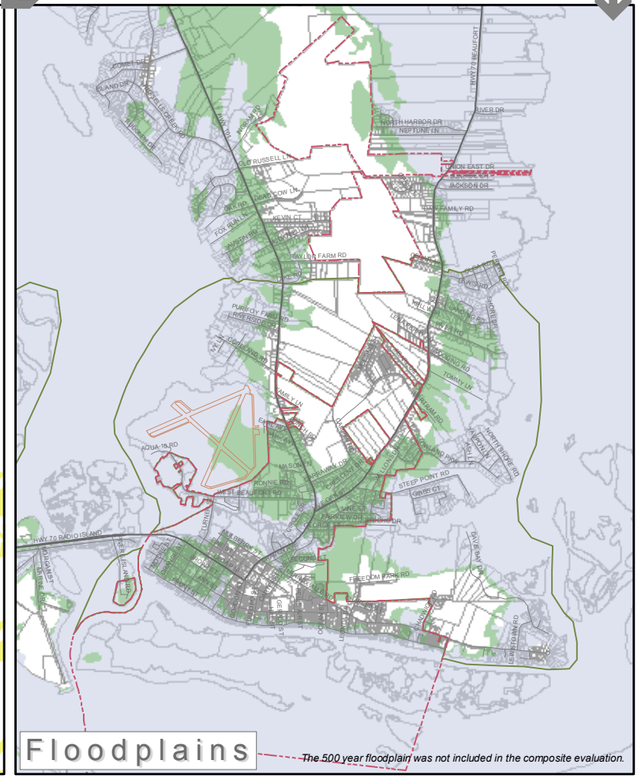
- NPDES
- Natural Heritage Areas
- Closed Shellfish Harvest Areas
- Primary Fishery Nursery Area
- Coastal Wetlands
- Beneficial Non Coastal Wetlands
- Estuarine Waters
- Exceptional Wetlands
- Protected Lands

Storm Surge

- Categories 1 & 2
- Category 3
- Categories 4 & 5

Floodplains

- 100 Year Floodplain
- 500 Year Floodplain



The 500 year floodplain was not included in the composite evaluation.

Flooding as well as high winds would impact the Beaufort area during a major coastal storm. The table below describes the impact of the various categories of hurricanes:

Table 22
Description of Hurricane Categories

Category	Winds	Storm Surge	Damage Expected
Category 1	74-95 MPH	4-5 Feet	Minimal Damage
Category 2	96-110 MPH	6-8 Feet	Moderate Damage
Category 3	111-130 MPH	9-12 Feet	Extensive Damage
Category 4	131-155 MPH	13-18 Feet	Extreme Damage
Category 5	155+ MPH	18+ Feet	Catastrophic Damage

While the identified hurricane storm surge inundation areas resulting from Category 1 and 2 hurricanes often parallel the 100-year flood hazard area shown in Figure 2, there are some additional portions of Beaufort that are particularly subject to more intensive hurricane-induced flooding. Such areas are generally located in the center of the peninsula north of the intersection of US 70 and NC 101 and west of Live Oak Street between Taylor's Creek and Turner Creek. The table below delineates storm surge flooding in the Beaufort planning jurisdiction by hurricane category.

Table 23
Storm Surge Flooding

Category	Acres Inundated	% of Total Planning Jurisdiction
Category 1 and 2	3,293.5	73.2%
Category 3	1,150.8	25.6%
Category 4 & 5	53.8	1.2%
Totals	4,498.1	100.0%

F. Non-coastal Wetlands

Non-coastal wetlands include all other wetlands not classified as coastal wetlands. These non-coastal wetlands are not covered by CAMA regulations (unless the Coastal Resource Commission designates them as a natural resource AEC) but are protected by the Clean Water Act. Consequently, the US Army Corps of Engineers is responsible for regulating these '404' wetlands. Authorization must be obtained from the Corps prior to disturbing such wetlands.

As with coastal wetlands, the precise location of non-coastal wetlands can only be determined through a field investigation and analysis. However, the US Fish and Wildlife Service, through its National Wetlands Inventory, has identified the general location of wetlands. The National Wetlands Inventory Maps are available from the US Department of the Interior and the NC Department of Environment, Health, and Natural Resources, Division of Soil and Water Conservation. The wetlands maps are not intended to be utilized for regulatory purposes.

The north central portion of the Beaufort planning jurisdiction is the area where freshwater wetlands are primarily concentrated. The general location of coastal and

non-coastal wetlands is shown in Figure 2. Non-coastal wetlands account for approximately 15 percent of the total Beaufort land area.

G. Public Water Supply Watersheds

There are no public water supply watersheds in the Beaufort planning jurisdiction.

H. Primary Nursery Areas

Primary Nursery Areas are identified by the Marine Fisheries Commission. PNA areas have been designated by the State as being highly productive for juvenile habitat of marine species. The North Carolina Division of Marine Fisheries is responsible for preserving, protecting, and developing Primary Nursery Areas for commercially important finfish and shellfish. The NC Marine Fisheries Division has identified Turner Creek as the only primary nursery area within the Beaufort planning area.

I. Other Environmentally Fragile Areas

Significant Natural Heritage Areas

The Rachel Carson Estuarine Research Reserve is the most significant designated natural heritage area within Beaufort. The islands and estuarine waters of the Reserve encompass some 2,600 acres. Town Marsh, Bird Shoal, and a portion of Carrot Island are located within the Beaufort planning jurisdiction. The general location of Natural Heritage Areas is shown in Figure 3. Appendix F contains an inventory of natural areas and rare species found in Carteret County.

Areas with Excessive Slope and High Erosion Potential

The topography of Beaufort rises quickly from Taylor's Creek to a maximum elevation of about 14 feet above mean sea level (msl). The shoreline along Gallants Channel is similar; although, the elevation is closer to 8 feet msl. These shoreline areas are subject to erosion and have been stabilized in many areas. In the region between the Newport River and North River, the topography is fairly level with a maximum elevation of approximately 25 feet msl.

Other Fragile Areas

Estuarine system islands are other fragile areas that are present in the Beaufort area. The shorelines of estuarine islands are classified as areas of environmental concern. The majority of the estuarine system islands in the Beaufort planning jurisdiction are within the Rachel Carson Estuarine Research Reserve and Town Creek.

The water source for the Town of Beaufort water system is three deep wells that draw water from the Castle Hayne Aquifer. Beaufort is within the 15-county Central Coastal Plain Capacity Use Area designated by the Environmental Management Commission. A capacity use area is an area where the use of water resources threatens to exceed the replenishment ability of the aquifers. Ground water withdrawals are regulated by the State and investment in alternative sources of water is encouraged.

3.2.2 Composite Environmental Conditions Map

The environmental composite map must show three categories of land based upon natural features and environmental conditions:

- **Class I** is land that contains only minimal hazards and limitations for development which can be addressed by commonly accepted land planning and development practices. Class I land will generally support the more intensive types of land uses and development.
- **Class II** is land that has hazards and limitations for development that can be addressed by restrictions on land uses, special site planning, or the provision of public services, such as water and sewer. Land in this class will generally support only the less intensive uses, such as low density residential, without significant investment in services.
- **Class III** is land that has serious hazards and limitations. Land in this class will generally support very low intensity uses, such as conservation and open space. The following table delineates the environmental features which are included in each land class:

Table 24
Environmental Features Included in Land Classes

Feature	Class I	Class II	Class III
Coastal Wetlands			✓
Exceptional or Substantial Non-Coastal Wetlands			✓
Beneficial Non-Coastal Wetlands		✓	
Estuarine Waters			✓
Public Trust Areas			✓
Soils with Slight or Moderate Septic Limitations	✓		
Soils with Severe Septic Limitations			✓
Flood Zones		✓	
Storm Surge Areas		✓	
Wellhead Protection Areas		✓	
Significant Natural Heritage Areas		✓	
Protected Lands			✓
HQW/ORW Watersheds		✓	

Based upon the environmental conditions assigned to each land class as delineated in the above table, the overwhelming majority (94.6%) of the land area in the Beaufort planning jurisdiction falls into Class III, serious hazards and limitations. Class II lands (moderate hazards and limitations) account for approximately 5.4 percent of the Town's land area. No land area is classified as Class I, minimal hazards and limitations. Land classes within Beaufort are shown in Figure 2, Environmental Composite and Natural Features Map.

The Environmental Composite and Natural Features Map is a very general depiction of the three land classes as defined above. The model utilized to produce this map uses one acre of land area to delineate a pixel or cell on the map. Consequently, the

information provided by this map is intended to show generalized patterns and is not intended for permitting or regulatory purposes. Based upon an evaluation of the individual environmental features included within each individual land class category, it appears that soils with severe limitations for septic systems skews the composite analysis since so much land area contains soils with severe limitations. However, severe soil limitations for septic systems can be mitigated in areas where public sewer service is available, as is the case within the corporate limits of Beaufort. The impact of adequate infrastructure to overcome environmental limitations is demonstrated in Section 3.5, Land Suitability Analysis; Figure 7, Land Suitability Map; and Section 4.7, Consistency with Natural Features and Land Suitability Analyses.

3.2.3 Assessment of Environmental Conditions

A. Water Quality Assessment

White Oak River Basin Overview. Preparation of a basinwide water quality plan is a five-year process. While these plans are prepared by the North Carolina Division of Water Quality, their implementation and the protection of water quality entail the coordinated efforts of many agencies, local governments and stakeholder groups in the state. The first cycle of plans was completed in 1998, but each plan is updated at five-year intervals. Much of the information in this CAMA land use plan regarding water quality has been obtained from the DWQ and the *White Oak Basinwide Water Quality Plan*.

The White Oak River Basin lies entirely within the southern coastal plain, and includes four separate river systems: the New River and its tributaries; the White Oak River and its tributaries; the Newport River and its tributaries, and the North River in the eastern area of the basin. The basin also includes the Bogue, Back, and Core Sounds, as well as portions of the Intracoastal Waterway.

Beaufort is within subbasins 03-05-03 (Newport River) and 03-05-04 (North River) of the White Oak River Basin. Beaufort comprises approximately 0.22% of the White Oak River Basin's geographical area. The Town's population comprised 2.58% of the population present in the river basin in 2001.

Table 25
Overview of the White Oak River Subbasins within the Beaufort Planning Jurisdiction

Subbasin 03-05-03 at a Glance	Subbasin 03-05-04 at a Glance
Land and Water Area (sq. mi.) Total area: 228 Land area: 168 Water area: 60	**Land and Water Area (sq. mi.)** Total area: 170 Land area: 102 Water area: 68
Population Statistics 1990 Est. Pop.: 11,404 people Pop. Density: 68 persons/mi^2	**Population Statistics** 1990 Est. Pop.: 8,514 people Pop. Density: 83 persons/mi^2
Land Cover (%) Forest/Wetland: 59 Surface Water: 26 Urban: 4 Cultivated Crop: 6.5 Pasture/	**Land Cover (%)** Forest/Wetland: 35 Surface Water: 40 Urban: 1 Cultivated Crop: 23 Pasture/

Managed Herbaceous: 4	Managed Herbaceous: 1
Water Area: Stream Miles: 18 Estuarine Acres: 34,723 Coastal Miles: 25 Shellfish Harvest Acres: 34,146	**Water Area:** Stream Miles: 6 Estuarine Acres: 39,498 Coastal Miles: 0 Shellfish Harvest Acres: 39,176

Source: Draft White Oak River Basinwide Water Quality Plan, September 2001

Subbasin 03-05-03 (Bogue Sound and Newport River). This subbasin lies in the center of Carteret County, extending from the Croatan National Forest to Beaufort and Beaufort Inlet. With the exception of Newport, most of the development in this subbasin is along the coast; Morehead City, Beaufort, Atlantic Beach, and Bogue Banks. Most of the waters in this subbasin are estuarine with the Newport River as the only major source of freshwater. There are 34,146 acres of estuarine water classified for shellfish harvesting; 11,368 of these acres are ORW. The most significant discharger in this subbasin is the Morehead City WWTP (3.4 MGD) which discharges into Calico Creek.

There are two Outstanding Resource Waters in this subbasin. The larger area is the western half of Bogue Sound, and the smaller is the swamp and salt waters of the Theodore Roosevelt State Natural Area.

Subbasin 03-05-04 (North River, Jarrett Bay, Nelson Bay, and Core Sound). This subbasin contains major waterbodies, including North River, Jarrett Bay and Nelson Bay, plus the landward halves of Back Sound and Core Sound. Atlantic, at the northern end of the subbasin, and Harkers Island, at the south, are the two most densely developed areas within the subbasin. A large part of the subbasin is in cultivated cropland (Open Grounds Farm). Water quality in this subbasin is generally high. Ambient monitoring data at one station indicated drainage from swampy areas near Open Grounds Farm. Most of this subbasin is estuarine with freshwater drainage from adjacent land. There are no freshwater streams in this subbasin. There are 39,176 acres of shellfish harvesting waters in the subbasin.

Most of these waters (25,958 acres) are classified as ORWs in the Core Sound. There are no coastal miles in this subbasin. The most densely populated areas are near the Town of Atlantic in the northern part of the basin and Harkers Island in the southern portion. The most significant discharges within this subbasin include the Beaufort Fisheries facility (3.0 MGD) and the Town of Beaufort WWTP (1.2 MGD), both of which discharge into Taylor's Creek.

Land Cover. The White Oak River Basin contains some of the most biologically significant habitats along the eastern Atlantic Coast, including longleaf pine, pocosin, limesinks, freshwater tidal marsh and swamp communities, tidal red cedar forest, and extensive marsh and tidal creeks. Only 1 percent of the White Oak River subbasin is covered by urban use; while, 4 percent of the Newport River subbasin is under urban use. Forests and wetlands account for most of the land cover in both subbasins.

Water Quality. According to the White Oak Basinwide Assessment Report, all rivers in the basin have periods of anoxia, as well as incidents of high fecal coliform counts

and turbidity levels. Water quality problems in the basin include fecal coliform bacteria contamination affecting shellfish harvesting. Fecal contamination in the basin is largely attributed to nonpoint source pollution. Additionally, many of the basin drainages are classified as nutrient sensitive waters. Nutrient loading, channelization, habitat removal and degradation, beach closures and shellfish harvesting closures are among the water quality concerns in the basin.

Basinwide Goals. The DWQ goals of basinwide management are to:

- Identify water quality problems and restore full use to impaired waters;
- Identify and protect high value resource waters;
- Protect unimpaired waters while allowing for reasonable economic growth;
- Develop appropriate management strategies to protect and restore water quality;
- Assure equitable distribution of waste assimilative capacity for dischargers; and
- Improve public awareness and involvement in the management of the state's surface waters.

In addition, DWQ is applying this approach to each of the major river basins in the state as a means of better identifying water quality problems; developing appropriate management strategies; maintaining and protecting water quality and aquatic habitat; assuring equitable distribution of waste assimilative capacity for dischargers; and improving public awareness and involvement in management of the state's surface waters.

The NC Ecosystem Enhancement Program (NCEEP) is a nonregulatory program established by the NC General Assembly in 1996 to restore wetlands, streams and streamside (riparian) areas throughout the state. The goals of the NCWRP are to:

- Protect and improve water quality by restoring wetland, stream and riparian area functions and values lost through historic, current and future impacts.
- Achieve a net increase in wetland acreage, functions and values in all of North Carolina's major river basins.
- Promote a comprehensive approach for the protection of natural resources.
- Provide a consistent approach to address compensatory mitigation requirements associated with wetland, stream, and buffer regulations, and to increase the ecological effectiveness of compensatory mitigation projects

B. Impaired Waters

Section 303(d) of the Clean Water Act requires states to develop a list of waters not meeting water quality standards or which have impaired uses. Listed waters must be prioritized and a management strategy or total maximum daily load must subsequently be developed for all listed waters.

The 2004 North Carolina 303(d) Impaired Waters List includes portions of the Newport River, Wading Creek, Gable Creek in subbasin 03-05-03 and portions of Back Sound and the North River, Gibbs Creek, Turner Creek, and Davis Bay in subbasin 03-05-04. The impaired use is shellfish harvesting and the reason for the listings is elevated fecal coliform levels. These particular waterbodies have been listed as impaired since 2002.

C. Closed Shellfishing Areas

The North Carolina Shellfish Sanitation and Recreational Water Quality Section of the Department of Environment and Natural Resources is responsible for protecting the consuming public from shellfish and crustacea which could cause illness. Rules and regulations following national guidelines have been implemented to ensure the safety of harvesting waters and the proper sanitation of establishments which process shellfish and crustacea for sale to the general public. Waters are sampled regularly and closed if levels of fecal coliform indicate that harvesting shellfish from those waters could cause a public health risk.

Closed shellfishing areas in the Beaufort vicinity include the impaired waters delineated in the previous section. Closed shellfishing areas are delineated in Figure 2, Environmental Composite and Natural Features Map.

Land uses that potentially adversely impact shellfishing waters include the conversion of undeveloped and underdeveloped land to more intensive land uses, the wastewater treatment plant, industrial uses, and the intensive urban development in and near the downtown waterfront. Increased stormwater runoff from developed uses also can adversely impact shellfishing waters.

D. Natural Hazards

Generally, severe thunderstorms producing lightning, high velocity winds, and hail are common in eastern North Carolina. In addition to the hazards posed by thunderstorms, seven categories of hazardous weather have been identified by the North Carolina Division of Emergency Management: earthquake, landslide, hurricane, nor'easter, tornado, severe winter weather, wildfire, and flood. As described in the Draft North Carolina Natural Hazards Mitigation (Section 322) Plan, each of the one hundred counties in North Carolina was categorized into one of three levels of risk, 'Low,' 'Moderate', and 'High' for these seven natural hazards. The table below indicates how Carteret County rates in terms of the risk of damage from natural hazards.

Table 26 *Risk Level Rating of Weather Events*			
	Risk Level		
Weather Event	**Low**	**Moderate**	**High**
Earthquake	X		
Landslide	X		
Hurricane			X
Nor'easter			X
Tornado			X
Severe Winter Weather	X		
Wildfire		X	
Flooding			X

Appendix G describes hazardous weather events that have affected Beaufort since the adoption of the previous land use plan. Information contained in Appendix G includes: type of event, magnitude, property damage, crop damage, and deaths.

In addition to the hurricane and tropical storms that have impacted the Carteret County area since 1950, other major weather-related events include tornados, thunderstorm wind and high winds, waterspouts, hail, winter storms, and floods. Wildfires are a moderate risk for the Carteret County in general. Wildfires have occurred in the Croatan National Forest and adjacent forest lands within the last 15 years.

Beaufort participates in the National Flood Insurance Program by adopting and enforcing a floodplain management ordinance to help reduce future flood damage. In exchange, the National Flood Insurance Program makes Federally-backed flood insurance available to homeowners, renters, and business owners. As of December 2003, there were 646 National Flood Insurance Program policies in force within Beaufort totaling over $115.3 million. According to loss statistics data from the Federal Emergency Management Agency (FEMA) for the period January 1978 to December 2003, 61 claims were filed and the amount of payments made totaled approximately $311,100. The *Town of Beaufort Hazard Mitigation Plan*, approved by FEMA in November 2004, identifies and analyzes natural hazards, evaluates vulnerability to natural hazards, assesses the town's capability to mitigate the effects of natural hazards, and outlines mitigation strategies and policies.

E. Natural Resources

Environmentally fragile areas and natural resource areas that may be impacted as a result of incompatible development are delineated in Section 3.2.1. Identified environmentally fragile areas include AECs, flood hazard areas, storm surge areas, and non-coastal wetlands. Natural resource areas include Significant Natural Heritage Areas.

F. Sources of Pollution

Water pollution is caused by a number of substances including sediment, nutrients, bacteria, oxygen-demanding wastes and toxic substances such as heavy metals,

chlorine and pesticides. Sources of these pollutants are divided into two general categories: point sources and nonpoint sources.

Point sources are basically discharges that enter surface waters through a pipe, ditch, or other well-defined point of discharge and often include discharges from wastewater treatment plants or large urban and industrial stormwater systems. Within the Beaufort planning jurisdiction, the major point source dischargers include the Town of Beaufort wastewater treatment plant and Beaufort Fisheries, both of which discharge into Taylor's Creek.

Nonpoint sources generally include stormwater runoff from small urban areas (less than 100,000 population), forestry, mining, agricultural lands and other. Examples of the types of land use activities that can serve as sources of nonpoint pollution include land development, construction, crop production, animal feeding lots, failing septic systems, landfills, roads, and parking lots. Fecal coliform bacteria and nutrients are major pollutants associated with nonpoint source pollution. Unlike point source pollution, nonpoint pollution sources are diffuse in nature and occur at random intervals depending on rainfall frequency and intensity. Within the Beaufort planning jurisdiction, the primary water pollution sources of estuarine waters are estimated to be multiple nonpoint sources including: agriculture, forestry, urban runoff, septic tank runoff, and marinas.

According to the *White Oak River Basinwide Water Quality Management Plan* prepared by the NC Division of Water Quality, Water Quality Section in September, 2001, the activities that contribute to the closure of shellfish harvesting areas include, but are not limited to, construction, urban stormwater runoff, failing septic systems, and agricultural activities. Control of these types of activities includes a wide variety of state agencies, local health departments, local municipal and county governments, and private property owners. There is no prescriptive remedy to solve the problem of closed shellfish waters; rather, it will require a great deal of collaboration and coordination to achieve the common goal of protecting and restoring shellfish waters. Areas closed to shellfishing in the Beaufort planning jurisdiction are delineated in Figure 2.

In 1990, the Division of Water Quality reported findings of a special study of marinas in coastal North Carolina. Eleven marinas were the subject of the study and five of these were located in Bogue Sound. While the primary objective of the study was to characterize the water quality of marinas relative to ambient waters, there was no evidence that the marinas in the study were a source of pollutants to ambient monitoring stations. Dye tracer studies suggested that the transport of pollutants from marinas might be concentrated near shore instead of in open waterways where the ambient stations were located. The report recommended that marina siting and design use features which promote flushing such as locating marinas near inlets, minimizing the restriction of entrance channels, and minimizing stagnant corners by using rounded corners, level bottoms sloping towards the entrance, and avoiding bends.

G. Construction and Stormwater Issues

According to the *White Oak Basinwide Assessment Report,* no development threshold can be identified at present and it is apparent that closings throughout the state have increased despite the management policies currently in place. The

reasons for this are not clear. There are many aspects of the development process that relate to factors influencing fecal coliform export from urban areas. These aspects include size of disturbed area, length of non-vegetated stage, size of vegetated buffer, amount of impervious surface, and design of sediment or stormwater control devices.

Shellfish closures and draining developed areas may be related to buffers and sediment control best management practices (BMPs) not being properly maintained or ditching/piping being installed inappropriately. The density levels allowed without stormwater BMPs may be too high or required buffers for low density development may be too small. Buffers for high density projects or the cumulative impact of the numerous small projects that are not subject to the regulations may partially relate to closures. Closures may also be related to the lack of vegetative buffers or stringent revegetation schedule during the construction phase. Most likely it is some combination of these factors, but adequate information does not exist to confirm this. DEH shoreline surveys often do not verify specific causes of contamination or identify specific aspects of stormwater management or erosion/sediment control which may need attention. Shellfish closures can also occur adjacent to agricultural or forested areas. Animal populations (both wildlife and livestock), timber cutting and associated land disturbance, and crop preparation all may contribute to fecal coliform bacteria levels in adjacent waters.

H. Septic System Impacts

Septic systems are common throughout North Carolina. Most are located in rural or small town areas that fall outside of a regional wastewater treatment plant's service area. Septic systems are utilized in the portions of the Beaufort planning jurisdiction that are located outside of the Town of Beaufort's sewer system service area. Unfortunately, many citizens fail to properly care for their septic systems. Improper maintenance leads to failing systems that may pollute nearby waters. A regular maintenance program benefits the effort to preserve water quality. Regular inspections by local governments can encourage proper maintenance.

I. Wellhead Protection

In 1986, Congress passed amendments to the Safe Drinking Water Act that established requirements for states to develop Wellhead Protection (WHP) Programs. These programs were intended by Congress to be an integral part of a national ground water protection strategy to prevent the contamination of ground waters that are used as public drinking water supplies. The North Carolina WHP Program is part of this national strategy. Currently, the Town of Beaufort does not have a wellhead protection program.

3.2.4 Summary of Limitations on and Opportunities for Development

Land development activity within most environmentally fragile areas is subject to local, state, and/or federal restrictions. Local land use regulations such as the zoning ordinance, subdivision ordinance, and flood damage prevention ordinance include specific standards for land development activities. Site-specific soil analyses are required by the Carteret County Environmental Health Services to evaluate the suitability of a particular parcel for a septic system if outside of the corporate limits. Encouraging good site planning principles and best management practices can assist with mitigating the impacts of land development on environmentally fragile areas.

Development within the designated Areas of Environmental Concern is limited by CAMA regulations and development guidelines. Generally, the development standards for coastal wetlands, estuarine waters, and public trust areas permit only water-dependent uses such as navigation channels, dredging projects, docks, piers, bulkheads, boat ramps, groins, and bridges. Priority is, however, given to the conservation of these AECs. CAMA standards for estuarine shoreline development generally require that (i) the development not cause significant damage to estuarine resources; (ii) the development not interfere with public rights of access to or use of navigable waters or public resources; (iii) the development preserve and not weaken natural barriers to erosion; (iv) impervious surfaces not exceed 30 percent of the lot area located within the AEC boundary; (v) the development comply with state soil erosion, sedimentation, and stormwater management regulations; and (vi) the development comply with the CAMA Land Use Plans. Specific CAMA development standards for AECs can be found in 15 NCAC 7H.

The US Army Corps of Engineers is responsible for regulating non-coastal or '404' wetlands. Authorization must be obtained from the Corps prior to disturbing such wetlands.

Opportunities exist for the conservation of fragile areas and natural resource areas through both private and public means. Private land trusts and conservancies are tax-exempt organizations that acquire and preserve natural areas, open spaces, and historical properties. Such organizations offer mechanisms such as conservation easements to protect natural resources (natural habitats, places of scenic beauty, farms, forestlands, floodplains, watersheds, etc.) while also providing compensation and possible tax incentives to private property owners. Tax incentive programs, such as the North Carolina Conservation Tax Credit Program, provide opportunities for property owners donating land for conservation purposes to receive tax credits. State and local governments may also accept land donations for conservation purposes.

Public land use regulations, such as conservation design subdivision requirements, can be developed to assist with the conservation of environmentally sensitive areas and open space as land is being subdivided into building parcels.

3.3 Analysis of Land Use and Land Development

3.3.1 Existing Land Use Analysis

The predominant land use in Beaufort is residential, accounting for approximately 22 percent of the total land area of the town's planning jurisdiction and almost 51 percent of the total developed acreage. Public and institutional land uses comprise the second largest land use category in Beaufort. The largest single use within the public and institutional land use category is the Michael J. Smith Airport which accounts for approximately 55 percent of the total acreage in this land use category. Commercial land uses make up approximately 13 percent of the developed land area and industrial land uses, about 4 percent.

A considerable amount of vacant land remains throughout the town's planning region, estimated at approximately 40 percent of the total acreage within the town's corporate limits and its extraterritorial planning and zoning jurisdiction. Figure 3 delineates the existing land use patterns with the Beaufort planning jurisdiction.

A. Description of Land Use Patterns within Watersheds

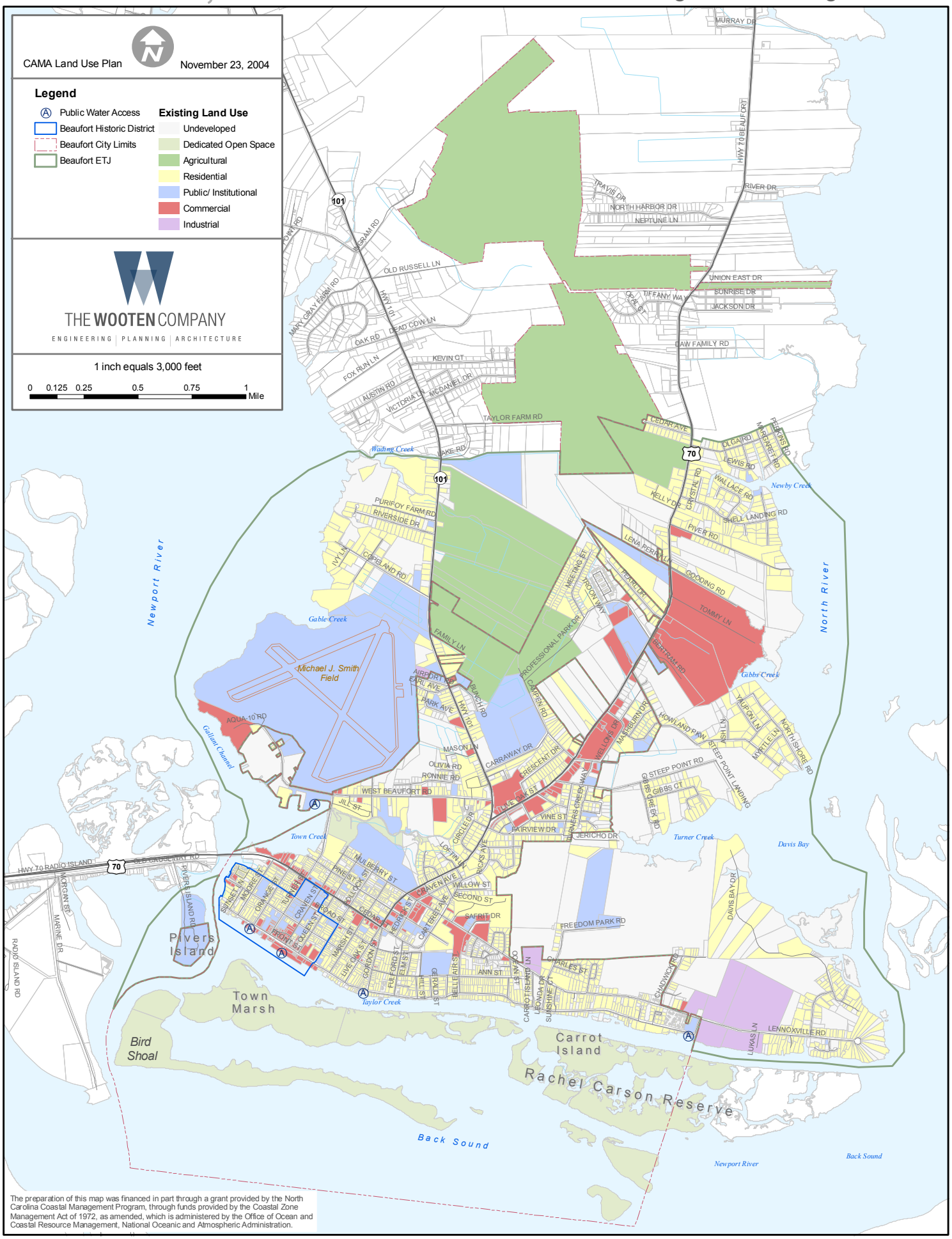
The Beaufort planning jurisdiction is located within three 14-digit watersheds (Town Creek, #03020106030070; Turner Creek, ##03020106040010; and Wading Creek, #03020106030040) as delineated by the Natural Resource Conservation Service of the U.S. Department of Agriculture. The Town Creek and Wading Creek watersheds are located within the White Oak River Subbasin 030503 and the Turner Creek watershed is within subbasin 030504. The boundaries of these three watersheds are delineated on Figure 8, Future Land Use Map.

The Wading Creek watershed, the smallest of the three, encompasses a small amount of acreage in the northwestern and north central sections of the Beaufort planning jurisdiction. Properties west of NC 101 are primarily developed for low density residential purposes. With the exception of a cemetery, all of the land east of NC 101 is agricultural or undeveloped.

The Town Creek watershed essentially encompasses the western one-half of the Beaufort peninsula. Of the three watersheds within the Beaufort Planning Area, the Town Creek watershed is the most intensively developed. The predominant land use is medium density single-family residences and includes the residential areas surrounding the Beaufort downtown area and west of NC 101. Commercial land uses within this watershed are chiefly located in the Beaufort Downtown area, along the Beaufort waterfront, and along the Cedar Street (US Highway 70) corridor. Institutional land uses within this watershed include Carteret County and Beaufort governmental facilities, cemeteries, and the airport. The majority of the vacant, undeveloped land in this watershed is located north of West Beaufort Road between the airport and NC Highway 101. Several vacant tracts are also located north of the airport along Copeland Road.

BEAUFORT, NC

Figure 3: Existing Land Use



The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.

The Turner Creek watershed includes the eastern one-half of the Beaufort peninsula. The predominant land use is low density single-family residences and includes the residential areas east of the Beaufort downtown along the Taylor's Creek, along Lennoxville Road, adjacent to the US Highway 70 corridor. Commercial land uses within this watershed are located primarily along the Live Oak Street (US Highway 70) corridor. The majority of the town's industrial uses
are located within the Turner Creek watershed along Lennoxville Road. Major institutional land uses within this watershed include Carteret County schools, parks, and the town's wastewater treatment facility. The majority of the vacant, undeveloped land in this watershed is located north of Lennoxville Road and south of Turner Creek and on the east and west sides of the US Highway 70 corridor.

B. Description and Analysis of Existing Land Uses

Residential. The residential classification includes all types of residential structures. The majority of residential uses in Beaufort are low density detached single-family residences at densities of 1 to 2 dwelling units per acre. Such low density areas are concentrated in the northern, northeastern, and eastern portions of the Beaufort planning jurisdiction. Medium-density residential areas (3 to 5 dwellings per acre) are located immediately surrounding the downtown area as well as north and east of the downtown. Higher-density residential areas are generally small scattered sites and area located primarily along the US Highway 70 corridor in the northeastern portion of the planning jurisdiction.

Over 72 percent of the residential land uses are comprised of single-family detached dwellings on lots generally ranging from 10,000 square feet to one-acre. As seen in Section 3.1.2, of the 2,191 dwelling units in Beaufort in 2000, over 66 percent were single-family residences, about 27 percent were multi-family dwellings, and slightly over 6 percent were manufactured homes. Beaufort's proportion of single-family dwellings is similar to that found in Carteret County and statewide. The town's proportion of manufactured homes is much lower than the county and statewide percentages. The overwhelming majority of recent construction has been single-family residential. Of the residential construction since 1998, almost 79 percent has been single-family detached dwellings and about 9 percent has been mobile homes.

The majority of future residential land uses are expected to be low density residential developments on vacant land located in the ETJ, particularly the eastern and north central potions of the planning jurisdiction. Plans for an approximate 630-acre mixed use development, North River Club, were recently approved and the site annexed to the Town of Beaufort. This proposed development, located between US 70 and NC 101, potentially will include 1,500 mixed density dwelling units, 30 acres of commercial use, and a golf course.

Commercial. Uses in this classification include highway commercial, general retail, as well as office and service uses. Uses identified by this classification include but are not limited to: restaurants, grocery stores, convenience stores, gift shops, and professional service establishments. Most of the commercially-used land is located along Front Street in the Beaufort downtown and along the US 70 highway corridor. A few commercial land uses exist on Lennoxville Road near its intersection with Front Street and the intersection with Safrit Drive. Also, there are commercial land uses along the NC 101 corridor and near the Gallants Channel shoreline.

The town's current zoning patterns indicate that future commercial areas are anticipated to be located along the NC 101 and the US 70 corridors. Some change in the current land uses to commercial land use is anticipated along these corridors. The potential rerouting of US 70 will effect development patterns and possibly the rate at which redevelopment occurs. Some older residential structures in the section of town west of Live Oak Street are being redeveloped as commercial uses. Many of these structures have been converted to offices, bed and breakfasts, and specialty shops. Further conversion or demolition of older residential structures is expected.

Industrial Land Use Industrial land uses exist on Lennoxville Road near its intersection with Front Street and the intersection with Safrit Drive. The largest industrial land uses are the Beaufort Fisheries and Atlantic Veneer properties on Lennoxville Road.

Public/Institutional. Public and institutional uses include recreational uses, waterfront access sites, parks, government offices and facilities, schools, churches, and government owned open space.

The majority of the town's developed land is contained within this land use category primarily due to the large acreage of Michael J. Smith Field. Other land uses within this category include all town facilities, the elementary and middle schools, churches, cemeteries, and public access sites. The state-owned boating access is also included in this land use category.

Agricultural. Land that is regularly under cultivation is considered agricultural land. Agricultural uses are primarily located in the north central portion of the planning jurisdiction between highways NC 101 and US 70. Portions of these existing agricultural lands have recently been proposed for urban development, such as the North River Club mixed use golf course development.

Forestry. There are no major tree farms or commercial forestry lands with the Beaufort planning jurisdiction.

Dedicated Open Space. Dedicated open space includes land that is permanently reserved for open space use. Traditional land uses are excluded in such areas. Approximately 10 percent of the land area is classified as dedicated open space, the majority of which is located within the Rachel Carson Estuarine Research Reserve located across Taylor's Creek from the Beaufort waterfront. Other dedicated open space includes the wetlands area on the south side of Town Creek which is owned by Carteret County.

Undeveloped. Land classified as 'undeveloped' is vacant land that currently is not under cultivation, used as a tree farm, or utilized on a regular basis for any other purposes. Vacant, developable land is scattered throughout the planning area, but the largest tracts are located southwest of Turner Creek and in the area between NC 101 and US 70. Vacant lots are scattered throughout some of the existing residential areas described above. The overwhelming majority of the vacant tracts are currently zoned R-20, Single-family Residential. Two small vacant tracts (one on the south of West Beaufort Road and one on the north side of Broad Street) are zoned R-8, Medium Density Residential and one tract east of the airport is zoned R-10, Single-

family Residential. The majority of the vacant tracts have potential for low density residential development. Commercial development is anticipated on the vacant parcels located in the Live Oak Street corridor. There is a potential for a small amount of industrial development on the undeveloped tracts located on the east side of Highway 101 in the vicinity of the area of the proposed Highway 101 relocation.

C. Historic, Cultural, and Scenic Areas

Beaufort's historic architecture includes residences from the 18th to the 20th centuries, ranging in style from plain, traditional cottages to elaborate Queen Anne and Neo-Classical Revival houses. Architectural details for which the town is noted include porches, roof lines, chimneys, and mantels. In 1985, the Town of Beaufort created the Beaufort Historic Preservation Commission and delineated the boundaries of the present local Historic District. The Historic Preservation Commission has adopted guidelines that promote, enhance, and preserve the historic and architectural character of the local Historic District. The boundaries of the Beaufort Historic District are shown in Figure 3 Existing Land Use Map.

In addition to the Beaufort Historic District, the following structures are listed in the National Register of Historic Places:

- Carteret County Home, NC 101
- Gibbs House, 903 Front Street
- Jacob Henry House, 229 Front Street
- Old Burying Ground, Ann Street

D. Estimates of Land Area by Land Use Category

Table 27
Land Use by Type and Acreage
Beaufort Planning Jurisdiction
2004

Land Use	Acres	Percent of Developed Acreage	Percent of Total Acreage
Residential	1046.6	50.9%	22.2%
Commercial	256.2	12.5%	5.4%
Public/Institutional/Recreational	664.1	32.3%	14.1%
Industrial	88.6	4.3%	1.9%
Agricultural	362.1	0.0%	7.7%
Dedicated Open Space	413.5	0.0%	8.8%
Undeveloped[1]	1,888.1	0.0%	40.0%
Totals	4,719.2	100.0%	100.0%

[1] Includes vacant developable land as well as land subject to flood hazard, wetlands, etc.

Source: Estimated from existing land use maps prepared by The Wooten Company.

3.3.2 Description of Land Use/Water Quality Conflicts

The following have been identified as existing conflicts in Beaufort:

- Development on the periphery of Beaufort of small-lot residential subdivisions utilizing subsurface sewage disposal systems.
- Loss of natural buffers as land is developed into more intensive uses.

- Land development occurring without a coordinated comprehensive stormwater management plan.
- Intensive land development within 100-year floodplains.
- Encroachment of incompatible land uses in the vicinity of the Michael J. Smith Airport.
- Currently, the Town is operating under a Special Order by Consent for a 4-year period. During this time period, sewer flow allocation is restricted by the SOC. Short term growth potential will be impacted by the restrictions of the SOC.

3.3.3 Description of Development Trends

Beaufort is located on a peninsula that is bordered on the east by the North River, on the south by Taylor's Creek, and on the west by the Newport River. The southern tip of the peninsula contains relatively compact development generally south of Town and Turner Creeks. Within the next five years, Beaufort is anticipated to grow mainly north of this area and in the area between the US Highway 70 and NC Highway 101 corridors. However, infill development and redevelopment of existing developed properties are also expected to accommodate future short-term growth.

Most of the recent development in Beaufort has been primarily low density residential in nature. Recent nonresidential development has occurred principally adjacent to the major highway corridors, particularly US Highway 70. The Taylor's Creek and Newport River waterfronts are essentially built-out.

Between 1999 and 2003, Beaufort average approximately 44 new residential building permits per year, with the highest number being issued in 2003 and the lowest, in 2001. The majority of new residences built during this time period were single-family, detached dwellings. Manufactured homes accounted for about 13 percent of the new residential permits issued. Section 3.1.2 provides data concerning the types and numbers of building permits issued and the numbers of new subdivision lots created during the period 1998 to 2003.

3.3.4 Projections of Land Needs

The following table provides short and long-term projections of residential land area needed to accommodate the projected future permanent and seasonal population projections. These land needs projections are based, in part, upon permanent population projections for Carteret County prepared by the NC State Data Center (Section 3.1.4 A) and seasonal and peak population projections made by The Wooten Company (Section 3.1.4 B.). The 7B Guidelines allow the projections of land needs to be increased by up to 50 percent to account for unanticipated growth and to provide market flexibility.

The table also projects commercial, industrial, and public and institutional land needs through 2025. Nonresidential land needs projections are based upon the proportional relationship of each of the nonresidential land use categories to total existing residential land as demonstrated in the existing land use patterns evaluated in Section 3.3, Analysis of Land Use and Land Development. Commercially-used land represents about 24 percent of the existing residential acreage, industrially-used land approximately 8 percent, and public and institutionally-used acreage about 25 percent. The

Table 28 Land Needs Projections
Beaufort Planning Jurisdiction

	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025	Total 2000-2025
Projected Permanent Population	6,891	7,177	7,409	7,622	7,771	
Permanent Population Increase	1,937	286	232	213	124	2,792
Permanent Dwelling Unit Increase*	936	138	112	103	60	1,349
Seasonal Dwelling Unit Increase**	118	17	14	13	8	170
Total Dwelling Unit Increase	1,054	156	126	116	67	1,519
Residential Acres Per Dwelling Unit***	1	1	1	1	1	
Additional Residential Acres Needed	1,054	156	126	116	67	1,519
Total Residential Acres w/50% Adjustment	1,580	233	189	174	101	2,278
Additional Commercial Acres Needed	258	38	31	28	17	372
Additional Industrial Acres Needed	90	13	11	10	6	129
Additional Public and Institutional Acres Needed	262	39	31	29	17	378

* Assumes 2.07 persons per household

** Assumes 12.6% of the seasonal population will be in seasonal dwelling units

*** Assumes 1.0 acre per person

Nonresidential land needs projections are based upon the current proportional relationship of each category of nonresidential land to residential land

Source: The Wooten Company, July 2006.

nonresidential land needs projections assume that these proportional ratios will remain constant in future years.

It appears that sufficient undeveloped land and redevelopable tracts currently exist within or on the immediate periphery of the current Beaufort planning jurisdictional area to meet projected residential land needs through 2025.

3.3.5 Description of Conflicts with Class II and Class III Lands

Almost the entire Beaufort planning jurisdiction, including existing developed properties, is classified as Class III lands as defined in Section 3.2.2 and as shown in Figure 2, Environmental Composite and Natural Features Map. The following table shows the extent of existing development that is within areas containing natural constraints (wetlands and 100-year floodplains).

Table 29
Existing Development In Areas Containing Natural Constraints

Existing Land Use Category	Acres	Acres with Natural Constraints	Percent w/ Constraints
Residential	1,046.3	473.4	45.2%
Commercial	256.2	89.0	34.7%
Public/Institutional/Recreational	677.6	383.0	56.5%
Industrial	88.6	25.4	28.7%
Agricultural	1,002.3	262.8	26.2%
Dedicated Open Space	436.3	431.4	98.9%
Vacant	1,233.0	719.0	58.3%
Totals	4,740.3	2,384.1	50.3%

Source: The Wooten Company.

Many of the potential conflicts with Class III lands can be mitigated through the provision of public utilities and careful site planning. The provision of public sewer can alleviate potential conflicts in areas where subsurface septic systems are currently being utilized. Wetlands and/or flood hazard can be conserved as part of any development proposals through such techniques as conservation subdivision design, buffering and open space requirements, etc. Effective site planning techniques, buffering, and conservation of natural vegetation can possibly ensure compatibility of new development.

3.4 Analysis of Community Facilities

Subchapter 7B .0702(c)(4) requires that the land use plan include a community facilities analysis that evaluates the existing and planned capacity, location, and adequacy of key facilities and services that serve the community's population and economic base; that protect important environmental factors such as water quality; and that guide land development. Section 3.4 provides an analysis of water and wastewater systems, stormwater systems, transportation systems, and other municipal services.

3.4.1 Water System

Beaufort owns and operates its own water treatment and distribution system. Water is drawn from the Castle Hayne Aquifer by three deep wells. The town's distribution system includes 36 miles of water mains (sizes 2"- 10"), two elevated storage tanks with

a combined capacity of 0.4 MG, and one 0.3 MG ground storage tank. The oldest portion of the water system is over 60 years old. The existing water treatment plant facilities include two iron filter/softener water treatment plants. The existing Beaufort water system is delineated in Figure 4, Water and Wastewater Systems Map.

The 12-hour supply capacity of the town's water supply wells is 0.828 MGD, while its average daily use during 2002 was 380,800 GPD. The water system serves approximately 2,500 users, 2,200 of which are residential customers. Commercial and industrial users total approximately 300 but their water use constitutes only a minor portion of the total water consumed. Approximately 98 percent of the system's total service population of 4,500 is composed of year-round customers. The system has a current available supply of 1.152 MGD and a total water treatment capacity of 2.304 MGD. Current average daily demand is 42 percent of the total available supply.

According to the town's 2002 Water Supply Plan, the average annual daily use was 0.483 MGD with a peak daily use of 0.759 MGD. The average annual daily use in 2002 was 0.246 MGD for residential uses, 0.081 MGD for commercial customers, 0.0 MGD for industrial uses and 0.014 MGD for institutional uses. Water used by the system accounted for .069 MGD and there was .073 MGD of unaccounted for water (leaks etc.)

Projected average daily demand is expected to increase from the current level of 0.483 MGD to 1.002 MGD by 2030, or to 24 percent of the total available supply. The average annual daily use in 2030 will be 0.632 MGD for residential uses, 0.090 MGD for commercial customers, 0.040 MGD for industrial uses and 0.080 MGD for institutional uses. Water used by the system is estimated to account for .080 MGD and there is anticipated to be .080 MGD of unaccounted for water (leaks etc.) Average daily water demand is not projected to exceed 27 percent of available supply through 2050.

Preliminary projected water system demands for the year 2030 include:

Parameter	*2030*
Treatment Capacity (18-hour capacity)	1.47 MGD
Average Day Projected Demand	0.7317 MGD
Maximum Day Projected Demand	1.1 MGD
Peak Hour Projected Demand	1.6463 MGD
Storage Capacity Required	0.35 MG

Source: Town of Beaufort Capital Improvements Plan, 2004.

The town is anticipating the completion in FY 06 of a comprehensive water facilities plan which will identify water system needs and provide a strategy for prioritizing and implementing recommended improvements. Several water system improvements that are currently in the Town's *Capital Improvements Plan* include:

- Replacement of one existing well that is failing.
- 2 additional wells.
- 1-2 elevated storage tanks.
- 1-2 surface water storage facilities.
- New water treatment facility.

These proposed water system capital improvements are currently estimated to total over $10.6 million.

3.4.2 Wastewater System

The Town of Beaufort operates a sanitary sewer collection/interceptor system which consists of more than 23 miles of 6-inch to 12-inch gravity mains, 17 pumping stations, and associated service laterals. All potential users within the corporate limits are currently served by the municipal system; however users within the ETJ are not currently served by the town. Additionally, the North River Club (NRC), a planned unit development located between Highway 101 and Highway 70 is within the town's corporate limits and is to be served by the town's sewer system once the infrastructure has been built. Section One of the NRC will be constructed in late 2006 and Section Two is expected in early 2007. The sewer system also extends beyond the corporate limits via remote pump stations connected to the primary system by force mains. Such service is provided to Eastman Creek subdivision, Jarrett Bay Industrial Park, Parker Boat Manufacturing, Capt. Kenny's BP gas station along Highway 101; and East Carteret High School, and Duke Marine Laboratories along Highway 70,

Although the force mains currently extend well beyond the town's corporate limits and the planning jurisdiction, accessing service to the line is currently limited to the entities listed above and in limited capacity that is not expected to increase. Currently the town requires annexation of a property as a precursor to provision of sewer. Eastman Creek subdivision and the Duke Marine Lab have petitioned for annexation and are pending. Jarrett Bay Industrial Park and other uses on Highway 101 were part of a federally funded community development block grant (CDBG) economic development partnership between the town and the county. East Carteret High School was recently built to address the needs of the school system, and the infrastructure is jointly owned by the county and the town. The town has reserved specific amounts of capacity for each of the above mentioned projects, including Section one and Two of the NRC; however it is not possible at this time for new projects of any size to tap into the force main that runs up Highways 101 and 70.

Potential short term growth is currently limited because the town's existing sewer collection system has been documented to suffer from severe infiltration/inflow. The entire system recently underwent a phase 1 sewer system evaluation survey to identify the most significant areas of the system will excessive inflow and to locate potential sources of inflow. Over 50 percent of the system was found to exhibit some degree of infiltration and over 80 potential sources of inflow were identified.

Because of the above stated problems with the sewer infrastructure, the town is operating under a Special Order by Consent (SOC) from the State of North Carolina for a 4-year period. During this period the town is responsible for the rebuilding/rehabilitation/ new construction of a majority of its sewer infrastructure. The SOC severely limits the amount of new development that may occur in Beaufort in the form of restricted state approvals for sewer line extension permits. During this time period sewer capacity is allotted in a limited fashion based on a policy set by the town council in 2005. Over the 4-year period the State will give the town 300,000 gpd of additional permitted 'flow' for projects that were permitted before the SOC, but had not reached build-out and for a limited amount of new growth initiated since the SOC. New growth over the 4-year period will only be located within the town's corporate limits.

The town owns and operates a secondary wastewater treatment facility with a design capacity of 1.5 MGD that discharges into Taylor's Creek, a Class SC-designated stream

BEAUFORT, NC

Figure 4: Water and Wastewater Systems

The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.

of the White Oak River Basin. The wastewater treatment facility produces a Class B sludge cake that is land applied by a contract hauler to permitted disposal sites.

Beaufort provides wastewater treatment for 2,390 sewer service connections. The average annual discharge is approximately 0.783 MGD. The average annual discharge for residential uses is 0.399 MGD, 0.131 MGD for commercial uses, 0.0 MGD for industrial use, 0.023 MGD for institutional uses, and 0.230 MGD for plant use and maintenance. The existing Beaufort sewer system is delineated in Figure 4, Water and Wastewater Systems Map.

The normal hydraulic design of the wastewater treatment facility for the year 2030 is projected at 1.3141 MGD, with facilities to handle individual day peak hydraulic loads of up to 3.2853 MGD. In 2030 the land use breakdown will be as follows (based on current percentage of total use): for residential uses is 0.829 MGD, 0.118 MGD for commercial uses, 0.052 MGD for industrial use, 0.105 MGD for institutional uses, and 0.210 MGD for plant use and maintenance. It has been recommended that planning for proposed improvements to the wastewater treatment facility tentatively provide for a daily hydraulic capacity of 1.5 MGD that is consistent with the current permitted capacity. In addition, it has been recommended that the wastewater treatment facility be designed to accommodate peak daily flows of 3.75 MGD.

A *Wastewater Facilities Plan* (Rivers and Associates, December 2004) was recently prepared for the Town of Beaufort. This document identifies the town's wastewater collection, treatment, and disposal needs and provides a comprehensive planning tool for funding and implementing needed wastewater system improvements. The following table provides a summary of the estimated cost of the recommended improvements:

Table 30
Estimated Cost of Recommended Wastewater System Improvements

Phase	Recommended Improvements	Projected Capital Cost
I and III	Phase 2 Sewer system evaluation survey and gravity sewer rehabilitation	$3,837,000
II	Immediate force main improvements	$ 736,100
IV	Wastewater treatment facilities, sludge disposal & effluent disposal	$8,724,500
V	Future force main improvements	$2,342,800
	Total	**$15,640,400**

Source: Wastewater Facilities Plan, December 2004.

The Town of Beaufort has already begun implementation of the sewer system evaluation survey activities of Phase I. The gravity sewer rehabilitation construction (Phase III) is projected to begin in 2007. Phase II force main improvements are anticipated to begin in 2006. Construction of the Phase IV improvements, including the construction of a recommended tertiary wastewater treatment plant, is projected to be initiated in 2007.

3.4.3 Transportation System

The Town of Beaufort maintains about 20 miles of streets within its corporate limits. Major thoroughfares and other streets outside of the town limits are maintained by the NC Department of Transportation (NCDOT). The state also has maintenance responsibility for all bridges in the area. Existing and proposed streets are delineated in Figure 5, Transportation System Map.

BEAUFORT, NC

Figure 5: Transportation Systems

The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.

*Proposed road alignments are conceptual only.

The North River Club development, a large mixed use golf course development will take access from NC 70. All streets within the North River club will be public, although only a small portion of the development has been platted out.

The Morehead City-Beaufort Thoroughfare Plan Study Report, prepared by the NC Department of Transportation, was prepared in 1992. This study includes a recommended thoroughfare plan to accommodate anticipated future traffic demands. The study includes recommendations for improving both major and minor thoroughfares.

The Carteret County Transportation Committee, on which Beaufort had representation, identified priorities and made recommendations for transportation improvements within Carteret County. This committee produced a document in 1999 entitled Transportation Improvement Program Priorities for Carteret County. The priorities of particular concern to Beaufort are: Replacement of Gallants Channel Bridge, 'Northern Bypass' from Havelock Bypass to Beaufort/Port of Morehead City, widening and improvement of US 70 from Beaufort to East Carteret High School, and a feasibility study for stormwater improvements in Beaufort and Morehead City.

A. Proposed Major Highway Improvements

Transportation improvement projects, as determined by the NCDOT, are cataloged in the *2004-2010 Transportation Improvement Program*. There are currently two transportation improvement projects underway in Beaufort. One project (R-3307) is the relocation and multilane widening of approximately 2.2 miles of US 70 between Radio Island and US 70 north of Beaufort near SR 1303. This project is currently in the planning stage. Design is scheduled to begin in federal fiscal year (FFY) 05. Right-of-way acquisition is scheduled for FFY 07-08 and construction is scheduled to begin after 2012. The Gallants Channel drawbridge will be replaced with a high-rise bridge in conjunction with this project. Several routing alternatives were evaluated, but the official transportation corridor has been decided.

A citizen's committee appointed by the Beaufort Town Board of Commissioners in December 2004 recommended that the existing drawbridge be replaced with a new four-lane drawbridge and that Cedar Street continue to be the designated route of US Highway 70. However, the alternative was not evaluated as a part of NCDOT's selection process.

The US 70–NC 12 Feasibility Study (FS-9902D) evaluated the possibility of upgrading 30.7 miles of existing roadway from NC 101 in Beaufort to Cedar Island. This project was recently upgraded and is currently identified in the *Transportation Improvement Program* as R-4746.

Other proposed projects included in the *2004-2010 Transportation Improvement Program* that are not yet in progress are:

- R-3624 NC 101 near Beaufort-Morehead City Airport, relocation of NC 101 to accommodate extension of runway 26; two lanes on a new location; 2.2 miles at a projected cost of $9.4 million. This project was in anticipation of the airport significantly expanding runway 26, which has been scaled back and currently there is not a need to relocated NC 101.

- R-4431 a new route from the Havelock Bypass in Craven County to Beaufort, 33.1 miles at a projected cost of $173.5 million. The recent annexation and development of the North River Club has necessitated the relocation of project R-4431. A new route has recently been researched and is under study. The impact of the new route is unknown at this time.

- R-3437 US 70-NC 101 Connector. This proposed road would provide a direct east-west connection between US 70 near the existing Pinners Point Road intersection and NC 101 in the vicinity of the existing Copeland Road intersection. The location of and need for this proposed connector will be impacted by the ultimate route that is selected for the US 70 realignment and Gallants Channel bridge replacement project (R-3307).

The *Morehead City-Beaufort Thoroughfare Plan Study Report* also included recommendations for improvements to the following streets in the Beaufort area:

- Leonda Drive Extension. This proposed extension of Leonda Drive from its current terminus at Freedom Park Road northward to Sycamore Drive would provide a north-south minor thoroughfare for the eastern portion of Beaufort that would facilitate traffic between the Front Street area and the US 70 area.

B. Major Streets with Capacity Deficiencies

The *Morehead City-Beaufort Thoroughfare Plan Study Report* identified portions of NC 101, Cedar Street, Live Oak Street, Turner Street, and Front Street as having capacity deficiencies in 1986. Streets with projected 2010 traffic volumes that would be near or exceed practical capacities include the following:

- The entire US 70-designated route (portions of Cedar and Live Oak Streets) through the Beaufort planning jurisdiction.
- NC 101.
- West Beaufort Road
- Turner Street
- Lennoxville Road from Live Oak Street to Leonda Drive.
- Front Street from Turner Street to Live Oak Street.
- Live Oak Street from Front Street to Cedar Street.
- Queen Street from Front Street to Cedar Street.

C. Traffic Volumes

As would be expected, the heaviest traffic volumes are on the major US and NC numbered thoroughfares (US 70 and NC 101). The following table summarizes the 2002 traffic volumes on major streets in the Beaufort area.

Table 31 2002 Average Daily Traffic		
Highway	**ADT**	**Location**
US 70	21000	Cedar Street east of Gallants Channel Bridge
	15000	Cedar Street east of Turner Street
	16000	Live Oak Street south of Lennoxville Road
	17000	Live Oak Street north of Lennoxville Road
	15000	Live Oak Street south of Steep Point Road
NC 101	7000	South of Taylor Farm Road
	8200	North of West Beaufort Road
Turner Street	3700	South of West Beaufort Road
Lennoxville Road	3000	East of Live Oak Street
Pinners Point Road	450	South of Live Oak Street
Airport Road	230	West of NC 101

Source: 2002 Average Daily Traffic, Beaufort, NCDOT

D. Air Transportation

Commercial air service to Beaufort is available through Craven Regional Airport in New Bern. Michael J. Smith Field, in Beaufort, offers full general aviation services and fueling. The airport, which encompasses some 403 acres, is owned and operated by the Beaufort-Morehead City Airport Authority. Michael J. Smith Field is among the busiest general aviation non-towered airports in North Carolina. Runway 8-26 is in the process of being extended to 5,000 feet.

3.4.4 Stormwater System

The existing stormwater drainage facilities within the Town of Beaufort consist of a system of piping, catch basins, and drainage ditches and swales. Currently, much of the stormwater conveyed by the system is discharged into Taylor's Creek (see Figure 6, Stormwater Systems Map).

Beaufort is in the process of exploring the benefits a stormwater management plan and ordinance would provide in directing further development of its stormwater system. The town is also evaluating the need for mapping the stormwater system as a planning and maintenance tool. There is a concern that as new land is developed the increased stormwater runoff will overload existing stormwater structures. The town intends to explore all options available for handling its stormwater in a way that protects both private property and the environment.

A reduction in off-site storm water will also assist in the reduction of infiltration into the town's aging sewer infrastructure. Although the town is undergoing an extensive upgrade to its sewer system, a reduction in off-site stormwater through various land use controls and stormwater management techniques is another approach the town is taking to address its near-shore water quality issues.

3.4.5 Police Protection

Beaufort receives police protection from the Beaufort Police Department. The Beaufort Police Department, with a staff of 13 full-time and 2 part-time personnel, appears to have adequate manpower to provide police services to the community. The current ratio of

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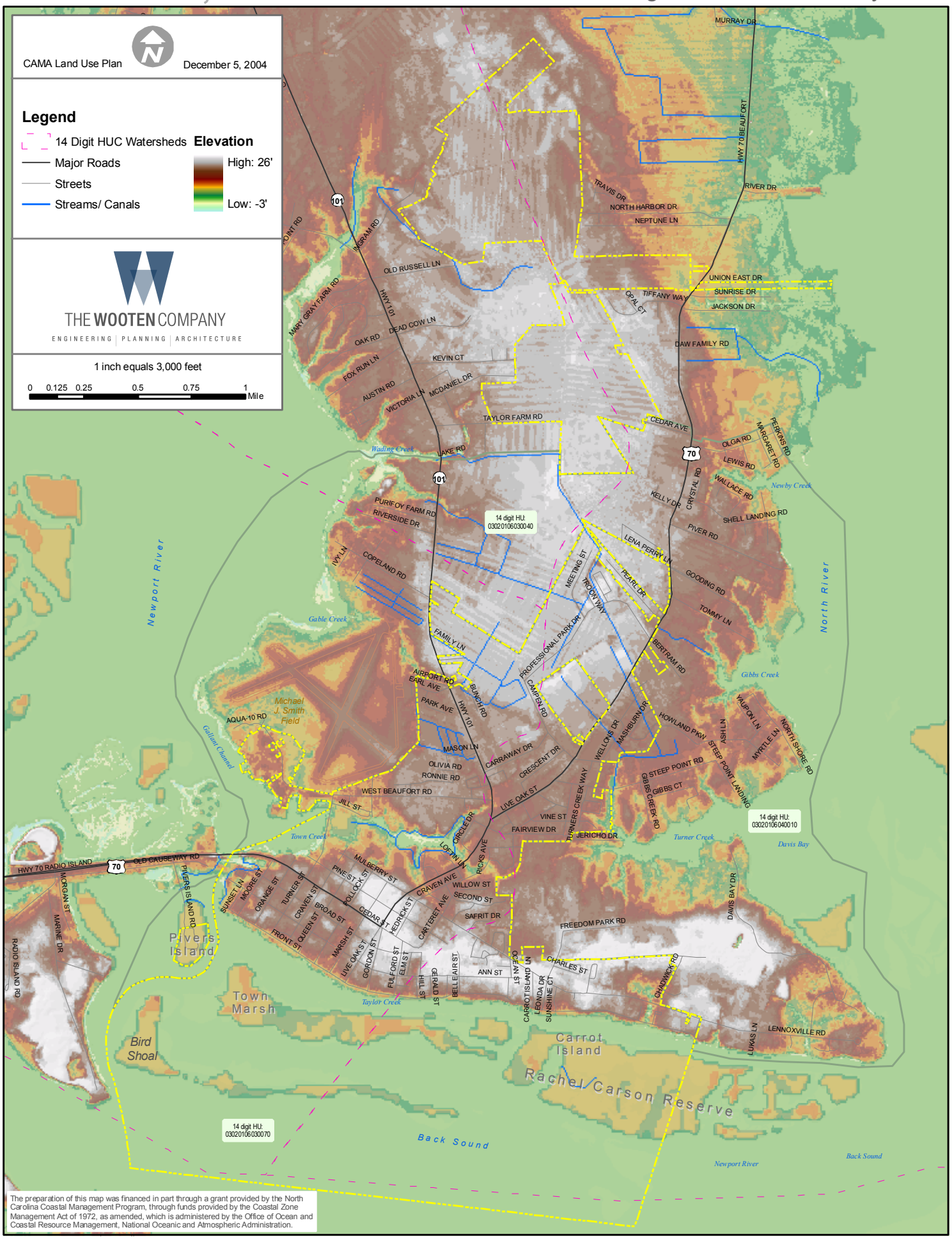
Figure 6: Stormwater Systems



The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.

police officers to Town population is 1 full-time officer per 290 residents. National law enforcement standards recommend two police officers per 1,000 people.

3.4.6 Fire Protection and Emergency Medical Services

The Beaufort Fire Department provides fire prevention and suppression services as well as emergency medical services assistance to the town and a fire district that encompasses areas outside the corporate limits of Beaufort. The fire services area extends to the North River Bridge on US 70, to Back Creek on Merrimon Road, and to Core Creek on NC 101.

The department is staffed by 11 full-time employees as follows: 1 fire chief, 9 firefighters, and 1 administrative assistant. Twelve volunteer firefighters complete the fire department staff. The fire insurance rating within Beaufort is '5' and in the rural portions of the service area '9S'. In 2003, the Department responded to approximately 200 fire calls and responded as EMS assistance to another 100 calls. The department has equipment consisting of two 1,000 gallon pumpers, one 1,250 gallon pumper, one 3,000 gallon tanker with a 750 gallon pump, and one heavy rescue equipment truck. The equipment and water supply of the fire department appear adequate to provide fire and emergency response services as well as maintain the current fire insurance rating.

The Beaufort Rescue Squad provides emergency medical services to the Beaufort Rescue District which includes the Town of Beaufort and a large geographic area extending northward along the Intracoastal Waterway to Adams Creek. The rescue squad employs 9 full-time, 15 part-time, and 21 volunteer staff persons. The squad operates 2 ambulances and 1 chase vehicle. The rescue squad anticipates the need for additional equipment and personnel based upon pending development in the Beaufort Rescue District.

3.4.7 Solid Waste Collection and Disposal

The Town of Beaufort offers curbside trash and recycling pick up. Three full-time equipment operators and 3 to 4 inmates collect solid waste on Monday/Thursday and Tuesday/Friday schedules. Recyclables are picked-up on Tuesday or Thursday. Yard waste service is also provided on Tuesday and Thursday.

Refuse is disposed of in the Tuscarora Regional Landfill located in the Craven County and operated by the Coastal Regional Solid Waste Management Authority (CRSWMA). According to a landfill capacity study prepared by the NC Division of Waste Management in 2003, CRSWMA had 37.41 years of remaining landfill capacity under permit as of July 1, 2002. With an additional approximate 100 acres owned and available for future permitting, the CRSWMA's *Ten-Year Solid Waste Management Plan 2003-2013* (June 2003) estimates that the Authority can meet its solid waste needs for the next 50 years or more.

Carteret County operates a system of greenbox collection sites throughout the county portion of the study area. County residents are responsible for private disposal of solid waste.

3.4.8 Recreation

The Town of Beaufort operates 9 facilities used for recreation and tourism purposes. The facilities include four parks: Curtis Perry Park located at the intersection of Front Street with Lennoxville Road, Grayden Paul Park at the intersection of Pollock Street

with Front Street, Orange Street Park at the intersection of Orange with Front Street, and Randolph Johnson Park on the corner of Pine Street and Carteret Avenue. The town boardwalk along Front Street and the Old Burying Ground on Broad Street are favorite tourist attractions. The Town also maintains three public restroom facilities; one on the south side of Front at Turner Street, second is in the 500 block on the south side of Front Street, third is at the Curtis Perry Park at the end of Front Street near Lennoxville Road. A 25-acre Carteret County-owned park, Freedom Park, is located on Freedom Park Road and contains athletic fields, picnic facilities, playground equipment, and restroom facilities.

Five public water access sites are located within the Beaufort planning jurisdiction. These access sites include:

- The Downtown Beaufort waterfront park at Front Street
- Curtis Perry Park at the eastern end of Front Street
- Topsail Park at the end of Orange Street in the downtown area
- Grayden Paul Park at the intersection of Pollock Street with Front Street just east of the downtown area
- Carteret County's Town Creek Water Access area off of West Beaufort Road

Additional public water access and recreational facility improvements, totaling almost $372,000, are planned for the following projects:

- Front Street Boardwalk Rehabilitation
- Harborwalk at Turner Street
- Carrot Island Boardwalk

The *Beaufort Waterfront Access Plan* adopted in 2000 identified water access needs as well as potential locations for additional public water access. Article VIII, Section 13 of the Town's Subdivision Ordinance requires that waterfront subdivisions provide boat docks or boat launching ramps every one-quarter mile along the shoreline.

3.4.9 Education

Carteret County operates three schools in the Beaufort area. Data for the 2003-2004 school year is provided in the table below.

School Name	*Staff*	*Enrollment*	*Grades*
Beaufort Elementary School	67	416	K-5
Beaufort Middle School	38	242	6-8
East Carteret High School	79	690	9-12

3.4.10 Public Administration Ability.

The Town of Beaufort operates under a mayor-council form of government. The town has a municipal staff of 39 employees that perform general administration, public works, public utilities, planning, and building inspection services. The current staffing level is considered sufficient to provide most municipal services necessary to meet current and anticipated demand.

3.5 Land Suitability Analysis

Subchapter 7B .0702(c)(5) requires that the land use plan include a land suitability analysis to determine the community's supply of land suited for development based upon the following considerations:

- Natural system constraints
- Compatibility with existing land uses and development patterns
- Existing land use and development criteria of local, state, and federal agencies
- Availability and capacity of water, sewer, stormwater management facilities, and transportation systems

The primary purpose of the land suitability analysis is to provide the local government with information regarding the best areas for development in order to guide the formulation of policies and the preparation of the future land use map.

The following factors must be considered to assess land suitability:

- Water quality
- Land Classes I, II, and III
- Proximity to existing developed areas and compatibility with existing land uses
- Potential impact of development on areas and sites designated by local historic commissions or the NC Department of Cultural Resources as historic, culturally significant, or scenic
- Land use and development requirements of local development regulations, CAMA Use Standards and other applicable state regulations, and applicable federal regulations
- Availability of community facilities, including water, sewer, stormwater and transportation

The development of a Land Suitability Map is required as part of the suitability analysis. The Land Suitability Map is intended to illustrate the degree to which land within the planning area is suitable for development. The Division of Coastal Management and the NC Center for Geographic Information and Analysis have jointly developed a GIS-based land suitability analysis model for analyzing and mapping land suitability. The suitability criteria, ratings, and weight factors used in this model to prepare the Land Suitability Map are delineated in the table on the following page.

The Land Suitability Map produced through this modeling process classifies land as High Suitability, Medium Suitability, Low Suitability, and Least Suitable. In general, over two-thirds of the Beaufort planning jurisdiction is within the higher suitability ratings (High and Medium Suitability). Lower suitability ratings (Low Suitability and Least Suitable) are found in areas subject to flooding and in wetlands areas. Figure 7, Land Suitability Map graphically illustrates the suitability ratings.

Table 32
Land Suitability Model

	----------Criteria and Rating----------						
Layer Name	**Least Suitable**	**Low Suitability**	**Medium Suitability**	**High Suitability**	**Assigned Weight**	**Percent Weight**	**Multiplier**
	0	**-2**	**1**	**2**			
Coastal Wetlands	Inside						
Exceptional and Substantial Noncoastal Wetlands	Inside						
Estuarine Waters	Inside						
Protected Lands	Inside						
Federal Lands	Inside						
State Lands	Inside						
Beneficial Noncoastal Wetlands		Inside		Outside	*1*	4.348	0.04348
High Quality Waters		Inside		Outside	*1*	4.348	0.04348
Storm Surge Areas		Inside		Outside	*2*	8.696	0.08696
Soils with Septic Limitations		Severe	Moderate	Slight	*1*	4.348	0.04348
Flood Zones		Inside		Outside	*2*	8.696	0.08696
Significant Natural Heritage Areas		< 500'		> 500'	*2*	8.696	0.08696
Hazardous Substance Disposal Sites		< 500'		> 500'	*1*	4.348	0.04348
NPDES Sites		< 500'		> 500'	*1*	4.348	0.04348
Wastewater Treatment Plants		< 500'		> 500'	*1*	4.348	0.04348
Municipal Sewer Discharge Points		< 500'		> 500'	*1*	4.348	0.04348
Airports		< 500'		> 500'	*1*	4.348	0.04348
Developed Land		> 1 mi	.5 - 1 mi	< .5 mi	*1*	4.348	0.04348
Primary Roads		> 1 mi	.5 - 1 mi	< .5 mi	*2*	8.696	0.08696
Water Pipes		> .5 mi	.25 - .5 mi	< .25 mi	*3*	13.043	0.13043
Sewer Pipes		> .5 mi	.25 - .5 mi	< .25 mi	*3*	13.043	0.13043
Total					23	100.000	1.00000

Assigned weight: 1 = Important 2 = Very important 3 = Most important for development

'Inside' = physically located within the layer. 'Outside' = not physically located within the layer.

Sources: William B. Farris; Frederick Steiner, The Living Landscape; Carteret County Land Suitability Analysis; Kaiser et al, Urban Land Use Planning; review by Onslow County Planning Department. Layers Not Used in Beaufort: Land Application Sites and Water Supply Watersheds. The DCM model default settings were utilized in this analysis.

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Figure 7: Land Suitability

The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.

Table 33 Land Suitability Ratings		
Suitability Rating	**Acres**	**Percent**
High Suitability	2,126.5	44.9%
Medium Suitability	1,105.7	23.3%
Low Suitability	256.3	5.4%
Least Suitable	1,251.3	26.4%

Source: The Wooten Company

A comparison of Figure 3, Existing Land Use Map with the Land Suitability Map reveals that a considerable number of vacant/under-utilized tracts are located within the areas with the higher suitability ratings. Approximately 62 percent of the existing vacant land within the Beaufort planning jurisdiction is outside of areas identified as containing natural constraints.

3.6 Review of Current Land Use Plan

Subchapter 7B .0702(c)(6) requires that the preparation of the land use plan update include an evaluation of the community's success in implementing the policies and programs adopted in the current land use plan as well as the effectiveness of those policies in achieving the goals of the plan. The current Beaufort CAMA Land Use Plan was certified in September 1997. A summary of ordinance consistency, implementation actions taken, and overall effectiveness of current land use plan policies follows.

A. Consistency of Existing Ordinances with the Current Land Use Plan Policies

Beaufort's land use and land development ordinances include a zoning ordinance, subdivision ordinance, and flood damage prevention ordinance. The Town considers their existing ordinances to generally be consistent with the 1997 Land Use Plan Policies.

Ordinance revisions/adoptions that have been made to ensure consistency with the 1997 Plan policies include:

- Adoption of airport height regulations for the Michael J. Smith Field (Beaufort-Morehead City Airport) in 2000.
- A zoning ordinance revision in 2002 regarding landscape plans and tree preservation.
- Adoption of an updated Flood Damage Prevention Ordinance in July 2003.

B. Adoption of the Current Implementation Measures

Major implementation activities undertaken by Beaufort since the preparation of the 1997 Land Use Plan include:

- Adoption of a *Parks and Recreation Master Plan* in 1997.
- Approval of the *Gallants Channel Bridge/US 70 Transportation Corridor Study and Impact Analysis* in 1997.
- Adoption of a *Strategic Growth Plan* in October 1999.

- Development of Transportation Improvement Program Priorities for the 2002-2008 TIP.
- Adoption of a *Waterfront Access Plan* in 2000.
- Annexation of the airport property in 2001.
- Approval of special legislation in June 2003 regarding satellite annexation.
- Approval of a Utility Service Area Boundary with Carteret County in 2003.

C. Effectiveness of the Current Policies

Beaufort considers that their current Land Use Plan policies are generally achieving the desired land use patterns and protecting natural systems. However, additional and/or revised policies are needed to ensure continued effective land use planning and protection of fragile natural environments. General policy areas that will be considered for revision of existing policies or development of new policies include:

- Stormwater management.
- Land development principles and techniques to better ensure land use compatibility with land suitability.
- Intergovernmental cooperation and coordination.

SECTION IV PLAN FOR THE FUTURE

This section of the Plan is organized in accordance with the requirements of Subchapter 7B .0702(d). Section IV includes goals, land use and development policies, and a future land use map. This portion of the Plan is intended to guide the development and use of land within the Beaufort planning jurisdiction in a manner that achieves the community's goals as well as the goals of the Coastal Area Management Act program.

Within this section specific definition of terms used in the goals and policies are as follows:

Continue: Follow past and present procedures to maintain desired goal, usually with Town staff involved at all levels from planning to implementation.

Encourage: To stimulate or foster a particular condition through direct or indirect action the private sector or through Town regulation, staff recommendation and decisions.

Enhance: Improve existing conditions by increasing the quantity or quality of desired features or current regulations and decisions towards a desired state through the use of policies and Town staff involved at all levels of planning. This could include financial support.

Implement: Actions to guide the accomplishment of the Plan recommendations.

Promote: Advance the desired state through the use of Town policies and codes and Planning Boards and staff activity at all levels of planning. This may include financial support.

Protect: Guard against a deterioration of the desired state through the use of Town policies and regulations, staff, and, if needed, financial assistance.

Provide: Take the lead role in supplying the needed financial and staff support to achieve the desired goal. The Town is typically involved in all aspects from planning to implementation to maintenance.

Support: Supply the needed staff support, policies, and financial assistance at all levels to achieve the desired goal.

Work: Cooperate and act in a manner through the use of Town staff, actions, and policies to create the desired goal.

During the course of the preparation of the land use plan update, specific issues have been identified that the Town's goals and policies strive to address. The following table summarizes, by CRC land use plan management topic, those issues.

Table 34 Land Use Issues and Management Topics	
Management Topic	*Issue*
Public Water Access	Providing for public water access to all segments of the community, including persons with disabilities.
	Development of comprehensive policies that provide access opportunities for the public along the shoreline within the planning jurisdiction.
Land Use Compatibility	Development of local development policies that balance protection of natural resources and fragile areas with economic development.
	Development of policies that provide clear direction to assist local decision making and consistency findings for zoning, divisions of land, and public and private projects.
	Compatibility of Town land use regulations in future municipal utility service areas.
	Development of land use and development policies that minimize adverse impacts on Areas of Environmental Concern (AECs) and which support overall CAMA goals.
Infrastructure Carrying Capacity	Establishment of service area boundaries for existing and future infrastructure
	Development of infrastructure service policies and criteria consistent with future land needs projections
	Correlating future land use map categories with existing and planned infrastructure such as water, sewer, and transportation facilities
	Ensuring that public infrastructure systems are appropriately sized, located, and managed so that the quality and productivity of AECs and other fragile areas are protected or restored
Natural Hazard Areas	Development of policies that minimize threats to life, property, and natural resources resulting from land development located in or adjacent to hazard areas such as those subject to erosion, high winds, storm surge, flooding, or sea level rise.
	Development of location, density, and intensity criteria for new, existing development, and redevelopment (including public facilities and infrastructure) so as to avoid or better withstand natural hazards.
	Ensuring that existing and planned development is coordinated with existing and planned evacuation infrastructure.
Water Quality	Development of policies to prevent or control nonpoint source discharges (sewage and storm water) such as impervious surface limits, vegetated riparian buffers, wetlands protection, etc.
	Establishment of policies and land use categories for protecting open shellfishing waters and restoring closed shellfishing waters.
	Adoption of policies for coastal waters within the planning jurisdiction to help ensure that water quality is maintained if not impaired and improved if impaired.
Areas of Local Concern	Identify and address local concerns and issues, such as cultural and historic areas, scenic areas, economic development, or general health and human service needs.

4.1 Land Use and Development Goals

The formulation of land use and development goals is based upon Beaufort's evaluation of its identified concerns and aspirations (Section II) and the needs and opportunities identified in the analysis of existing and emerging conditions (Section III). These land use plan goals were formulated after a review and analysis of the goals and objectives contained in the 1997 Town of Beaufort CAMA Land Use Plan (see Appendix B) and the Coastal Resource Commission (CRC) management goals and planning objectives (see Appendix K). Delineation of goals is a foundation upon which policy statements can be built.

The following table summarizes the land use and development goals, organized by CRC land use plan management topic, that have been formulated by Beaufort.

Table 35
Land Use and Development Goals

Management Topic	***Beaufort Land Use and Development Goals***
Public Water Access	Provide adequate opportunities for public access to coastal waters
Land Use Compatibility	Balance growth and development and conservation/preservation of natural resources
	Promote land use and public infrastructure development that is compatible with land suitability as well as capabilities to provide requisite public services
	Promote land use and land development compatible with the functional purposes of Areas of Environmental Concern
Infrastructure Carrying Capacity	Promote land use and public infrastructure development that is compatible with land suitability as well as capabilities to provide requisite public services
Natural Hazard Areas	Conserve and maintain areas that help protect against natural hazards
Water Quality	Maintain and enhance the water quality of coastal waters
Areas of Local Concern	Preserve historic and cultural resources Ensure compatible development along the Beaufort waterfront Provide a variety of housing opportunities Promote diversified economic development Protect existing waterfront vistas in the Town of Beaufort

4.2 Land Use and Development Policies

The formulation of land use and development policies is based upon a review and analysis of policy statements contained in the 1997 Beaufort CAMA Land Use Plan (see Appendix H for a summary of policies from the former plan); an evaluation of identified concerns and aspirations (Section II) and the needs and opportunities identified in the analysis of existing and emerging conditions (Section III); input from the Land Use Plan Advisory Committee, local planning board, and elected officials; and input obtained through citizen participation efforts including public informational meetings, public forums, and Land Use Plan Advisory Committee meetings.

Table 36
Land Use and Development Policies

Management Topic	***Policy***
4.2.1 Public Access to Public Trust Waters	
	Policy 1. The Town of Beaufort will provide a variety of opportunities for access to public trust waters to all segments of the community, including persons with disabilities.
	Policy 2. Beaufort supports the state's shoreline access policies as set forth in NCAC Chapter 15A, Subchapter 7M and will implement the goals and recommendations set forth in the town's Waterfront Access Plan.
	Policy 3. Beaufort supports public access to Radio Island shoreline areas and coordination of such access with Morehead City.
	Policy 4. Continue to require, through Article VIII, Section 13 of the Subdivision Ordinance, that waterfront subdivisions provide boat docks or boat launching ramps every one-quarter mile along the shoreline.
4.2.2 Land Use Compatibility	

Table 36 Land Use and Development Policies	
Management Topic	***Policy***
	Policy 1. Beaufort will ensure that land use and development activities provide a balance between economic development needs and protection of natural resources and fragile environments.
	Policy 2. Beaufort will support growth and development at the densities specified in the Future Land Use Map land classifications as delineated in Section 4.5 of this plan.
	Policy 3. In order to preserve natural vegetation and scenic views, no buildings or houses or structures, except residential docks or piers, will be erected on the south side of Front Street outside of the designated urban waterfront.
	Policy 4. Beaufort opposes private development on sound and estuarine islands located within its planning jurisdiction. The Town supports public access facilities and other development as outlined in Policy 5 below on sound and estuarine islands.
	Policy 5. Beaufort will support the policies for the management of the Rachel Carson Reserve, Carrot Island, and Town Marsh as identified in the *North Carolina National Estuarine Research Reserve Management Plan*. This includes, but is not limited to, the construction of scientific monitoring devices and associated structures, structures for environment protection purposes, and other construction necessary to the management of the reserve. The town also approves the current policy of maintaining a viable population of feral horses on the property.
	Policy 6. Residential, commercial and industrial development should be allowed in coastal wetlands which is consistent with 15A NCAC 7H and the policies contained in this plan.
	Policy 7. Only commercial and industrial uses that are water dependent and which cannot function elsewhere or are supportive of commercial fishing will be allowed in conservation-classified areas. Examples of such uses would include but not necessarily be limited to commercial fishing and fish processing, marinas consistent with the policies of this plan, boat repair and construction facilities, any business dependent upon natural salt water as a resource, and restaurants that do not extend into or over estuarine waters and/or public trust waters. All uses must be consistent with established zoning.
	Policy 8. New industrial sites should be located where they may be connected to municipal/central water and sewer services.
	Policy 9. Industries not dependent on commercial fishing which are noxious by reason of the emission of smoke, odor, dust, glare, noise, and vibrations, and those which deal primarily in hazardous products such as explosives, should be located away from population centers and sensitive natural areas.
	Policy 10. New industrial development and/or industrial zoning should not infringe on established residential development.
	Policy 11. Coordinate all development activity with appropriate Carteret County and state regulatory personnel, and in particular, with the Carteret County Sanitarian.
	Policy 12. Coordinate with the U.S. Army Corps of Engineers in the regulation/enforcement of the 404 wetlands permit process.
4.2.3 Infrastructure Carrying Capacity	
	Policy 1. Beaufort will coordinate the establishment of service area boundaries for existing and future water and sewer infrastructure with Carteret County and other utility providers.

Table 36 Land Use and Development Policies	
Management Topic	***Policy***
	Policy 2. Beaufort will ensure that public infrastructure systems are sized, located and managed in accordance with the need to protect or restore natural resources and fragile environments.
	Policy 3. The Town supports the implementation of the system improvements recommended in the Town of Beaufort *Wastewater Facilities Plan*.
	Policy 4. The Town will permit the construction of package treatment plants located in the ETJ which are approved and permitted by the State Division of Environmental Management. Plants must be designed for future connection to the municipal WWTP. The Town, however, opposes the installation of package treatment plants and septic tanks or discharge of waste in any areas classified as coastal wetlands, freshwater wetlands (404), or natural heritage areas.
	Policy 5. Beaufort will work cooperatively with Carteret County to provide a year-round recreation program.
	Policy 6. The town requires that all existing and new residential and commercial development located within the town limits to be connected to both the town water and sewer systems.
	Policy 7. The town will allow the installation of private wells within the corporate limits for irrigation only.
	Policy 8. Beaufort will support the development of central sewer service throughout its incorporated area and will develop a policy to control extending sewer service to areas within its unincorporated planning jurisdiction.
	Policy 9. Beaufort supports Carteret County's participation in a regional multi-county approach to solid waste management. This includes disposal of waste in the Tri-County Regional Landfill.
	Policy 10. The town will support efforts to educate people and businesses on waste reduction and recycling. The town supports recycling by all users of the Tri-County Landfill and supports setting up practical collection methods and education efforts to achieve a high degree of county-wide recycling.
	Policy 10. Beaufort supports the placement of recycling centers within public and commercial land classifications.
	Policy 12. Beaufort supports implementation of the following land transportation improvements: • Replacement of the drawbridge between Morehead City and Beaufort with a medium height 4-lane drawbridge. A medium height bridge is considered to be between 40-45 feet. • Improvements to US 70. • A connector between NC 101 and US 70 (the corridor for this road has not yet been determined). • Utilize Orange and Turner Streets as a one-way pair providing access to the waterfront. • Elimination of the 'Y' intersection with NC 101 and US 70. • A minor thoroughfare to connect Steep Point Road just east of US 70 and Mulberry Street at its intersection with Ocean Street. • Addition of a turn lane to facilitate traffic flow and safety at the US Highway 70 intersection and Tiller School.
4.2.4 Natural Hazard Areas	

Table 36 Land Use and Development Policies	
Management Topic	***Policy***
	Policy 1. Beaufort will conserve the natural resources and fragile environments that provide protection from such natural hazards as floods and storm surges.
	Policy 2. Beaufort will minimize the threat to life, property, and natural resources that may result from land use and development within or adjacent to identified natural hazard areas.
	Policy 3. Beaufort will continue to coordinate all development within the special flood hazard area with the town's Inspections Department, North Carolina Division of Coastal Management, FEMA, and the U.S. Corps of Engineers.
	Policy 4. Beaufort will implement strategies recommended by the hazard mitigation plan.
	Policy 5. The town will implement its storm hazard mitigation post-disaster recovery plan to control redevelopment.
4.2.5 Water Quality	
	Policy 1. Beaufort will establish land use and development policies to help ensure that water quality in coastal wetlands, rivers, streams, and estuaries is maintained if not impaired and improved if impaired.
	Policy 2. The town will support existing state regulations relating to stormwater runoff resulting from development and will investigate and pursue adopting even more stringent stormwater regulations where it is clear that existing state regulations are inadequate to protect the receiving waters from significant pollution.
	Policy 3. The Town of Beaufort supports the development of a town-wide stormwater management plan.
	Policy 4. The Town of Beaufort Building Inspections Department will coordinate building inspections with state and federal regulations governing underground storage tanks and will endeavor to advise building permit applicants of those regulations.
	Policy 5. Beaufort supports developing a wellhead protection program to manage land use in the vicinity of public wellheads to help prevent the contamination of the public water supply.
	Policy 6. The town will support the Division of Environmental Management stormwater runoff retention permitting process.
	Policy 7. Beaufort supports and encourages use of the Natural Resources Conservation Service 'Best Management Practices' program.
	Policy 8. Beaufort objects to any discharge of water from aquaculture activities that will degrade in any way the receiving waters.
	Policy 9. Beaufort objects to withdrawing water from aquifers or surface sources if such withdrawal will endanger water quality or water supply from the aquifers or surface sources.
	Policy 10. Beaufort opposes any additional point source discharges of pollution into primary nursery areas and shellfishing areas. In addition, Beaufort reserves the right to review and comment on the approval of outfalls on a case-by-case basis.
4.2.6 Areas of Environmental Concern	
	Policy 1. The Town of Beaufort supports state and federal law regarding land use and development in AECs.
Coastal Wetlands	**Policy 2.** Beaufort will only permit uses in coastal wetlands which are authorized by 15A NCAC 7H.
Estuarine Waters and Public Trust Areas	**Policy 3.** Beaufort supports the use standards for estuarine and public trust areas as specified in 15A NCAC .0207.

Table 36 *Land Use and Development Policies*	
Management Topic	***Policy***
	Policy 4. Beaufort will allow the construction of open water and upland marinas within its planning jurisdiction which satisfy the use standards for marinas as specified in 15A NCAC 7H.
	Policy 5. Beaufort will allow construction of dry stack storage facilities for boats associated with marinas.
	Policy 6. Construction of boat ramps, piers, and bulkheads within conservation-designated areas will be allowed if 15A NCAC 7H use standards and local ordinances are met.
	Policy 7. Beaufort supports the state's minimum use standards for the regulation of floating structures.
	Policy 8. The town supports the development of mooring fields in coordination with and with assistance from the appropriate state agencies.
General	**Policy 9.** Beaufort encourages aquaculture activities which meet applicable federal, state and local policies and permit requirements and which do not alter significantly and negatively the natural environment of conservation-designated areas.
	Policy 10. Beaufort opposes the utilization of off-road vehicles in any areas classified as coastal wetlands and in the entire Rachel Carson Sanctuary.
4.2.7 Areas of Local Concern	
	Policy 1. Beaufort will support the technical requirements and state program approval for underground storage tanks (40 CFR, Parts 280 and 281), and any subsequent state regulations concerning underground storage tanks adopted during the planning period.
	Policy 2. Beaufort encourages the establishment of appropriate environmental and operational safeguards for all development and port expansions on Radio Island. Beaufort opposes the storage of any non-fuel hazardous materials on Radio Island.
	Policy 3. Beaufort supports development of sound attenuation zoning requirements for the areas affected by the aircraft operating patterns at the Michael J. Smith Field and the coordination of such zoning requirements with Carteret County.
	Policy 4. Beaufort shall coordinate all housing code enforcement/redevelopment projects which involve any historically significant structure with the N.C. Division of Archives and History, to ensure that any significant architectural details or buildings are identified and preserved.
	Policy 5. Beaufort will coordinate all public works projects that entail significant excavation with the NC Division of Archives and History, to ensure the identification and preservation of significant archaeological sites.
	Policy 6. Beaufort will continue to support and protect the town's Historic District and the Taylor's Creek waterfront area.
	Policy 7. Beaufort will support and cooperate with efforts by the Corps of Engineers and state officials to maintain channels.
	Policy 8. The town will provide assistance in maintaining the waterway by helping to obtain or providing dredge spoil sites.
	Policy 9. Beaufort will support projects that will increase public access to shoreline areas.
	Policy 10. Beaufort will continue to support the activities of the North Carolina Division of Travel and Tourism; specifically, the monitoring of tourism-related industry, efforts to promote tourism-related commercial activity, and efforts to enhance and provide shoreline resources.

4.3 Analysis of the Impact of Policies on Management Topics

The following table summarizes the general impact of the Beaufort land use and development policies on the CRC land use plan management topics.

Table 37
Impact of Local Policies on CRC Land Use Plan Management Topics

	CRC Land Use Plan Management Topics					
Policies	**Public Water Access**	**Land Use Compatibility**	**Infrastructure Carrying Capacity**	**Natural Hazard Areas**	**Water Quality**	**Local Areas of Concern**
Public Water Access	Positive					Positive
Land Use Compatibility		Positive	Positive	Positive	Positive	
Infrastructure Carrying Capacity		Positive	Positive	Positive	Positive	Positive
Natural Hazard Areas		Positive	Positive	Positive	Positive	
Water Quality		Positive		Positive	Positive	
Areas of Environmental Concern	Positive	Positive	Positive	Positive	Positive	
Areas of Local Concern	Positive	Positive		Positive		Positive

Note: Blank space in table indicates neutral impact. All local policies have been determined to have either a positive or neutral impact on CRC management topics. No specific actions or programs are required to mitigate negative impacts.

A more detailed analysis of the impact of Beaufort's policies on the CRC land use plan management topics is provided below.

4.3.1 Public Water Access

Five public water access points currently exist within the Beaufort planning jurisdiction. Article VIII, Section 13 of the Town's Subdivision Ordinance requires that waterfront subdivisions provide boat docks or boat launching ramps every one-quarter mile along the shoreline.

The *Beaufort Waterfront Access Plan*, adopted in 2000, identifies water access needs and potential locations for additional public water accesses. Additional water access improvements are scheduled for FY 05. The Town's policies support the implementation of the *Waterfront Access Plan.*

The Town's policies encourage the provision of public water access and the continued assessment of its water access needs and opportunities for improving public water access. The Town's policies have a positive impact on the CRC public water access goals and objectives.

4.3.2 Land Use Compatibility

Overall, the Town's existing building intensities and densities are consistent with infrastructure availability and land suitability. Generally, the most intense development is located in areas with adequate water and sewer facilities and other support infrastructure and outside of sensitive natural environments.

The Town's policies provide for a balance of growth and the preservation of fragile environments. Development with acceptable impacts on natural resources and which is in harmony with the Town's existing character is encouraged. Town policies concerning Areas of Environmental Concern support state and federal law regarding development with AECs. Development is encouraged in those portions of the Town's planning jurisdiction that possess the support infrastructure necessary to sustain that growth.

Beaufort's policies support the implementation of the *Wastewater Facilities Plan* recommended improvements which will vastly improve the Town's ability to provide effective and reliable wastewater collection, treatment, and disposal systems. The Town's policies have a positive impact on the CRC land use compatibility goals and objectives.

4.3.3 Infrastructure Carrying Capacity

The Town of Beaufort supports managing and directing development in balance with the availability of municipal services. The most intensive land uses and highest residential densities are guided to those portions of the Town's planning jurisdiction that possess the support infrastructure necessary to sustain that level of development.

Within the next five years, Beaufort is anticipated to grow mainly north of this area and in the area between the US Highway 70 and NC Highway 101 corridors. However, infill development and redevelopment of existing developed properties are also expected to accommodate future short-term growth. The majority of the Town's future land development will be in areas that currently have the necessary infrastructure already in place or in areas where that infrastructure can be readily provided.

Beaufort's policies support the implementation of the *Wastewater Facilities Plan* recommended improvements which will vastly improve the Town's ability to provide effective and reliable wastewater collection, treatment, and disposal systems. The Town's policies also support the development of a water facilities plan which will identify water system needs and provide a strategy for prioritizing and implementing recommended improvements. The Town's policies ensure that public infrastructure is located and managed in harmony with fragile environments and natural resource areas. Beaufort's policies have a positive impact on the CRC infrastructure carrying capacity goals and objectives.

4.3.4 Natural Hazard Areas

Town policies encourage the conservation of natural resources and fragile environments that provide protection from natural hazards. Intensive nonresidential development and high density residential development is discouraged within areas susceptible to storm surge and flooding. Flood damage prevention policies encourage compatible development and redevelopment within flood hazard areas. The Town's policies have a positive impact on the CRC natural hazard areas goals and objectives.

4.3.5 Water Quality

The Town's policies support the maintenance, protection, and enhancement of water quality. Beaufort's policies support land development that has minimal adverse impacts on water quality. Best management practices are encouraged to minimize stormwater impacts. Town policies support the continued use of land in conservation-designated areas for appropriate land uses that are compatible with their fragile nature.

Beaufort's policies support the implementation of the *Wastewater Facilities Plan* recommended improvements which will vastly improve the Town's ability to provide effective and reliable wastewater collection, treatment, and disposal systems that assist in protecting water quality. Beaufort's policies also support the development of a stormwater management plan and ordinance. The Town's policies have a positive impact on the CRC water quality goals and objectives.

4.3.6 Local Areas of Concern

Beaufort's policies regarding local areas of concern support and have a positive impact on the CRC public water access, land use compatibility, and infrastructure carrying capacity goals and objectives. The Town's policies encourage increased public access, compatible development, and the preservation of the historic district and waterfront area. Town policies also promote tourism-related economic development.

Appendix M provides a further evaluation of each individual town policy's impact on the CRC land use plan management topics.

4.4 Statement of Local Support Regarding Areas of Environmental Concern

The Town of Beaufort supports state and federal law regarding land use and development in Areas of Environmental Concern (AECs). Specific policy statements have been developed that support the general use standards of the North Carolina Administrative Code (15 NCAC 7H) for development within the estuarine system (see Section 4.2.6). No policy statements have been developed which exceed the requirements of CAMA regarding land use and development within AECs.

4.5 Future Land Use Map

The purpose of the Future Land Use Map is to graphically depict Beaufort's policies for growth and land development and the projected patterns of future land use. The Future Land Use Map has been prepared with consideration given to land development objectives and policies, natural constraints and limitations, overall land suitability, and the ability to provide the infrastructure to support growth and development.

The Future Land Use Map for the Beaufort planning jurisdiction encompasses the Beaufort corporate limits and the Town's extraterritorial planning and zoning jurisdiction. The Town's Future Land Use Map classifications include the following categories and subcategories:

- Residential
  - Low Density Residential
  - Medium Density Residential
  - High Density Residential
- Commercial
  - General Commercial
  - Downtown Commercial
- Mixed Use
- Public and Institutional
- Industrial
- Conservation/Open Space

Generally, growth and land development is anticipated to occur in all future land use categories except for the Conservation/Open Space classification. The type and intensity of projected development varies within each future land use map classification. Future Land Use projections are delineated in Figure 8, Future Land Use Map. The Future Land Use Map classifications are considered part of the Land Use Plan's policy.

A. Residential Classification

The Residential classification is subdivided into three subcategories: Low Density, Medium Density, and High Density.

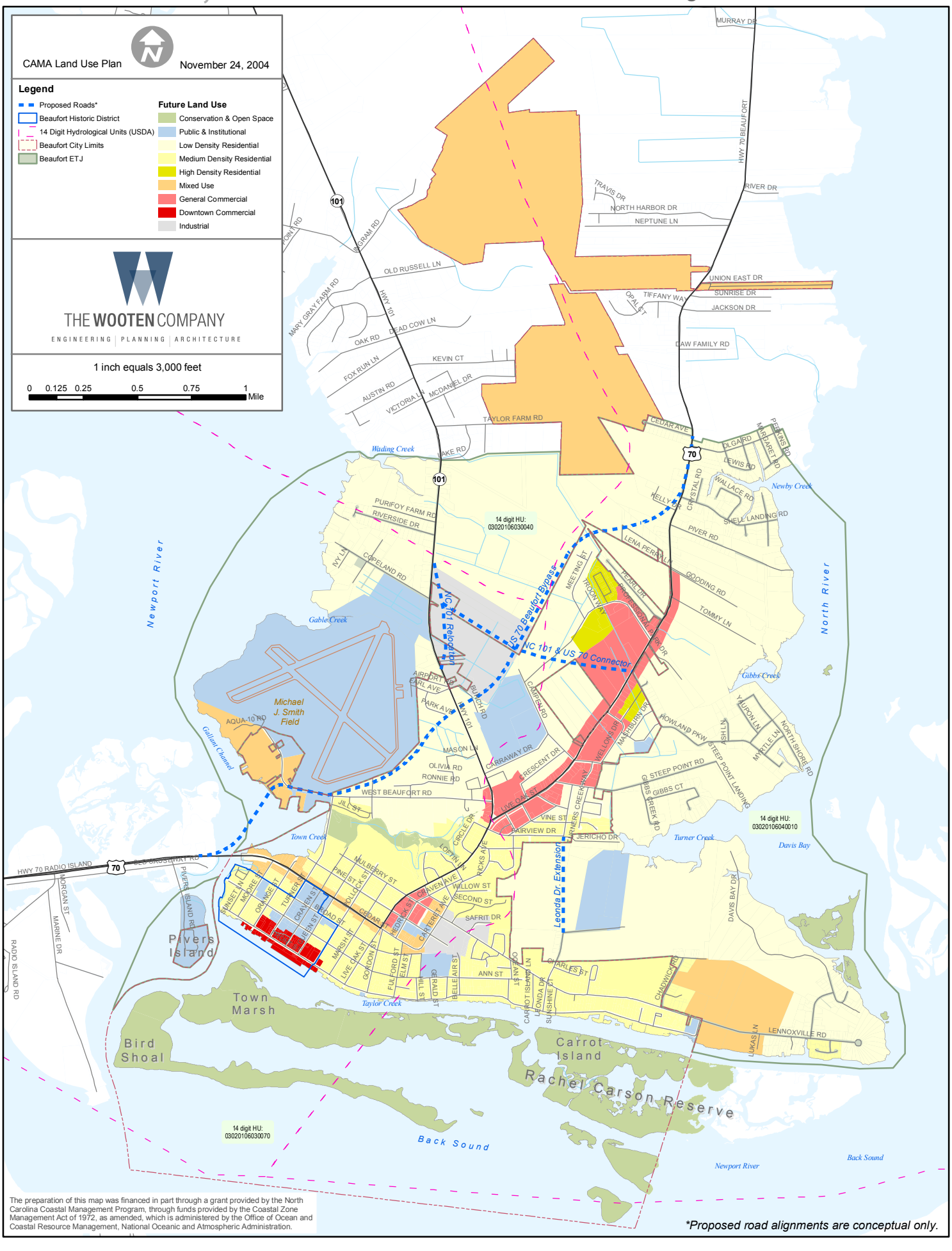
Low Density Residential Classification. The Low Density Residential classification encompasses approximately 3.19 square miles (2,041 acres) or about 43 percent of the total planning jurisdiction. The majority of the lands classified as Low Density Residential are located on primarily in the northern, northeastern, and eastern portions of the Town's planning jurisdiction.

The Low Density Residential classification is intended to delineate lands where the predominant land use is low density detached residences. The residential density within this classification is generally 2 or less dwelling units per acre. Minimum lot sizes vary from 15,000 to 20,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems. Single-family detached residences are the predominant types of dwellings within these areas. Manufactured homes on individual lots are also dwelling types found within this classification. Land uses within Low Density Residential-designated areas are generally compatible with the R-20 and R-15, Single-Family Residential zoning classifications. Public water service is widely available throughout the Low Density Residential-classified areas. Public sewer service is generally not available within this classification.

The Town's goals and policies support the continued use of land in Low Density-classified areas for low density dwellings and for public and institutional land uses that support and that are compatible with this type of residential development. Future development is projected to be no more than 2 dwelling units per acre. Some Low Density Residential areas that are located on the immediate fringe of the intensively-developed urban core may evolve into higher density areas over time, particularly where public utilities and other infrastructure will be available to support increases in residential density.

BEAUFORT, NC

Figure 8: Future Land Use



The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.

*Proposed road alignments are conceptual only.

Medium Density Residential Classification. The Medium/High Density Residential classification encompasses approximately 0.8 square miles (483 acres) or about 10 percent of the total planning jurisdiction. The majority of the properties classified as Medium Density Residential are generally located immediately surrounding the Beaufort downtown area as well as north and east of the downtown area.

The Medium Density Residential classification is intended to delineate lands where the predominant land use is higher density single-family residential developments and/or two-family developments. The residential density within this classification is generally 3 to 5 dwelling units per acre. Minimum lot sizes vary from 8,000 to 10,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems. Land uses within Medium Density Residential-designated areas are generally compatible with the R-10, One or Two-family Residential; R-10MH, Single-family Residential and Manufactured Home; R-8, Medium Density Residential; and R-8A Single-family Medium Density Residential zoning districts. Public water is widely available and sewer service is required to support the higher residential densities in this classification. Streets with the capacity to accommodate higher traffic volumes are also necessary to support Medium Density Residential development.

The Town's goals and policies support the use of land in Medium Density-classified areas for single-family and two-family dwellings where adequate public utilities and streets are available or can be upgraded to support the higher residential densities encouraged in this classification.

High Density Residential Classification. The High Density Residential classification encompasses approximately 0.05 square miles (32.6 acres) or about 0.7 percent of the total planning jurisdiction. The properties classified as High Density Residential are located in the northeastern portion of the Town's planning jurisdiction along the US Highway 70 North corridor.

The High Density Residential classification is intended to delineate lands where the predominant land use is higher density single-family residential developments and/or multifamily developments. The residential density within this classification is generally 6 to 16 dwelling units per acre. The minimum lot size is 2,750 square feet per unit unless a larger minimum lot area is required by the health department for land uses utilizing septic systems. Land uses within High Density Residential-designated areas are generally compatible with the RMF, Multi-Family High Density Residential and the R-5, Residential Cluster zoning classifications. Public water and sewer service is required to support the residential densities in this classification. Streets with the capacity to accommodate higher traffic volumes are also necessary to support High Density Residential development.

The Town's goals and policies support the use of land in High Density-classified areas for single-family and multifamily dwellings where adequate public utilities and streets are available or can be upgraded to support the higher residential densities encouraged in this classification. The higher density residential developments anticipated to occur during the planning period are encouraged within the High Density-classified areas.

B. Commercial Classification

The Commercial classification is subdivided into two subcategories: General Commercial and Downtown Commercial.

General Commercial Classification. The General Commercial classification encompasses approximately 0.24 square miles (154 acres) or about 3.3 percent of the planning jurisdiction. The properties classified as General Commercial are located along the Town's major road corridor--US Highway 70.

The General Commercial classification is intended to delineate lands that can accommodate a wide range of retail, wholesale, office, business services, and personal services. Areas classified as General Commercial may also include some heavy commercial uses as well as intensive public and institutional land uses. Minimum lot sizes typically range from 5,000 to 8,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems. Maximum floor area ratios (the total building floor area divided by the total lot area) range from 0.57 to 0.83. Land uses within General Commercial-designated areas are generally compatible with the B-1, General Business; B-2, Highway Business; B-3, Marina Business; and the O & I, Office and Institutional zoning districts. Public water service is needed to support the land uses characteristic of this classification. Public sewer service is needed to support the most intensive commercial uses. Streets with the capacity to accommodate higher traffic volumes are necessary to support commercial development.

General Commercial-classified areas are anticipated to accommodate some of the most intensive land uses found in the Town's planning jurisdiction. The Town's goals and policies support the use of land in General Commercial-classified areas for a wide variety of retail and commercial services uses where adequate public utilities and streets are available or can be upgraded to support the intensity of development encouraged in this classification. Public and institutional land uses that support and that are compatible with this type of commercial development are also encouraged.

Downtown Commercial Classification. The Downtown Commercial classification encompasses approximately 0.03 square miles (18 acres) or about 0.4 percent of the planning jurisdiction. The properties classified as Downtown Commercial are located in the Front Street commercial district and the downtown waterfront area. The core of the Downtown Commercial area is generally bounded by Taylor's Creek on the south, Orange Street on the west, and Pollock Street on the east.

The Downtown Commercial classification is intended to delineate properties that can accommodate a variety of retail, office, business services, and personal services. Areas classified as Downtown Commercial may also include some public and institutional land uses. The Downtown Mixed Use classification specifically includes waterfront tourist-oriented land uses. The minimum lot size is 3,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems. Maximum floor area ratios range from 1.73 to 2.13. Land uses within the Downtown Commercial-designated areas are generally compatible with the C-D, Central Downtown Business and the W-C, Waterfront Commercial zoning districts.

Public water and sewer service is needed to support the land uses characteristic of this classification. Streets with the capacity to accommodate higher traffic volumes are also necessary to support the intensive land uses within this classification.

The Town's goals and policies support the use of land in Downtown Commercial-classified areas for a wide variety of retail and commercial services uses where adequate public utilities and streets are available or can be upgraded to support the intensity of development encouraged in this classification. Redevelopment of the downtown waterfront area for tourist-oriented mixed uses consisting of retail shops, places of entertainment, restaurants, boating services, and overnight lodging is promoted by the Town's goals and policies.

C. Mixed Use Classification

The Mixed Use classification encompasses approximately 1.3 square miles (826 acres) or 17.4 percent of the total land area. The properties classified as Mixed Use are located adjacent to Town Creek (2 sites), at the former Beaufort Elementary School site, adjacent to the Cedar Street-Carteret Avenue area, and along Lennoxville Road at the site of the Atlantic Veneer Corporation and Beaufort Fisheries Industries.

The Mixed Use classification is intended to delineate areas where there is potential to redevelop the existing properties and adjoining vacant land, particularly for multiple land uses. The North Carolina Maritime Museum has proposed expanding the Maritime Museum to a portion of the Mixed Use-designated area located on the north side of Town Creek. An associated maritime village has also been proposed for this site. Mixed residential and commercial uses, including marine uses along waterfront areas, have potential at the other Mixed Use-designated sites.

The Cedar Street corridor is anticipated, with the proposed relocation of US Highway 70, to redevelop from a general commercial area into more of an office, light retail, professional services, institutional, and residential area.

The anticipated residential density within this classification ranges from medium to high density. Multifamily densities are consistent with the current requirements of the Town's zoning ordinance which allows a density range of up to 16 dwellings per acre for planned developments. Residential building types encouraged within this classification include single-family attached dwellings, condominiums, cluster developments, and multifamily dwellings. Commercial uses include a variety of retail, office, business services, and personal services. Minimum lot sizes are generally dependent upon the specific nature and characteristics of the land use but typically range from 2,750 to 20,000 square feet for residential land uses and 3,000 to 8,000 square feet for nonresidential land uses. Maximum floor area ratios for nonresidential land uses range from 0.57 to 2.13. Land uses within the Mixed Use-designated areas are generally compatible with B-1, General Business; B-3, Marina Business; O & I, Office and Institutional; RMF, Multi-family Residential; and PUD, Planned Unit Development zoning districts. Public water and sewer service is needed to support the land uses characteristic of this classification. Streets with the capacity to accommodate higher traffic volume are necessary to support the intensity of development expected within the Mixed Use Classification.

The Town's goals and policies support the use of land in Mixed Use-classified areas for a range of uses where adequate public utilities and streets are available or can be upgraded to support the intensity of development encouraged in this classification. Public and institutional land uses that support and that are compatible with this type of mixed development are also encouraged.

While the Mixed Use areas are expected to accommodate future growth and development, they may or may not actually be developed during the planning period. Critical factors that will determine the development potential of these areas include market demand and the provision of the necessary support infrastructure (particularly public water and sewer utilities). Consequently, the development potential of the some of the lands within the Mixed Use areas may be more long-term than short-term.

In order to permit the type of mixed use development envisioned in this classification, the Town of Beaufort may have to prepare amendments to its existing zoning ordinance and subdivision ordinance to establish specific conditions and standards for such mixed use development.

D. Public and Institutional

The Public and Institutional classification encompasses approximately 0.9 square miles (576 acres) or about 12 percent of the total planning jurisdictional area. The properties classified as Public and Institutional are scattered throughout the Town's planning jurisdiction. The largest individual property within the Public and Institutional classification includes the Michael J. Smith Field and airport facilities located in the western section of Beaufort.

The Public and Institutional classification is intended to delineate large land areas that are used for intensive public and educational purposes. Land uses within this classification include primarily government buildings and service facilities, public recreational facilities, and public educational facilities. Some private office and institutional facilities may also be included within this classification. Minimum lot sizes are generally dependent upon the specific nature and characteristics of the land use but typically range from 5,000 to 40,000 square feet for low intensity uses to multiple acres for more intensive land uses. Maximum floor area ratios range from 0.59 to 0.83. Land uses within the Public and Institutional-designated areas are generally compatible with B-1, General Business; O & I, Office and Institutional; and R-8 Medium Density Residential zoning districts. Generally, public water service is needed to support the land uses characteristic of this classification. Public sewer is needed to support the most intensive public and institutional uses. Streets with the capacity to accommodate higher traffic volumes are necessary to support the intensity of development expected within the Public and Institutional Classification.

E. Industrial

The Industrial classification encompasses approximately 0.2 square miles (135 acres) or about 2.8 percent of the planning jurisdiction. The properties classified as Industrial are along Lennoxville Road at Carteret Avenue in south central Beaufort and along the east side of NC Highway 101 directly across from the airport property.

The Industrial classification is intended to delineate lands that can accommodate industrial and manufacturing establishments. Some heavy commercial uses as well

as services and businesses which support industrial land uses are also appropriate land uses within the Industrial classification. The minimum lot size typically is 8,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems. Maximum floor area ratios range from 0.36 to 0.57. Land uses within the Industrial-designated areas are generally compatible with the L-I, Light Industrial and the I-W, Industrial Warehouse zoning districts. Public water and sewer service is needed to support the land uses characteristic of this classification. Streets with the capacity streets to accommodate higher traffic volumes are necessary to support the intensity of development expected within the Industrial Classification.

The Industrial areas are expected to accommodate the majority of the future industrial growth projected for the planning period. Critical factors that will determine the development potential of these Industrial-classified areas include market demand and the provision of the necessary support infrastructure (particularly public water and sewer utilities). Consequently, the development potential of the majority of the lands within the Industrial areas may be more long-term than short-term.

The Town's goals and policies support the use of land in Industrial-classified areas for a wide variety of manufacturing and heavy commercial services uses where adequate public utilities and streets are available or can be upgraded to support the intensity of development encouraged in this classification. Public and institutional land uses as well as commercial services that support and that are compatible with this type of industrial development are also encouraged. Industrial-classified areas may include certain land uses which, due to their nature and characteristics, have potential adverse impacts on surrounding land use types. Consequently, the Town's objective is to ensure the compatible location of industrial land uses and to require the necessary measures to mitigate any adverse impacts.

F. Conservation/Open Space

Conservation/Open Space areas are scattered throughout the Beaufort jurisdiction and include coastal wetlands, estuarine waters, estuarine shoreline, public trust areas, and '404' wetlands. Due to the small size of such areas, they are not individually identified on the Future Land Use Map. Generally, the precise location of such areas must be determined by field investigation. Conservation/Open Space areas that are delineated on the Future Land Use Map include Town Marsh, Carrot Island (including the portion of the Rachel Carson Estuarine Reserve lands within the Beaufort planning jurisdiction), marshland in Davis Bay, and the county-owned Town Creek wetlands area. These Conservation/Open Space-designated areas encompass approximately 0.7 square miles (472 acres) or approximately 10 percent of the planning jurisdictional area.

The Conservation/Open Space classification is intended to delineate areas where traditional land uses are not desirable or expected to develop. Land development may, however, include public building and facilities necessary to support existing land uses within the areas classified as Conservation/Open Space. Land uses within the Conservation/Open Space-designated areas are generally compatible with the O-S, Open Space zoning district. Public water or sewer utilities are not needed to support the types and intensities of land uses in these areas. Extensions of water and sewer utilities into these areas are not expected or encouraged.

The Town's goals and policies support the continued use of land in Conservation/Open Space-classified areas for appropriate uses that are compatible with the fragile nature of the Conservation/Open Space areas. Traditional urban growth and development in such areas is discouraged. Conservation/Open Space areas are expected to retain their existing character over time.

4.6 Cost Estimates for Planned Community Facility Improvements

- Water system improvements: $10.6 million (See section 3.4.1 for a description of proposed improvements)
- Wastewater collection, treatment, and disposal systems improvements: $15.6 million (See section 3.4.2 for a description of the proposed improvements).
- Water Access and recreational facilities improvements: $372,000 (See section 3.4.8 for a description of proposed improvements)

4.7 Consistency With Natural Systems and Land Suitability Analyses

The land use patterns depicted on the Future Land Use Map are consistent with the analysis of natural systems and the analysis of land suitability. The Future Land Use Map depicts very generalized patterns of projected land use. The intent of the map is to illustrate a typical pattern of use for a general area and not the specific use of an individual parcel. The Future Land Use Map is not intended for site-specific land planning or for regulatory purposes.

The north central portion of the Town's planning jurisdiction and the areas adjacent to the Newport River, North River and Taylor's Creek shorelines contain the greatest concentrations of natural constraints, primarily floodplains and wetlands. Major undeveloped areas with significant natural constraints and low suitability ratings within the Beaufort jurisdiction are designated as Conservation/Open Space on the Future Land Use Map. The majority of developed areas with significant natural constraints and low suitability ratings are designated on the Future Land Use Map for low density residential use.

Other Conservation/Open Space areas are scattered throughout Beaufort and include coastal wetlands, estuarine waters, estuarine shoreline, public trust areas, and '404' wetlands. Due to the small size of such areas, they are not specifically identified on the Future Land Use Map. Other areas with significant natural constraints and low suitability ratings are designated on the Future Land Use Map for low intensity land uses such as those anticipated to occur in the Low Density Residential classification.

The table below illustrates the amount of land area within the Beaufort planning jurisdiction by land suitability rating.

Table 38 Acreage by Land Suitability Rating		
	Beaufort Jurisdiction	
Suitability Rating	**Total Acres**	**%**
High	2,126.5	44.9%
Medium	1,105.7	23.3%
Low	256.3	5.4%
Least	1,251.8	26.4%
Totals	4,740.3	100.0%

Source: The Wooten Company

Some portions of the projected use classifications shown on the Future Land Use Map may include land which is designated as having moderate or serious natural limitations or land which is rated as having low suitability for development. Inclusion of such areas within a specific projected future use classification does not denote a recommendation for future development. Rather, it means that while such areas are located within a broader general use pattern, their ultimate future use may be different from other properties because of their natural constraints and regulatory limitations. Some of the designated fragile areas may always remain in their current natural state or, if permitted by regulatory authority, may be altered and any negative impacts overcome through approved mitigation measures. Some of the areas currently designated as having low suitability for development may lose that rating over time as, for example, public utilities are installed and roads are constructed. Consequently, the future use of such areas, if the low suitability conditions are eliminated, will be in accordance with the broader general use classification.

Land development activity within most environmentally fragile areas is subject to local, state, and/or federal restrictions. Local land use regulations such as the Town's zoning ordinance, subdivision ordinance, and flood damage prevention ordinance include specific standards for land development activities. Site-specific soil analyses are required by the Carteret County Environmental Health Department to evaluate the suitability of a particular parcel for septic system suitability. Encouraging good site planning principles and best management practices can assist with mitigating the impacts of land development on environmentally fragile areas.

Development within the designated Areas of Environmental Concern is limited by CAMA regulations and development guidelines. Generally, the development standards for coastal wetlands, estuarine waters, and public trust areas permit only water-dependent uses such as navigation channels, dredging projects, docks, piers, bulkheads, boat ramps, groins, and bridges. Priority is, however, given to the conservation of these AECs. CAMA standards for estuarine shoreline development generally require that (i) the development not cause significant damage to estuarine resources; (ii) the development not interfere with public rights of access to or use of navigable waters or public resources; (iii) the development preserve and not weaken natural barriers to erosion; (iv) impervious surfaces not exceed 30 percent of the lot area located within the AEC boundary; (v) the development comply with state soil erosion, sedimentation, and stormwater management regulations; and (vi) the development comply with the CAMA Land Use Plans. Specific CAMA development standards for AECs can be found in 15 NCAC 7H.

The US Army Corps of Engineers is responsible for regulating non-coastal or '404' wetlands. Authorization must be obtained from the Corps prior to disturbing such wetlands.

Opportunities exist for the conservation of fragile areas and natural resource areas through both private and public means. Private land trusts and conservancies are tax-exempt organizations that acquire and preserve natural areas, open spaces, and historical properties. Such organizations offer mechanisms such as conservation easements to protect natural resources (natural habitats, places of scenic beauty, farms, forestlands, floodplains, watersheds, etc.) while also providing compensation and possible tax incentives to private property owners. Tax incentive programs, such as the North Carolina Conservation Tax Credit Program, provide opportunities for property owners donating land for conservation purposes to receive tax credits. State and local governments may also accept land donations for conservation purposes.

Public land use regulations, such as conservation design subdivision requirements, can be developed to assist with the conservation of environmentally sensitive areas and open space as land is being subdivided into building parcels.

The timing of the provision of infrastructure improvements, particularly water and sewer services and roads, will also have a tremendous impact on the rate and location of growth and development. Development will occur where infrastructure is available or can readily be made available to sustain that development. Consequently, achieving the Future Land Use Map land use projections will depend in large part upon if and when infrastructure is provided. The provision of public infrastructure generally depends upon capability to provide the service and demand for the service. Economic climate will be a major factor in the capability to make infrastructure available as well as the level of service demand.

4.8 Comparison of Future Land Use Allocations and Projected Land Needs

The following table provides estimates of the acreages within each Future Land Use Map classification. In addition to providing total acreage within each classification, the table also shows estimated acreage with natural constraints (100-year floodplains and wetlands), and probable developable acreage (total acreage less acreage with natural constraints). It should be noted, however, that existing development currently exists in some areas identified as floodplains and wetlands, particularly in the southern peninsula area. Also, some developmental limitations created by natural constraints, such as location within a 100-year floodplain, can be mitigated (for example, by elevating a structure). Consequently, ‘acreage with natural constraints’ does not equate with ‘undeveloped’ or ‘undevelopable’ land.

Table 39 Future Land Use Map Calculations					
Classifications	**Total Acres**	**% of Total Acres**	**Acreage w/ Natural Constraints**	**Probable Developable Acres**	**Developable Acres as a % of Total Acres**
Low Density Residential	2,041.5	43.1%	1,075.0	966.5	47.3%
Medium Density Residential	483.9	10.2%	192.6	291.2	60.2%
High Density Residential	32.6	0.7%	0.2	32.5	99.5%
General Commercial	154.3	3.3%	5.4	148.8	96.5%
Downtown Commercial	18.0	0.4%	11.9	6.1	33.8%
Mixed Use	826.8	17.4%	287.2	539.6	65.3%
Public and Institutional	576.3	12.2%	343.2	233.1	40.4%
Industrial	134.9	2.8%	1.1	133.7	99.2%
Conservation/Open Space	472.0	10.0%	467.1	4.9	1.0%
Totals	4,740.3	100.0%	2,383.8	2,356.5	49.7%

Source: The Wooten Company

As shown in the above table, approximately 50 percent of the total Beaufort jurisdiction contains natural constraints that present limitations but do not prevent the use of the land for future development. If this acreage is deducted from the total land acreage within each jurisdiction, the resultant probable developable acreage is land that is, generally, most readily available to accommodate future land development. As previously stated however, some developmental limitations created by natural constraints can be mitigated. Consequently, a larger amount of acreage is available for development purposes than is portrayed here as 'probable developable acres'.

The following table provides a comparison of the amount of projected future land area, as delineated on the Future Land Use Map, with projected land needs:

Table 40 Comparison of Future Land Allocation with Projected Needs				
Gross Acres Allocated on the Future Land Use Map		Existing Acres from the Existing Land Use Map	Gross Undeveloped Acres*	Projected Additional Acres Needed Through 2025
Residential**	3,260	1,046	2,214	2,278
Commercial	298	256	42	372
Industrial	135	89	46	129
Public and Institutional	576	261	315	378

Source: The Wooten Company

* Gross Future Land Use Map Acres less Existing Land Use Map Acres.
** Includes the allowable 50% increase in residential acreage to accommodate market flexibility and unanticipated growth (see Section 3.3.4, Projections of Land Needs).

Note that the 'Mixed-Use' future land use classification has been omitted from the comparison table as a separate line item, as there is no corresponding category on the existing land use map. However, the Mixed Use future land use category has been integrated into the

Residential and Commercial Future Land use categories in the table. Mixed Use was divided according to the ratio of residential and commercial development which currently exists within the Town, with the assumption that the ratio will roughly continue. The breakdown results in the following division of the 827 acres of proposed Mixed Use: 126 additional acres added to the Commercial category, and 701 acres added to the Residential category for comparison with existing land use acreage.

Based upon this comparison, the projected residential land needs through 2025 can be met with the estimated amount of available developable acreage in the current Beaufort jurisdiction. It should be noted, however, that some undeveloped land within the Town's jurisdiction containing developmental constraints can be utilized by employing mitigating measures. Therefore, a greater supply of land that will support development, with environmental mitigation techniques, exists than is delineated here.

Based on the water and wastewater capacity and projected needs through the year 2030 as outlined in Sections 3.4.1 and 3.4.2, the projected land use needs will be supported by the associated necessary water and sewer infrastructure. The improvements to each system that the town has planned within the next five years will support the associated growth and need for additional land to accommodate projected growth.

4.9 Use of the Future Land Use Plan Map to Guide Development

In preparing the Future Land Use Map, consideration was given to land development objectives and policies, land suitability, and the ability to provide the infrastructure to support growth and development. The Future Land Use Map depicts the general location of projected patterns of future land uses. The Future Land Use Map is a plan or guideline for the future.

The ultimate use and development of a particular parcel of land will be determined by property owners' desires, overall market conditions, implementation tools employed by the Town to regulate land use and development (such as the Town's zoning ordinance, subdivision regulations, flood hazard regulations), the absence of specific natural constraints to development, and the availability of the necessary infrastructure (water, sewer, roads, etc.) to support development. Consequently, even though the Future Land Use Map may indicate a specific projected use in a particular location, many factors come into play to determine if the projected use is appropriate and the land can be developed as projected. Also, formal amendments to the zoning ordinance and subdivision ordinance will be required to specifically authorize the type of mixed use development envisioned in this Land Use Plan.

In the way of an example, the Beaufort Future Land Use Map indicates Industrial use on the east side of NC 101 directly across from the airport property. Thus, it has been determined through the Land Use Plan that the industrial use of property in this area is desirable and is expected to occur. However, the actual industrial use of a specific piece of property in this generally-identified area will depend upon the following:

- Is the property owner willing to use or sell the parcel for the proposed industrial use? Change of use or change of development intensity is, in most cases, initiated by the desires of the property owner.
- Is the parcel properly zoned for industrial use? If not, a rezoning must be requested and approved by the Town Board of Commissioners. In reviewing the rezoning request, the Board of Commissioners will determine if industrial use is appropriate and desirable for the parcel.

- If the parcel is already zoned for industrial use, a building permit must be requested and approved by the Town. The proposed use and layout of the proposed building will be reviewed to determine conformance with the Town's land use and development regulations and standards. Water supply and sewage disposal systems must be approved.
- In reviewing rezoning requests and zoning and building permit applications, site characteristics of the parcel will be a major consideration by the review and approval authority. Are site characteristics such that the parcel can be physically used for the proposed industrial use? Do poor soils, poor drainage, wetlands, flood hazards, etc. limit the use of all or a portion of the parcel for industrial development? Can adverse site conditions be overcome or mitigated in accordance with Town, County, State, and Federal regulations? The allowable building intensity and density of development may need to be reduced to ensure compatibility with existing site conditions.
- Are adequate utilities in place to support the proposed industrial use? If adequate utilities are not in place, improvements will have to be planned, approved, and extended to the parcel in accordance with Town, County, State, and utility provider standards and regulations. Are improvements and extensions economically feasible?
- Are adequate roads in place to provide access to the parcel? If new roads or improvements to existing roads are needed, they will have to be planned, approved, and constructed in accordance with Town and NCDOT standards.

Achieving the projected patterns of land use indicated by the Future Land Use Map will be greatly impacted by timing. Much of the projected land use indicated on the Future Land Use Map will not come to fruition without market demand. Therefore, market and economic conditions must be conducive for growth and development. While the Land Use Plan attempts to provide a general expectation of growth based upon projected population change, it simply cannot predict the economic future. The demand for houses, businesses, industries, etc. will fluctuate widely with economic conditions.

The timing of the provision of infrastructure improvements, particularly water and sewer services and roads, will also have a tremendous impact on growth and development. Development will occur where infrastructure is available or can be made available to sustain that development. Consequently, achieving the Future Land Use Map land use projections will depend in large part upon if and when infrastructure is provided. The provision of public infrastructure depends upon capability to provide the service and demand for the service. Economic climate will be a major factor in both the capability to make infrastructure available and the level of service demand.

SECTION V TOOLS FOR MANAGING DEVELOPMENT

This section of the Plan is organized in accordance with the requirements of Subchapter 7B .0702(e). Section V includes a description of the Town of Beaufort land management tools and programs as well as the actions and strategies that the Town will use to implement the Land Use Plan.

5.1 Guide for Land Use Decision-making

The Land Use Plan, as adopted by the elected officials of the Town of Beaufort and as may be amended from time to time, will serve as the primary guide upon which to make land use policy decisions. Every land use policy decision, such as a rezoning request or approval of a conditional or special use permit, will be measured for consistency with the goals, policies, and recommendations of the Plan. The elected officials, Planning Board, Board of Adjustment, and Town staff should utilize the Land Use Plan as the basic policy guide in the administration of the zoning ordinance, subdivision regulations, and other land development regulatory tools. Persons involved in the land development business as well as the general public can also utilize the Land Use Plan to guide private decisions regarding land use and land development.

The policy statements and recommendations of the Land Use Plan can also be of assistance to the elected officials in making long-range decisions regarding such matters as the provision of municipal services, thoroughfare planning, stormwater planning and management, implementation of economic development strategies, recreational facility planning, and preparation of capital and operating budgets.

It should be noted, however, that the Land Use Plan is one of a variety of guides in making a public policy decision. The Plan should be viewed as a tool to aid in decision making and not as the final decision.

Additional information regarding utilizing the Land Use Plan to guide development is provided in Section 4.9.

5.2 Existing Land Use and Development Management Program

Beaufort's existing land development management program includes the following land regulatory ordinances and related plans:

- Zoning Ordinance.
- Subdivision Ordinance.
- Flood Damage Prevention Ordinance, July 2003.
- Airport Height Regulations for the Michael J. Smith Field, 2000.
- CAMA Land Use Plan Update, Certified in September 1997.
- Strategic Approach for Growth, October 1999.
- Waterfront Access Plan, 2000.
- Parks and Recreation Master Plan, August 1997.
- Beaufort Historic District Guidelines, 1994.

The Town's land development regulations are applicable to all land areas located within the Beaufort planning and zoning jurisdiction. The Planning Board serves primarily in an advisory capacity, making recommendations to the Town Board of Commissioners on zoning and subdivision matters. The Board of Adjustment is responsible for hearing requests for special use permits as well as requests for appeals and variances from the zoning ordinance. The Town Board of Commissioners' responsibilities in the zoning process include adopting and amending the zoning ordinance text and map and making approval decisions regarding applications for planned residential developments. The Town Board of Commissioners is also responsible for making approval decisions on all preliminary and final subdivisions.

5.3 Additional Implementation Tools

5.3.1 Amendments or Adjustments to Existing Land Development Ordinances

Amendments to land development ordinances necessary to ensure consistency with the Land Use Plan include the following:

- Zoning ordinance amendment regarding residential boat docks and piers.
- Zoning ordinance amendment regarding commercial marinas.
- Development of a Stormwater Management Ordinance.

5.3.2 Capital Improvements

In February 2004, the Town of Beaufort adopted a *Capital Improvements Plan*. Proposed water and wastewater capital improvements include the following:

- Water system improvements: $10.6 million (See section 3.4.1 for a description of proposed improvements).
- Wastewater collection, treatment, and disposal systems improvements: $15.6 million (See section 3.4.2 for a description of the proposed improvements).

In addition, proposed public water access and recreation facilities improvements include:

- Water access and recreational facilities improvements: $372,000 (See section 3.4.8 for a description of proposed improvements).

Estimated total cost for all proposed capital improvements is $26.5 million.

5.4 Implementation Plan and Schedule

Beaufort has developed the following action plan and schedule to implement the Land Use Plan.

5.4.1 Public Water Access Implementation Actions

1. **FY05:** Beaufort will undertake improvements to water accesses and recreational facilities.

2. **Ongoing:** Review, through the subdivision plat and site plan review and approval process, proposed waterfront land development projects to ensure consistency with the Town's public access goals and policies.

5.4.2 Land Use Compatibility Implementation Actions

1. **FY 05**: Zoning ordinance amendments regarding residential boat docks and piers and commercial marinas.
2. **FY06**: Comprehensive zoning ordinance update.
3. **FY07**: Review, and revise as determined appropriate, the County land use and development regulations to include development principles and techniques that promote land use compatibility as open space subdivision design, clustering, innovative stormwater management design, etc.
4. **Ongoing**: Review the zoning ordinance, subdivision regulations, and other Town land use and development regulations to ensure that residential densities and building intensities are consistent with the Town's land suitability goals and policies. Prepare revisions and updates as determined appropriate. Coordinate the review with the Carteret County Health Department.

5.4.3 Infrastructure Carrying Capacity Implementation Actions

1. **FY 06**: Completion of a comprehensive water system improvements plan.
2. **FY 06**: Annexation boundary agreement with the Town of Morehead City.
3. **FY 09**: Completion of sewer system improvements.
4. **FY 10**: Completion of water system improvements.
5. **Ongoing:** Utilize the Land Use Plan, zoning ordinance, subdivision ordinance, and utilities extension policies to guide public infrastructure and services to areas where growth and development are desired.

5.4.4 Natural Hazard Areas Implementation Actions

1. **Ongoing:** The Town will review its zoning ordinance, subdivision ordinance, and flood damage prevention ordinance to determine if more specific locational and density regulations regarding development or redevelopment activities within identified flood hazard areas and storm surge areas are warranted. Issues to be addressed include restrictions on land uses that utilize or store hazardous materials on-site, establishment of riparian buffers, increasing the minimum freeboard height above base flood elevation, etc.
2. **Ongoing:** The Town will avoid zoning areas susceptible to storm surge for high density residential or intensive nonresidential use.
3. **Ongoing:** Based upon the availability of federal and state grant funds, land acquisition programs will be utilized in the most hazardous areas to minimize future damage and loss of life.
4. **Ongoing:** If any portion of the Town's public infrastructure is significantly damaged by a major storm, consideration will be given to the feasibility of relocating or modifying the affected facilities to prevent the reoccurrence of storm damage.
5. **Ongoing:** Coordinate the review and approval of development plans for major subdivisions, multifamily developments, and large public and institutional uses located within identified natural hazard areas with the

County Emergency Management Agency. Continue the active enforcement of the State Building Code provisions regarding wind-resistance requirements and participation in the National Flood Insurance Program.

5.4.5 Water Quality Implementation Actions

1. **FY06:** The Town will investigate the feasibility of developing and implementing a stormwater management plan.
2. **FY06:** The Town will prepare and implement a wellhead protection program.
3. **FY07:** The Town will review its zoning ordinance and subdivision regulations to determine if revisions are needed to include additional measures, such as riparian buffers and impervious surface limitations, to control stormwater discharges. A stormwater management ordinance will be developed.
4. **FY08:** Beaufort will make significant advances in the rehabilitation of it's sewer infrastructure to reduce infiltration, thus preventing overflows and reducing the amount of discharge released into Taylor's Creek.
5. **Ongoing:** The Town will continue to require, through its subdivision regulations and technical specifications manual, adequate stormwater drainage systems for new developments. The Town will continue to promote the use of best management practices to minimize the degradation of water quality resulting from stormwater runoff. The Town will continue to coordinate the approval of land development projects with the applicable State agencies.

5.4.6 Areas of Environmental Concern Implementation Actions:

1. **FY06:** The Town will review its zoning ordinance to determine if revisions are needed to include additional protective measures for AECs.

5.4.7 Areas of Local Concern Implementation Actions:

1. **FY05:** The Town will employ a Town Planner to coordinate land development and growth management plans and to oversee the administration of land use regulations.
2. **FY 08:** The Town will prepare a comprehensive community services/facilities plan. This plan will identify major municipal services and facilities needs and deficiencies, prioritize those needs, and prepare cost estimates and a budgeting plan for the recommended improvements.

5.5 Description of Public Participation Activities to Assist in Monitoring Plan Implementation

Beaufort has developed the following action plan to assist in monitoring implementation of the Land Use Plan.

Annual Performance Review
The Town of Beaufort, through the Town Planner and the Planning Board, will undertake an annual review of the proposed implementation activities delineated in Section 5.4 to determine the following:

- The status of the implementation actions proposed during the previous fiscal year.
- If the implementation action has been completed, evaluate the general effectiveness of the implementation action taken and make recommendations on any follow-up action deemed necessary to assist in implementing the goals, objectives, and policies of the Land Use Plan.
- If the implementation action has not been undertaken, assess the reasons that the action has not been completed, evaluate the current need to undertake the action, and make recommendations regarding a revised schedule for carrying out the action.

In addition to reviewing specific implementation actions outlined in Section 5.4, the Town will also undertake an assessment of the general effectiveness of the policies outlined in Section 4.2 and make recommendations on any follow-up action deemed necessary to improve the effectiveness of the policies.

The Planning Board will forward its evaluation and recommendations to the Town of Beaufort Board of Commissioners. The Board of Commissioners, following a review of the Planning Board's recommendations, will make a determination of what action, if any, should be taken to ensure implementation of the Land Use Plan. All Planning Board and Board of Commissioner meetings are open to the public and citizen comments are welcomed.

If a formal amendment to the Land Use Plan is deemed necessary, such amendment shall be processed in accordance with the requirements of NCAC 7B.0900.

The Town of Beaufort will utilize its webpage to distribute information regarding the Town's overall planning program, annual reports and evaluations, and specific implementation activities.

APPENDICES

Appendix A

Index of Data Sources

- United States Bureau of Census, 2000 Census of Population and Housing
- North Carolina State Data Center, Office of State Budget and Management
- Division of Coastal Management, Subchapter 7B, Land Use Planning Guidelines
- Division of Coastal Management, Subchapter 7H, State Guidelines for AECs
- North Carolina Division of Coastal Management, *Technical Manual for Coastal Land Use Planning*, Version 2.0, July 2002
- *White Oak River Basinwide Water Quality Plan*, North Carolina Department of Environment and Natural Resources, Division of Water Quality, September, 2001
- Soil Survey of Carteret County, North Carolina, US Department of Agriculture, Natural Resources Conservation Service
- United States Bureau of Economic Analysis
- North Carolina Division of Marine Fisheries
- North Carolina Natural Heritage Program
- North Carolina Division of Archives and History
- Draft North Carolina Natural Hazards Mitigation (Section 322) Plan
- White Oak Basinwide Assessment Report, North Carolina Department of Environment and Natural Resources, Division of Water Quality.
- A Guide to North Carolina's Tidal Saltwater Classifications, Cape Fear Council of Governments, 1994
- NC Ecosystem Enhancement Program
- North Carolina 2004 Impaired Waters List, April 26, 2004, DWQ
- *Ten-Year Solid Waste Management Plan 2003-2013*, Coastal Regional Solid Waste Management Authority, June 2003.
- Town of Beaufort Zoning Ordinance.
- Town of Beaufort Subdivision Ordinance, September 1998.
- *1996 Land Use Plan, Town of Beaufort* (certified on September 27, 1997), Holland Consulting Planners, Inc.
- *Parks and Recreation Master Plan for the Town of Beaufort, North Carolina*; Hayes, Seay, Mattern and Mattern, Inc.; August 1997.
- *Waterfront Access Plan, Town of Beaufort*, 2000*,* Benchmark, Incorporated.
- *Town of Beaufort Gallants Channel Bridge/US70 Transportation Corridor Study and Impact Analysis, Holland Consulting Planners, Inc.*, August 1997.
- *Town of Beaufort Gallants Channel Bridge/US70 Transportation Corridor Study and Impact Analysis; Water and Wastewater and Stormwater Systems Proposed Systems Development*; Rivers and Associates, Inc., April 1997.
- *North Carolina National Estuarine Research Reserve Management Plan,* North Carolina National Estuarine Research Reserve Staff, 1998.
- *Carteret County Transportation Improvement Program Priorities for the 2002-2008 Transportation Improvement Program,* Carteret County Transportation Committee, November 1999.
- *Historic District Design Guidelines*, Town of Beaufort Historic Preservation Commission, 1994.
- *Town of Beaufort Strategic Plan for Growth*, Benchmark Incorporated, October 1999.
- *Town of Beaufort Capital Improvements Plan,* Rivers and Associates, Inc. February 2004.
- *Town of Beaufort, Hazard Mitigation Plan,* Holland Consulting Planners, November 2004.

Appendix B

Summary of Land Use Issues, Goals, and Objectives
Identified in the 1997 Beaufort Land Use Plan

Summary of 1997 Land Use and Development Issues

Land Use Compatibility

- Control of strip commercialization along US 70 East and NC 101 North

Infrastructure Carrying Capacity

- Coordination of the development/improvement of the Beaufort sewage treatment system with Carteret County's plans and policies for the development of sewage treatment system(s)
- Extension of water and sewer utilities into the town's extraterritorial jurisdiction
- Construction of a new bridge on US 70 at Beaufort Channel to alleviate disruptions to east-west traffic
- Stormwater runoff

Natural Hazard Areas

- The effects of sea level rise on the Town of Beaufort

Areas of Environmental Concern

- Protection of Areas of Environmental Concern
- Protection of the Rachel Carson National Estuarine Sanctuary which includes Carrot Island, Town Marsh, and Bird Shoal
- The impact of offshore drilling on the Town of Beaufort
- Stormwater runoff

Areas of Local Concern

- Redevelopment/visual improvement of the US 70-Cedar Street area dependent upon US 70 relocation/bridge projects
- Removal of substandard dwelling units through enforcement of the town's minimum housing code
- Continued protection of both the historic district and the waterfront area
- Establishment of a Growth Management Plan
- Development of service sector to support tourism
- Establishment of a comprehensive annexation plan
- Implementation of redevelopment/revitalization projects to eliminate substandard housing
- Continued protection of the town's historic district
- Continued expansion of the Michael J. Smith Airport
- Maritime Museum Expansion
- Beaufort Historical Association (BHA) restoration site

Summary of 1997 Goals and Objectives

General

- Protect and maintain the town's historic assets and shoreline setting.
- Protect valuable maritime resources.
- Control growth and development.

Resource Protection

- Mitigate septic tank problems and other restrictions on development posed by soil limitations.
- Conserve the town's surficial groundwater resources.
- Encourage the establishment of appropriate environmental and operational safeguards for the expansion of fuel storage tank facilities on Radio Island.
- Discourage agricultural quarantine and decontamination facilities on Radio Island.
- Support sound attenuation zoning requirements for the areas affected by airport operations.
- Support the airport operation, development, and expansion.
- Support the development of a comprehensive town-wide stormwater drainage plan.
- Protect the town's Historic District.
- Support the construction of package treatment plants which are approved and permitted by the State.
- Allow open water and upland marinas.
- Allow dry stack storage facilities.
- Support the development of mooring fields.
- Oppose any development of sound and estuarine islands.
- Support the State's management of the Rachel Carson Reserve.
- Support the construction of bulkheads.
- Support recommendations of the White Oak River Basinwide Management Plan concerning long-term growth management, shellfish water closures, animal operation waste management, and nutrients/toxic dinoflagellate.

Resource Protection and Management

- Discourage resource production that adversely affects Beaufort's sensitive coastal environment or natural heritage areas.
- Support the protection of coastal wetlands.
- Support aquaculture activities that meet all state, federal, and local policies and permit requirements.
- Discourage any additional point source discharges into primary nursery areas and shellfishing areas.
- Preserve natural vegetation and scenic views on the south side of Front Street in the R-8 zoning district.
- Oppose off-road vehicle use in coastal wetlands and in the Rachel Carson Reserve.

Economic and Community Development

- Expand the town's economic base.
- Maintain a reasonable policy of annexation.
- Support growth and development at the densities specified in the land classification definitions.
- Require that all existing and new residential and commercial development be connected to both the town water and sewer systems.
- Support the extension of water services beyond the ETJ area if adequate demand for service exists.
- Support the development of central sewer service throughout the incorporated area and unincorporated planning jurisdiction.
- Support participation in a regional multi-county approach to solid waste management.
- Allow the reconstruction of any structures demolished by natural disaster which will comply with existing state and local codes.
- Support the State's shoreline access policies.
- Encourage industrial development which will not adversely affect the natural environment or the quality of established residential areas.
- Support NCDOT projects that improve access to the town.
- Support projects that will increase public access to shoreline areas.
- Support activities of the NC Division of Travel and Tourism.
- Preserve the town's historic district and Taylor's Creek waterfront areas.
- Beaufort supports implementation of the following land transportation improvements:
    - A connector between N.C. 101 and U.S. 70 (the corridor for this road has not yet been determined).
    - Reroute U.S. 70 from Cedar Street to Turner/West Beaufort Road.
    - Utilize Orange and Turner Streets as a one-way pair providing access to the waterfront.
    - Elimination of the "Y" intersection with N.C. 101 and U.S. 70.
    - Replacement of the drawbridge between Morehead City and Beaufort with a medium height bridge.
    - A possible minor thoroughfare is proposed to connect Steep Point Road just east of U.S. 70 and Mulberry Street at its intersection with Ocean Street.

Appendix C
Housing Characteristics

	Beaufort	*Carteret County*	*North Carolina*
Total Housing Units	2,187	40,947	3,523,944
Occupied Housing Units	1,780	25,204	3,132,013
% Occupied	81.39%	61.55%	88.88%
No. Owner-Occupied	998	19,316	2,172,355
No. Renter-Occupied	782	5,888	959,658
% Owner-Occupied	56.07%	76.64%	69.56%
% Renter Occupied	43.93%	23.36%	30.72%
% W/1.01 or More Persons Per Room	1.46%	1.75%	3.01%
Median Value, Owner-Occupied Units	$112,900	$106,400	$95,800
Total Vacant Units	407	15,743	391,931
For Seasonal, Recreational Use	241	13,537	134,870
Homeowner Vacancy Rate	0.6%	2.92%	1.2%
Rental Vacancy Rate	3.4%	5.39%	2.6%

Household Population
(Persons per Occupied Dwelling)

	1980	*1990*	*2000*
Beaufort	2.44	2.21	2.07
Carteret County	2.66	2.43	2.31
North Carolina	2.78	2.54	2.49

Sources: U.S. Census Bureau; North Carolina State Data Center, Office of State Budget and Management, 2003.

Appendix D
Soil Characteristics

This Appendix contains the following Carteret County soils data prepared by the Natural Resources Conservation Service, US Department of Agriculture:

D1 Map Unit Legend. A description of soil name by soil map symbol.

D2 Sewage Disposal. Rating classes and limiting features for septic tank absorption fields and sewage lagoons.

D3 Dwellings and Small Commercial Buildings. Rating classes and limiting features for dwellings without basements, dwellings with basements, and small commercial buildings.

D4 Hydric Soils. Delineates soils that are classified as hydric soils.

The Carteret County soil survey was published in 1987. Soils maps have been digitized. Soils maps are available at the offices of the Natural Resources Conservation Service located at:

New Bern Field Office
302 Industrial Drive
New Bern, NC 28562-5434
Telephone: 252-637-2547 or 252-637-2642
Fax: 252-514-2009

Appendix D1

Map Unit Legend

Carteret County, North Carolina

Map symbol	Map unit name
AaA	Altavista loamy fine sand, 0 to 2 percent slopes
Ag	Augusta loamy fine sand
Ap	Arapahoe fine sandy loam
AuB	Autryville loamy fine sand, 0 to 6 percent slopes
Be	Beaches, coastal
Bf	Beaches, storm tidal
BH	Belhaven muck
Bn	Beaches-Newhan complex, 0 to 30 percent slopes
ByB	Baymeade fine sand, 1 to 6 percent slopes
Cd	Corolla-Duckston complex
CH	Carteret sand, frequently flooded
CL	Carteret sand, low, frequently flooded
CnB	Conetoe loamy fine sand, 0 to 5 percent slopes
Co	Corolla fine sand
CrB	Craven loam, 1 to 4 percent slopes
CT	Croatan muck
Cu	Corolla-Urban land complex
DA	Dare muck
De	Deloss fine sandy loam
Dm	Deloss mucky loam, frequently flooded
DO	Dorovan muck, frequently flooded
Du	Duckston fine sand, frequently flooded
Fr	Fripp fine sand, 2 to 30 percent slopes
GoA	Goldsboro loamy fine sand, 0 to 2 percent slopes
HB	Hobucken mucky fine sandy loam, frequently flooded
KuB	Kureb sand, 0 to 6 percent slopes
LF	Longshoal muck, very frequently flooded
Ln	Leon sand
Lu	Leon-Urban land complex
Ly	Lynchburg fine sandy loam
MA	Masontown mucky loam, frequently flooded
Mc	Mandarin-Urban land complex
Mn	Mandarin sand
Mu	Murville mucky sand
Nc	Newhan-Corolla complex, 0 to 30 percent slopes
Nd	Newhan fine sand, dredged, 2 to 30 percent slopes
Ne	Newhan-Urban land complex, 0 to 8 percent slopes
Nh	Newhan fine sand, 2 to 30 percent slopes
NoA	Norfolk loamy fine sand, 0 to 2 percent slopes
NoB	Norfolk loamy fine sand, 2 to 6 percent slopes
On	Onslow loamy sand
Pa	Pantego fine sandy loam
PO	Ponzer muck
Ra	Rains fine sandy loam
Ro	Roanoke loam
Se	Seabrook fine sand
StA	State loamy fine sand, 0 to 2 percent slopes
Tm	Tomotley fine sandy loam
To	Torhunta mucky fine sandy loam

Map Unit Legend

Carteret County, North Carolina

Map symbol	Map unit name
W	Water
WaB	Wando fine sand, 0 to 6 percent slopes
Ws	Wasda muck
WuB	Wando-Urban land complex, 0 to 6 percent slopes

Appendix D2

Sewage Disposal

Carteret County, North Carolina

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AaA:					
Altavista	80	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Seepage	1	Depth to saturated zone	1
		Restricted permeability	0.5		
Ag:					
Augusta	85	Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1
		Restricted permeability	0.5	Seepage	0.5
Ap:					
Arapahoe, undrained	80	Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1
		Seepage	1	Seepage	1
		Flooding	0.4	Flooding	0.4
Arapahoe, drained	10	Not rated		Not rated	
AuB:					
Autryville	85	Somewhat limited		Very limited	
		Restricted permeability	0.5	Seepage	1
		Depth to saturated zone	0.4		
Be:					
Beaches	95	Not rated		Very limited	
				Flooding	1
				Seepage	1
				Depth to saturated zone	1
Bf:					
Beaches	95	Not rated		Very limited	
				Flooding	1
				Seepage	1
				Depth to saturated zone	1

Sewage Disposal

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
BH:					
Belhaven, undrained	80	Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1
		Seepage	1	Seepage	1
		Restricted permeability	1	Flooding	0.4
		Flooding	0.4		
Belhaven, drained	10	Not rated		Not rated	
Bn:					
Beaches	65	Not rated		Very limited	
				Flooding	1
				Seepage	1
				Depth to saturated zone	1
				Slope	0.08
Newhan	30	Very limited		Very limited	
		Filtering capacity	1	Seepage	1
		Seepage	1	Slope	1
		Slope	0.84	Flooding	0.4
		Flooding	0.4		
ByB:					
Baymeade	85	Very limited		Very limited	
		Seepage	1	Seepage	1
		Depth to saturated zone	0.84	Slope	0.32
				Depth to saturated zone	0.17
Cd:					
Corolla	60	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Filtering capacity	1	Depth to saturated zone	1
		Seepage	1	Flooding	0.4
		Flooding	0.4	Slope	0.08
Duckston	30	Very limited		Very limited	
		Flooding	1	Flooding	1
		Depth to saturated zone	1	Seepage	1
		Filtering capacity	1	Depth to saturated zone	1
		Seepage	1		

Sewage Disposal

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
CH:					
Carteret, high	95	Very limited		Very limited	
		Flooding	1	Flooding	1
		Depth to saturated zone	1	Seepage	1
		Seepage	1	Depth to saturated zone	1
CL:					
Carteret, low	95	Very limited		Very limited	
		Flooding	1	Flooding	1
		Depth to saturated zone	1	Seepage	1
		Seepage	1	Depth to saturated zone	1
CnB:					
Conetoe	90	Very limited		Very limited	
		Seepage	1	Seepage	1
				Slope	0.08
Co:					
Corolla	90	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Filtering capacity	1	Depth to saturated zone	1
		Seepage	1	Flooding	0.4
		Flooding	0.4		
CrB:					
Craven	85	Very limited		Very limited	
		Restricted permeability	1	Depth to saturated zone	1
		Depth to saturated zone	1	Seepage	1
		Seepage	1	Slope	0.08
CT:					
Croatan, undrained	80	Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1
		Restricted permeability	0.68	Seepage	1
Croatan, drained	10	Not rated		Not rated	

Sewage Disposal

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Cu:					
Corolla	50	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Filtering capacity	1	Depth to saturated zone	1
		Seepage	1	Flooding	0.4
		Flooding	0.4	Slope	0.08
Urban land	35	Not rated		Not rated	
DA:					
Dare, undrained	80	Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1
		Subsidence	1	Seepage	1
		Seepage	1	Content of organic matter	1
		Flooding	0.4	Flooding	0.4
Dare, drained	10	Not rated		Not rated	
De:					
Deloss, undrained	80	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Seepage	1	Depth to saturated zone	1
		Ponding	1	Ponding	1
		Restricted permeability	0.5		
Deloss, drained	10	Not rated		Not rated	
Dm:					
Deloss, undrained	80	Very limited		Very limited	
		Flooding	1	Flooding	1
		Depth to saturated zone	1	Seepage	1
		Seepage	1	Depth to saturated zone	1
		Ponding	1	Ponding	1
		Restricted permeability	0.5		

Sewage Disposal

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
DO:					
Dorovan	90	Very limited		Very limited	
		Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1
		Subsidence	1	Seepage	0.5
		Restricted permeability	0.5		
Du:					
Duckston	90	Very limited		Very limited	
		Flooding	1	Flooding	1
		Depth to saturated zone	1	Seepage	1
				Depth to saturated zone	1
		Filtering capacity	1		
		Seepage	1		
Fr:					
Fripp	90	Very limited		Very limited	
		Seepage	1	Seepage	1
		Slope	1	Slope	1
GoA:					
Goldsboro	90	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
				Depth to saturated zone	1
		Restricted permeability	0.5		
HB:					
Hobucken	90	Very limited		Very limited	
		Flooding	1	Ponding	1
		Ponding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1
		Seepage	1	Seepage	1
				Content of organic matter	1
KuB:					
Kureb	80	Very limited		Very limited	
		Seepage	1	Seepage	1
				Slope	0.08

Sewage Disposal

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
LF:					
Longshoal	90	Very limited		Very limited	
		Flooding	1	Flooding	1
		Depth to saturated zone	1	Content of organic matter	1
		Subsidence	1	Depth to saturated zone	1
		Seepage	1	Seepage	1
Ln:					
Leon	80	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Restricted permeability	0.5	Depth to saturated zone	1
Lu:					
Leon	40	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Restricted permeability	0.5	Depth to saturated zone	1
				Slope	0.08
Urban land	35	Not rated		Not rated	
Ly:					
Lynchburg	85	Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1
		Restricted permeability	0.5	Seepage	1
MA:					
Masontown, undrained	80	Very limited		Very limited	
		Flooding	1	Ponding	1
		Ponding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1
		Seepage	1	Seepage	1
Mc:					
Mandarin	50	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Restricted permeability	0.5	Depth to saturated zone	1
Urban land	35	Not rated		Not rated	

Sewage Disposal

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Mn:					
Mandarin	80	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Restricted permeability	0.5	Depth to saturated zone	1
Mu:					
Murville, undrained	85	Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1
		Seepage	1	Seepage	1
		Ponding	1	Ponding	1
Nc:					
Newhan	60	Very limited		Very limited	
		Filtering capacity	1	Seepage	1
		Seepage	1	Slope	1
		Slope	1	Flooding	0.4
		Flooding	0.4		
Corolla	30	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Filtering capacity	1	Depth to saturated zone	1
		Seepage	1	Flooding	0.4
		Flooding	0.4	Slope	0.08
Nd:					
Newhan	75	Very limited		Very limited	
		Filtering capacity	1	Seepage	1
		Seepage	1	Slope	1
		Slope	1	Flooding	0.4
		Flooding	0.4		
Ne:					
Newhan	60	Very limited		Very limited	
		Filtering capacity	1	Seepage	1
		Seepage	1	Slope	0.68
Urban land	30	Not rated		Not rated	
Nh:					
Newhan	85	Very limited		Very limited	
		Filtering capacity	1	Seepage	1
		Seepage	1	Slope	1
		Slope	1	Flooding	0.4
		Flooding	0.4		

Sewage Disposal

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
NoA:					
Norfolk	85	Somewhat limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Restricted permeability	0.5	Depth to saturated zone	0.71
NoB:					
Norfolk	85	Somewhat limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Restricted permeability	0.5	Depth to saturated zone	0.71
				Slope	0.32
On:					
Onslow	90	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Restricted permeability	0.5	Depth to saturated zone	1
Pa:					
Pantego, undrained	85	Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1
		Restricted permeability	0.5	Seepage	1
		Flooding	0.4	Flooding	0.4
Pantego, drained	10	Not rated		Not rated	
PO:					
Ponzer, undrained	80	Very limited		Very limited	
		Restricted permeability	1	Depth to saturated zone	1
		Depth to saturated zone	1	Content of organic matter	1
				Seepage	0.32
Ponzer, drained	10	Not rated		Not rated	
Ra:					
Rains, undrained	80	Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1
		Restricted permeability	0.5	Seepage	0.5
Rains, drained	10	Not rated		Not rated	

Sewage Disposal

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ro:					
Roanoke, undrained	80	Very limited		Very limited	
		Restricted permeability	1	Depth to saturated zone	1
		Depth to saturated zone	1	Seepage	1
		Seepage	1		
Roanoke, drained	10	Not rated		Not rated	
Se:					
Seabrook	90	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Seepage	1	Depth to saturated zone	1
StA:					
State	90	Very limited		Very limited	
		Seepage	1	Seepage	1
		Depth to saturated zone	1	Depth to saturated zone	0.71
		Restricted permeability	0.5		
Tm:					
Tomotley, undrained	80	Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1
		Seepage	1	Seepage	1
		Restricted permeability	0.68		
Tomotley, drained	10	Not rated		Not rated	
To:					
Torhunta, undrained	80	Very limited		Very limited	
		Depth to saturated zone	1	Seepage	1
		Seepage	1	Depth to saturated zone	1
Torhunta, drained	10	Not rated		Not rated	
W:					
Water	100	Not rated		Not rated	

Sewage Disposal

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
WaB:					
Wando	90	Very limited		Very limited	
		Seepage	1	Seepage	1
		Depth to saturated zone	0.4	Slope	0.08
Ws:					
Wasda, undrained	80	Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1
		Seepage	1	Content of organic matter	1
		Restricted permeability	0.5	Seepage	0.5
		Flooding	0.4	Flooding	0.4
Wasda, drained	10	Not rated		Not rated	
WuB:					
Wando	50	Very limited		Very limited	
		Seepage	1	Seepage	1
		Depth to saturated zone	0.4	Slope	0.08
Urban land	35	Not rated		Not rated	

Appendix D3

Dwellings and Small Commercial Buildings

Carteret County, North Carolina

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AaA:							
Altavista	80	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1	Depth to saturated zone	0.39
Ag:							
Augusta	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1	Depth to saturated zone	0.98
Ap:							
Arapahoe, undrained	80	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
Arapahoe, drained	10	Not rated		Not rated		Not rated	
AuB:							
Autryville	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.15		
Be:							
Beaches	95	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
				Depth to saturated zone	0.95		
Bf:							
Beaches	95	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
				Depth to saturated zone	0.95		
BH:							
Belhaven, undrained	80	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
		Subsidence	1	Subsidence	1	Subsidence	1
Belhaven, drained	10	Not rated		Not rated		Not rated	

Dwellings and Small Commercial Buildings

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Bn:							
Beaches	65	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
				Depth to saturated zone	0.95		
Newhan	30	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Slope	0.84	Slope	0.84	Slope	1
ByB:							
Baymeade	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.35		
Cd:							
Corolla	60	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	0.98	Depth to saturated zone	1	Depth to saturated zone	0.98
Duckston	30	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
CH:							
Carteret, high	95	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
CL:							
Carteret, low	95	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
CnB:							
Conetoe	90	Not limited		Not limited		Not limited	
Co:							
Corolla	90	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	0.98	Depth to saturated zone	1	Depth to saturated zone	0.98

Dwellings and Small Commercial Buildings

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CrB:							
Craven	85	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.5	Depth to saturated zone	1	Shrink-swell	0.5
				Shrink-swell	0.5		
CT:							
Croatan, undrained	80	Very limited		Very limited		Very limited	
		Subsidence	1	Subsidence	1	Subsidence	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
Croatan, drained	10	Not rated		Not rated		Not rated	
Cu:							
Corolla	50	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	0.07	Depth to saturated zone	1	Depth to saturated zone	0.07
Urban land	35	Not rated		Not rated		Not rated	
DA:							
Dare, undrained	80	Very limited		Very limited		Very limited	
		Subsidence	1	Subsidence	1	Subsidence	1
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
		Content of organic matter	1			Content of organic matter	1
Dare, drained	10	Not rated		Not rated		Not rated	
De:							
Deloss, undrained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
		Ponding	1	Ponding	1	Ponding	1
Deloss, drained	10	Not rated		Not rated		Not rated	
Dm:							
Deloss, undrained	80	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
		Ponding	1	Ponding	1	Ponding	1

Dwellings and Small Commercial Buildings

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
DO:							
Dorovan	90	Very limited		Very limited		Very limited	
		Subsidence	1	Subsidence	1	Subsidence	1
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
Du:							
Duckston	90	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
Fr:							
Fripp	90	Very limited		Very limited		Very limited	
		Slope	1	Slope	1	Slope	1
GoA:							
Goldsboro	90	Not limited		Very limited		Not limited	
				Depth to saturated zone	1		
HB:							
Hobucken	90	Very limited		Very limited		Very limited	
		Ponding	1	Ponding	1	Ponding	1
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
KuB:							
Kureb	80	Not limited		Not limited		Not limited	
LF:							
Longshoal	90	Very limited		Very limited		Very limited	
		Subsidence	1	Subsidence	1	Subsidence	1
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
		Content of organic matter	1	Content of organic matter	1	Content of organic matter	1
Ln:							
Leon	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1

Dwellings and Small Commercial Buildings

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Lu:							
Leon	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
Urban land	35	Not rated		Not rated		Not rated	
Ly:							
Lynchburg	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
MA:							
Masontown, undrained	80	Very limited		Very limited		Very limited	
		Ponding	1	Ponding	1	Ponding	1
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
Mc:							
Mandarin	50	Not limited		Very limited		Not limited	
				Depth to saturated zone	1		
Urban land	35	Not rated		Not rated		Not rated	
Mn:							
Mandarin	80	Not limited		Very limited		Not limited	
				Depth to saturated zone	1		
Mu:							
Murville, undrained	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
		Ponding	1	Ponding	1	Ponding	1
Nc:							
Newhan	60	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Slope	1	Slope	1	Slope	1
Corolla	30	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	0.07	Depth to saturated zone	1	Depth to saturated zone	0.07

Dwellings and Small Commercial Buildings

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Nd:							
Newhan	75	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Slope	1	Slope	1	Slope	1
Ne:							
Newhan	60	Not limited		Not limited		Somewhat limited	
						Slope	0.13
Urban land	30	Not rated		Not rated		Not rated	
Nh:							
Newhan	85	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Slope	1	Slope	1	Slope	1
NoA:							
Norfolk	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
NoB:							
Norfolk	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
On:							
Onslow	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.07	Depth to saturated zone	1	Depth to saturated zone	0.07
Pa:							
Pantego, undrained	85	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
Pantego, drained	10	Not rated		Not rated		Not rated	
PO:							
Ponzer, undrained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
		Subsidence	1	Subsidence	1	Subsidence	1
Ponzer, drained	10	Not rated		Not rated		Not rated	

Dwellings and Small Commercial Buildings

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ra:							
Rains, undrained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
Rains, drained	10	Not rated		Not rated		Not rated	
Ro:							
Roanoke, undrained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
		Shrink-swell	0.5	Shrink-swell	0.5	Shrink-swell	0.5
Roanoke, drained	10	Not rated		Not rated		Not rated	
Se:							
Seabrook	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1	Depth to saturated zone	0.39
StA:							
State	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
Tm:							
Tomotley, undrained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
Tomotley, drained	10	Not rated		Not rated		Not rated	
To:							
Torhunta, undrained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
Torhunta, drained	10	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaB:							
Wando	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.15		

Dwellings and Small Commercial Buildings

Carteret County, North Carolina

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ws:							
Wasda, undrained	80	Very limited		Very limited		Very limited	
		Flooding	1	Flooding	1	Flooding	1
		Depth to saturated zone	1	Depth to saturated zone	1	Depth to saturated zone	1
Wasda, drained	10	Not rated		Not rated		Not rated	
WuB:							
Wando	50	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.15		
Urban land	35	Not rated		Not rated		Not rated	

Appendix D4

Hydric Soils

Carteret County, North Carolina

[This report lists only those map unit components that are rated as hydric. Dashes (---) in any column indicate that the data were not included in the database. Definitions of hydric criteria codes are included at the end of the report]

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
Ag:					
Augusta loamy fine sand	Tomotley, undrained	5	Depression, Flat	Yes	2B3
Ap:					
Arapahoe fine sandy loam	Arapahoe, undrained	80	Flat	Yes	2B3
	Arapahoe, drained	10	Flat	Yes	2B3
AuB:					
Autryville loamy fine sand, 0 to 6 percent slopes	Muckalee, undrained	2	Flood plain	Yes	2B3
Be:					
Beaches, coastal	Beaches	95	Barrier beach, Barrier flat	Yes	2B1
Bf:					
Beaches, storm tidal	Beaches	95	Barrier beach, Barrier flat	Yes	2B1
BH:					
Belhaven muck	Belhaven, undrained	80	Pocosin	Yes	1
	Belhaven, drained	10	Pocosin	Yes	1
Bn:					
Beaches-Newhan complex, 0 to 30 percent slopes	Beaches	65	Barrier beach, Barrier flat	Yes	2B1
ByB:					
Baymeade fine sand, 1 to 6 percent slopes	Leon	5	Flat	Yes	2B3
Cd:					
Corolla-Duckston complex	Duckston	30	Barrier island, Depression, Flat	Yes	2B1
CH:					
Carteret sand, frequently flooded	Carteret, high	95	Tidal marsh	Yes	2B1
CL:					
Carteret sand, low, frequently flooded	Carteret, low	95	Tidal marsh	Yes	2B1
Co:					
Corolla fine sand	Duckston	5	Barrier island, Depression, Flat	Yes	2B1
	Carteret, high	2	Tidal marsh	Yes	2B1

Hydric Soils

Carteret County, North Carolina

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
CT:					
Croatan muck	Croatan, undrained	80	Pocosin	Yes	1
	Croatan, drained	10	Pocosin	Yes	1
Cu:					
Corolla-Urban land complex	Duckston	5	Barrier island, Depression, Flat	Yes	2B1
DA:					
Dare muck	Dare, undrained	80	Pocosin	Yes	1
	Dare, drained	10	Pocosin	Yes	1
De:					
Deloss fine sandy loam	Deloss, undrained	80	Depression, Flat	Yes	2B3
	Deloss, drained	10	Depression, Flat	Yes	2B3
Dm:					
Deloss mucky loam, frequently flooded	Deloss, undrained	80	Depression, Flat	Yes	2B3
DO:					
Dorovan muck, frequently flooded	Dorovan	90	Flood plain	Yes	1, 4
Du:					
Duckston fine sand, frequently flooded	Duckston	90	Barrier island, Depression, Flat	Yes	2B1
Fr:					
Fripp fine sand, 2 to 30 percent slopes	Conaby, undrained	5	Depression, Pocosin	Yes	2B3
GoA:					
Goldsboro loamy fine sand, 0 to 2 percent slopes	Rains, undrained	5	Carolina bay, Depression	Yes	2B3
	Muckalee, undrained	1	Flood plain	Yes	2B3
HB:					
Hobucken mucky fine sandy loam, frequently flooded	Hobucken	90	Tidal marsh	Yes	2B3, 3
KuB:					
Kureb sand, 0 to 6 percent slopes	Leon	5	Flat	Yes	2B3
LF:					
Longshoal muck, very frequently flooded	Longshoal	90	Marsh	Yes	1, 4

Hydric Soils

Carteret County, North Carolina

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
Ln:					
Leon sand	Leon	80	Flat	Yes	2B3
Lu:					
Leon-Urban land complex	Leon	40	Flat	Yes	2B3
Ly:					
Lynchburg fine sandy loam	Rains, undrained	5	Depression	Yes	2B3
	Woodington, undrained	2	Depression	Yes	2B3
MA:					
Masontown mucky loam, frequently flooded	Masontown, undrained	80	Flood plain	Yes	2B3, 3, 4
Mc:					
Mandarin-Urban land complex	Leon	5	Flat	Yes	2B3
Mn:					
Mandarin sand	Leon	5	Flat	Yes	2B3
	Murville	2	Depression	Yes	2B3
Mu:					
Murville mucky sand	Murville, undrained	85	Depression	Yes	2B3
Nc:					
Newhan-Corolla complex, 0 to 30 percent slopes	Duckston	5	Barrier island, Depression, Flat	Yes	2B1
Ne:					
Newhan-Urban land complex, 0 to 8 percent slopes	Duckston	5	Barrier island, Depression, Flat	Yes	2B1
Nh:					
Newhan fine sand, 2 to 30 percent slopes	Beaches	5	Barrier beach, Barrier flat	Yes	2B1
NoB:					
Norfolk loamy fine sand, 2 to 6 percent slopes	Woodington, undrained	3	Depression	Yes	2B3
	Muckalee, undrained	1	Flood plain	Yes	2B3
On:					
Onslow loamy sand	Rains, undrained	5	Carolina bay, Depression	Yes	2B3

Hydric Soils

Carteret County, North Carolina

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
Pa:					
Pantego fine sandy loam	Pantego, undrained	85	Flat	Yes	2B3
	Pantego, drained	10	Flat	Yes	2B3
PO:					
Ponzer muck	Ponzer, undrained	80	Flat, Pocosin	Yes	1
	Ponzer, drained	10	Flat, Pocosin	Yes	1
Ra:					
Rains fine sandy loam	Rains, undrained	80	Carolina bay, Depression	Yes	2B3
	Rains, drained	10	Carolina bay, Depression	Yes	2B3
Ro:					
Roanoke loam	Roanoke, undrained	80	Depression, Flat	Yes	2B3
	Roanoke, drained	10	Depression, Flat	Yes	2B3
Se:					
Seabrook fine sand	Nimmo, undrained	5	Depression, Flat	Yes	2B3
	Leon	2	Flat	Yes	2B3
Tm:					
Tomotley fine sandy loam	Tomotley, undrained	80	Depression, Flat	Yes	2B3
	Tomotley, drained	10	Depression, Flat	Yes	2B3
To:					
Torhunta mucky fine sandy loam	Torhunta, undrained	80	Flat	Yes	2B3
	Torhunta, drained	10	Flat	Yes	2B3
WaB:					
Wando fine sand, 0 to 6 percent slopes	Leon	3	Flat	Yes	2B3
	Muckalee, undrained	2	Flood plain	Yes	2B3
Ws:					
Wasda muck	Wasda, undrained	80	Depression, Flat	Yes	2B3
	Wasda, drained	10	Depression, Flat	Yes	2B3

Hydric Soils

Carteret County, North Carolina

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
WuB:					
Wando-Urban land complex, 0 to 6 percent slopes	Leon	3	Flat	Yes	2B3

Explanation of hydric criteria codes:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      1.) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      2.) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      3.) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

Appendix E
Water Quality Classifications
White Oak River Subbasins 03-05-03 and 03-05-04

Source: NC Division of Water Quality

North Carolina Waterbodies Listed by Subbasin

Report Date: 02/04/05
Records Found: 91

Note: Waterbodies are listed in more than one subbasin if they cross subbasin boundaries.

Search Parameters:
Subbasin: 03-05-03
Class:
Name:
Desc:
Index#:

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Subbasin# 03-05-03						
Intracoastal Waterway	From the southwest mouth of Queen Creek to Whiteoak River	SA;HQW	06/01/56		White Oak	19-41-(15.5)
WHITE OAK RIVER	From Hunters Creek to Atlantic Ocean, including the Intracoastal Waterway, with exception of restricted shellfish area adjacent to Swansboro	SA;HQW	06/01/56		White Oak	20-(18)
Bogue Sound (Including Intracoastal Waterway)	From Bogue Inlet (from a line running from the eastern mouth of Bogue Inlet to SR 1117 on the mainland) to a line across Bogue Sound from the southwest side of mouth of Gales Creek to Rock Point	SA;ORW	01/01/90		White Oak	20-36-(0.5)
Deer Creek	From source to Bogue Sound	SA;ORW	01/01/90		White Oak	20-36-1
Hunting Island Creek	From source to Bogue Sound	SA;HQW	06/01/56		White Oak	20-36-2
Taylor Bay	Entire Bay	SA;ORW	01/01/90		White Oak	20-36-3
Goose Creek	From source to Bogue Sound	SA;HQW	06/01/56		White Oak	20-36-4
Sanders Creek	From source to Goose Creek	SA;HQW	06/01/56		White Oak	20-36-4-1
Archer Creek (Piney Cr.)	From source to Bogue Sound	SA;ORW	01/01/90		White Oak	20-36-5
Sanders Creek	From source to Bogue Sound	SA;ORW	01/01/90		White Oak	20-36-6
East Prong Sanders Cr.	From source to Sanders Creek	SA;HQW	06/01/56		White Oak	20-36-6-1
Sikes Branch	From source to East Prong Sanders Creek	SA;HQW	06/01/56		White Oak	20-36-6-1-1
Broad Creek	From source to Bogue Sound	SA;HQW	06/01/56		White Oak	20-36-7
West Prong Broad Creek	From source to Broad Creek	SA;HQW	06/01/56		White Oak	20-36-7-1
Hannah Branch	From source to West Prong Broad Creek	SA;HQW	06/01/56		White Oak	20-36-7-1-1
Sandy Branch	From source to Hannah Branch	SA;HQW	06/01/56		White Oak	20-36-7-1-1-1

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Wolf Branch	From source to West Prong Broad Creek	SA;HQW	06/01/56		White Oak	20-36-7-1-2
East Prong Broad Creek	From source to Broad Creek	SA;HQW	06/01/56		White Oak	20-36-7-2
Gales Creek	From source to Bogue Sound	SA;HQW	06/01/56		White Oak	20-36-8
East Prong Gales Creek	From source to Gales Creek	SA;HQW	06/01/56		White Oak	20-36-8-1
Bogue Sound (Including Intracoastal Waterway to Beaufort Inlet)	From a line across Bogue Sound from the southwest side of mouth of Gales Creek to Rock Point to Beaufort Inlet	SA;HQW	06/01/56		White Oak	20-36-(8.5)
Jumping Run	From source to Bogue Sound	SA;HQW	06/01/56		White Oak	20-36-9
Roosevelt Natural Area Swamp	All of the fresh waters within the property boundaries of the natural area including swamp forest, shrub swamp and ponds	C;Sw,ORW	06/01/88		White Oak	20-36-9.5-(1)
Roosevelt Natural Area Swamp	All of the saline waters within the boundaries of the natural area including brackish marsh and salt marsh	SA;Sw,ORW	06/01/88		White Oak	20-36-9.5-(2)
Spooner Creek	From source to Bogue Sound	SA;HQW	06/01/56		White Oak	20-36-10
Peltier Creek	From source to Bogue Sound	SB:#	06/01/92		White Oak	20-36-11
Hoop Pole Creek	From source to Bogue Sound	SA;HQW	06/01/56		White Oak	20-36-12
Money Island Bay	Entire Bay	SA;HQW	06/01/56		White Oak	20-36-13
Money Island Slough	From source to Money Island Bay	SA;HQW	06/01/56		White Oak	20-36-13-1
Allen Slough	From source to Money Island Bay	SA;HQW	06/01/56		White Oak	20-36-13-2
Harbor Channel	Entire Channel	SC	06/01/56		White Oak	20-36-14
Tar Landing Bay	Entire Bay	SA;HQW	06/01/56		White Oak	20-36-15
Fishing Creek	From source to Tar Landing Bay	SA;HQW	06/01/56		White Oak	20-36-15-1
Fort Macon Creek	From source to Bogue Sound	SA;HQW	06/01/56		White Oak	20-36-16
NEWPORT RIVER	From source to Little Creek Swamp	C	06/01/56		White Oak	21-(1)
Northwest Prong Newport River	From source to Newport River	C	06/01/56		White Oak	21-2
Little Run	From source to Northwest Prong Newport River	C	06/01/56		White Oak	21-2-1
Cypress Drain	From source to Northwest Prong Newport River	C	06/01/56		White Oak	21-2-2

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Southwest Prong Newport River	From source to Newport River	C	06/01/56		White Oak	21-3
Mairey Branch	From source to Southwest Prong Newport River	C	06/01/56		White Oak	21-3-1
Millis Swamp	From source to Southwest Prong Newport River	C	06/01/56		White Oak	21-3-2
Juniper Branch	From source to Southwest Prong Newport River	C	06/01/56		White Oak	21-3-3
Peak Swamp	From source to Southwest Prong Newport River	C	06/01/56		White Oak	21-3-4
Jasons Branch	From source to Southwest Prong Newport River	C	06/01/56		White Oak	21-3-5
East Prong Jasons Branch	From source to Jasons Branch	C	06/01/56		White Oak	21-3-5-1
Milldam Branch	From source to Southwest Prong Newport River	C	06/01/56		White Oak	21-3-6
Big Ramhorn Branch	From source to Newport River	C	06/01/56		White Oak	21-4
Little Ramhorn Branch	From source to Big Ramhorn Branch	C	06/01/56		White Oak	21-4-1
Meadows Branch	From source to Newport River	C	06/01/56		White Oak	21-5
Shoe Branch	From source to Newport River	C	06/01/56		White Oak	21-6
Cedar Swamp Creek	From source to Newport River	C	06/01/56		White Oak	21-7
School House Branch	From source to Newport River	C	06/01/56		White Oak	21-8
Smiths Swamp	From source to Newport River	C	06/01/56		White Oak	21-9
Blakes Branch	From source to Smiths Swamp	C	06/01/56		White Oak	21-9-1
Smiths Swamp Branch	From source to Newport River	C	06/01/56		White Oak	21-10
Deep Creek	From source to Newport River	C	09/01/74		White Oak	21-11
Laurel Branch	From source to Deep Creek	C	09/01/74		White Oak	21-11-1
Little Deep Creek	From source to Deep Creek	C	09/01/74		White Oak	21-11-2
Snows Swamp Branch	From source to Newport River	C	06/01/56		White Oak	21-12
Sandy Branch	From source to Newport River	C	06/01/56		White Oak	21-13
Lodge Creek	From source to Newport River	C	06/01/56		White Oak	21-14
Hull Swamp	From source to Newport River	C	06/01/56		White Oak	21-15
Black Creek (Mill Pond)	From source to Newport River	C	06/01/56		White Oak	21-16
Main Prong	From source to Mill Pond, Black Creek	C	06/01/56		White Oak	21-16-1
Ghouls Fork	From source to Main Prong	C	06/01/56		White Oak	21-16-1-1
Money Island Swamp	From source to Mill Pond, Black Creek	C	06/01/56		White Oak	21-16-2

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Billys Branch	From source to Mill Pond, Black Creek	C	06/01/56		White Oak	21-16-3
NEWPORT RIVER	From Little Creek Swamp to Atlantic Ocean with exception of Morehead City Harbor restricted area	SA;HQW	06/01/56		White Oak	21-(17)
Little Creek Swamp	From source to Newport River	SA;HQW	06/01/56		White Oak	21-18
Mill Creek	From source to Newport River	SA;HQW	06/01/56		White Oak	21-19
Big Creek	From source to Newport River	SA;HQW	06/01/56		White Oak	21-20
Little Creek	From source to Newport River	SA;HQW	06/01/56		White Oak	21-21
Harlowe Creek	From source (at N.C. Hwy. # 101) to Newport River	SA;HQW	06/01/56		White Oak	21-22
Harlowe Canal	From Neuse River Basin Boundary (at Craven-Carteret County Line) to Harlowe Creek (at N.C. Hwy. # 101)	SA;HQW	06/01/56		White Oak	21-22-1
Alligator Creek	From source to Harlowe Creek	SA;HQW	06/01/56		White Oak	21-22-2
Oyster Creek	From source to Newport River	SA;HQW	06/01/56		White Oak	21-23
Core Creek (Intracoastal Waterway Adams Creek Canal)	From Neuse River Basin boundary to Newport River	SA;HQW	06/01/56		White Oak	21-24
Eastman Creek	From source to Core Creek	SA;HQW	06/01/56		White Oak	21-24-1
Bell Creek	From source to Core Creek	SA;HQW	06/01/56		White Oak	21-24-2
Ware Creek	From source to Newport River	SA;HQW	06/01/56		White Oak	21-25
Russell Creek	From source to Newport River	SA;HQW	06/01/56		White Oak	21-26
Wading Creek	From source to Newport River	SA;HQW	06/01/56		White Oak	21-27
Gable Creek	From source to Newport River	SA;HQW	06/01/56		White Oak	21-28
Willis Creek	From source to Newport River	SA;HQW	06/01/56		White Oak	21-29
Crab Point Bay	Entire Bay	SA;HQW	06/01/56		White Oak	21-30

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Newport River Restricted Area (Morehead City Harbor)	All waters within a line beginning at a point of land near the south end of 11th street in Morehead City at Lat. 34 43' 08, Long. 76 43' 04; thence in straight line to the western end of Sugarloaf Island; thence along the north shore of the Island to the eastern end of the Island; thence in a straight line to Channel Marker C 1 near the western end of the Turning Basin; thence in a straight line to a point in the Turning Basin at Lat. 34 42'50, Long. 76 41' 36; thence in a northerly direction to a point in Intracoastal Waterway at Lat. 34 43' 25, Long. 76 41' 40 adjacent to the channel leading to Morehead City Yacht Basin; thence in a straight line in a westerly direction to a point of land on the Morehead City Mainland at Lat. 34 43' 23, Long. 76 42' 24.	SC	06/01/56		White Oak	21-31
Calico Creek	From source to Newport River (The mouth of Calico Creek is defined as beginning at a point of land on the north shore at Lat. 34 43' 46, Long. 76 43' 07, thence across the creek in a straight line to a point of land on the south shore at Lat. 34 43' 36, Long. 76 43' 05)	SC;HQW	06/01/56		White Oak	21-32
Town Creek	From source to Newport River (The mouth of Town Creek is defined as beginning at a point of land on the north shore at Lat. 34 43' 41, Long. 76 40' 04, thence across the creek in a straight line to a point of land on the south shore at Lat. 34 43' 23, Long. 76 40' 04)	SC	06/01/56		White Oak	21-33

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Taylor Creek	From source to Newport River (The mouth of Taylor Creek is defined as beginning at a point of land on the north shore at Lat. 34 43' 07, Long. 76 40' 13, thence across the creek in a straight line to a point of land on the south shore at Lat. 34 42' 55, Long. 76 40' 10)	SC	06/01/56		White Oak	21-34
Back Sound	From Newport River to a point on Shackleford Banks at lat. 34 40'57 and long 76 37'30 north to the western most point of Middle Marshes and along the northeast shoreline of Middle Marshes to Rush Point on Harkers Island	SA;HQW	06/01/56		White Oak	21-35-(0.5)
Atlantic Ocean	The waters of the Atlantic Ocean contiguous to that portion of the White Oak River Basin that extends from the northern boundary of White Oak River Basin (southwest side of Drum Inlet) to the southern boundary of White Oak River Basin (northern boundary of Cape Fear River Basin at the southwest side of the mouth of Goose Bay in the Intracoastal Waterway.	SB	07/01/73		White Oak	99-(4)

North Carolina Waterbodies Listed by Subbasin

Report Date: 03/12/05
Records Found: 61

Note: Waterbodies are listed in more than one subbasin if they cross subbasin boundaries.

Search Parameters:
Subbasin: 03-05-04
Class:
Name:
Desc:
Index#:

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Subbasin# 03-05-04						
Wading Creek	From source to Newport River	SA;HQW	06/01/56		White Oak	21-27
Taylor Creek	From source to Newport River (The mouth of Taylor Creek is defined as beginning at a point of land on the north shore at Lat. 34 43' 07, Long. 76 40' 13, thence across the creek in a straight line to a point of land on the south shore at Lat. 34 42' 55, Long. 76 40' 10)	SC	06/01/56		White Oak	21-34
Back Sound	From Newport River to a point on Shackleford Banks at lat. 34 40'57 and long 76 37'30 north to the western most point of Middle Marshes and along the northeast shoreline of Middle Marshes to Rush Point on Harkers Island	SA;HQW	06/01/56		White Oak	21-35-(0.5)
North River	From source to Back Sound	SA;HQW	06/01/56		White Oak	21-35-1
Feltons Creek	From source to North River	SA;HQW	06/01/56		White Oak	21-35-1-1
Deep Creek	From source to North River	SA;HQW	06/01/56		White Oak	21-35-1-2
Crabbing Creek	From source to North River	SA;HQW	06/01/56		White Oak	21-35-1-3
Lynch Creek	From source to North River	SA;HQW	06/01/56		White Oak	21-35-1-4
Thomas Creek	From source to North River	SA;HQW	06/01/56		White Oak	21-35-1-5
Fulcher Creek	From source to North River	SA;HQW	06/01/56		White Oak	21-35-1-6
Ward Creek	From source to North River	SA;HQW	06/01/56		White Oak	21-35-1-7
Gilliklin Creek	From source to Ward Creek	SA;HQW	06/01/56		White Oak	21-35-1-7-1
North Leopard Creek	From source to Ward Creek	SA;HQW	06/01/56		White Oak	21-35-1-7-2
South Leopard Creek	From source to Ward Creek	SA;HQW	06/01/56		White Oak	21-35-1-7-3
Newby Creek	From source to North River	SA;HQW	06/01/56		White Oak	21-35-1-8
Goose Bay	Entire Bay	SA;HQW	06/01/56		White Oak	21-35-1-9
Gibbs Creek	From source to North River	SA;HQW	06/01/56		White Oak	21-35-1-10

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Davis Bay (Cheney Bay)	Entire Bay	SA;HQW	06/01/56		White Oak	21-35-1-11
Turner Creek	From source to Davis Bay	SA;HQW	06/01/56		White Oak	21-35-1-11-1
The Straits	From Core Sound to North River	SA;HQW	06/01/56		White Oak	21-35-1-12
Sleepy Creek	From source to The Straits	SA;HQW	06/01/56		White Oak	21-35-1-12-1
Whitehurst Creek	From source to The Straits	SA;HQW	06/01/56		White Oak	21-35-1-12-2
Westmouth Bay	Entire Bay	SA;HQW	06/01/56		White Oak	21-35-1-12-3
Henry Jones Creek	From source to Westmouth Bay	SA;HQW	06/01/56		White Oak	21-35-1-12-3-1
Eastmouth Bay	Entire Bay	SA;HQW	06/01/56		White Oak	21-35-1-12-3.5
Janes Creek	From source to The Straits	SA;HQW	06/01/56		White Oak	21-35-1-12-4
Brooks Creek	From source to North River	SA;HQW	06/01/56		White Oak	21-35-1-13
Back Sound	From a point on Shackleford Banks at lat. 34 40'57 and long 76 37'30 north to the western most point of Middle Marshes and along the northwest shoreline of Middle Marshes (to include all of Middle Marshes) to Rush Point on Harkers Island and along the southern shore of Harkers Island back to Core Sound	SA;ORW	01/01/90		White Oak	21-35-(1.5)
Core Sound	From northern boundary of White Oak River Basin (a line from Hall Point to Drum Inlet) to Back Sound	SA;ORW	01/01/90		White Oak	21-35-7
Little Port Branch	From source to Core Sound (including Atlantic Harbor)	SC	12/01/92		White Oak	21-35-7-2
Styron Bay	Entire Bay	SA;ORW	01/01/90		White Oak	21-35-7-3
Glover Creek	From source to Styron Bay	SA;HQW	06/01/56		White Oak	21-35-7-3-1
Annis Run	From source to Styron Bay	SA;HQW	06/01/56		White Oak	21-35-7-3-2
Styron Creek	From source to Styron Bay	SA;HQW	06/01/56		White Oak	21-35-7-3-3
Cedar Creek	From source to Styron Creek	SA;HQW	06/01/56		White Oak	21-35-7-3-3-1
Nelson Bay	From mouth of Salters Creek to a line extending from mouth of Broad Creek due east across Nelson Bay	SC	06/01/56		White Oak	21-35-7-10-(1)
Salters Creek	From source to Nelson Bay	SC	06/01/56		White Oak	21-35-7-10-2
Mingo Creek	From source to Nelson Bay	SC	06/01/56		White Oak	21-35-7-10-3
Broad Creek	From source to Nelson Bay	SC	06/01/56		White Oak	21-35-7-10-4
Nelson Bay	From a line extending from mouth of Broad Creek due east across Nelson Bay to Core Sound	SA;HQW	06/01/56		White Oak	21-35-7-10-(5)
Lewis Creek	From source to Nelson Bay	SA;HQW	06/01/56		White Oak	21-35-7-10-6

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Pasture Creek	From source to Nelson Bay	SA;HQW	06/01/56		White Oak	21-35-7-10-7
Willis Creek	From source to Core Sound	SA;ORW	01/01/90		White Oak	21-35-7-11
Fulchers Creek	From source to Core Sound	SA;ORW	01/01/90		White Oak	21-35-7-12
Brett Bay	Entire Bay	SA;ORW	01/01/90		White Oak	21-35-7-13
Maria Creek	From source to Brett Bay	SA;ORW	01/01/90		White Oak	21-35-7-13-1
Fork Creek	From source to Brett Bay	SA;ORW	01/01/90		White Oak	21-35-7-13-2
Oyster Creek	From source to Core Sound	SA;ORW	01/01/90		White Oak	21-35-7-18
Spit Bay	Entire Bay	SA;HQW	06/01/56		White Oak	21-35-7-21
Jarrett Bay	Entire Bay	SA;ORW	01/01/90		White Oak	21-35-7-22
Smyrna Creek	From source to Jarrett Bay	SA;HQW	06/01/56		White Oak	21-35-7-22-1
Ditch Cove	From source to Jarrett Bay	SA;ORW	01/01/90		White Oak	21-35-7-22-2
Broad Creek	From source to Jarrett Bay	SA;ORW	01/01/90		White Oak	21-35-7-22-3
Great Creek	From source to Jarrett Bay	SA;ORW	01/01/90		White Oak	21-35-7-22-4
Howland Creek	From source to Jarrett Bay	SA;ORW	01/01/90		White Oak	21-35-7-22-5
Williston Creek	From source to Jarrett Bay	SA;HQW	06/01/56		White Oak	21-35-7-22-6
Wade Creek	From source to Jarrett Bay	SA;HQW	06/01/56		White Oak	21-35-7-22-7
Jump Run	From source to Core Sound	SA;ORW	01/01/90		White Oak	21-35-7-23
Middens Creek	From source to Core Sound	SA;HQW	06/01/56		White Oak	21-35-7-24
Tush Creek	From source to Core Sound	SA;ORW	01/01/90		White Oak	21-35-7-25
Great Marsh Creek	From source to Core Sound	SA;ORW	01/01/90		White Oak	21-35-7-26

Appendix F

Natural Area and Rare Species Inventory
Carteret County

Natural Area and Rare Species Inventory
Carteret County

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
Mammal	*Neotoma floridana floridana*	Eastern Woodrat - Coastal Plain Population	T	-	S1	G5T5	Carteret - Historic
Mammal	*Puma concolor couguar*	Eastern Cougar	E	E	SH	G5TH	Carteret - Obscure
Mammal	*Sciurus niger*	Eastern Fox Squirrel	SR	-	S3	G5	Carteret - Obscure
Mammal	*Trichechus manatus*	West Indian Manatee	E	E	S1N	G2	Carteret - Current
Bird	*Aimophila aestivalis*	Bachman's Sparrow	SC	FSC	S3B,S2N	G3	Carteret - Current
Bird	*Ammodramus henslowii*	Henslow's Sparrow	SR	FSC	S2B,S1N	G4	Carteret - Current
Bird	*Anhinga anhinga*	Anhinga	SR	-	S2B,SZN	G5	Carteret - Historic
Bird	*Botaurus lentiginosus*	American Bittern	SR	-	S1B,S3N	G4	Carteret - Current
Bird	*Charadrius melodus*	Piping Plover	T	T	S2B,S2N	G3	Carteret - Current
Bird	*Charadrius wilsonia*	Wilson's Plover	SR	-	S3B,SZN	G5	Carteret - Current
Bird	*Circus cyaneus*	Northern Harrier	SR	-	S1B,S4N	G5	Carteret - Current
Bird	*Coturnicops noveboracensis*	Yellow Rail	SR	-	S2N	G4	Carteret - Current
Bird	*Dendroica virens waynei*	Black-throated Green Warbler - Coastal Plain Population	SR	-	S3B,SZN	G5TU	Carteret - Current
Bird	*Egretta caerulea*	Little Blue Heron	SC	-	S3B,S3N	G5	Carteret - Current
Bird	*Egretta thula*	Snowy Egret	SC	-	S3B,S3N	G5	Carteret - Current
Bird	*Egretta tricolor*	Tricolored Heron	SC	-	S3B,S3N	G5	Carteret - Current
Bird	*Falco peregrinus*	Peregrine Falcon	E	-	S1B,S2N	G4	Carteret - Current
Bird	*Himantopus mexicanus*	Black-necked Stilt	SR	-	S2B	G5	Carteret - Current
Bird	*Ictinia mississippiensis*	Mississippi Kite	SR	-	S2B	G5	Carteret - Current
Bird	*Lanius ludovicianus ludovicianus*	Loggerhead Shrike	SC	-	S3B,S3N	G4T4	Carteret - Current
Bird	*Laterallus jamaicensis*	Black Rail	SR	FSC	S3B,S2N	G4	Carteret - Current
Bird	*Passerina ciris ciris*	Eastern Painted Bunting	SR	FSC	S3B,SZN	G5T3T4	Carteret - Current
Bird	*Pelecanus occidentalis*	Brown Pelican	SR	-	S3B,S4N	G4	Carteret - Current
Bird	*Picoides borealis*	Red-cockaded Woodpecker	E	E	S2	G3	Carteret - Current
Bird	*Plegadis falcinellus*	Glossy Ibis	SC	-	S2B,SZN	G5	Carteret - Current
Bird	*Rynchops niger*	Black Skimmer	SC	-	S3B,S3N	G5	Carteret - Current
Bird	*Sterna antillarum*	Least Tern	SC	-	S3B,SZN	G4	Carteret - Current
Bird	*Sterna dougallii*	Roseate Tern	E	E	SAB,SZN	G4	Carteret - Historic
Bird	*Sterna hirundo*	Common Tern	SC	-	S3B,SZN	G5	Carteret - Current
Bird	*Sterna nilotica*	Gull-billed Tern	T	-	S3B,SZN	G5	Carteret - Current
Reptile	*Alligator mississippiensis*	American Alligator	T	T(S/A)	S3	G5	Carteret - Current
Reptile	*Caretta caretta*	Loggerhead	T	T	S3B,S3N	G3	Carteret - Current
Reptile	*Chelonia mydas*	Green Turtle	T	T	S1B,SZN	G3	Carteret - Current
Reptile	*Crotalus adamanteus*	Eastern Diamondback Rattlesnake	E	-	S1	G4	Carteret - Current

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
Reptile	*Crotalus horridus*	Timber Rattlesnake	SC	-	S3	G4	Carteret - Current
Reptile	*Deirochelys reticularia*	Chicken Turtle	SR	-	S3	G5	Carteret - Obscure
Reptile	*Dermochelys coriacea*	Leatherback	E	E	SAB,SZN	G2	Carteret - Current
Reptile	*Eretmochelys imbricata*	Hawksbill	E	E	SZN	G3	Carteret - Historic
Reptile	*Heterodon simus*	Southern Hognose Snake	SC	FSC	S2	G2	Carteret - Obscure
Reptile	*Lampropeltis getula sticticeps*	Outer Banks Kingsnake	SC	-	S2	G5T2Q	Carteret - Historic
Reptile	*Lepidochelys kempii*	Atlantic Ridley	E	E	SAB,SZN	G1	Carteret - Historic
Reptile	*Malaclemys terrapin centrata*	Carolina Diamondback Terrapin	SC	-	S3	G4T4	Carteret - Current
Reptile	*Masticophis flagellum*	Coachwhip	SR	-	S3	G5	Carteret - Obscure
Reptile	*Nerodia sipedon williamengelsi*	Carolina Water Snake	SC	-	S3	G5T3	Carteret - Current
Reptile	*Ophisaurus mimicus*	Mimic Glass Lizard	SC	FSC	S2	G3	Carteret - Current
Reptile	*Regina rigida*	Glossy Crayfish Snake	SR	-	S2S3	G5	Carteret - Obscure
Reptile	*Seminatrix pygaea*	Black Swamp Snake	SR	-	S2	G5	Carteret - Obscure
Reptile	*Sistrurus miliarius*	Pigmy Rattlesnake	SC	-	S3	G5	Carteret - Current
Amphibian	*Rana capito*	Carolina Gopher Frog	T	FSC	S2	G3	Carteret - Current
Fish	*Acipenser brevirostrum*	Shortnose Sturgeon	E	E	S1	G3	Carteret - Historic
Fish	*Eleotris pisonis*	Spinycheek Sleeper	SR	-	S2	G5	Carteret - Obscure
Fish	*Evorthodus lyricus*	Lyre Goby	SR	-	S2	G5	Carteret - Historic
Fish	*Fundulus confluentus*	Marsh Killifish	SR	-	S2	G5	Carteret - Historic
Fish	*Fundulus luciae*	Spotfin Killifish	SR	-	S2	G4	Carteret - Obscure
Crustacean	*Procambarus plumimanus*	Croatan Crayfish	SR	FSC	S3	G4	Carteret - Historic
Insect	*Amblyscirtes reversa*	Reversed Roadside-skipper	SR	-	S3	G3G4	Carteret - Current
Insect	*Atrytone arogos arogos*	Arogos Skipper	SR	FSC	S1	G3G4T1T2	Carteret - Current
Insect	*Atrytonopsis sp 1*	an undescribed skipper	SR	FSC	S1?	G1?	Carteret - Current
Insect	*Calephelis virginiensis*	Little Metalmark	SR	-	S2	G4	Carteret - Current
Insect	*Doryodes sp 1*	a new owlet moth	SR	-	S3?	G3G4	Carteret - Obscure
Insect	*Dysgonia similis*	an owlet moth	SR	-	S2S3	G3G4	Carteret - Obscure
Insect	*Euphyes berryi*	Berry's Skipper	SR	-	S1?	G3G4	Carteret - Current
Insect	*Euphyes bimacula*	Two-spotted Skipper	SR	-	S2	G4	Carteret - Current
Insect	*Fixsenia favonius ontario*	Northern Oak Hairstreak	SR	-	S3?	G4T4	Carteret - Obscure
Insect	*Hemipachnobia subporphyrea*	Venus Flytrap Cutworm Moth	SR	FSC	S1?	G1	Carteret - Obscure
Insect	*Meropleon cinnamicolor*	an owlet moth	SR	-	S2S3	GU	Carteret - Current
Insect	*Papilio cresphontes*	Giant Swallowtail	SR	-	S2	G5	Carteret - Current
Insect	*Phragmatiphila interrogans*	an owlet moth	SR	-	S2?	G3G4	Carteret - Obscure
Insect	*Satyrium kingi*	King's Hairstreak	SR	-	S2S3	G3G4	Carteret - Obscure
Insect	*Spartiniphaga carterae*	Carter's Noctuid Moth	SR	FSC	S2S3	G2G3	Carteret - Historic
Insect	*Zale declarans*	an owlet moth	SR	-	S2S3	G5	Carteret - Obscure
Lichen	*Teloschistes flavicans*	Sunrise Lichen	SR-P	-	S1	G3G4	Carteret - Current
Liverwort	*Lejeunea bermudiana*	a liverwort	SR-P	-	SH	G3G4	Carteret - Historic
Liverwort	*Lejeunea dimorphophylla*	a liverwort	SR-L	-	S1	G2G3	Carteret - Historic

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Liverwort	*Plagiochila miradorensis var miradorensis*	a liverwort	SR-P	-	SH	G4?T4	Carteret - Historic
Moss	*Campylopus carolinae*	Savanna Campylopus	SR-T	FSC	S1	G1G2	Carteret - Current
Moss	*Sphagnum fitzgeraldii*	Fitzgerald's Peatmoss	SR-T	-	S2S3	G2G3	Carteret - Historic
Vascular Plant	*Agalinis aphylla*	Scale-leaf Gerardia	SR-P	-	S3	G3G4	Carteret - Current
Vascular Plant	*Agalinis virgata*	Branched Gerardia	SR-P	-	S2	G3G4Q	Carteret - Current
Vascular Plant	*Amaranthus pumilus*	Seabeach Amaranth	T	T	S2	G2	Carteret - Current
Vascular Plant	*Asclepias pedicellata*	Savanna Milkweed	SR-P	-	S2	G4	Carteret - Current
Vascular Plant	*Ceratophyllum muricatum ssp australe*	Southern Hornwort	SR-P	-	S1	G5T?	Carteret - Historic
Vascular Plant	*Cirsium lecontei*	Leconte's Thistle	SR-P	-	S2	G4G5	Carteret - Current
Vascular Plant	*Cladium mariscoides*	Twig-rush	SR-O	-	S2	G5	Carteret - Current
Vascular Plant	*Cyperus tetragonus*	Four-angled Flatsedge	SR-P	-	S1	G4?	Carteret - Historic
Vascular Plant	*Dichanthelium caerulescens*	Blue Witchgrass	SR-T	-	S1	G5T?	Carteret - Historic
Vascular Plant	*Dichanthelium sp 5*	Nerve-flowered Witch Grass	SR-D	-	S1	G5?	Carteret - Historic
Vascular Plant	*Dionaea muscipula*	Venus Flytrap	SR-L, SC	FSC	S3	G3	Carteret - Current
Vascular Plant	*Eleocharis cellulosa*	Gulfcoast Spikerush	SR-P	-	S1	G4G5	Carteret - Current
Vascular Plant	*Eleocharis robbinsii*	Robbins's Spikerush	SR-P	-	S2	G4G5	Carteret - Current
Vascular Plant	*Eleocharis rostellata*	Beaked Spikerush	SR-O	-	S2	G5	Carteret - Current
Vascular Plant	*Erythrina herbacea*	Coralbean	SR-P	-	S1	G5	Carteret - Historic
Vascular Plant	*Helianthemum carolinianum*	Carolina Sunrose	SR-P	-	S1	G4	Carteret - Historic
Vascular Plant	*Helianthemum corymbosum*	Pinebarren Sunrose	SR-P	-	S1	G4G5	Carteret - Current
Vascular Plant	*Helianthemum georgianum*	Georgia Sunrose	SR-P	-	S1	G4	Carteret - Historic
Vascular Plant	*Hibiscus aculeatus*	Comfortroot	SR-P	-	S1	G4G5	Carteret - Historic
Vascular Plant	*Ipomoea imperati*	Beach Morning-glory	SR-P	-	S1	G5	Carteret - Current
Vascular Plant	*Litsea aestivalis*	Pondspice	SR-T	FSC	S2	G3	Carteret - Current
Vascular Plant	*Ludwigia alata*	Winged Seedbox	SR-P	-	S2	G4	Carteret - Current
Vascular Plant	*Ludwigia lanceolata*	Lanceleaf Seedbox	SR-P	-	S1	G3	Carteret - Current
Vascular Plant	*Ludwigia linifolia*	Flaxleaf Seedbox	SR-P	-	S2	G4	Carteret - Current
Vascular Plant	*Ludwigia ravenii*	Raven's Seedbox	SR-T	-	S2?	G2?	Carteret - Current
Vascular Plant	*Lysimachia asperulifolia*	Rough-leaf Loosestrife	E	E	S3	G3	Carteret - Current
Vascular Plant	*Malaxis spicata*	Florida Adder's Mouth	SR-P	-	S1	G4?	Carteret - Current
Vascular Plant	*Myriophyllum laxum*	Loose Watermilfoil	T	FSC	S1	G3	Carteret - Current
Vascular Plant	*Panicum tenerum*	Southeastern Panic Grass	SR-P	-	S3	G4	Carteret - Current
Vascular Plant	*Parietaria praetermissa*	Large-seed Pellitory	SR-P	-	S1	G3G4	Carteret - Current
Vascular Plant	*Peltandra sagittifolia*	Spoonflower	SR-P	-	S2S3	G3G4	Carteret - Current
Vascular Plant	*Pinguicula pumila*	Small Butterwort	SR-P	-	S2	G4	Carteret - Current
Vascular Plant	*Platanthera integra*	Yellow Fringeless Orchid	T	-	S1	G3G4	Carteret - Current
Vascular Plant	*Polygala hookeri*	Hooker's Milkwort	SR-T	-	S2	G3	Carteret - Current
Vascular Plant	*Polygonum glaucum*	Seabeach Knotweed	SR-T	-	S1	G3	Carteret - Current
Vascular Plant	*Polygonum hirsutum*	Hairy Smartweed	SR-P	-	S1	G4G5	Carteret - Historic
Vascular Plant	*Ponthieva racemosa*	Shadow-witch	SR-P	-	S2	G4G5	Carteret - Current

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Vascular Plant	*Rhexia cubensis*	West Indies Meadow-beauty	SR-P	-	S1	G4G5	Carteret - Current
Vascular Plant	*Rhynchospora breviseta*	Short-bristled Beaksedge	SR-P	-	S2	G3G4	Carteret - Current
Vascular Plant	*Rhynchospora globularis var pinetorum*	Small's Beaksedge	SR-T	-	S1	G5?T3?	Carteret - Current
Vascular Plant	*Rhynchospora harperi*	Harper's Beaksedge	SR-P	-	S1	G4?	Carteret - Current
Vascular Plant	*Rhynchospora macra*	Southern White Beaksedge	E	-	S1	G3	Carteret - Current
Vascular Plant	*Rhynchospora odorata*	Fragrant Beaksedge	SR-P	-	S1	G4	Carteret - Current
Vascular Plant	*Rhynchospora oligantha*	Feather-bristle Beaksedge	SR-P	-	S2S3	G4	Carteret - Current
Vascular Plant	*Rhynchospora pleiantha*	Coastal Beaksedge	SR-T	-	S1	G2	Carteret - Current
Vascular Plant	*Rhynchospora scirpoides*	Long-beak Baldsedge	SR-O	-	S2	G4	Carteret - Current
Vascular Plant	*Sabal palmetto*	Cabbage Palm	SR-P	-	S1	G5	Carteret - Historic
Vascular Plant	*Sageretia minutiflora*	Small-flowered Buckthorn	SR-P	-	S1	G4	Carteret - Current
Vascular Plant	*Sagittaria graminea var chapmanii*	Chapman's Arrowhead	SR-P	-	S1	G5T3?	Carteret - Current
Vascular Plant	*Schoenoplectus acutus*	Hardstem Bulrush	SR-P	-	SH	G5	Carteret - Obscure
Vascular Plant	*Scleria baldwinii*	Baldwin's Nutrush	SR-P	-	S1	G4	Carteret - Current
Vascular Plant	*Scleria georgiana*	Georgia Nutrush	SR-P	-	S2	G4	Carteret - Current
Vascular Plant	*Scleria verticillata*	Savanna Nutrush	SR-P	-	S1	G5	Carteret - Current
Vascular Plant	*Solidago leavenworthii*	Leavenworth's Goldenrod	SR-P	-	S1	G3G4	Carteret - Historic
Vascular Plant	*Solidago pulchra*	Carolina Goldenrod	E	-	S3	G3	Carteret - Current
Vascular Plant	*Solidago verna*	Spring-flowering Goldenrod	SR-L	FSC	S3	G3	Carteret - Current
Vascular Plant	*Spiranthes laciniata*	Lace-lip Ladies'-tresses	SR-P	-	S1	G4G5	Carteret - Current
Vascular Plant	*Spiranthes longilabris*	Giant Spiral Orchid	SR-T	-	S1	G3	Carteret - Current
Vascular Plant	*Trichostema sp 1*	Dune Bluecurls	SR-L	FSC	S2	G2	Carteret - Current
Vascular Plant	*Utricularia olivacea*	Dwarf Bladderwort	T	-	S2	G4	Carteret - Current
Vascular Plant	*Xyris brevifolia*	Shortleaf Yellow-eyed-grass	SR-P	-	S2	G4G5	Carteret - Current
Vascular Plant	*Xyris stricta*	a yellow-eyed grass	SR-P	-	S1	G3G4	Carteret - Current
Vascular Plant	*Yucca gloriosa*	Moundlily Yucca	SR-P	-	S2?	G4?	Carteret - Current
Natural Community	*Brackish Marsh*	-	-	-	S5	G5	Carteret - Current
Natural Community	*Coastal Fringe Evergreen Forest*	-	-	-	S1	G3?	Carteret - Current
Natural Community	*Coastal Fringe Sandhill*	-	-	-	S1	G3?	Carteret - Current
Natural Community	*Coastal Plain Semipermanent Impoundment*	-	-	-	S4	G5	Carteret - Current
Natural Community	*Coastal Plain Small Stream Swamp (Blackwater Subtype)*	-	-	-	S5	G5	Carteret - Current
Natural Community	*Dune Grass*	-	-	-	S3	G3G4	Carteret - Current
Natural Community	*Estuarine Fringe Loblolly Pine Forest*	-	-	-	S3	G3?	Carteret - Current
Natural Community	*High Pocosin*	-	-	-	S4	G4	Carteret - Current
Natural Community	*Interdune Pond*	-	-	-	S1S2	G2?	Carteret - Current
Natural Community	*Low Pocosin*	-	-	-	S2	G3	Carteret - Current
Natural Community	*Maritime Dry Grassland*	-	-	-	S2	G3	Carteret - Current
Natural Community	*Maritime Evergreen Forest*	-	-	-	S1	G2G3	Carteret - Current
Natural Community	*Maritime Shrub*	-	-	-	S3	G4	Carteret - Current
Natural Community	*Maritime Shrub Swamp*	-	-	-	S1	G1	Carteret - Current

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Natural Community	*Maritime Swamp Forest*	-	-	-	S1S2	G1	Carteret - Current
Natural Community	*Maritime Wet Grassland*	-	-	-	S2?	G3?	Carteret - Current
Natural Community	*Mesic Mixed Hardwood Forest (Coastal Plain Subtype)*	-	-	-	S4	G5T5	Carteret - Current
Natural Community	*Mesic Pine Flatwoods*	-	-	-	S3	G5	Carteret - Current
Natural Community	*Nonriverine Swamp Forest*	-	-	-	S2S3	G2G3	Carteret - Historic
Natural Community	*Nonriverine Wet Hardwood Forest*	-	-	-	S1	G1	Carteret - Current
Natural Community	*Pine Savanna*	-	-	-	S2S3	G3	Carteret - Current
Natural Community	*Pine/Scrub Oak Sandhill*	-	-	-	S3	G4	Carteret - Current
Natural Community	*Pond Pine Woodland*	-	-	-	S4	G4G5	Carteret - Current
Natural Community	*Salt Flat*	-	-	-	S4	G5	Carteret - Current
Natural Community	*Salt Marsh*	-	-	-	S5	G5	Carteret - Current
Natural Community	*Salt Shrub*	-	-	-	S4	G5	Carteret - Current
Natural Community	*Small Depression Pocosin*	-	-	-	S3	G2?	Carteret - Current
Natural Community	*Small Depression Pond*	-	-	-	S3	G3	Carteret - Current
Natural Community	*Tidal Cypress--Gum Swamp*	-	-	-	S3	G4	Carteret - Current
Natural Community	*Upper Beach*	-	-	-	S3	G4	Carteret - Current
Natural Community	*Wet Pine Flatwoods*	-	-	-	S3	G3	Carteret - Current
Natural Community	*Xeric Sandhill Scrub*	-	-	-	S4	G5	Carteret - Current
Special Habitat	*Gull*Tern*Skimmer Colony*	Colonial Waterbirds Nesting Site	-	-	S3	G5	Carteret - Current
Special Habitat	*Marsh Bird Nesting Area*	-	-	-	S4	G5	Carteret - Historic
Special Habitat	*Shorebird Foraging Area*	-	-	-	S3	G5	Carteret - Current
Special Habitat	*Wading Bird Rookery*	-	-	-	S3	G5	Carteret - Current

NC NHP database updated: January, 2004.
Search performed on Friday, 4 February 2005 @ 11:11:58 EST

Appendix G

Hazardous Weather affecting Beaufort Since August 1997

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Eastern North Carolina	1/19/1998	Winter Storm	N/A	2	14	0	0
Eastern North Carolina	1/27/1998	Winter Strom	N/A	0	0	600K	0
Eastern North Carolina	2/3/1998	Winter Strom	N/A	0	0	22.2M	0
Eastern North Carolina	2/17/1998	Winter Storm	N/A	0	0	25K	0
Eastern North Carolina	3/11/1998	Extreme Cold	N/A	0	0	0	350K
Beaufort	5/17/1998	Hail	1 inch	0	0	0	0
Beaufort	6/13/1998	High Wind	52 kts.	0	0	0	0
Beaufort	8/26/1998	Tornado	F1	0	0	225K	0
Eastern North Carolina	8/26/1998	Hurricane	Category III	0	0	6.4M	117M
Carteret County	12/16/1998	Nor'easter	84 kts.	0	0	0	0
Eastern North Carolina	8/30/1999	Hurricane	Category II	0	0	0	0
Eastern North Carolina	9/14/1999	Hurricane	Category II	13	0	410.6M	413.6M
Eastern North Carolina	10/16/1999	Hurricane	Category I	1	0	0	0
Carteret County	12/16/2000	Nor'easter	62 kts.	0	2	0	0
Carteret County	3/13/2001	Nor'easter	55 kts.	0	0	20K	0
Carteret County	3/20/2001	Nor'easter	52 kts.	0	0	15K	0
Eastern North Carolina	9/17/2003	Hurricane	Category II	0	0	435.6M	14.3M

Appendix H

Summary of Policy Statements
from the 1997 Beaufort Land Use Plan

A. 1997 RESOURCE PROTECTION POLICY STATEMENTS

Community Attitude on Resource Protection

Beaufort has demonstrated a concern with resource protection. This concern has been displayed through the adoption of local ordinances and support for the 15A NCAC 7H minimum use standards. Emphasis has been placed on restriction of floating structures and preservation of estuarine shoreline areas, the historic district, the town's central waterfront area, and Carrot Island.

Physical Limitations

Soils

Beaufort opposes the installation of package treatment plants and septic tanks or discharge of waste in any areas classified as coastal wetlands, freshwater wetlands (404), or natural heritage areas. This policy applies only to areas shown as freshwater wetlands, coastal wetlands, and natural heritage areas.

Flood Hazard Areas

Beaufort will continue to coordinate all development within the special flood hazard area with the town's Inspections Department, North Carolina Division of Coastal Management, FEMA, and the U.S. Corps of Engineers.

Groundwater/Protection of Potable Water Supplies

Beaufort's policy is to conserve its surficial groundwater resources by supporting CAMA and N.C. Division of Water Quality stormwater run-off regulations, and by coordinating local development activities involving chemical storage or underground storage tank installation/abandonment with Carteret County Emergency Management personnel and the Groundwater Section of the North Carolina Division of Water Quality.

Manmade Hazards

Beaufort encourages the establishment of appropriate environmental and operational safeguards for the expansion of fuel storage tank facilities on Radio Island. All expansions must be in compliance with applicable state, federal, and local regulations. Beaufort opposes the storage of any non-fuel hazardous materials on Radio Island.

Agricultural quarantine and decontamination facilities should not be established on Radio Island by the U.S. Navy or other agent of the federal government unless a full Environmental Impact Statement with a finding of no significant effect on the environment has been prepared and proper environmental safeguards are implemented. The Environmental Impact Statement should include mitigation measures for the loss of any public beach access.

Beaufort will support development of sound attenuation zoning requirements for the areas affected by the aircraft operating patterns at the Michael J. Smith Field. The zoning for Michael J. Smith Field should be coordinated with Carteret County and Morehead City.

With the exception of fuel storage tanks used for retail and wholesales, Beaufort opposes the bulk storage of fuel or other man-made hazardous materials within any areas not zoned for industrial usage.

Beaufort does not object to increased air traffic which will not result in increased noise impacts on properties within airport flight patterns.

Beaufort supports any runway extensions or other airport expansions which will not cause any changes to NC 101 which will result in increased traffic in the vicinity of the Beaufort Middle School.

The Town supports airport development projects.

Beaufort will support the development of a comprehensive town-wide stormwater drainage plan.

Cultural/Historic Resources

Beaufort shall coordinate all housing code enforcement/redevelopment projects which involve any historically significant structure with the N.C. Division of Archives and History, to ensure that any significant architectural details or buildings are identified and preserved.

Beaufort will continue to support and protect the town's Historic District.

Impacts on Fragile Areas

Only commercial and industrial uses that are water dependent and which cannot function elsewhere or are supportive of commercial fishing will be allowed in conservation classified areas. Examples of such uses would include but not necessarily be limited to commercial fishing and fish processing, marinas consistent with the policies of this plan, boat repair and construction facilities, any business dependent upon natural salt water as a resource, and restaurants that do not extend into or over estuarine waters and/or public trust waters.

Miscellaneous Resource Protection

Package Treatment Plant Use

Beaufort will support the construction of package treatment plants which are approved and permitted by the State Division of Environmental Management. If any package plants are approved, Beaufort supports requirement of a specific contingency plan specifying how ongoing private operation and maintenance of the plant will be provided, and detailing provisions for assumption of the plant into a public system should the private operation fail or management of the system not meet the conditions of the state permit.

Marina and Floating Home Development

Beaufort will allow the construction of open water and upland marinas within its planning jurisdiction which satisfy the use standards for marinas as specified in 15A NCAC 7H. This shall include marinas proposed for location within Conservation areas.

Beaufort will allow construction of dry stack storage facilities for boats associated either with or independent of marinas. All applicable zoning and subdivision regulations must be satisfied. Construction of associated boat ramps, piers, and bulkheads within conservation areas will be allowed if 15A NCAC 7H use standards are met.

Beaufort supports the state's minimum use standards for the regulation of floating structures.

Mooring Fields
The town supports the development of mooring fields and will enforce its ordinance regulating the establishment of mooring fields. The ordinance, as it is currently written, regulates the establishment of mooring fields within the waters of Taylor's Creek. The town will consider amending this ordinance to include all of the waters within Beaufort's planning jurisdiction.

Development of Sound and Estuarine Islands
Beaufort opposes any development on sound and estuarine islands located within its planning jurisdiction.

Beaufort will support the following policies for the Rachel Carson Sanctuary:

- The Rachel Carson Sanctuary can be utilized for the deposit of dredge spoil. If spoil is deposited in the Sanctuary, proper safety measures should be implemented to protect the public and wildlife from hazards associated with spoil sites such as "quicksand." However, if deposition must occur, the site should be located and constructed so as to not obstruct the view of the sound areas from the Beaufort waterfront.
- Commercial boat access to the Rachel Carson Sanctuary should be limited.
- Beaufort requests the right to review and comment on all plans for spoil sites to be located within the town's planning jurisdiction.

Bulkhead Construction
Beaufort supports the construction of bulkheads as long as they fulfill the use standards set forth in 15A NCAC 7H and the sea level rise policies as defined by this plan.

Sea Level Rise
Beaufort recognizes the uncertainties associated with sea level rise. The rate of rise is difficult to predict. Those factors combine to make it difficult, if not impossible, to establish specific policies to deal with the effects of sea level rise.

Rachel Carson Reserve
The Town of Beaufort supports the State's management of the Rachel Carson Reserve (also known as Carrot Island-Bird Shoal) for research, education, and compatible public uses. The town also approves the current policy of maintaining a viable population of feral horses on the property.

B. 1997 RESOURCE PRODUCTION AND MANAGEMENT POLICIES

Community Attitude Toward Resource Production and Management
Beaufort will implement policies which support resource production and management. All policies will meet or exceed 15A NCAC 7H minimum use standards. Resource production should not be allowed to adversely affect Beaufort's sensitive coastal environment or natural heritage areas.

Recreation Resources
Beaufort considers coastal wetland areas to be valuable passive recreation areas. These areas should be protected in their natural state. Only uses which are permitted by 15A NCAC 7H will be allowed.

Beaufort supports public access to Radio Island shoreline areas.

Productive Agricultural Lands
Beaufort supports and encourages use of the U.S. Natural Resources Conservation Service "Best Management Practices" program.

Aquaculture Activities
Beaufort encourages all aquaculture activities which meet applicable federal, state and local policies and permit requirements. However, Beaufort reserves the right to comment on all aquaculture activities which require Division of Environmental Management permitting.

Beaufort objects to any discharge of water from aquaculture activities that will degrade in any way the receiving waters. Beaufort objects to withdrawing water from aquifers or surface sources if such withdrawal will endanger water quality or water supply from the aquifers or surface sources.

Beaufort will support only aquaculture activities which do not alter significantly and negatively the natural environment of conservation areas as shown on the Land Classification Map.

Residential, Commercial, and Industrial Development Impacts on Resources
Residential, commercial and industrial development should be allowed in coastal wetlands which is consistent with 15A NCAC 7H and the policies contained in this plan.

Beaufort discourages any additional point source discharges of pollution into primary nursery areas and shellfishing areas.

Residential development meeting the use standards of 15 NCAC 7H.0209 shall be allowed in estuarine shoreline areas.

Only commercial and industrial uses that are water dependent and which cannot function elsewhere or are supportive of commercial fishing will be allowed in conservation classified shoreline areas. Examples of such uses would include but not necessarily be limited to commercial fishing and fish processing, marinas consistent with the policies of this plan, boat repair and construction facilities, any business dependent upon natural salt water as a resource, and restaurants that do not extend into or over estuarine waters and/or public trust waters. Where zoning exists, all uses must be consistent with established zoning.

In order to preserve natural vegetation and scenic views, "no buildings or houses or structures excepting noncommercial docks or piers will be erected on the south side of Front Street in this (R-8) district."

Off-Road Vehicles
Beaufort opposes the utilization of off-road vehicles in any areas classified as coastal wetlands and in the entire Rachel Carson Sanctuary.

Marine Resource Areas
Beaufort supports the use standards for estuarine and public trust areas as specified in 15A NCAC .0207.

C. 1997 ECONOMIC AND COMMUNITY DEVELOPMENT POLICIES

Community Attitude on Economic and Community Development

Beaufort desires to expand its economic base. A reasonable policy of annexation will be maintained. Beaufort will support growth and development at the densities specified in the land classification definitions. The Town of Beaufort will pursue the development of an impact study to determine the growth and development issues and needs associated with the construction of the proposed NC 101 corridor.

Water Supply

There are no significant constraints to development or land development issues relating to the town's potable water supply. The town's water system will provide adequate water supply throughout the planning period. The town's policies concerning water supply shall be:

The town requires that all existing and new residential and commercial development be connected to both the town water and sewer systems.

The town will allow the installation of private wells for irrigation only through the NCDEM permit process.

The town will extend water services beyond its extraterritorial area if an adequate demand for service exists.

The Town of Beaufort will support a study of the limestone aquifer underlying Carteret County by the United States Geological Survey. This study would aid in determining the optimum locations for wells 'and the long-term viability of the town's water supply. The issue of salt water intrusion should be addressed by the study.

Sewer System

There are no problems or constraints to development caused by the town's sewage treatment system. The town will implement the following policies:

- The town requires that all existing and new residential and commercial development be connected to both the town water and sewer systems.
- Beaufort will support the development of central sewer service throughout its incorporated area and its unincorporated planning jurisdiction.

Solid Waste

Beaufort supports Carteret County's participation in a regional multi-county approach to solid waste management. This includes disposal of waste in the Tri-County Regional Landfill.

The town will support efforts to educate people and businesses on waste reduction and recycling. The town vigorously supports recycling by all users of the Tri-County Landfill and supports setting up practical collection methods and education efforts to achieve a high degree of county-wide recycling.

Beaufort supports the siting of recycling centers within public and commercial land classifications.

Energy Facility Siting and Development
There are no electric generating plants located in Beaufort's planning jurisdiction. The town will consider the need for establishing energy facilities on a case-by-case basis, judging the need for development against all identified possible adverse impacts.

Beaufort has some concerns over offshore drilling. In the event that oil or gas is discovered, Beaufort will not oppose drilling operations and onshore support facilities for which an Environmental Impact Statement has been prepared with a finding of no significant impact on the environment. Beaufort supports and requests full disclosure of development plans, with mitigative measures that will be undertaken to prevent adverse impacts on the environment, the infrastructure, and the social systems of Beaufort and Carteret County. The town also requests full disclosure of any adopted plans. Offshore drilling and the development of onshore support facilities may have severe costs for the town and county as well as advantages. The costs should be borne by the company(ies) which profits from offshore drilling and onshore support facilities.

Redevelopment of Developed Areas
The most important redevelopment issue confronting the Town of Beaufort would be reconstruction following a hurricane or other natural disaster. The town will implement its storm hazard mitigation post-disaster recovery plan to control redevelopment. However, the town will allow the reconstruction of any structures demolished by natural disaster which will comply with existing state and local codes.

The town will enforce its minimum housing code to ensure that minimum housing standards are met.

Estuarine Access
Beaufort supports the state's shoreline access policies as set forth in NCAC Chapter 15A, Subchapter 7M.

Types and Locations of Desired Industry
Industrial sites should be accessible to municipal/central water and sewer services.

Industries which are noxious by reason the emission of smoke, odor, dust, glare, noise, and vibrations, and those which deal primarily in hazardous products such as explosives, should not be located in Beaufort.

Industrial development and/or industrial zoning should not infringe on established residential development.

Assistance in Channel Maintenance
Proper maintenance of channels is very important to Beaufort because of the substantial economic impact of commercial and sport fisheries. If silt or other deposits fill in the channels, safe and efficient movement of commercial and sport fishing and transport vessels could be impeded. Beaufort will support and cooperate with efforts by the Corps of Engineers and state officials to maintain channels.

Assistance in Interstate Waterways
Beaufort considers the interstate waterway to be a valuable economic asset. The town will provide assistance in maintaining the waterway by helping to obtain or providing dredge spoil sites and, when possible, providing easements across county-owned property for work.

Tourism
Beaufort will support North Carolina Department of Transportation projects to improve access to the town.

Beaufort will support projects that will increase public access to shoreline areas.

Beaufort will continue to support the activities of the North Carolina Division of Travel and Tourism; specifically, the monitoring of tourism-related industry, efforts to promote tourism-related commercial activity, and efforts to enhance and provide shoreline resources.

Beaufort will preserve its historic district and Taylor's Creek waterfront areas.

The Town of Beaufort supports the State's management of the Rachel Carson Reserve (also known as Carrot Island-Bird Shoal) for research, education, and compatible public uses. The town also approves the current policy of maintaining a viable population of feral horses on the property.

Transportation
Beaufort supports implementation of the following land transportation improvements:

- A connector between N.C. 101 and U.S. 70 (the corridor for this road has not yet been determined).
- Reroute U.S. 70 from Cedar Street to Turner/West Beaufort Road.
- Utilize Orange and Turner Streets as a one-way pair providing access to the waterfront.
- Elimination of the "Y" intersection with N.C. 101 and U.S. 70.
- Replacement of the drawbridge between Morehead City and Beaufort with a medium height bridge. A medium height bridge is considered to be between 40-45 feet. In FY98, a planning study will be conducted by the DOT Planning and Environmental Branch to determine the exact recommended bridge height.
- A possible minor thoroughfare is proposed to connect Steep Point Road just east of U.S. 70 and Mulberry Street at its intersection with Ocean Street.

D. 1997 CONTINUING PUBLIC PARTICIPATION POLICIES
Citizen input will continue to be solicited, primarily through the Planning Board, with advertised and adequately publicized public meetings held to discuss special land use issues and to keep citizens informed.

E. 1997 STORM HAZARD MITIGATION, POST-DISASTER RECOVERY, AND EVACUATION POLICIES
In general terms, Beaufort's existing policies meet the requirements for storm hazard mitigation planning in *Before the Storm*. These policies consist of a combination of accompanying land use plan policies and regulations established by the town's land development ordinances. Specifically:

- Lands in the estuarine shoreline AEC are subject to development limitations imposed by the CRC. The expected effect will be to further limit the amount and placement of development in these fragile areas. This will indirectly provide a further limitation on new construction which would be at risk from hurricanes and tropical storms.

- Lands in FEMA A-zones are subject to elevation standards and insurance requirements which help ensure that damage to any new development which occurs will be minimized in the event of a hurricane or tropical storm.
- The town's policies and ordinances support and are consistent with state policies and regulations for development in Areas of Environmental Concern.
- All new development must conform with the provisions of the North Carolina Building Code.
- The town's flood plain development policies conform with all federal and state requirements.

Post-Disaster Reconstruction

The policies outlined are for the Mayor and Commissioners to consider after a storm occurs. It is impractical to determine at this time what specific responses are appropriate, since the circumstances surrounding a given storm can vary greatly. The following policy areas are discussed:

- Permitting: Permits to restore previously conforming structures outside AEC's issued automatically. Structures suffering major damage allowed to rebuild to original state but must be in compliance with N.C. Building Code, Zoning, and Flood Hazard Regulations. Structures with minor damage allowed to rebuild to original state before the storm. Structures in AEC's allowed to rebuild only after determination has been made as to adequacy of existing development regulations in these special hazard areas.
- Utility and Facility Reconstruction: Water system components repaired or replaced must be floodproofed or elevated above the 100-year flood level. Procedures established to effect emergency repairs to major thoroughfares if necessary.
- Temporary Development Moratorium: To be considered after major storm damage for AEC's if existing regulations appear inadequate to protect structures from storm damage.

Appendix I
Citizen Participation Plan

Subchapter 7B of the North Carolina Administrative Code, Land Use Planning Guidelines, requires that the Land Use Plan update process include a variety of educational efforts and participation techniques to assure that all segments of the community have a full and adequate opportunity to participate in all stages of the preparation of the land use plan. It is therefore the responsibility of the Town of Beaufort to involve, inform and educate a broad cross-section of the community's populace. It is the intent of the Town of Beaufort to have a continuous citizen participation and education process that achieves these purposes.

The following steps will be taken to provide information to the public and to encourage citizen involvement:

1. Establishment of Land Use Plan Advisory Committee

An Advisory Committee representing a cross-section of the community will be organized to serve as the body responsible for guiding the Land Use Plan formulation effort. The Advisory Committee will serve in a review and advisory capacity to Town of Beaufort Mayor and Board of Commissioners, the Town of Beaufort staff, and the project Planning Consultant, The Wooten Company.

The Advisory Committee will meet on a periodic basis with the Planning Consultant and Town staff to assist the Planning Consultant in defining land use and development issues and concerns, reviewing draft land use plan components prepared by the Planning Consultant, providing recommendations regarding land use plan content, and provide general input. The Advisory Committee members will keep the Beaufort Board of Commissioners apprised of their activities and progress through regular oral and/or written reports. The composition of the membership of the Advisory Committee is delineated in Attachment A.

The local staffing of the Advisory Committee will be handled through the staff of the Town of Beaufort. The Town of Beaufort Town Manager will serve as the local coordinator of the CAMA Land Use Plan project.

2. Land Use Plan Advisory Committee Orientation

An orientation meeting of the Land Use Plan Advisory Committee will be held in September 2003. The meeting will focus on the purposes of the CAMA Land Use Plan Update, the process and schedule for preparing the plan, an overview of the 7B Land Use Planning Guidelines, the recent changes to the guidelines, and a review of the draft Citizen Participation Plan. This meeting will be open to the public and its time and location will be advertised in the local media. It is anticipated that this meeting will be held prior to the initial public informational meeting.

3. Initial Public Informational Meeting

A meeting of the Land Use Plan Advisory Committee will be held in October 2003 to serve as an educational opportunity to inform the general public of the purpose of the CAMA Land Use Plan and the process for preparing the Plan and an opportunity to solicit citizen comments. In addition, the following specific topics will be discussed:

- The local policy statements contained in the current CAMA land use plans.
- The effect of those policies on the community.
- Ways the current CAMA land use plans have been used to guide development during the past planning period.
- The methods to be utilized to inform the general public of the plan preparation process and to solicit the views of citizens in the development of updated policy statements.
- Key planning concerns and issues regarding public access to public trust waters, land use compatibility, infrastructure carrying capacity, natural hazard areas, water quality, and other growth and land development issues of local concern.
- Community aspirations and visions for the future.

Notification of the meeting will be achieved through local newspaper notices and the preparation and distribution of public service announcements to local radio and television stations.

Written notice of the public informational meeting will be published in a local newspaper twice prior to the meeting date. The first notice will be published not less than 30 days prior to the public informational meeting and the second notice, not less than 10 days prior to the meeting. Notice of the meeting will also be provided to the Coastal Resources Advisory Council member and the Division of Coastal Management District Planner.

4. Periodic Land Use Plan Advisory Committee Meetings

It is anticipated that the Land Use Plan Advisory Committee will meet at strategic points throughout the land use planning process to provide general input into the plan development and to review materials prepared by the Planning Consultant. Meetings will be held to identify project goals and objectives; identify key planning and land use issues and concerns; review an analysis of existing and emerging conditions; review draft policy statements, land use suitability analyses, and future land use maps; review land use management implementation plans and schedules; and review a draft of the entire land use plan document. Advisory Committee meetings will be held from September 2003 to March 2005. Newspaper

notices and public service announcements to radio and television stations will be prepared and distributed prior to each meeting. An opportunity for public comment and input will be invited and encouraged at each meeting.

It is anticipated that at least six Advisory Committee meetings will be held. The location for Advisory Committee meetings will be the Beaufort Town Hall. The regularly scheduled Advisory Committee meetings will be held during the third week of the month that a meeting is scheduled. A tentative meeting schedule of the Advisory Committee is attached as Attachment B.

At all regular meetings of the Advisory Committee, time will be provided on the meeting agenda for public comment. A list of the names of the speakers providing public comment and a copy of any written comments provided will be kept on file by the Town of Beaufort. A copy of the written comments will also be provided to the Division of Coastal Management District Planner for use in the CAMA land use plan review process.

5. Public Informational Meeting on the Preliminary Draft Land Use Plan

Following the completion of a preliminary draft Land Use Plan Update, a public informational meeting will be held by the Advisory Committee. The purpose of this meeting will be to review the draft Plan, particularly the land use and development policies, future land use map, and implementation plan and schedule. The public informational meeting date is projected to be held in August 2004. Copies of the full preliminary draft Land Use Plan as well as executive summaries will be available at Town facilities. Notification of the meeting will be achieved through local newspaper notices and the preparation and distribution of public service announcements to local radio and television stations. Notice of the meeting will also be provided to the Coastal Resources Advisory Council member and the Division of Coastal Management District Planner.

7. Planning Board Review Meeting

The purpose of this meeting is to provide a review of the draft land use plan by the Beaufort Planning Board and to provide another opportunity for general public comments.

8. Board of Commissioners Review Meeting

The purpose of this meeting is to provide a review of the draft land use plan by the Beaufort Board of Commissioners and to provide another opportunity for general public comments.

9. Public Forum on Final Draft Land Use Plan

The purpose of this meeting is to provide public information regarding the final draft land use plan document and a formal opportunity for general citizen review and comments on the final draft land use plan. The meeting will afford another opportunity for public involvement prior to a formal public hearing on the adoption of the Land Use Plan.

10. Public Hearing

A formal public hearing will be held by the Beaufort Board of Commissioners to review the final draft Plan and to solicit citizen comments. Following the public hearing, the Board of Commissioners will consider action on adoption of the Plan. The public hearing will be advertised by newspaper notice at least 30 days prior to the date of the public hearing which is anticipated to be held in May 2005. Notice of the public hearing will also be posted at municipal facilities. Additional means of public notification will include radio and television public service announcements. Copies of the final draft Land Use Plan and executive summaries will be available for review at municipal facilities and at the local public library.

11. Additional Means of Soliciting Public Involvement

In addition to the meetings outlined above, Beaufort will utilize the following means to increase public involvement and to disseminate public information:

- Quarterly project progress reports will be made available to the local media.
- Presentations by representatives of Town of Beaufort staff and/or Advisory Committee members to civic, business, church, and similar groups, as requested.
- Use of local CATV and Town Web page for meeting schedules, meeting notices, project progress reports, plan drafts, and other public educational materials.
- The Town of Beaufort may also utilize its utilities billings as a means to provide meeting notice.

12. Additional Meetings

In addition to the meetings outlined above and in Attachment B, The Town of Beaufort may elect to hold additional meetings if it is determined that more meetings are needed to provide project information and/or provide additional opportunities for soliciting citizen comments and public participation in the Land Use Plan preparation process.

13. Stakeholder Groups

During the Land Use Plan preparation process, specific stakeholder or interest groups may be identified. Such groups or individuals will, if requested, receive mailed meeting notices and will be specifically encouraged to participate at all stages of the Land Use Plan preparation process.

14. Amendment to the Citizen Participation Plan

This Citizen Participation Plan will be reevaluated at the end of Phase I of the project (May 2004) by the Town of Beaufort staff and amendments may be recommended. Any amendment to the Plan will be approved by the Town of Beaufort in the same manner as adoption of the original Plan.

Attachment A
Advisory Committee Membership
Town of Beaufort Land Use Plan Update

Name	*Address*	*Representing*	*Contact Information*
Robert Davis		Code Enforcement and P&Z Liaison	
Terri Parker-Eakes		Town Manager (Ex Officio)	
Billy Harvey		P&Z Board Chair	
Bill Hubbard		Board of Commissioners	
Tom Steepy		Mayor (Ex Officio)	
Lisa Wimpfheimer		Ag Extension Agency	
John Young		Public Works Department	
The following consultants will provide technical planning assistance to the Advisory Committee:			
Alex Fuller	*Greenville, NC*	*The Wooten Company*	*252-757-1096*
Buddy Blackburn	*Raleigh, NC*	*The Wooten Company*	*919-828-0531*

Attachment B
Tentative Advisory Committee Meeting Schedule
Town of Beaufort Land Use Plan Update

Target Date	*Type of Meeting*
September 2003	Advisory Committee Orientation Meeting
October 2003	Initial Public Informational Meeting
November 2003	Advisory Committee #2 re: Community Concerns and Aspirations
January 2004	Advisory Committee #3 re: Analysis of Existing And Emerging Conditions
March 2004	Advisory Committee #4 re: Plan for the Future
May 2004	Advisory Committee #5 re: Management Tools
August 2004	Second Public Informational Meeting
November 2004	Planning Board review of draft document
January 2005	Board of Commissioners review of draft document
March 2005	Advisory Committee #6 re: final review of draft document and recommendation for approval
April 2005	Public Forum re: final draft document
May 2005	Public Hearing
May 2005	Board of Commissioners meeting re: adoption of plan
Post May 2005	CRC review and approval

Regularly scheduled Advisory Committee meetings will be held at the Town Hall, Beaufort, NC. The location of all other meetings will be determined at a later date. Meeting dates are tentative and are subject to change. Notification of the meetings will be achieved through local newspaper notices and the preparation and distribution of public service announcements to local radio and television stations. Notice of the meetings will also be provided to the Coastal Resources Advisory Council member and the Division of Coastal Management District Planner.

Attachment C
Local Media Resources

1. *Carteret County News-Times*
2. *The Venture*
3. *The Gam*
4. Local Public Access CATV station: Channel 10
5. Local radio stations: WRHT-FM
   WJNC-AM
   WBTB-AM
6. Local television stations: WYDO
   WITN
   WCTI

Appendix J
Maps and Land Use Plan Data Available at the Beaufort Town Hall

Maps

- Natural Features Map
- Composite Environmental Conditions Map
- Wetlands Map
- Floodplains Map
- Storm Surge Map
- Existing Land Use Map
- Water and Wastewater Systems Map
- Stormwater Management System Map
- Septic System Soil Limitations Map
- Land Suitability Map
- Future Land Use Map

Data

- 2005 Beaufort Core Land Use Plan

Appendix K

Summary of CRC Land Use Plan Management Topic Goals and Objectives

Public Access	
Goal	Maximize public access to the beaches and the public trust waters of the coastal region
Objective	Develop comprehensive policies that provide access opportunities for the public along the shoreline within the planning jurisdiction
Land Use Compatibility	
Goal	Ensure the development and use of resources or preservation of land minimizes direct and secondary environmental impacts, avoids risks to public health, safety and welfare, and is consistent with the capability of the land based on considerations of interactions of natural and manmade features
Objective	Adopt and apply local development policies that balance protection of natural resources and fragile areas with economic development
	Policies should provide clear direction to assist local decision making and consistency findings for zoning, divisions of land, and public and private projects
Infrastructure Carrying Capacity	
Goal	Ensure that public infrastructure systems are appropriately sized, located, and managed so that the quality and productivity of AECs and other fragile areas are protected or restored
Objective	Establish level of service policies and criteria for infrastructure consistent with future land needs projections
Natural Hazard Areas	
Goal	Conserve and maintain barrier dunes, beaches, floodplains, and other coastal features for their natural storm protection functions and their natural resources giving recognition to public health, safety, and welfare issues
Objective	Develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas such as those subject to erosion, high winds, storm surge, flooding, or sea level rise
Water Quality	
Goal	Maintain, protect and, where possible, enhance water quality in all coastal wetlands, rivers, streams, and estuaries
Objective	Adopt policies for coastal waters within the planning jurisdiction to help ensure that water quality is maintained if not impaired and improved if impaired
Local Areas of Concern	
Goal	Integrate local concerns with the overall goals of CAMA in the context of land use planning
Objective	Identify and address local concerns and issues, such as cultural and historic areas, scenic areas, economic development, downtown revitalization or general health and human service needs

Source: CAMA Land Use Planning Guidelines, Subchapter 7B .0702(d)(3)

Appendix L
Population Projections

	US Census 2000	Certified Estimate July 2002	Projections					
			2005	2010	2015	2020	2025	2030
Carteret County	59,383	60,064	62,435	65,019	67,128	69,056	70,406	71,427
Beaufort Corporate Area	3,771	3,787						
Average rate of growth 1970-2000			5,245	5,462	5,639	5,801	5,914	6,000
Town to county ratio			9,091	9,383	9,638	9,879	10,073	10,241
Average of both methodologies			4,545	4,692	4,819	4,939	5,037	5,120
Beaufort Planning Jurisdiction	4,954*	4,974*	6,891	7,177	7,409	7,622	7,771	7,884

Sources: US Census, 1970-2000. 2002 Certified Population Estimates, NC State Data Center, April 2006. County Population Growth 2000-2030, NC State Data Center, July 2004. Block 2000 US Census data for the ETJ area.

*2000 and 2002 estimates for the Beaufort planning jurisdiction by The Wooten Company.

Carteret County projections by the NC State Data Center.

Beaufort corporate and planning jurisdiction projections by The Wooten Company.

Beaufort Planning Jurisdiction population projections based upon the average of two the methodologies delineated above for the Beaufort corporate area.

Assumptions:

1. The average rate of growth (0.4%) annualized rate for the period 1970-2000 will remain constant through 2030.
2. The average ratio (8.4%) of the town's population to the Carteret County population for the period 1970-2000 will remain constant through 2030.
3. The ratio (131.4%) of the estimated 2000 planning jurisdiction population to the 2000 Beaufort corporate population will remain constant through 2030.

Appendix M

Impact of Beaufort Policies on CRC Land Use Plan Management Topics

	CRC Land Use Plan Management Topics and Benchmarks					
	Public Water Access	**Land Use Compatibility**	**Infrastructure Carrying Capacity**	**Natural Hazard Areas**	**Water Quality**	**Local Areas of Concern**
Land Use and Development Policies (see Table 36 for the details of each policy)	• *Improvements to existing access locations* • *Development of new access areas*	• *Reduce the placement of incompatible land uses* • *Preservation of existing character*	• *Water, sewer, and other services being available in required locations at adequate capacities to support development*	• *Land uses and development patterns that reduce the vulnerability to natural hazards* • *Planning for adequate evacuation infrastructure.*	• *Land use and development measures that abate impacts that degrade water quality*	• *Reduction in the placement of incompatible land uses* • *Continued preservation of water access and town character*
4.2.1 Public Water Access:						
• Policy 1	Beneficial	Beneficial				Beneficial
• Policy 2	Beneficial					Beneficial
• Policy 3	Beneficial	Beneficial				
• Policy 4	Beneficial	Beneficial	Beneficial			Beneficial
4.2.2 Land Use Compatibility:						
• Policy 1	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
• Policy 2	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
• Policy 3	Beneficial	Beneficial		Beneficial	Beneficial	Beneficial
• Policy 4	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
• Policy 5	Beneficial	Beneficial		Beneficial	Beneficial	Beneficial
• Policy 6		Beneficial				
• Policy 7	Beneficial	Beneficial		Beneficial	Beneficial	
• Policy 8		Beneficial	Beneficial		Beneficial	
• Policy 9		Beneficial		Beneficial	Beneficial	Beneficial
• Policy 10		Beneficial			Beneficial	

• Policy 11		Beneficial		Beneficial	Beneficial	Beneficial
• Policy 12	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	
4.2.3 Infrastructure Carrying Capacity:						
• Policy 1		Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
• Policy 2		Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
• Policy 3			Beneficial	Beneficial	Beneficial	
• Policy 4		Beneficial	Beneficial		Beneficial	Beneficial
• Policy 5	Beneficial		Beneficial			Beneficial
• Policy 6		Beneficial	Beneficial		Beneficial	Beneficial
• Policy 7			Beneficial		Beneficial	
• Policy 8		Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
• Policy 9			Beneficial			
• Policy 10			Beneficial			
• Policy 11		Beneficial	Beneficial			
• Policy 11		Beneficial	Beneficial	Beneficial		Beneficial
4.2.4 Natural Hazard Areas:						
• Policy 1	Beneficial	Beneficial		Beneficial	Beneficial	Beneficial
• Policy 2		Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
• Policy 3		Beneficial		Beneficial	Beneficial	
• Policy 4			Beneficial	Beneficial		
• Policy 5		Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
4.2.5 Water Quality:						
• Policy 1		Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
• Policy 2		Beneficial	Beneficial		Beneficial	Beneficial
• Policy 3			Beneficial		Beneficial	Beneficial
• Policy 4		Beneficial		Beneficial	Beneficial	
• Policy 5			Beneficial	Beneficial	Beneficial	
• Policy 6				Beneficial	Beneficial	Beneficial
• Policy 7		Beneficial			Beneficial	Beneficial
• Policy 8					Beneficial	Beneficial
• Policy 9			Beneficial		Beneficial	
• Policy 10			Beneficial		Beneficial	Beneficial
4.2.6 Areas of Environmental Concern:						

• Policy 1		Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
• Policy 2	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
• Policy 3	Beneficial	Beneficial		Beneficial	Beneficial	Beneficial
• Policy 4	Beneficial	Beneficial		Beneficial		Beneficial
• Policy 5		Beneficial				Beneficial
• Policy 6	Beneficial	Beneficial				
• Policy 7				Beneficial	Beneficial	Beneficial
• Policy 8	Beneficial			Beneficial	Beneficial	
• Policy 9					Beneficial	
• Policy 10				Beneficial		
4.2.7 Areas of Local Concern:						
• Policy 1		Beneficial			Beneficial	Beneficial
• Policy 2		Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
• Policy 3		Beneficial	Beneficial	Beneficial		Beneficial
• Policy 4						Beneficial
• Policy 5						Beneficial
• Policy 6	Beneficial	Beneficial			Beneficial	Beneficial
• Policy 7	Beneficial				Beneficial	Beneficial
• Policy 8	Beneficial				Beneficial	Beneficial
• Policy 9	Beneficial				Beneficial	Beneficial
• Policy 10	Beneficial				Beneficial	Beneficial

Note: Blank space in table indicates neutral impact. All local policies have been determined to have either a positive or neutral impact on CRC management topics. No specific actions or programs are required to mitigate negative impacts.