Town of Cape Carteret
North Carolina

Core Land Use Plan

Adopted by the Cape Carteret Town Board:
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Certified by the Coastal Resources Commission:

Prepared by:

THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE

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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.

CAMA regulations require that an update be made of land use plans every five years. The Town of Cape Carteret's previous land use plan was updated and certified in 1998. 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 1998 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 Cape Carteret Planning Jurisdiction which includes the Town of Cape Carteret 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.
- Re-examine 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.

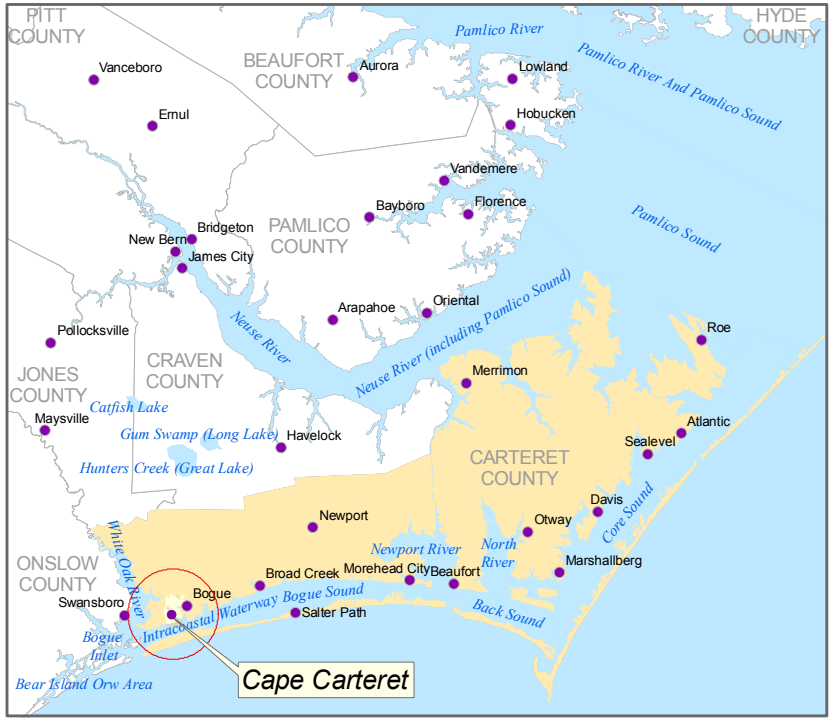
CAPE CARTERET, NC

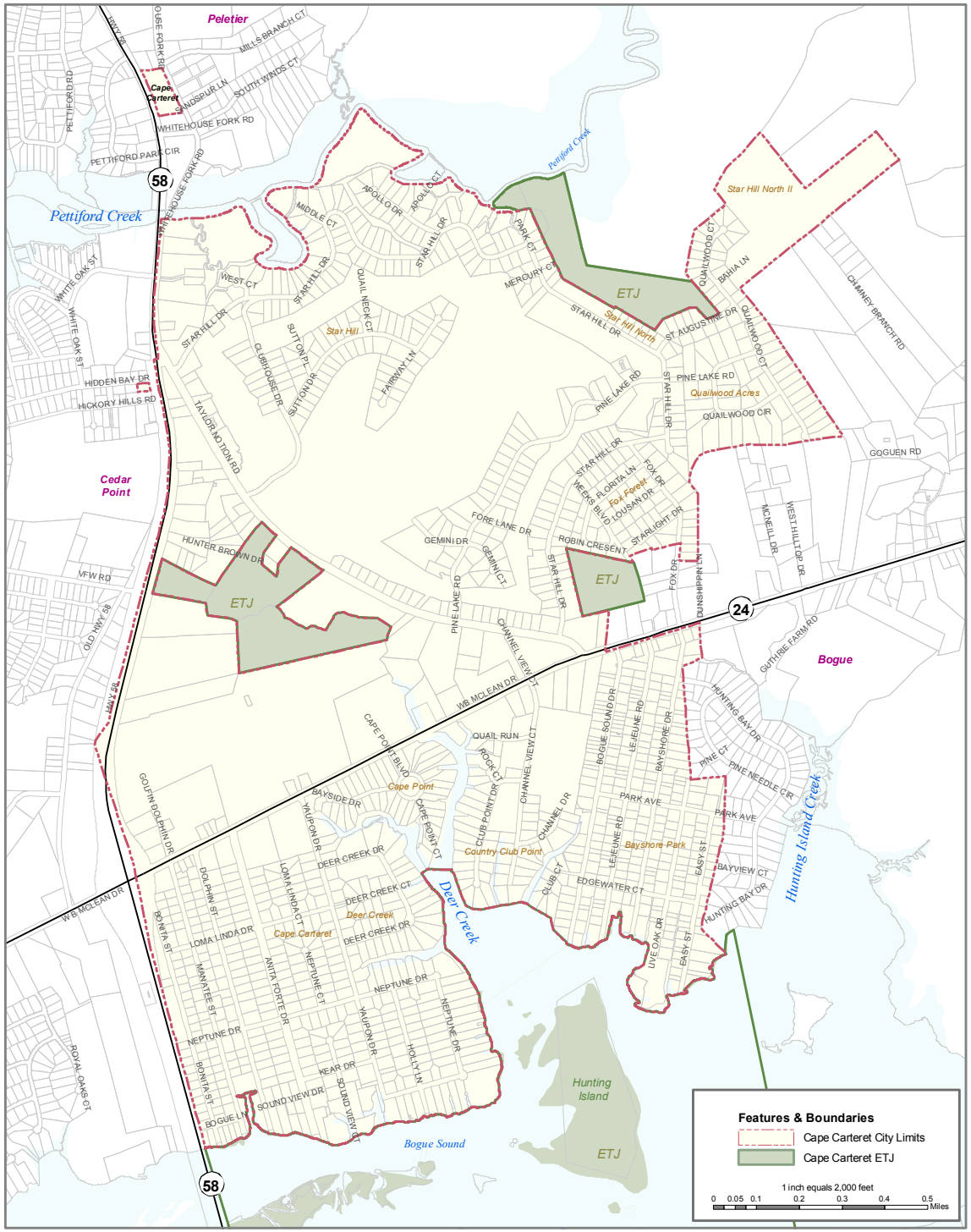
THE WOOTEN COMPANY

October 25, 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 Cape Carteret 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 (see Appendix N) was developed to involve, inform and educate a broad cross-section of the community's populace. Section 4.9 provides specific information concerning use of the future land use plan in guiding decisions about future development.

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 Cape Carteret 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 N. No written comments, including comments regarding the review of the preliminary draft land use plan by adjoining jurisdictions, were received by the Town of Cape Carteret.

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 Cape Carteret 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 1998 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 the Town of Cape Carteret 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 Cape Carteret 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 Cape Carteret 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 Cape Carteret during the next ten year period include the following (not presented here in any priority order):

Public Access

- Provision of waterfront access.
- The provision of public recreational space and water access.

Land Use Compatibility

- Maintaining low residential densities.
- Managing infill development in established residential areas.
- Commercial land use encroachment in residential areas.
- Managing strip commercial development adjacent to NC Highways 24 and 58.
- Guiding growth to areas best suited to accommodate development.

Infrastructure Carrying Capacity

- Connectivity of subdivisions and access to thoroughfares
- Proposed highway improvements to NC 58 and NC 24

Natural Hazard Areas

- Zoning for intensive uses in areas susceptible to storm surge

Water Quality

- Regional solutions to wastewater disposal needs.
- Coordination of comprehensive stormwater management practices and policies with adjoining local governments.
- Stormwater runoff impacts.
- Water quality of surface and ground waters.
- Long-term solutions to wastewater treatment and disposal.

Areas of Environmental Concern

- The impact of development on water quality and marine fisheries

Areas of Local Concern

- Expansion of municipal ETJ areas.
- Incorporation of new municipalities without regard to the new town's capability to provide municipal services or the adverse impact of the new town on existing municipalities.
- Annexation/delineation of future growth area agreements with the Towns of Cedar Point and Bogue.
- Coordination of comprehensive stormwater management practices and policies with adjoining local government

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 town's 2003 population is 1,283, an increase of over 26 percent since 1990.
- The town's population is projected to increase from approximately 1,283 in 2003 to 1,442 in 2010.
- The 2005 peak population (total permanent and seasonal population) is estimated to total 1,816 for the Cape Carteret planning jurisdiction and is projected to increase to 2,646 by 2025.
- Cape Carteret's projected growth rate is slightly higher than that anticipated for the state as a whole.

Housing

- Town data indicates that 110 permits were issued for new residential dwellings since 1998. Of those permits, 102 were issued for single-family detached dwellings and 8 were issued for mobile homes. Building permit data since 1998 indicate that Cape Carteret has averaged about 18 new residential dwellings per year—approximately 93 percent of those were single-family dwellings.
- Based upon the anticipated population increase of 116 persons by 2010 and the average household population size in the 2000 US Census of

Population (2.69 persons per household), it is projected that an additional 43 residential units will be needed through the end of the 10-year planning period.

Economy

- The economy of Cape Carteret and Carteret County is expected to remain based on retail trade, services, and tourism.
- Employment in Cape Carteret is almost entirely in the non-manufacturing sector.
- Cape Carteret's employment is expected to continue to be centered on the services and retail trade sectors of the economy.

Natural Constraints for Development

- The AEC areas in Cape Carteret are primarily located in the Pettiford Creek vicinity and along the Bogue Sound and Deer Creek shorelines. They include estuarine waters, public trust waters, estuarine shoreline, and coastal wetlands.
- Generally, most of the soils in the Cape Carteret planning jurisdiction have limitations for many urban uses due to wetness, low strength, and restricted permeability. One hundred percent of the Cape Carteret planning jurisdiction contains soils that are rated as having severe limitations for septic tank absorption fields.
- The waters in the Cape Carteret area are classified as SA, HQW, and ORW.
- Approximately 20 percent of the Cape Carteret planning area is within the 100-year floodplain.
- Generally, the parcels adjacent to the shorelines of Bogue Sound, Deer Creek, and Pettiford Creek are the areas within the 100-year floodplain. The floodplain surrounding Deer Creek is the most expansive area of floodplain and reaches inland from the sound across NC Highway 24.
- Approximately 19 percent of the Cape Carteret planning jurisdiction is susceptible to flooding from Category 1 and 2 hurricanes. Storm surge flooding resulting from the most intensive hurricanes (Categories 4 and 5) is projected to inundate almost two-thirds of the planning jurisdiction.
- Based upon the analysis of natural features and environmental conditions, the overwhelming majority (98.9%) of the land area in the Cape Carteret planning jurisdiction falls into Class III, serious hazards and limitations. Class II lands (moderate hazards and limitations) account for approximately 1.1 percent of the Town's land area. No land area is classified as Class I, minimal hazards and limitations.
- Closed shellfishing areas in the Cape Carteret vicinity include Pettiford Creek located adjacent to the northern boundary of the town's planning jurisdiction and Hunting Island Creek located west of Cape Carteret in the Town of Bogue.
- Within the Cape Carteret planning jurisdiction, the primary water pollution sources of estuarine waters are estimated to be multiple nonpoint sources including agriculture, forestry, stormwater runoff, septic tank runoff, and marinas.

- Identified fragile areas within the Cape Carteret planning jurisdiction include all state-designated Areas of Environmental Concern (AEC's) such as wetlands and ORW.
- The land suitability analysis classifies land as High Suitability, Medium Suitability, Low Suitability, and Least Suitable. In general, the majority of the Cape Carteret 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, particularly south of Pettiford Creek and along the Bogue Sound and Deer Creek shorelines.

Existing Land Use

- Cape Carteret is primarily a residential-resort/retirement community that is also a commercial services and retail center for the southwestern portion of Carteret County.
- The predominant land use in Cape Carteret is single-family residences.
- Most of the commercial land uses are located in the northeastern corner of the NC Highway 24/58 intersection and adjacent to the NC Highway 58 corridor.
- There are currently no traditional industrial or manufacturing land uses within the town's planning region.
- The Town of Cape Carteret is surrounded on its northwestern, western and eastern boundary by other municipalities (Peletier, Cedar Point, and Bogue) and by Bogue Sound on its southern boundary. Consequently, any future expansions of the Cape Carteret corporate area will be limited to the northeast.
- Future growth and development will primarily be the result of infill development on undeveloped tracts within the current corporate limits and redevelopment of existing developed properties.
- The largest tracts available for infill development are located within the triangle formed by Taylor Notion Road, NC Highway 24, and NC Highway 58.
- It appears that sufficient undeveloped land and redevelopable tracts currently do not exist within the current Cape Carteret planning jurisdictional area to meet projected residential land needs through 2020. Because the possibilities for expansion of the town's planning jurisdictional area are limited, residential growth will most likely peak out between 2015 and 2020.

Community Facilities

- Public water service in Cape Carteret is provided by the West Carteret Water District.
- Wastewater disposal in Cape Carteret is provided by individual subsurface disposal systems or by privately-owned package treatment plants.
- The town has a municipal staff of 9 full time and 2 part time employees (and 4 reserve police officers serving on an as-needed basis) that perform general administration, public works, law enforcement, and planning and zoning services. With anticipated development and growth in population,

the current staffing level may need to be increased to meet future demand on municipal services.

- According to the North Carolina Department of Transportation's 2004-2010 Transportation Improvement Program, the only improvement project directly impacting Cape Carteret is the conversion of the at-grade intersection at NC 24 and NC 58 to an interchange. This project is currently listed in the TIP as an unfunded project.
- Based upon population projections and estimates of land needs, no additional major community facilities will be required during the 10-year study period to accommodate the anticipated growth.
- As new land development increases the town's wastewater disposal needs and as existing subsurface disposal systems begin to fail, water quality will most likely be adversely impacted. Consequently, the provision of adequate wastewater treatment is a paramount concern to the Town of Cape Carteret and all of western Carteret County.

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 1998 Cape Carteret CAMA Land Use 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.

The town developed four policy statements that impose additional local requirements for Areas of Environmental Concern which would be more restrictive than the CAMA minimum use standards. The town's policies (Section 4.2) regarding drystack storage facilities, marinas, commercial docks, and floating homes are more restrictive than the CAMA regulations.

Many of the policy statements from the previous plan (1998 Land Use Plan Update) have been retained. It is the town's intent that its policies concerning resource protection policies be consistent with CAMA 7H Use Standards, except as noted above. New policy statements and amendments to policy statements were developed which address a variety of issues and include:

Public Access to Public Trust Waters	
AMENDED	Marina construction is limited in Cape Carteret's planning jurisdiction according to town ordinances and CAMA 7H Use Standards. This policy exceeds CAMA 7H use standards.
NEW POLICY	Public mooring fields are not permitted in Cape Carteret's planning jurisdiction. This policy exceeds CAMA 7H use standards.

NEW POLICY	The town does not permit commercial uses in connection with marinas and docking facilities. This policy exceeds CAMA 7H use standards.
NEW POLICY	No boat rigged for commercial purposes shall dock at a marina or boat dock or be launched or recovered from a boat ramp within the town, except, such boats may be launched or recovered from boat ramps owned and operated by state or local government agencies. This policy exceeds CAMA 7H use standards.
AMENDED	The town encourages the establishment of attractive, environmentally-responsible marinas and water access facilities for residents and vacationers consistent with CAMA regulations and local ordinances. This policy exceeds CAMA 7H use standards.
DELETED	Public mooring fields shall be permitted in accordance with CAMA regulations.
Infrastructure Carrying Capacity	
AMENDED	The provision of basic municipal services shall be contingent upon the town's needs, financial capacity, and the economic feasibility of providing the municipal service.

Areas of Environmental Concern	
Coastal Wetlands **AMENDED**	Only certain uses which require water access and cannot function elsewhere will be permitted in coastal wetlands. Such uses include utility easements, navigation channels, dredging projects, marinas, piers, boat ramps, noncommercial docks, navigational aids, groins, culverts, and bridges. Each proposed use shall be evaluated for compliance with the CAMA 7H Use Standards and town ordinances. Mooring fields, mooring pilings, and commercial docking facilities are not permitted in the Cape Carteret planning jurisdiction.
AMENDED	Marina construction will not be permitted in coastal wetlands except as may be allowed by CAMA 7H Use Standards and local land development regulations. Marina construction will be permitted in estuarine waters which are classified as primary nursery areas in accordance with the CAMA 7H Use Standards and local land development regulations.

1.3.4 Summary of Future Land Use Projections

The Future Land Use Map for the Cape Carteret planning jurisdiction encompasses the Cape Carteret 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 Single-family Residential
  - Medium Density Single-family Residential
  - Medium Density Multi-family Residential
- Commercial
- Public, Institutional, and Recreational
- 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 7.

Low density (1 to 2 dwelling units per acre) single-family residential use is expected to continue to remain the dominant land use in future years. Nonresidential land uses are projected to cluster along the NC 24 and NC 58 corridors.

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.

Based upon the analysis of existing land use patterns, natural developmental constraints, and projected land use, the anticipated 2015 residential land needs can not be met with the estimated amount of available developable acreage in the current Cape Carteret jurisdiction.

1.3.5 Summary of Implementation Strategies

In order to implement the policies outlined in the Land Use Plan Update, the Cape Carteret 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 Cape Carteret Board of Adjustment will also review policies outlined in this plan prior to making decisions on variances and special use permit requests.

Cape Carteret 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, an amendment to the subdivision ordinance regarding street connectivity is anticipated.

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 Cape Carteret 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 Cape Carteret 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

Cape Carteret is primarily a low density residential community. The majority of the developed residential land within the Cape Carteret planning jurisdiction is located within eight major subdivisions. With the exception of the Star Hill Country Club and Golf Course located in the north central portion of the Cape Carteret planning jurisdiction, nonresidential development is concentrated along the NC Highway 24 corridor.

Recent growth includes additional low density residential subdivisions that have developed along the northeast fringe of the Town's current ETJ, the only direction that the town can expand its ETJ since it is bounded on all other sides by other municipalities and Bogue Sound. Very few large acreage, undeveloped tracts exists within the Cape Carteret planning jurisdiction. The largest mass of undeveloped land is located within the triangle formed by Taylor Notion Road, NC Highway 24, and NC Highway 58. Some subdivision development is beginning to occur in this area.

B. Land Suitability and Natural Constraints on Development

The entire Cape Carteret planning jurisdiction has significant soil limitations for septic tank drainfields. Also, approximately 20 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

In Cape Carteret, new home construction shows modest growth and the vacancy rate of residential units is low. The town is interested in maintaining its low density residential character and does not intend to encourage high density residential development. This is consistent with the inability to provide adequate sanitary sewer service for higher density development.

2.1.2 Economic Conditions

A. General Economic Conditions

The town has identified the corridors along highways NC 24 and NC 58 as the areas most suitable for economic development related to commercial land uses. Due to the character of the town, a slow economy nationwide, and labor trends, new

manufacturing and industrial uses are not anticipated in the planning jurisdiction within the planning period.

B. Population Growth

Cape Carteret's total population increased 19.8% from 1990-2000. Carteret County's population growth rate during the same time period was 13.0%. The statewide average was 21.4%. The Town's and County's growth rates since 1990 are about average compared to other coastal North Carolina communities. The estimated 2003 population for Cape Carteret is 1,283. The town's planning jurisdiction population is projected to increase to 1,455 in 2010 and 1,756 in 2020. Projections indicate that the population growth rate of Carteret County and the entire state will slow over the next 25 years.

Population growth will result in increased demand for additional goods, services, and housing as well as public services—utilities, roads, schools, police and fire protection, parks, etc.

An aging population, approximately one-third of which is over 65 years of age, is slightly increasing due primarily to in-migration. The school-aged population represents less than twenty percent of the population while more than eighty-one percent of the population is over 25 years-of-age.

2.1.3 Transportation

A. Interconnection of Local Streets

Although only a small number of large, undeveloped tracts exist within the current planning jurisdiction, the town feels that it is important to ensure an interconnection between developing properties and existing developed areas.

B. Pedestrian Circulation

Improving pedestrian circulation through a sidewalk or trail system, particularly along the NC Highway 24 and Taylor Notion Road corridors, is a growing concern.

C. NC Highway 58/24 Interchange

The impact of the proposed conversion of the current at-grade intersection of Highway 24 and 58 to an interchange can have a significant effect on commercial development in this area.

2.1.4 Infrastructure

A. Water and Sewer Utilities

Potable water service to Cape Carteret is provided by a private utility, West Carteret Water Corporation. Public sewer service is not available in Cape Carteret. The town supports efforts for a long-term solution to regional wastewater needs. A regional wastewater facility would alleviate concerns for on-going maintenance of septic systems and their longevity, as well as the impacts these systems may have on water quality.

B. Municipal Staffing

Cape Carteret continues to monitor the need for additional staff according to the rate of development in order to maintain quality service as the town grows.

2.1.5 Water Quality

A. Stormwater Management

Cape Carteret is committed to maintaining water quality and the implementation of Best Management Practices as land is developed. The town promotes coordinated stormwater management with neighboring communities. The town recognizes the importance of ensuring proper operation of on-site sewage disposal systems.

2.1.6 Other Environmental Concerns

A. Accessibility while Protecting Public Trust Waters

The Town has recently provided public access to Bogue Sound at seven street dead-ends. Marina development is allowed but is limited to noncommercial operations. Floating homes are not permitted within the Cape Carteret planning jurisdiction.

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):

Public Access	• Marina development has been an issue and the town allows limited marina construction. • The provision of public recreational space and water access.
Land Use Compatibility	• Maintaining low residential densities is a primary objective in Cape Carteret. • Managing infill development in established residential areas is a concern. • Commercial land use encroachment in residential areas. • Managing strip commercial development adjacent to NC Highways 24 and 58. • Guiding growth to areas best suited to accommodate development.
Infrastructure Carrying Capacity	• Connectivity of subdivision streets and access to thoroughfares. • Feel a need for thoroughfare planning. • Proposed interchange improvements at the intersection of NC 58 and NC 24.
Water Quality	• Regional solutions to wastewater disposal needs. • Coordination of comprehensive stormwater management practices and policies with adjoining local governments. • Stormwater runoff impacts. • Water quality of surface and ground waters. • Long-term solutions to wastewater treatment and disposal.

Areas of Environmental Concern	• The impact of development on water quality and marine fisheries.
Areas of Local Concern	• Traffic congestion at the NC Highway 24/58 intersection. • Provision of sidewalks along NC 24 and Taylor Notion Road. • Feasibility of a pedestrian bridge over NC 24.

Many of the important land use and land development issues delineated in this updated Land Use Plan have also been identified in previous land use plans. A summary of the land use and development issues contained in the previous 1998 Town of Cape Carteret Land Use Plan is provided in Appendix B.

2.3 Vision Statement

Cape Carteret is primarily a low-density single-family residential community that offers some municipal urban services and public and private community facilities. It is the Town's desire to maintain the low-density residential character of the community as well as the high quality of life. Residents and officials of Cape Carteret favor moderate growth and development that is environmentally responsible and that is in keeping with the current character of the town. The majority of future growth and development is anticipated to be residential in nature while some commercial development is desired. Residential densities are expected to range from one to two dwelling units per acre. Improvements to municipal services and facilities are anticipated in order to meet current and projected demand for such services. The provision of these services shall be contingent upon the town's needs, financial capacity and the economic feasibility of providing the municipal service.

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

- Cape Carteret's population in 2002 was 1,243, an increase of over 22 percent since 1990. The estimated total 2002 population for the Cape Carteret planning jurisdiction is 1,254.
- The estimated 2005 population of the Cape Carteret corporate area is 1, 322.
- The county's population growth rate since 1990 was 14.2%. The statewide average was 25.5%.
- The town's growth rate since 1990 is about average compared to other coastal North Carolina communities of similar size.
- Between 1990 and 2001, Cape Carteret's total population increased more by migration than by natural increase. In 2000, there were 296 people that did not live in the county five years earlier. The total increase in population from 1990-2001 was 204.
- Cape Carteret's 2001 population density was 513 persons per square mile. In comparison, some regional population densities in 2001 were: Swansboro 1,165, Bogue 224, Cedar Point 388, and Peletier 151. These figures are rounded to the nearest whole figure and reflect persons per square mile. In 1990, Cape Carteret's population density was 478 persons per square mile. There was a net increase in density of 35 persons per square mile between 1990 and 2001. Cedar Point experienced a similar trend, as their population density in 1990 was 331 persons per square mile and increased by 51 between 1990 and 2001.
- Cape Carteret's age distribution differs from that of the county and the state. In 2000, only 66.56% of Cape Carteret's population was under 65 years of age while the county and state populations under the age of 65 were 82.78% and 87.96%, respectively. Cape Carteret's over-65 population comprises 33.44% of the population while, in 2000, the county and state were at 17.22% and 12.04% respectively. The over-65

population of neighboring towns, Bogue (14.92%) and Cedar Point (22.3%), more closely reflects that of the state and county.

- The estimated 2005 seasonal population of Cape Carteret is 479. The 2005 peak population, which is the sum of the permanent population and the seasonal population, is estimated to be 1,801.
- Projections indicate that the peak population for the Cape Carteret planning jurisdiction will increase to 1,982 in 2010 and 2,392 in 2020. Complete population projections are provided in Section 3.1.4.

A. Permanent Population Growth Trends

While Cape Carteret's population has increased steadily since 1980, its rate of growth is below that of Carteret County and the statewide average. 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
Cape Carteret, Carteret County, and the State
1980-2002

Population Size				
	1980	**1990**	**2000**	**2002**
Cape Carteret	944	1,013	1,214	1,243
Carteret County	41,092	52,553	59,383	60,064
North Carolina	5,880,095	6,628,637	8,046,962	8,323,375
Population Growth Rates				
		1980-1990	***1990-2000***	***2000-2002***
Cape Carteret		7.3%	19.8%	2.4%
Carteret County		27.9%	13.0%	1.1%
North Carolina		13.0%	21.4%	3.4%

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

In 2002, the municipal population of Cape Carteret, one of eleven incorporated municipalities within Carteret County, comprised approximately 2 percent of the total county population.

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

Table 2
Comparison of Cape Carteret'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%

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

B. Population Characteristics

1. Age Characteristics

Cape Carteret's age distribution differs from that of the county and the state. In 2000, only 66.56% of Cape Carteret's population was under 65 years of age while the county and state populations under the age of 65 were 82.78% and 87.96%, respectively. Cape Carteret's over-65 population comprises 33.44% of the population while, in 2000, the county and state were at 17.22%

and 12.04% respectively. The over-65 population of neighboring towns, Bogue (14.92%) and Cedar Point (22.3%), more closely reflects that of the state and county.

Table 3
Age Distribution
2000

		Cape Carteret	Carteret County	North Carolina
Age Category	**Number**	**% of Total**	**% of Total**	**% of Total**
Under 18 Years School Age	178	14.66	20.71	24.40
18-24 Years College Age	4`5	3.71	6.44	10.02
25-64 Years Working Age	585	48.19	55.63	53.54
65+ Years Retirement Age	406	33.44	17.22	12.04
Totals	1,214	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

Cape Carteret's proportion of males and females is similar to the Carteret County and statewide averages.

Table 4
Distribution of Males and Females in the Total Population
2000

	Male	Percent	Female	Percent	Total
Cape Carteret	594	48.9%	620	51.1%	1,214
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

Racial composition data for Cape Carteret indicate that 97.3% of the population is white and 2.7% all other races. The town's minority population is lower than the Carteret County and statewide averages.

Table 5
Race and Hispanic or Latino Origin
2000

	Cape Carteret		Carteret County		North Carolina	
Race Category	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
White	1,181	97.3%	53,443	90.0%	5,802,165	72.1%
Black/African American	18	1.5%	4,191	7.1%	1,734,154	21.5%
American Indian/Alaska Native	3	0.2%	341	0.6%	100,956	1.3%
Asian	4	0.3%	253	0.4%	111,292	1.4%
Hawaiian/Pacific Islander	0	0.0%	29	0.0%	3,699	0.0%
Other Race	8	0.7%	392	0.7%	185,138	2.3%
Two or More Races	0	0.0%	734	1.2%	111,909	1.4%
Total	1,214	100.0%	59,383	100.0%	8,049,313	100.0%
Hispanic or Latino Origin	27	2.2%	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

Cape Carteret's 2000 per capita income of $26,806 was 132 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. Cape Carteret's median household income of $44,514 was considerably higher 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 Cape Carteret was 2.6 % 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 Cape Carteret is the single-family detached dwelling. Of the 711 housing units in Cape Carteret, approximately 82% are single-family detached dwellings. Cape Carteret has a much lower number of multifamily dwellings (3) than manufactured housing units (122). They represent 0.42% and 17.16% of the housing stock respectively. Slightly more than 88 percent of housing units are owner occupied and almost 12 percent are renter occupied.

Table 7 *Housing by Structure Type* *Cape Carteret* *2000*		
Type of Structure	**No.**	**% of Total**
Single-Family		
1 Unit Detached	575	81.45%
1 Unit Attached	6	0.85%
Multi-Family		
2-4 Units	3	0.42%
5-9 Units	0	0.00%
10+ Units	0	0.00%
Manufactured Home	122	17.28%
TOTAL UNITS	**706**	**100.00%**

Table 8 *Comparison of* *Housing by Structure Type* *2000*			
	Cape Carteret	**Carteret County**	**North Carolina**
Single-Family	82.30%	59.72%	67.48%
Multi-Family	0.42%	14.54%	16.11%
Manufactured Home	17.28%	25.74%	16.41%
TOTAL	**100.00%**	**100.00%**	**100.00%**

Source: U.S. Census of Housing, 2000.

Household population of housing units in Cape Carteret in 2000 was 2.23 persons per unit while the household population for the county and state were 2.31 and 2.49 persons per unit respectively. Cape Carteret has a homeowner vacancy rate (2.63%) similar to the county (2.92%) and higher than the state (1.2%). The rental vacancy rate in Cape Carteret (0.3%) is lower than both the county (5.39%) and the state (2.6%). The 2000 Census reported 166 vacant units and 136 intended for seasonal use. Appendix C provides a summary of housing characteristics for the Town, Carteret County, and the State.

According to the 2000 Census, the median value of owner-occupied homes in Cape Carteret is $141,000 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 110 permits were issued for new residential dwellings since 1998. Of those permits, 102 were issued for single-family detached dwellings and 8 were issued for mobile homes. Building permit data since 1998 indicate that Cape Carteret has averaged about 18 new residential dwellings per year—approximately 93 percent of those were single-family dwellings.

Table 9
Residential Building Permits
Cape Carteret

Year	SFR	Mfg. Homes	Total
1998	5	1	6
1999	5	1	6
2000	9	0	9
2001	16	2	18
2002	41	2	43
2003	26	2	28
Total	**102**	**8**	**110**
Average	17.0	1.3	18.3
Percent	92.7%	7.3%	100.0%

Source: Town of Cape Carteret

Subdivision lot approvals in Cape Carteret since 1999 have resulted in the creation of an average of 14 new building lots per year.

Table 10
Subdivision Lots
Cape Carteret

Year	Residential	Nonresidential	Total
1999	44	0	44
2000	0	0	0
2001	0	0	0
2002	2	0	2
2003	24	0	24
Total	**70**	**0**	**70**
Average	14.0	0.0	14.0

Source: Town of Cape Carteret

B. Seasonal Housing

The majority (96.8 percent) of seasonal housing units in Cape Carteret is composed of seasonal dwellings. Hotel, motel, and bed and breakfast units comprise the remainder of the town's seasonal housing.

Table 11 Seasonal Housing 2000		
Town of Cape Carteret	**Total Seasonal Housing Units**	**% of Seasonal Housing w/i Jurisdiction**
Seasonal Dwellings	142	96.8%
Hotel, Motel, B&B	7	3.2%
Campsites	0	0.0%
Transient Marina Slips	0	0.0%
Totals	149	100.0%

Source: US Census, 2000

3.1.3 Local Economy

Employment in Cape Carteret is almost entirely in the non-manufacturing sector. Non-manufacturing industries include agriculture, forestry, fishing, mining, construction, transportation/communications/public utilities, wholesale trade, retail trade, information, finance/real estate, service professions, and public administration. In the 2000 census, 453 people were reported to be employed in non-manufacturing sectors. The wholesale and retail trade; educational, health, and social services; and public administration categories accounted for over 52 percent of all employment. Only 7 people in Cape Carteret were employed in the manufacturing sector in 2000. The vast majority of jobs in Cape Carteret will most likely be provided by the non-manufacturing sector for the foreseeable future. Presently, there is no indication of additional manufacturing jobs coming to Cape Carteret. 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 12 Employment by Industry Sector, Carteret County	
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 Cape Carteret totaled $181,239,601.00 in 2003. Real property constitutes approximately 91 percent of the town's total valuation. Cape Carteret comprised approximately 2.5 percent of the total Carteret County valuation.

Table 13
Valuations and Tax Rates for 2002-2003

	Total Assessed Valuation	Tax Rate (per $100)
Carteret County	7,330,795,475	$0.420
Atlantic Beach	826,469,876	$0.230
Beaufort	373,038,454	$0.360
Bogue	37,752,442	$0.050
Cape Carteret	***181,239,601***	***$0.230***
Cedar Point	160,316,119	$0.050
Emerald Isle	1,361,208,559	$0.185
Indian Beach	163,317,742	$0.160
Morehead City	899,596,917	$0.380
Newport	161,283,726	$0.430
Peletier	34,048,700	$0.050
Pine Knoll Shores	538,823,834	$0.170

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.

Permanent population projections for Cape Carteret 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 M provides more detailed information regarding population projections.

The following table provides projected population figures for the County, the Town of Cape Carteret and the Cape Carteret planning jurisdiction.

Table 14 Permanent Population Projections								
	US Census 2000	Certified Estimate July 2002	Projections					
			2005	2010	2015	2020	2025	2030
Carteret County	59,383	60,064	61,636	63,939	66,026	67,762	69,042	69,962
Cape Carteret Corporate Area	1,214	1,243	1,322	1,442	1,593	1,740	1,925	2,106
Cape Carteret Planning Jurisdiction	1,225*	1,254*	1,333	1,455	1,607	1,756	1,942	2,125

**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, July 2004.

B. Seasonal and Peak Population Projections

The current estimate of the seasonal population of Cape Carteret is 440. The peak population, which is the sum of the permanent population and the seasonal population, is estimated to be 1,654.

Table 15 Seasonal and Peak Population 2000			
Cape Carteret Corporate	**Total**	**PPH**	**Pop**
Seasonal DU	142	3	426
Hotel, Motel, B&B	7	2	14
Campsites	0	na	0
Transient Marina Slips	0	na	0
Totals	149		440
Seasonal Population 2000	440		
Permanent Population 2000	1,214		
Peak Population 2000	1,654		
Peak to Permanent Ratio	136.24%		

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 Cape Carteret corporate area and for the Cape Carteret planning jurisdiction.

Table 16
Seasonal and Peak Population Projections

	2005	2010	2015	2020	2025	2030
Cape Carteret Corporate Area						
Permanent Population	1,322	1,442	1,593	1,740	1,925	2,10
Seasonal Population	479	523	577	631	698	130
Peak Population	1,801	1,965	2,170	2,371	2,623	2,236
Cape Carteret Planning Jurisdiction						
Permanent Population	1,333	1,455	1,607	1,756	1,942	2,125
Seasonal Population	483	527	582	636	704	770
Peak Population	1,816	1,982	2,189	2,392	2,646	2,895

Source: The Wooten Company, August 2004

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 Cape Carteret 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 Cape Carteret planning jurisdiction that could easily be damaged or destroyed by inappropriate or poorly planned land uses include: freshwater marshes, saltwater and brackish marshes, beneficial non-coastal wetlands, and estuarine waters.

A. Areas of Environmental Concern

Areas of environmental concern (AECs) include coastal wetlands, estuarine waters and public trust areas, and the estuarine shoreline. 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. The estuarine shoreline area of environmental concern in Cape Carteret is (i) 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) in the Western Bogue Sound, 575 feet landward of the mean high water level, or normal water level, of the estuarine waters.

The AEC areas in Cape Carteret are primarily located in the Pettiford Creek vicinity and along the Bogue Sound and Deer Creek shorelines. They include estuarine waters, public trust waters, estuarine shoreline, and coastal wetlands. All of these areas are subject to stricter regulations controlling development. 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. 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. Development within the designated Areas of Environmental Concern is restricted by CAMA regulations and development guidelines. Specific CAMA development standards for AECs can be found in 15 NCAC 7H.

B. Soil Characteristics

The majority of soils in Cape Carteret's planning jurisdiction are hydric soils. Hydric soils often contain an abundance of moisture and generally lack oxygen. According to the *Soil Survey of Carteret County, North Carolina,* soils such as Leon sand, Wando fine sand, and Hoboken muck are the predominant soils and they are hydric. Other soils that are not entirely hydric yet include hydric soils or have wet spots are: Kureb sand, Baymeade fine sand, and Seabrook fine sand. 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 Cape Carteret 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. One hundred percent of the Cape Carteret planning jurisdiction contains soils that are rated as having severe limitations for septic tank

absorption fields. 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 table below describes the soils within the Cape Carteret planning jurisdiction and the specific limitations for septic system use.

Table 17
Soils in the Cape Carteret Planning Jurisdiction

Symbol	Soil Description	Acres	Percent	Limitation for Septic Systems
KuB	Kureb sand-0 to 6 percent slopes	517.7	34.0%	Severe: poor filter
WaB	Wando fine sand-0 to 6 percent slopes	426.2	28.0%	Severe: poor filter
ByB	Baymeade fine sand-1 to 6 percent slopes	240.9	15.8%	Severe: poor filter
Ln	Leon sand	149.4	9.8%	Severe: wetness/poor filter
Se	Seabrook fine sand	84.3	5.5%	Severe: wetness/poor filter
HB	Hobucken muck-frequently flooded	41.8	2.7%	Severe: flooding/ponding
Nd	Newhan fine sand-dredged-2 to 30 percent slopes	38.3	2.5%	Severe: poor filter/slope
CL	Carteret sand-low-frequently flooded	14.1	0.9%	Severe: flooding/ponding/poor
Mu	Murville mucky sand	6.8	0.4%	Severe: ponding/poor filter
CH	Carteret sand-frequently flooded	3.9	0.3%	Severe: flooding/ponding/poor
	Totals	1523.3	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 18
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 Cape Carteret area are classified as SA, HQW, and ORW. Appendix E includes a listing of the water quality classifications for the various water bodies in the Cape Carteret area. The following table summarizes some of the major characteristics and development regulations for SA, HQW, and ORW waters.

Table 19
Overview of 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				
Shellfish Harvest Areas (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 03-05-01 and 03-05-03 were rated as follows:

Table 20
Use Support Ratings for Monitored Waters

Subbasin 03-05-01

Use Support Category	Fully Supporting	Partially Supporting	Not Supporting	Not Rated	Total
Aquatic Life/Secondary Recreation	21.3 mi 5,772.6 ac	0	0	19.0 mi 0 ac 8 coastal mi*	40.3 mi 5,772.6 ac 8 coastal mi*
Fish Consumption	0	8 coastal mi*	0	0	8 coastal mi*
Primary Recreation	0 7,298.7 ac 8 coastal mi	0	0	6.6 mi 3,940.4 ac	6.6 mi 11,239.1 mi 8 coastal mi*
Shellfishing Harvesting	0 4,609 ac	1.4 mi 3,581 ac	5.3 mi 3,049 ac	0	6.7 mi 11,239 ac

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
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 Bogue Sound, Deer Creek, and Pettiford Creek are the areas within the 100-year floodplain. The floodplain surrounding Deer Creek is the most expansive area of floodplain and reaches inland from the sound across NC Highway 24. Approximately 20 percent of the Cape Carteret planning area is within the 100-year floodplain. An additional 4 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, Cape Carteret had 9 repetitive loss properties with 23 reported losses at a cost of $1,345,602.

E. Storm Surge Areas

Maps delineating hurricane surge inundation areas have been provided to Cape Carteret 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, approximately two-thirds of the Cape Carteret 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 Cape Carteret Town Clerk.

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

Table 21
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

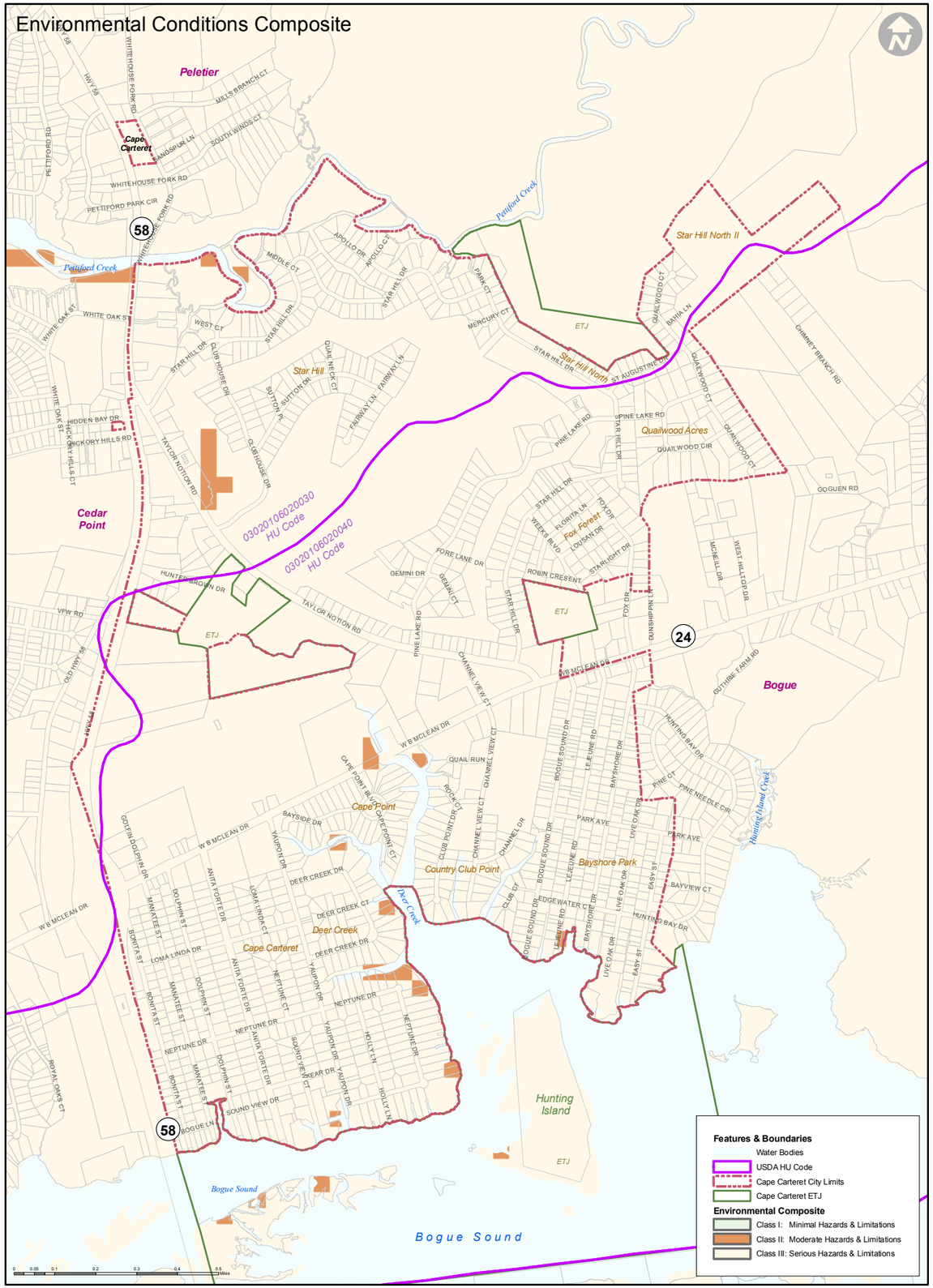
While the identified hurricane storm surge inundation areas resulting from Category 1 and 2 hurricanes often parallel the 100-year flood hazard area shown in Figure 2, there are some additional portions of Cape Carteret that are particularly subject to more intensive hurricane-induced flooding. Such areas are generally located south of Pettiford Creek and between NC Highway 24 and Bogue Sound. The Star Hill Golf Club vicinity is the only area projected to remain above the storm surge of major hurricanes. The table below delineates storm surge flooding by hurricane category.

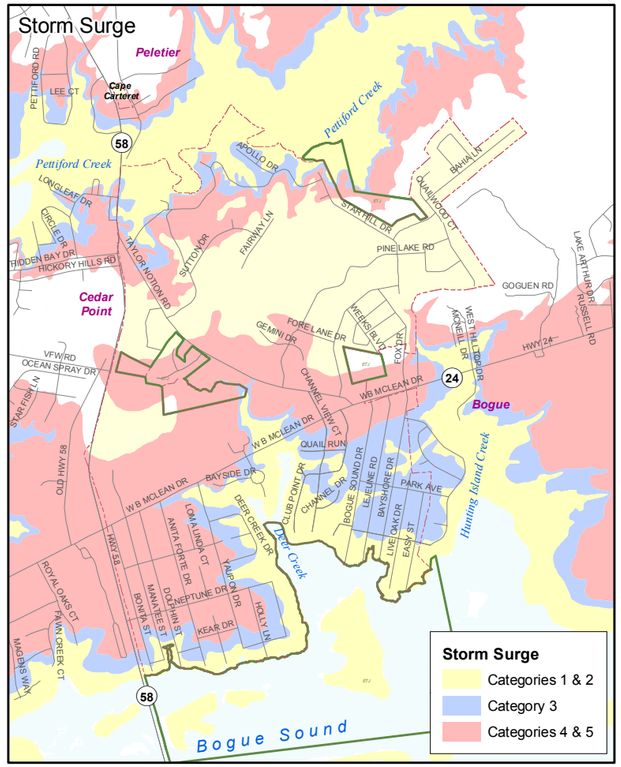
Table 22
Storm Surge Flooding

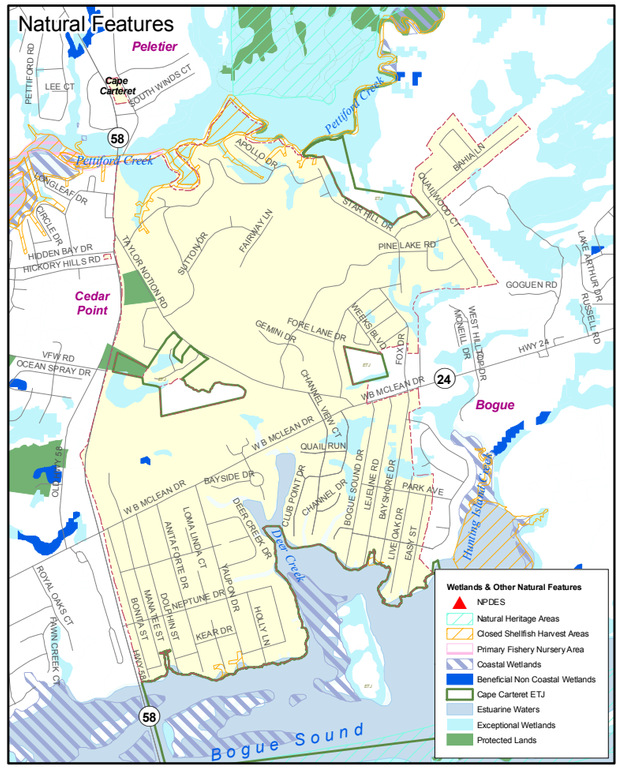
Category	Acres Inundated	% of Total Planning Jurisdiction
Category 1 and 2	294.4	19.0%
Category 3	195.9	12.7%
Category 4 & 5	525.8	34.0%
Totals	1,016.1	65.7%

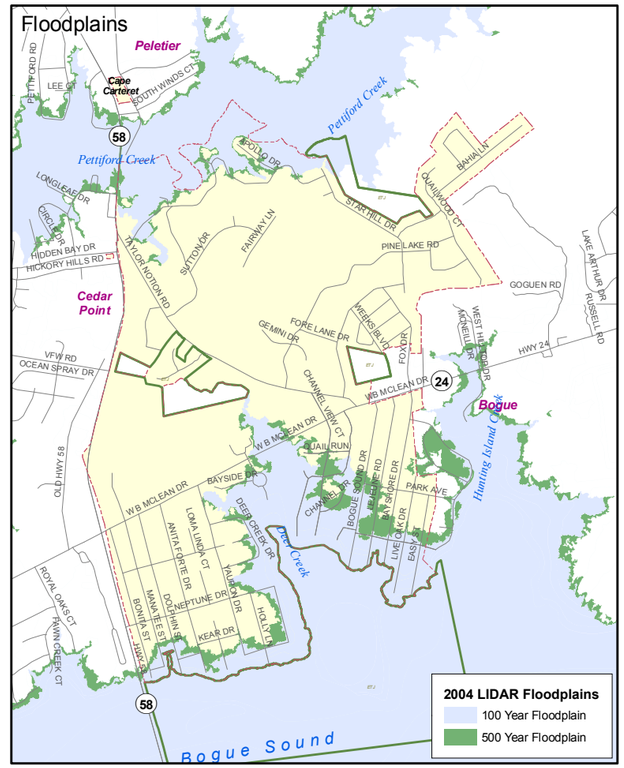
Source: The Wooten Company

Environmental Conditions Composite









CAPE CARTERET, NC

Figure 2
Envrionmental Composite & Natural Features

THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE

October 26, 2004

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.

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 Pettiford Creek vicinity is the area where freshwater wetlands are primarily found in Cape Carteret. The general location of coastal and non-coastal wetlands is shown on the Figure 2. Non-coastal wetlands account for approximately 9 percent of the total Cape Carteret land area.

G. Public Water Supply Watersheds

There are no public water supply watersheds in the Cape Carteret 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 the portion of Pettiford Creek downstream of Starkey Creek as the only primary nursery area within the Cape Carteret planning area.

I. Other Environmentally Fragile Areas

Significant Natural Heritage Areas

The NC Natural Heritage Program compiles a list of natural heritage areas based upon an inventory of natural diversity across the state. Natural areas are evaluated on the basis of the occurrences of rare plant and animal species, rare or high quality natural communities, and geologic features. Designation as a Significant Natural Heritage Areas does not imply that any protection or public access exists.

The NC Natural Heritage Program compiles a list of natural heritage areas based upon an inventory of natural diversity across the state. Natural areas are evaluated on the basis of the occurrences of rare plant and animal species, rare or high quality natural communities, and geologic features. Designation as a Significant Natural Heritage Area does not imply that any protection or public access exists. Cape Carteret contains portions of two significant natural heritage areas: they are the Croatan National Forest Megasite and the Bogue Inlet Macrosite. One parcel within

Cape Carteret's planning jurisdiction is part of the Croatan Game Land. The game land is located on both sides of US 58, north of NC 24.

The McLean Sanctuary, also known as Hunting Island, is owned and managed by The National Audubon Society. The sanctuary is located within the designated 100-year flood hazard area and contains some wetlands areas. This is the only sanctuary located in the Cape Carteret planning area.

The general locations of Natural Heritage Areas are shown in Figure 2. 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 Cape Carteret rises fairly rapidly from the sound shore to a maximum elevation of about 40 feet above mean sea level (msl). In the area between NC 24 and the shoreline, the maximum elevation is approximately 25 feet msl. North of NC 24, elevations generally are above 20 feet msl with one area reaching nearly 40 feet msl. Along most of the northern town limits, Pettiford Creek is characterized by a bluff which rises sharply to above 10 feet msl.

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 table below delineates the environmental features which are included in each land class:

Table 23 *Environmental Features within Land Classes*			
Layer	**Class I**	**Class II**	**Class III**
Coastal Wetlands			**X**
Exceptional or Substantial Non-Coastal Wetlands			**X**
Beneficial Non-Coastal Wetlands		**X**	
Estuarine Waters			**X**
Public Trust Areas			**X**
Soils with Slight or Moderate Septic Limitations	**X**		
Soils with Severe Septic Limitations			**X**
Flood Zones		**X**	
Storm Surge Areas		**X**	
Wellhead Protection Areas		**X**	
Water Supply Watersheds		**X**	
Significant Natural Heritage Areas		**X**	
Protected Lands			**X**
HQW/ORW Watersheds		**X**	

Based upon the environmental conditions assigned to each land class as delineated in the above table, the overwhelming majority (98.9%) of the land area in the Cape Carteret planning jurisdiction falls into Class III, serious hazards and limitations. Class II lands (moderate hazards and limitations) account for approximately 1.1 percent of the Town's land area. No land area is classified as Class I, minimal hazards and limitations. Land classes within Cape Carteret 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 by establishing a public sewer service. The impact of adequate infrastructure to overcome environmental limitations is demonstrated in Section 3.5, Land Suitability Analysis; Figure 6, 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.

Cape Carteret is within subbasins 03-05-01 (White Oak River) and 03-05-03 (Newport River) of the White Oak River Basin. Cape Carteret comprises approximately 0.19% of the White Oak River Basin's geographical area. The Town's population comprised 0.38% of the population present in the river basin in 2001.

Table 24:
Overview of the White Oak River Subbasins

Subbasin 03-05-01 at a Glance	**Subbasin 03-05-03 at a Glance**
Land and Water Area (sq. mi.) Total area: 351 Land Area: 322 Water Area: 29	**Land and Water Area (sq. mi.)** Total area: 228 Land area: 168 Water area: 60
Population 1990 Est. Pop.: 39,388 people Pop. Density: 122 persons/mi^2	**Population Statistics** 1990 Est. Pop.: 11,404 people Pop. Density: 68 persons/mi^2
Land Cover (%) Forest/Wetland: 76 Water: 8 Urban: 1 Cultivated Crop: 11 Pasture/ Managed Herbaceous: 3	**Land Cover (%)** Forest/Wetland: 59 Surface Water: 26 Urban: 4 Cultivated Crop: 6.5 Pasture/ Managed Herbaceous: 4
Water Area Stream Miles: 116 Estuarine Acres: 11,567 Coastal Miles: 8 Shellfish Harvest Acres: 11,239	**Water Area:** Stream Miles: 18 Estuarine Acres: 34,723 Coastal Miles: 25 Shellfish Harvest Acres: 34,146

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

White Oak River Subbasin 03-05-01. This subbasin consists of the White Oak River and its tributaries in Onslow, Jones, Craven, and Carteret counties. Most of this area, including its two lakes (Catfish Lake and Great Lake), lies within the Croatan National Forest and Hoffman State Forest and is relatively undisturbed. A significant portion of waters in this subbasin are estuarine, including the waters around Hammocks Beach State Park, the intracoastal waterway, Bogue Sound, much of the White Oak River, and most of Queens Creek and Bear Creek. With the exception of Maysville, most development is on the coast near the towns of Swansboro and Cape Carteret. There are no major dischargers in this subbasin. Swansboro WWTP is the largest discharger of wastewater and discharges 0.3 million gallons per day into Fosters Creek.

A stretch of approximately two miles of the White Oak River between Spring Branch and Hunters Creek has been classified as High Quality Waters and it is a primary nursery area (PNA) designated by the Division of Marine Fisheries. Two other areas have been classified as Outstanding Resource Waters (ORW) based on the existence of excellent water quality and significant aquatic resources. The first are the waters between Bear Island (Hammocks Beach State Park) and the Intracoastal Waterway (ICW). The second area and larger of the two extends from Bogue Inlet eastward including all of Bogue Sound within this subbasin. This area includes Taylor Bay, but excludes all other creeks and bays. Water quality in the sound is considered to be generally excellent due largely to good tidal flushing.

Newport River Subbasin 03-05-03. This subbasin lies in the center of Carteret County, extending from the Croatan National Forest to Beaufort and Beaufort Inlet. Most of this subbasin is estuarine with the Newport River as the only major source of freshwater. With the exception of Newport, most of the development in this subbasin is along the coast; Morehead City, Beaufort, Atlantic Beach, and Bogue Banks. 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.

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 35.2 acres of Pettiford Creek, located within subbasin 03-05-01, from its source to the mouth of Pettiford Creek Bay. Waterbodies within subbasin 03-05-03 listed as impaired include portions of Bogue Sound and Hunting Island Creek (2.7 acres) from its source to Bogue Sound. 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 Cape Carteret vicinity include Pettiford Creek located adjacent to the northern boundary of the town's planning jurisdiction and Hunting Island Creek located west of Cape Carteret in the Town of Bogue. 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. 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 25
Risk Level Rating of Weather Events

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 Cape Carteret 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 Cape Carteret and Carteret County in general. Wildfires have occurred in the Croatan National Forest and adjacent forest lands within the last 15 years.

Cape Carteret 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 134 National Flood Insurance Program policies in force within Cape Carteret totaling over $26.9 million. According to loss statistics data from the Federal Emergency Management Agency (FEMA) for the period January 1978 to December 2003, 70 claims were filed and the amount of payments made totaled approximately $565,000.

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 Cape Carteret planning jurisdiction, there are no major point source dischargers.

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 Cape Carteret 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.

The DWQ has determined 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 Cape Carteret 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, for example, can be suggestive, but 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. 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. The West Carteret Water Corporation has completed a Wellhead Protection Plan and it was approved by the Public Water Supply Section of the NCDENR in November of 2001.

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. 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 Cape Carteret is residential, accounting for almost 32 percent of the total land area of the town's planning jurisdiction and over 57 percent of the total developed acreage. Public and institutional land uses comprise the second largest land use category in Cape Carteret. The largest single use within the public and institutional land use category is the Star Hill Golf and Country Club which accounts for approximately 90 percent of the total acreage in this category. Commercial land uses make up approximately 11 percent of the developed land area.

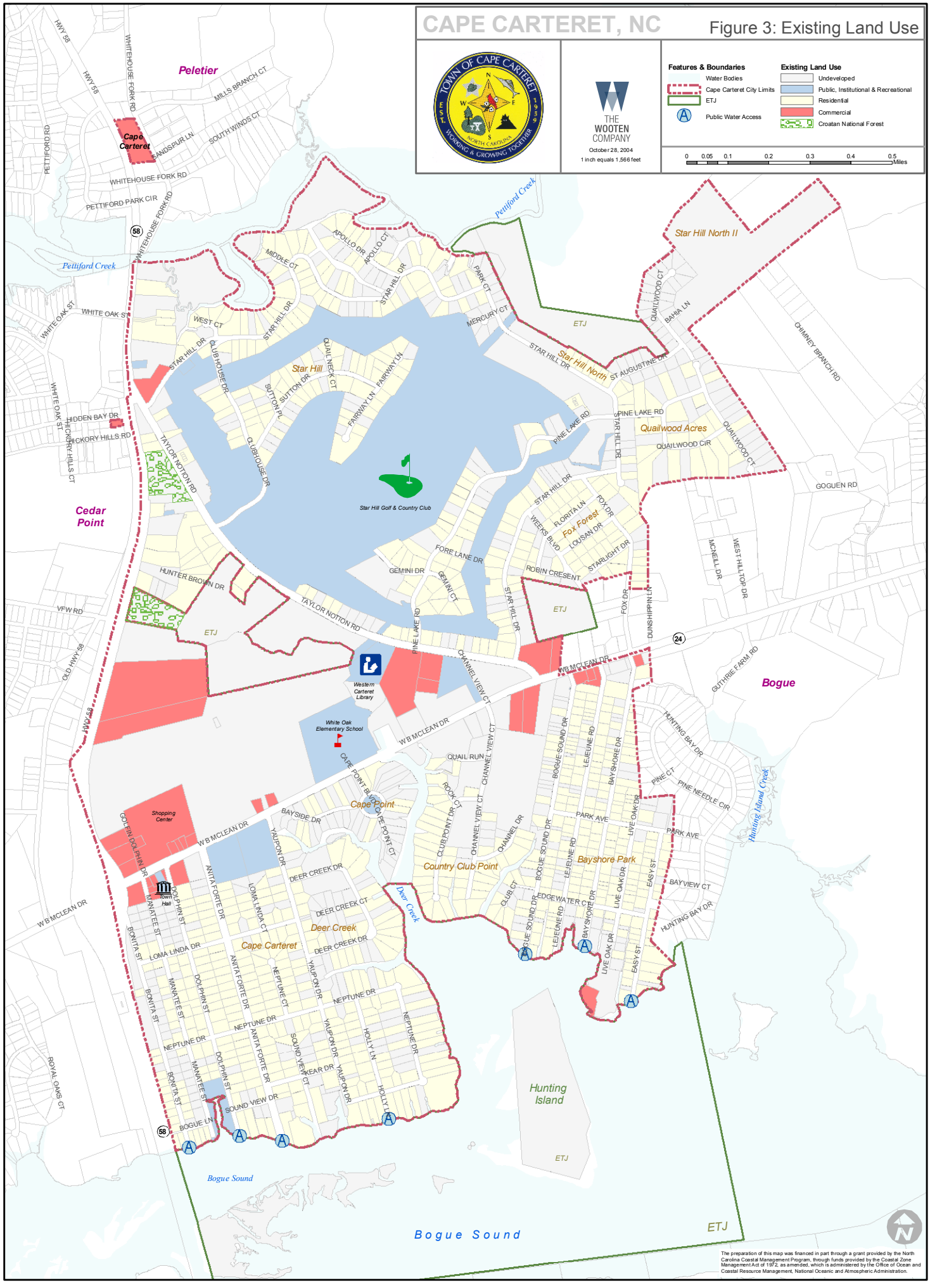
A considerable amount of vacant land remains throughout the town's planning region, estimated at approximately 45 percent of the total acreage within the town's corporate limits and its extraterritorial planning and zoning jurisdiction. Figure 3 delineates the existing land use patterns with the Cape Carteret planning jurisdiction.

A. Description of Land Use Patterns within Watersheds

The Cape Carteret planning jurisdiction is located within two 14-digit watersheds (Pettiford Creek, #03020106020030 and Deer Creek, #03020106020040) as delineated by the Natural Resource Conservation Service of the U.S. Department of Agriculture. These two watersheds are located with subbasin 030501 and 030503, respectively of the White Oak River Basin. The boundaries of these two watersheds are delineated on Figure 3.

The Pettiford Creek watershed encompasses roughly the northern one-half of the Cape Carteret planning jurisdiction. The predominant land use within this watershed is low density single-family residences, but the largest, single land use is the Star Hill Golf and Country Club. Several large, undeveloped tracts are within this watershed and are located primarily in the northern and northeastern portions of the town's ETJ area on the immediate periphery of the corporate limits. More of this land has recently been developed as residential single family homes and additional subdivisions are anticipated. The Star Hill North II Subdivision, currently under construction northeast of the country club, will continue the trend of residential development in this area. Some of the land in this area is held by a land trust and, therefore, will not be developed in the foreseeable future. The NC Highway 58 corridor is perhaps the most heavily developed portion of this watershed and includes a mixture of commercial, residential, and institutional land uses.

The Deer Creek watershed encompasses the most intensively developed portions of the Cape Carteret planning jurisdiction. Again, the predominant land use is low density single-family residences and includes the Country Club, Country Club Point, Cape Point, Bayshore Park, Fox Forest, and Quail Wood Acres Subdivisions. Commercial and institutional land uses within this watershed are chiefly located along


CAPE CARTERET, NC
Figure 3: Existing Land Use
TOWN OF CAPE CARTERET
EST. 1959
WORKING & GROWING TOGETHER
NORTH CAROLINA
THE WOOTEN COMPANY
October 28, 2004
1 inch equals 1,566 feet
Features & Boundaries
Water Bodies
Cape Carteret City Limits
ETJ
Public Water Access
Existing Land Use
Undeveloped
Public, Institutional & Recreational
Residential
Commercial
Croatan National Forest
0 0.05 0.1 0.2 0.3 0.4 0.5 Miles
Peletier
Cape Carteret
Cedar Point
Bogue
Star Hill North II
Star Hill North
Star Hill
Quailwood Acres
Fox Forest
Cape Point
Country Club Point
Bayshore Park
Deer Creek
Hunting Island
Star Hill Golf & Country Club
Western Carteret Library
White Oak Elementary School
Shopping Center
Town Hall
Pettiford Creek
Hunting Island Creek
Bogue Sound
HWY 58
WHITEHOUSE FORK RD
PETTIFORD RD
PETTIFORD PARK CIR
MILLS BRANCH CT
SANDSPUR LN
SOUTH WINDS CT
WHITE OAK ST
HIDDEN BAY DR
HICKORY HILLS RD
HICKORY HILLS CT
TAYLOR NOTION RD
HUNTER BROWN DR
VFW RD
OLD HWY 58
APOLLO DR
APOLLO CT
MIDDLE CT
STAR HILL DR
WEST CT
CLUBHOUSE DR
QUAIL NECK CT
SUTTON DR
SUTTON PL
FAIRWAY LN
PARK CT
MERCURY CT
ST AUGUSTINE DR
QUAILWOOD CT
BAHIA LN
CHIMNEY BRANCH RD
PINE LAKE RD
QUAILWOOD CIR
GOGUEN RD
FLORITA LN
FOX DR
WEEKS BLVD
LOUSAN DR
STARLIGHT DR
ROBIN CRESENT
FORE LANE DR
GEMINI DR
GEMINI CT
MCNEILL DR
WEST HILLTOP DR
CUSHIONHEAD LN
GUTHRIE FARM RD
W B MCLEAN DR
CHANNEL VIEW CT
QUAIL RUN
CAPE POINT BLVD
CAPE POINT CT
BAYSIDE DR
GOLDEN DOLPHIN DR
YAUPON DR
DEER CREEK DR
DEER CREEK CT
ANITA FORTE DR
LOMA LINDA CT
LOMA LINDA DR
BONITA ST
MANATEE ST
DOLPHIN ST
NEPTUNE CT
NEPTUNE DR
SOUND VIEW CT
SOUND VIEW DR
HOLLY LN
BOGUE LN
ROYAL OAKS CT
ROCK CT
CLUB POINT DR
BOGUE SOUND DR
LEJEUNE RD
BAYSHORE DR
LIVE OAK DR
EASY ST
CLUB CT
EDGEWATER CT
PARK AVE
PINE CT
PINE NEEDLE CIR
HUNTING BAY DR
BAYVIEW CT
ETJ
Bogue Sound
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 NC Highway 24 corridor and in the northeast corner of the NC Highway 24/58 intersection. Institutional land uses within this watershed include the White Oak Elementary School and the Cape Carteret Town Hall facilities. The majority of the vacant, undeveloped land in this watershed is located along the north and south sides of NC Highway 24. Many vacant lots are also located within the residential subdivisions delineated above.

B. Description of Existing Land Uses

Residential. The residential classification includes all residential structural types and densities. The majority of residential uses in Cape Carteret are low density, detached single-family residences at densities of 1-2 dwelling units per acre. There are a few duplex and multi-unit structures. Further development of residential structures other than single family detached dwellings is not likely given the current zoning patterns and desires of the community to retain a low density character.

Currently, there are seven primary areas of residential land uses: (i) the Cape Carteret Subdivision located west of Deer Creek between NC Highway 24 and Bogue Sound, (ii) the Country Club Point Subdivision located east of Deer Creek and north of Bogue Sound, (iii) the Bayshore Park Subdivision located north of the Country Club Point Subdivision and south of NC Highway 24, (iv) the Star Hill Subdivision located on the northeast side of Taylor Notion Road generally between NC Highway 24 and Pettiford Creek, (v) the Fox Forest Subdivision located southeast of Star Hill Drive and north of NC Highway 24, (vi) the Quailwood Acres Subdivision located east of Star Hill Road at the terminus of Pine Lake Road, and (vii) Cape Point Subdivision located between NC 24 and Deer Creek. Another approximate 115-lot residential subdivision (Star Hill North, Section II), which was recently annexed to the Town, is being developed northeast of the Quailwoods Acres Subdivision. All other residential land uses are strip residential areas abutting Taylor Notion Road and NC Highway 58 and a small subdivision along Hopeland Road.

Over 81 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. Of the 575 dwelling units located in Cape Carteret in 2000, over 82 percent were single-family residences, less than 1 percent were multi-family dwellings, and slightly over 17 percent were manufactured homes. Cape Carteret's proportion of single-family dwellings is considerably higher than that found throughout Carteret County and that statewide. The town's proportion of manufactured homes is lower than the county percentage but higher than the statewide percentage. The majority of the existing manufactured homes are located within the Bayshore Park Subdivision. The overwhelming majority of recent construction has been single-family residential. Of the residential construction since 1998, almost 93 percent has been single-family detached dwellings and about 7 percent has been manufactured homes.

The majority of future residential land uses are expected to be infill development within the existing subdivisions, such as Star Hill North Section 2, as well as new residential developments on vacant land located on the periphery of the current town limits, particularly on the west side of Taylor Notion Road and along the northeastern boundary of the current planning and zoning jurisdiction.

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 in the northeastern corner of the NC Highway 24/58 intersection and adjacent to the north side of the NC Highway 24 corridor. Smaller commercial areas are located along the south side of the NC Highway 24 corridor between Bonita Street and Anita Forte Drive and in the intersection area of Taylor Notion Road NC Highway 24.

The town's current zoning patterns indicate that future commercial areas are anticipated to be located along the NC Highway 24 corridor between the Taylor Notion Road/NC 24 intersection and the White Oak School property and between Channel View Court and Bayshore Drive.

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

The majority of the town's developed land contained within this land use category is primarily due to large amount of acreage (approximately 240 acres) within the Star Hill Golf and Country Club in north central Cape Carteret. Other land uses within this category include the Cape Carteret Town Hall facilities and police station, the White Oak Elementary School, the Western Carteret Library, churches, privately-owned dock facilities, and publicly-owned sound access sites. The privately-owned air strip located within the Star Hill Subdivision is also included in this land use category.

Industrial Land Use. There are currently no traditional industrial or manufacturing land uses within the town's planning region. Limited light industrial and heavy commercial uses are, however, permissible within the town's B-30, Light Industrial zoning classification. Currently, no large tracts or large amounts of acreage are zoned for light industrial use.

Agriculture. There are no agricultural land uses within the Cape Carteret planning jurisdiction.

Forestry. There are no commercial forestry land uses within the Cape Carteret planning jurisdiction. However, two small Croatan National Forest tracts are located on the east side of NC Highway 58.

Undeveloped. Land classified as vacant is 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 region, but the largest tracts are located within the triangle formed by Taylor Notion Road, NC Highway 24, and NC Highway 58; along the northeastern periphery of the town's ETJ; adjacent to the north side of NC Highway 24 between the Taylor Notion Road intersection and the White Oak Elementary School; and between NC Highway 24 and the Country Club Point Subdivision. Vacant building lots are located within the existing residential subdivisions located throughout the jurisdiction.

The overwhelming majority of the vacant tracts and lots are currently zoned for residential use, either R-20, Single-family Residential or R-30, Single-family Residential. R-10, Single-family Residential zoning is limited to the southeastern portion of Cape Carteret in the Bayshore Park Subdivision area. The only multifamily

zoning of vacant land is one tract located northeast of the intersection of Starhill Drive and NC Highway 24. The majority of the vacant tracts have potential for low density residential development. Several residentially-zoned vacant tracts directly abutting the south side of Pettiford Creek are wetlands areas that have low development potential and are best suited for conservation or open space uses.

Commercial development is anticipated on the vacant parcels located along the NC Highway 24 corridor east of the White Oak Elementary School and in the northeast quadrant of the intersection of NC Highways 24 and 58. Both of these areas are currently zoned B-20, Retail Sales and Shopping Centers. Approximately 6 vacant lots located in the southeast quadrant of the intersection of NC Highways 24 and 58 are zoned B-10, Business and Professional Offices.

C. Historic, Cultural, and Scenic Areas

The Cape Carteret planning area contains many archaeologically sensitive sites. The North Carolina Division of Archives and History has identified 11 sites that they deem significantly important. All of these sites have been disturbed by urban development. However, artifacts from the various Indian tribes that inhabited the region could still be found and as a result, the NC Division of Archives and History has recommended that plans for further development in these areas be carefully reviewed. The policy of the Office of State Archaeology is not to disclose the location of such sites in public documents. Any further development that would adversely impact the sites is subject to applicable state and/or federal laws and regulations.

D. Estimates of Land Area by Existing Land Use Category

Table 26
Existing Land Use By Type and Acreage
Cape Carteret Planning Jurisdiction
2004

Land Use	Acres	Percent of Developed Acreage	Percent of Total Acreage
Residential	491.3	57.5%	31.7%
Commercial	90.5	10.6%	5.8%
Public/Institutional/Recreational	272.0	31.9%	17.5%
Industrial	0.0	0.0%	0.0%
Agricultural	0.0	0.0%	0.0%
Dedicated Open Space	0.0	0.0%	0.0%
Undeveloped[1]	697.3	0.0%	45.0%
Totals	1,551.0	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 and Land Use/Water Conflicts

The following have been identified as existing conflicts in Cape Carteret:

- Loss of natural buffers as land is developed into more intensive uses.

- Land development occurring without a coordinated comprehensive stormwater management plan.
- Uncoordinated street planning that hinders interconnection between existing developed and developing areas.

3.3.3 Description of Development Trends

The Town of Cape Carteret is surrounded on its northwestern, western and eastern boundary by other municipalities (Peletier, Cedar Point, and Bogue) and by Bogue Sound on its southern boundary. Consequently, any future expansions of the Cape Carteret corporate area will be limited to the northeast. Future growth and development will primarily be the result of infill development on undeveloped tracts within the current corporate limits and redevelopment of existing developed properties. The largest tracts available for infill development are located within the triangle formed by Taylor Notion Road, NC Highway 24, and NC Highway 58.

Most of the recent development within Cape Carteret has been low density residential in nature. Nonresidential development has occurred primarily along the NC 24 corridor and adjacent to the south side of Taylor Notion Road.

3.3.4 Projections of Land Needs

The following table provides short and long-term projections of land area needed to accommodate the projected future permanent and seasonal population projections. The residential 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 commercial and public/institutional land needs projections are based upon the proportional relationship that the current acreages of these two land use categories represent of the total existing residential acreage (i.e., existing commercially-used land represents about 19 percent of the existing residential acreage and public/institutionally-used acreage represents about 7 percent). The nonresidential land needs projections assume that these proportional ratios will remain constant in future years. 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.

Table 27
Land Needs Projections
Cape Carteret Planning Jurisdiction

	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025	Total 2000-2025
Projected Permanent Population	1,333	1,455	1,607	1,756	1,942	---
Permanent Population Increase	108	122	152	149	186	717
Permanent Dwelling Unit Increase*	49	55	68	67	84	322
Seasonal Dwelling Population Increase	42	42	54	52	65	255
Seasonal Dwelling Unit Increase**	14	14	18	17	22	85
Total Dwelling Unit Increase	63	69	86	84	105	407
Residential Acres Per Dwelling Unit***	0.5	0.5	0.5	0.5	0.5	---
Additional Residential Acres Needed	**75.2**	**81.9**	**103.1**	**100.3**	**125.6**	**486.0**
Additional Commercial Acres Needed	**14.3**	**15.6**	**19.6**	**19.1**	**23.9**	**92.3**
Additional Public and Institutional Acres Needed	**5.3**	**5.7**	**7.2**	**7.0**	**8.8**	**34.0**

* Assumes 2.2275 persons per household

** Assumes 96.8% of the seasonal population will be in seasonal dwelling units

*** Assumes 0.5 acre per person

Source: The Wooten Company, July 2006

Based upon the existence of almost 700 undeveloped acres within the Cape Carteret planning jurisdiction, it appears that sufficient undeveloped land currently exists within the planning jurisdiction to meet projected land needs through 2025.

3.3.5 Description of Conflicts with Class II and Class III Lands

Almost the entire Cape Carteret planning jurisdiction, including existing developed properties, is classified as Class III lands as defined in Section 3.2.2 and as shown of the Environmental Conditions Composite Map. Many of the potential conflicts with Class III lands can be mitigated through the provision of public utilities and careful site planning. 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.

Cape Carteret receives water from the West Carteret Community Water Corporation, a nonprofit community water association that provides water service to a total of approximately 4,512 customers, over 95 percent of which are residential users. Water is drawn from the Castle Hayne Aquifer and distributed to the various localities situated along NC Highways 58 and 24. The water system consists of four 10-inch wells located in the Croatan National Forest. The system has a current available supply of 1.706 MGD and a total water treatment capacity of 1.700 MGD. The average daily use in 2002 was 0.800 MGD with a peak daily use of 1.176 MGD. The total treated water storage capacity is 1.35 MG in two elevated storage tanks. The system consists of approximately 101 miles of distribution line primarily along the NC Highway 24 and 58 corridors in the White Oak Township of Carteret County.

According to the West Carteret Water Corporation, the total number of meter connections in the Cape Carteret corporate limits in 2004 is 837. Some of these meter connections are not being utilized year-round. This is primarily due to the seasonal nature of this area or because of the customers' wishes to suspend billing on their account. West Carteret Water Corporation is a voluntary system so homeowners can utilize their meter or a well. The average annual daily water use by these customers in 2003 was 0.074 MGD. The largest water user in 2003 in Cape Carteret was the Cape Carteret Aquatic and Wellness Center. The existing West Carteret Water Corporation water system in the Cape Carteret area is delineated in Figure 4, Water System Map.

According to the West Carteret Water Corporation's 2002 Water Supply Plan, four additional wells with a total supply of 1.540 MGD are planned between 2006 and 2021 to augment the existing available water supply, thereby increasing the total available supply to 3.246 MGD. Projected average daily demand is expected to increase from the current level of 0.800 MGD to 1.640 MGD by 2030 or 51 percent of the total available supply. Average daily water demand is not projected to exceed 80 percent of available water supply through 2050.

Based upon the estimated peak population in the Cape Carteret planning jurisdiction and an average consumption rate of 60 gallons of water per person per day, the projected future water demand totals 118,920 gpd in 2010; 143,520 gpd in 2020; and 173,700 gpd in 2030.

Water system extensions are anticipated in the area bounded by Taylor Notion Road, NC Highway 58, and NC Highway 24 where the largest amount of new development is expected to occur. Also, water system extensions are projected along the northeastern boundary of the existing ETJ as new residential developments are built in this area.

3.4.2 Wastewater System

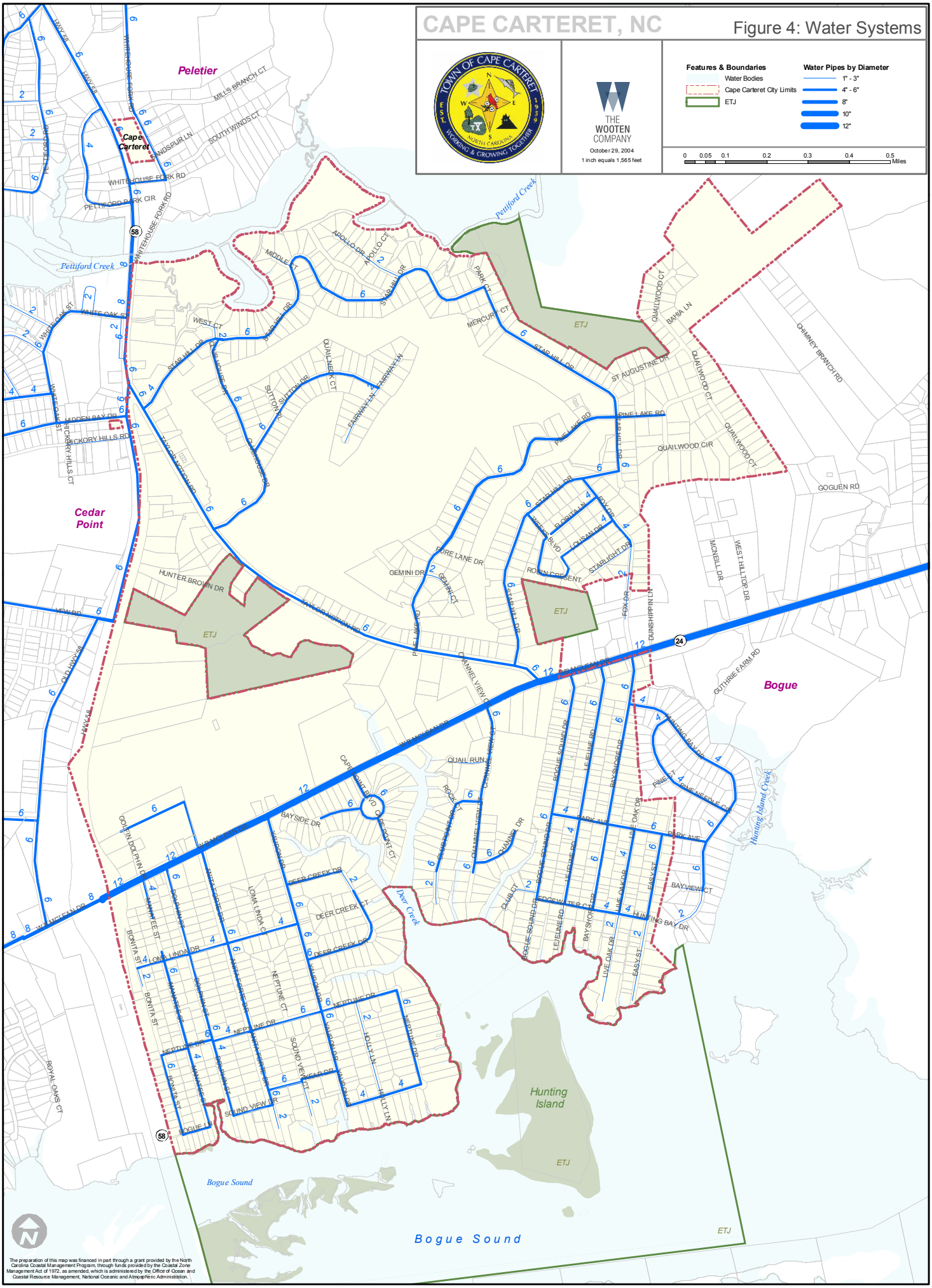
Cape Carteret does not have access to a public sewer system; thus, public wastewater treatment facilities are not available. Wastewater disposal is provided by individual subsurface disposal systems or by privately-owned package treatment plants. There are no pending plans for public wastewater collection and treatment facilities to be constructed in the Cape Carteret area. Information regarding private wastewater systems in the Cape Carteret planning jurisdiction is not available.

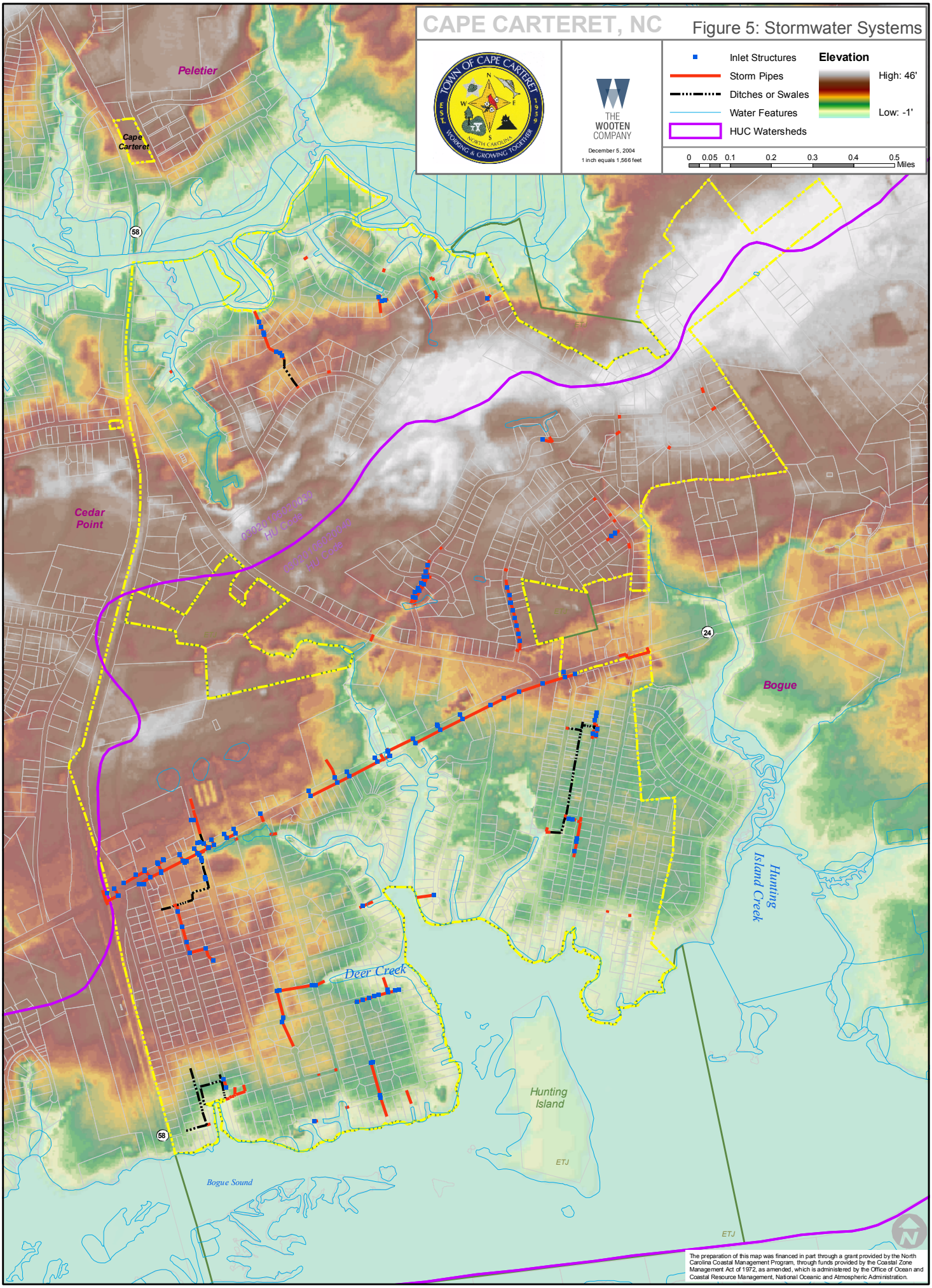
Based upon the estimated peak population in the Cape Carteret planning jurisdiction and an average consumption rate of 50 gallons of wastewater per person per day, the projected future wastewater demand totals 99,100 gpd in 2010; 119,600 gpd in 2020; and 144,750 gpd in 2030.

3.4.3 Stormwater System

The existing drainage facilities within the Town of Cape Carteret consist of a system of small (12-inch diameter and smaller) corrugated plastic piping, catch basins, and drainage ditches and swales (See Figure 5, Stormwater Systems Map).

In 2001, the Town of Cape Carteret undertook a stormwater mapping project to address issues related to water quality and flooding of property. The first phase of this project involved the accurate mapping of the existing stormwater facilities and the identification of potential problem areas. The second phase of the project involved reviewing the identified problem areas with the Town staff and outlining a course of action to address each problem area. Recommendations for piping and ditching improvements were made for 15 problem areas. As of December 2004, approximately 60 percent of the recommendations have been implemented since the preparation of the report, specifically on Star Hill Drive, Sutton Drive, Pine Lake Road, Gemini Court, Park Avenue, and Sound View Court. Additional improvements are planned on Pine Lake


CAPE CARTERET, NC
Figure 4: Water Systems
TOWN OF CAPE CARTERET
WORKING & GROWING TOGETHER
NORTH CAROLINA
THE WOOTEN COMPANY
October 29, 2004
1 inch equals 1,565 feet
Features & Boundaries
Water Bodies
Cape Carteret City Limits
ETJ
Water Pipes by Diameter
1" - 3"
4" - 6"
8"
10"
12"
0 0.05 0.1 0.2 0.3 0.4 0.5 Miles
Peletier
Cape Carteret
Cedar Point
Bogue
Hunting Island
Bogue Sound
Pettiford Creek
Deer Creek
Hunting Island Creek
ETJ
WHITEHOUSE FORK RD
MILLS BRANCH CT
SOUTH WINDS CT
SANDSPUR LN
PETTIFORD PARK CIR
MIDDLE CT
APOLLO DR
APOLLO CT
STARHILL DR
PARK CT
MERCURY CT
WEST CT
QUAILNEEK CT
SUTTON CT
FAIRWAY LN
FAIRWAY LN
QUAILWOOD DR
QUAILWOOD CT
BAHIA LN
CHIMNEY BRANCH RD
ST AUGUSTINE DR
PINE LAKE RD
QUAILWOOD CIR
GOGUEN RD
WHITE OAK ST
HIDDEN BAY DR
HICKORY HILLS RD
HICKORY HILLS CT
TAYLOR BROUGHTON RD
HUNTER BROWN DR
VIEW DR
OLD HWY 58
HWY 58
GEMINI DR
GEMINI CT
PURE LANE DR
PINE VALLEY DR
ROBIN CRESENT
STARLIGHT DR
FOX DR
JOHNSON HILL
MONELL DR
WEST HILLTOP DR
GUTHRIE FARM RD
CHANNEL VIEW CT
CHANNEL VIEW DR
QUAIL RUN
CAPE CARTERET BLVD
CAPE CARTERET CT
BAY SIDE DR
ROCK POINT CT
CHANNEL DR
ROGUE SOUND DR
LEJEUNE RD
BAYSHORE DR
LIVE OAK DR
EASY ST
PINE NEEDLE CIR
PARK AVE
BAYVIEW CT
HUNTING BAY DR
EDGEWATER DR
DUBLET
GOLDEN DOLPHIN DR
DEER CREEK DR
DEER CREEK CT
LOMA LINDA CT
LOMA LINDA DR
BONITA ST
MANATEE ST
DOLPHIN ST
NEPTUNE DR
NEPTUNE CT
SOUND VIEW DR
SOUND VIEW CT
HOLLY LN
ROGUE LN
ROYAL OAKS CT
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.


CAPE CARTERET, NC
Figure 5: Stormwater Systems
TOWN OF CAPE CARTERET
WORKING & GROWING TOGETHER
NORTH CAROLINA
THE WOOTEN COMPANY
December 5, 2004
1 inch equals 1,566 feet
Inlet Structures
Storm Pipes
Ditches or Swales
Water Features
HUC Watersheds
Elevation
High: 46'
Low: -1'
0 0.05 0.1 0.2 0.3 0.4 0.5 Miles
Peletier
Cape Carteret
Cedar Point
Bogue
Deer Creek
Hunting Island
Hunting Island Creek
Bogue Sound
ETJ
58
24
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.

Road, Loma Linda Court, and Channel View Drive. A complete listing of the stormwater problem areas identified in the 2001 report is provided in Appendix L.

3.4.4 Transportation System

The Town of Cape Carteret maintains over 17 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. The state also has maintenance responsibility for all bridges in the area. The major road system is delineated on Figure 4.

The Carteret County Transportation Committee, on which Cape Carteret 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 priority of particular concern to Cape Carteret is the construction of an overpass at the intersection of NC Highway 24 and NC Highway 58. The overpass was proposed due to the current and projected traffic volumes on Highway 24 which exceed the capabilities of the current at-grade intersection. The overpass is also considered necessary to facilitate evacuations from Bogue Banks during storm threats.

A. Proposed Highway Improvements

Transportation improvement projects, as determined by the NCDOT, are cataloged in the *2004-2010 Transportation Improvement Program*. There is currently one transportation improvement project directly impacting the Town of Cape Carteret. This project (R-4721) is the conversion of the NC 24 and NC 58 at-grade intersection to an interchange. This project is currently listed as an unfunded project.

B. Major Streets with Capacity Deficiencies

The Transportation Improvement Program Priorities for Carteret County identified NC 24 and portions of NC 58 at or over capacity in 1996. Streets with projected 2025 traffic volumes that would be near or exceed practical capacities also include NC 24 and NC 58. The 2025 average summer weekday traffic count on NC 58 at the Bogue Sound bridge was projected to total 26,200 ADT.

C. Traffic Volumes

As would be expected, the heaviest traffic volumes are on the major and NC numbered thoroughfares (NC 24 and NC 58). The following table summarizes the 2002 traffic volumes on major streets in the Cape Carteret area.

Table 28
2002 Average Daily Traffic

Highway	ADT	Location
NC 24	20,000	West of NC 58 intersection
	16,000	East of Taylor Notion Road intersection
	15,000	East of NC 58 intersection
NC 58	15,000	South of NC 24 intersection
	8,500	North of Pettiford Creek

Source: 2002 Average Daily Traffic, Cape Carteret, NCDOT

The Town of Cape Carteret recognizes the need to improve vehicular circulation within the corporate limits. To that end, the Town stresses the need for developing a local street system that promotes interconnection between developed and developing properties. One area of town where this is particularly important is the area bounded by Taylor Notion Road, NC 24, and NC 58. This area contains the largest amount of undeveloped land which is expected to develop in the near future. As each individual tract is developed, it is critical to ensure that the proposed streets within the new development allow for a connection to adjoining properties. Such connections will ultimately result in a new local street which ties all of the developing properties with the existing major street network. NC Highway 24 has been designated a Strategic Highway Corridor by the North Carolina Department of Transportation and in the future is expected to be developed as an expressway with high mobility and low access. Land use policy guidelines for mobility protection recently developed by the North Carolina Department of Transportation should be adhered to as land development occurs along this major highway corridor.

Other areas where improved street connectivity is proposed include the Quailwood Acres and the Star Hill North II Subdivisions. Quailwood Court is proposed to be extended from its southern terminus southward to NC Highway 24. A street connecting Bahia Lane in the Star Hill North II Subdivision to NC Highway 24 is also proposed. Both of these proposed street connections would traverse the Town of Bogue planning jurisdiction. Consequently, coordination with Bogue will be necessary to ensure the feasibility of such future street connections.

The Town is also interested in developing a sidewalk or trail system to improve pedestrian circulation between residential areas, commercial areas, and community facilities. A sidewalk or pedestrian trail along the NC 24 and Taylor Notion Road corridors is particularly desirable. In August 2006, the Town of Cape Carteret amended its Subdivision Regulations and Zoning Ordinance to require pedestrian improvements in all new subdivisions and commercial developments as well as in the redevelopment of subdivisions and commercial developments. Specifically, the Town requires a sidewalk with a minimum width of five feet to be installed adjacent to the south side of NC Highway 24 and the east side of Taylor Notion Road. Along the west side of Taylor Notion Road, a hike-bike trail of at least eight feet in width is required. Sidewalks with a minimum width of six feet and a hike-bike trail of at least eight feet in width are required along the north side of NC Highway 24.

A hike-bike trail linking the West Carteret Library with the White Oak Elementary School is also proposed.

The general location of the proposed street extensions, sidewalks, and hike-bike trails are delineated in Figure 7, Future Land Use Plan. The proposed alignments shown in Figure 7 are conceptual only and are intended to illustrate the general locations of these proposed street, trail, and sidewalk improvements.

Air service to Cape Carteret is available through commercial airports located in nearby New Bern and Jacksonville.

3.4.5 Police Protection

Cape Carteret receives police protection from the Cape Carteret Police Department which is located on 204 W.B. McLean Drive. The Cape Carteret Police Department, with

a staff of 5 full-time, 3 part-time, and 4 reserve personnel, appears to have adequate manpower to provide police services to the community.

3.4.6 Fire Protection and Emergency Medical Services

The Western Carteret Volunteer Fire and Rescue District provides fire prevention and suppression services, as well as, emergency medical services to the Town and a fire district that encompasses areas outside the corporate limits of Cape Carteret. The fire insurance rating within Western Carteret fire district is a 6. Correspondingly, the volunteer fire department must retain a minimum of 20 active firefighters. In 2003, the District responded to approximately 171 fire calls. Along with 15 volunteer rescue personnel, the 20 fire personnel also respond as emergency medical technicians; combined, the staff responded to approximately 700 emergency medical and rescue calls in 2003. Basic emergency medical treatment and transportation to hospitals are the general services provided by the fire and rescue squad. The equipment of the fire and rescue squad appears adequate to provide fire and emergency medical services through the study period. All firefighting equipment meets the National Fire Protection Association's standards. There is a projected need for additional personnel. The District estimates a need for 6 additional fire/EMT personnel which will permit staffing three shifts with 2 additional personnel each. The fire station is located just off NC 24 in Cedar Point.

3.4.7 Solid Waste Collection and Disposal

Solid waste collection services for the town are provided through a contract with a private garbage collector. Unlike county residents, Cape Carteret residents are not required to pay an annual waste collection fee. Rather, this service is funded through the Town's property tax collections. Currently, curbside garbage collection occurs once a week. The frequency of brush and yard debris collection is determined by seasonal demands. A curbside recycling program is also in place and collections are made once every two weeks. White goods are collected once a year. No deficiencies with the existing collection system have been identified.

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 Cape Carteret currently maintains seven public waterfront accesses to Bogue Sound (see Figure 3, Existing Land Use Map for the location of each access point). The major private recreational facility located in the town is a public golf course located in the Star Hill neighborhood. An aquatic and wellness center has recently been constructed on Taylor Notion Road.

A 1990 study on sound access, parks, and recreation identified water access and other recreational needs. To date however, no major recreational sites have been developed by the town. However, public water access points have been developed at seven streets that terminate at the Bogue Sound shoreline.

3.4.9 Education

Carteret County operates four schools in the Cape Carteret area. All four schools are located along highway NC24. White Oak Elementary is located in Cape Carteret while the other schools are located east of Cape Carteret. Data for the 2004-2005 school year is provided in the table below.

Table 29
Public Schools within the Cape Carteret Planning Jurisdiction

School Name	Staff	Enrollment	Grades
White Oak Elementary School	76	500	K-5
Bogue Sound Elementary School	57	432	K-5
Broad Creek Middle School	58	490	6-8
Croatan High School	76	770	9-12

3.4.10 Public Administration Ability

The Town of Cape Carteret operates under a mayor-council form of government. The town has a municipal staff of 9 full time and 2 part time employees (as well as 4 reserve police officers) that perform general administration, public works, law enforcement, and planning and zoning services. With anticipated development and growth in population, the current staffing level may need to be increased to meet future demand on municipal services.

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 following table.

Table 30
Land Suitability Model

Layer Name	----------Criteria and Rating----------				Assigned Weight	Percent Weight	Multiplier
	Least Suitable	Low Suitability	Medium Suitability	High Suitability			
	0	-2	1	2			
Coastal Wetlands	Inside		Outside				
Exceptional and Substantial Noncoastal Wetlands	Inside		Outside				
Estuarine Waters	Inside		Outside				
Protected Lands	Inside		Outside				
Federal Lands	Inside		Outside				
State Lands	Inside		Outside				
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
Totals					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. The DCM model default settings were utilized in this analysis. Layers Not Used in Cape Carteret: Land Application Sites and Water Supply Watersheds

The Land Suitability Map produced through this modeling process classifies land as High Suitability, Medium Suitability, Low Suitability, and Least Suitable. In general, the majority of the Cape Carteret 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, particularly south of Pettiford Creek and along the Bogue Sound and Deer Creek shorelines. Figure 6, Land Suitability Map graphically illustrates the suitability ratings.

Table 31
Land Suitability Ratings

Suitability Rating	Acres	Percent
High Suitability	1,117.8	72.2%
Medium Suitability	232.7	15.0%
Low Suitability	0.0	0.0%
Least Suitable	197.2	12.7%

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.

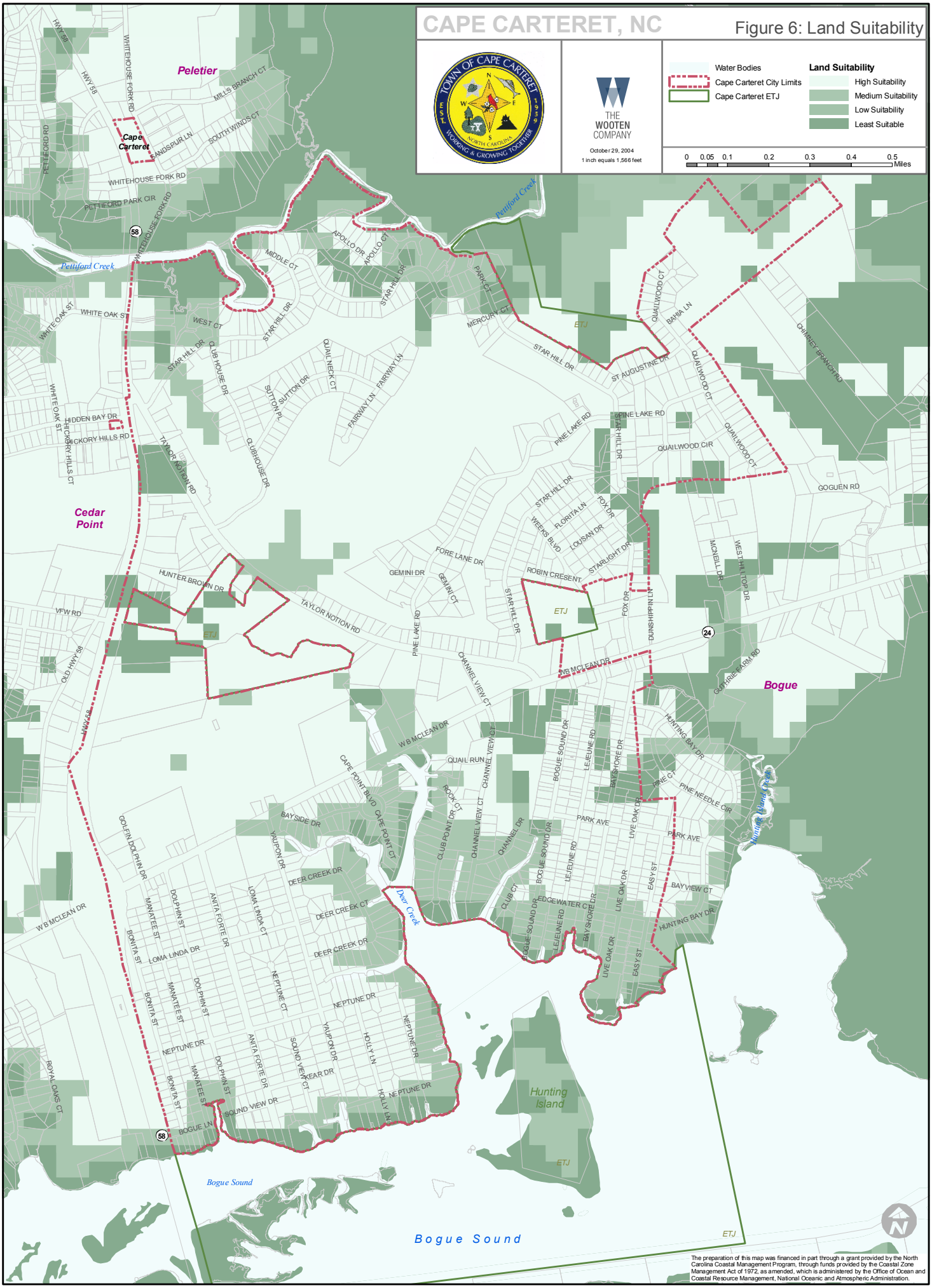
3.6 Review of Current Land Use Plan

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 Cape Carteret CAMA Land Use Plan was certified in January 1998. 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

Cape Carteret's land use and land development ordinances include a zoning ordinance, subdivision ordinance, flood damage prevention ordinance, sign ordinance, and waterways ordinance. The Town considers their existing ordinances to generally be consistent with the 1998 Land Use Plan Policies. Ordinance revisions/adoptions that have been made to ensure consistency with the 1998 Plan policies include:

- Adoption of a Waterways Ordinance in 2000.
- Adoption of a revised Flood Damage Prevention Ordinance in 2003.
- A subdivision ordinance revision regarding connections to a potable water supply.
- A zoning ordinance revision regarding driveway regulations.


CAPE CARTERET, NC
Figure 6: Land Suitability
TOWN OF CAPE CARTERET
THE WOOTEN COMPANY
October 29, 2004
1 inch equals 1,566 feet
Water Bodies
Cape Carteret City Limits
Cape Carteret ETJ
Land Suitability
High Suitability
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APOLLO CT
STAR HILL DR
PARK CT
MERCURY CT
WEST CT
WHITE OAK ST
CLUB HOUSE DR
SUTTON DR
SUTTON PL
QUAIL NECK CT
FAIRWAY LN
HIDDEN BAY DR
HICKORY HILLS RD
HICKORY HILLS CT
TAYLOR NOTTON RD
CLUBHOUSE DR
QUAILWOOD CT
BAHIA LN
ST AUGUSTINE DR
CHIMNEY BRANCH TRL
PINE LAKE RD
QUAILWOOD CIR
GOGUEN RD
FLORITA LN
FOX DR
WEEKS BLVD
LOUSAN DR
STARLIGHT DR
FORE LANE DR
GEMINI DR
GEMINI CT
ROBIN CRESENT
MONELL DR
WEST HILLTOP DR
DUNSHIPPIN LN
HUNTER BROWN DR
VFW RD
OLD HWY 58
TAYLOR NOTTON RD
PINE LAKE RD
CHANNEL VIEW CT
W B MCLEAN DR
GUTHRIE FARM RD
HUNTING BAY DR
QUAIL RUN
CAPE POINT BLVD
CAPE POINT CT
BAYSIDE DR
GOLFIN DOLPHIN DR
YAUPON DR
DEER CREEK DR
DEER CREEK CT
CLUB POINT DR
ROCK CT
CHANNEL DR
BOGUE SOUND DR
LEJEUNE RD
BAYSHORE DR
PARK AVE
LIVE OAK DR
PINE CT
PINE NEEDLE CIR
BAYVIEW CT
EDGEWATER CT
EASY ST
CLUB CT
ANITA FORTE DR
LOMA LINDA CT
LOMA LINDA DR
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MANATEE ST
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SOUND VIEW CT
SOUND VIEW DR
YEAR DR
HOLLY LN
ROYAL OAKS CT
BOGUE LN
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B. Adoption of the Current Implementation Measures

Major implementation activities undertaken by Cape Carteret since the preparation of the 1996 Land Use Plan include:

- Adoption of a Waterways Ordinance in 2000.
- Adoption of a revised Flood Damage Prevention Ordinance in 2003.
- Expansion of the corporate limits through annexation of urbanizing areas.
- Storm drainage improvements in various sections of Town (see Appendix L).

C. Effectiveness of the Current Policies

Cape Carteret 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:

- Intergovernmental cooperation and coordination.
- Stormwater management.
- Development principles and techniques to better ensure land use compatibility with land suitability.
- Local street planning to ensure connectivity between new and existing developments.
- Pedestrian circulation.

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 Cape Carteret 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 elected officials, appointed officials, and 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 elected officials, appointed officials, and staff involved at all levels of planning. This could include financial support.

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

Prevent: Stop a described event through the use of appropriate Town regulations, staff actions, permit-issuing authority actions, and Town finances, if needed.

Promote: Advance the desired state through the use of Town policies and codes and elected officials, appointed officials, and staff involved 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 elected and advisory boards, 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 32 *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 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 Cape Carteret'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 development issues, goals ,and objectives contained in the 1998 Town of Cape Carteret 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 Cape Carteret.

Table 33
Land Use and Development Goals

Management Topic	**Cape Carteret 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 natural hazard areas
Water Quality	• Maintain and enhance the water quality of coastal waters
Areas of Local Concern	• Preserve historic and cultural resources • Provide a variety of housing opportunities • Promote diversified economic development

4.2 Land Use Development Policies

The formulation of land use and development policies is based upon a review and analysis of policy statements contained in the 1998 Cape Carteret 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.

Table 34
Land Use and Development Policies

Management Topic	**Cape Carteret Policies**
4.2.1 Public Access to Public Trust Waters	
	Policy 1: It is the policy of the Town of Cape Carteret to ensure a variety of opportunities for access to public trust waters to all segments of the community, including persons with disabilities.
	Policy 2: The town will continue to support the exploration, assessment, and development of estuarine access opportunities.
	Policy 3: The town encourages the establishment of attractive, environmentally-responsible marinas and water access facilities for residents and vacationers consistent with CAMA regulations and local ordinances.
	Policy 4: The town will continue to require, through its Subdivision Regulations, provisions for common water access in waterfront subdivisions.
	Policy 5: The town encourages the construction of boat docking facilities by landowner or homeowner associations that are designed to service only lots within a designated subdivision.
4.2.2 Land Use Compatibility	
	Policy 1: The town will continue to enforce the Flood Damage Prevention Ordinance which requires new construction to be elevated above the established 100-year flood elevation.
	Policy 2: The town, through its Zoning Ordinance, will ensure that industrial development does not adversely impact identified fragile lands.
	Policy 3: The town will promote only those types of development that will meet state and/or federal permitting requirements for acceptable impacts on natural resources and which retain and maintain the town's present character.
	Policy 4: The town will encourage land development in areas that currently have the necessary support infrastructure (water, streets, etc.) or where these services can readily be made available. Land development will be guided to areas that have public water and a street system with the capacity to accommodate increased land development.
	Policy 5: The town will promote the continued low-density residential development character of areas located on the fringes of the extraterritorial jurisdiction and in locations adjacent to identified fragile and hazard areas.

	Policy 6: The town will support local intergovernmental cooperation with regard to land use planning issues, such as ETJ areas, annexation agreements, thoroughfare planning, and regional sewage systems.
	Policy 7: Cape Carteret will continue to promote a variety of land uses which complement the residential, commercial, institutional, and recreational needs of the community. Industrial development is generally considered not to be desirable or compatible with the town's character and ability to provide municipal services.
	Policy 8: Current residential densities will be maintained in order to preserve the overall low-density character of Cape Carteret's residential areas. Low density areas will require a minimum lot area of 20,000 square feet. Medium density single-family areas will require a minimum lot area of 15,000 square feet.
	Policy 9: Multi-family residential development will be encouraged at a moderate density range of approximately five dwelling units per acre. Residential densities in approved Planned Residential Developments will be allowed at a maximum density of 8 dwelling units per acre and a minimum development area of 6 acres. Such development will be guided to locations in which utilities and a street system are capable of accommodating higher densities.
	Policy 10: Cape Carteret will maintain residential areas that are used exclusively for detached 'stick-built' single-family dwellings.
	Policy 11: The town will continue to enforce the requirement that new subdivisions provide lands for neighborhood recreation use.
	Policy 12: Cape Carteret will encourage the development of aesthetically pleasing commercial and professional buildings along the NC Highway 24 and 58 corridors. Commercial land uses will require a minimum lot area of 20,000 square feet. The maximum ground coverage for retail sales and shopping center uses will not exceed 40 percent of the gross land area. Intensive commercial uses must be located on a major or minor thoroughfare. The streets providing access to commercial uses shall have the capacity to adequately accommodate anticipated traffic volumes.
	Policy 13: The town will continue to enforce zoning ordinance standards for screening and buffering in commercial areas.
	Policy 14: The town will evaluate staff and development service needs in planning, engineering, and inspections to maintain and improve quality development as growth increases.
	Policy 15: The town will continue to require, through its subdivision regulations, provisions for the dedication of community service facilities or payment of an in-lieu of fee in residential subdivision developments of four or more lots.
	Policy 16: Where infill development opportunities exist the Town shall support best management practices (BMP) and impervious surface limits for stormwater.
	Policy 17: Cape Carteret will only allow development activities in estuarine and public trust waters that are associated with water-dependent uses, consistent with state and federal standards, and meet all local policies contained in this plan.
	Policy 18: Marinas and other docking facilities may be permitted where it is consistent with local zoning and must be constructed in accordance with

	the Division of Coastal Management guidelines.
4.2.3 Infrastructure Carrying Capacity	
	Policy 1: Cape Carteret supports managing and directing the town's growth and development in balance with the availability of municipal services.
	Policy 2: The provision of basic municipal services shall be contingent upon the town's needs, financial capacity, and the economic feasibility of providing the municipal service.
	Policy 3: Currently the Town of Cape Carteret does not provide utilities such as water or sewer. Water is provided by an independent entity. Wastewater disposal is either on individual septic systems or small package treatment systems. Cape Carteret remains committed to providing appropriate municipal services to support additional development. However, the Town does not anticipate providing sewer or water services in the future. The Town would be supportive of a regional sewer service.
	Policy 4: The town will promote residential densities as outlined in section 4.5. Higher densities will be permitted only in areas with adequate utilities and with a street system that has the capacity to sufficiently handle increased vehicle trips.
	Policy 5: Package treatment plants may be permitted in areas in which public sewer service is currently unavailable and where the sewer service utility has determined that the municipal sewer system is not likely to be extended in the future provided that the treatment plants conform to state permitting requirements.
4.2.4 Natural Hazard Areas	
	Policy 1: It is the policy of Cape Carteret to conserve the natural resources and fragile environments that provide protection from such natural hazards as floods and storm surges by using local zoning and DCM guidelines for development.
	Policy 2: Cape Carteret will continue to support and cooperate with Carteret County and other local units of government in emergency management planning and training.
	Policy 3: Cape Carteret will continue to enforce the state building code requirements that relate to wind-resistant construction standards.
	Policy 4: Cape Carteret will continue to participate in the National Flood Insurance Program and to enforce the flood damage prevention ordinance.
	Policy 5: Cape Carteret will avoid zoning areas susceptible to storm surge for higher density residential uses and intensive nonresidential uses. The Town does not have any high density residential areas designated on the Future Land Use Map and intensive non-residential classifications are located along Hwy 24, away from high storm surge areas. It should be noted that in case of a class 4 or 5 hurricane, the majority of the Town will be inundated.
4.2.5 Water Quality	
	Policy 1: Cape Carteret will ensure that developments locating adjacent to coastal waters make every effort to mitigate any adverse effects on riverine and estuarine water quality and on primary nursery and fish habitat areas. The town will maintain its current low density zoning classifications and will ensure that subsurface sewage disposal systems are permitted only in conformance with county health department regulations.
	Policy 2: Cape Carteret will promote the use of best available management

	practices to minimize the degradation of water quality resulting from stormwater runoff; examples of these practices include using pervious or semi-pervious materials for driveways and walks, retaining natural vegetation along marsh and waterfront areas, and allowing stormwater to percolate into the ground rather than discharging it directly to coastal waters.
	Policy 3: The town supports the use of water conservation practices and groundwater protection measures in order to prevent lowering the water table, to limit the quantity of wastewater generated, and to protect the quality of water.
	Policy 4: The town will coordinate its approval of land development projects with (i) the permitting requirements and stormwater regulations of the North Carolina Division of Water Quality, Water Quality Section, and (ii) the soil erosion and sedimentation control regulations of the Land Quality Section of the North Carolina Division of Land Resources.
	Policy 5: The town promotes the coordination with adjoining local government jurisdictions of comprehensive stormwater management practices and policies to enhance water quality.
	Policy 6: The town will cooperate with the Water Quality Section, NC Division of Environmental Management to preserve and improve riverine and estuarine water quality.
	Policy 7: The town will coordinate land development activities involving hazardous chemical or petroleum storage and disposal with the appropriate county and state regulatory agencies. The town also supports management practices which address the incidental use of hazardous materials such as insecticides, herbicides, fertilizers, etc.
	Policy 8: Cape Carteret encourages the design and construction of subdivisions that limit surface runoff through natural topographic features, drywells, landscaping, and natural vegetation.
	Policy 9: Cape Carteret will consider amending their developmental regulations to include stormwater design standards in order to limit nonpoint sources discharges.
4.2.6 Areas of Environmental Concern	
Coastal Wetlands	**Policy 1:** The town will restrict adverse land uses in coastal wetlands through local zoning laws. The highest priority will be given to the conservation of coastal wetlands identified as of the highest functional significance on maps supplied by the Division of Coastal Management.
	Policy 2: Only certain uses which require water access and cannot function elsewhere will be permitted in coastal wetlands. Such uses include utility easements, navigation channels, dredging projects, marinas, piers, boat ramps, noncommercial docks, navigational aids, groins, culverts, and bridges. Each proposed use shall be evaluated for compliance with the CAMA 7H Use Standards and town ordinances.
	Policy 3: Coastal wetlands should only be filled consistent with the CAMA 7H Use Standards.
4.2.6 Areas of Environmental Concern	
Estuarine Waters and Public Trust Areas	**Policy 4:** The town's policy is to restrict development in estuarine waters and public trust waters to those uses which will not cause significant degradation of the natural function nor condition of the estuarine waters and public trust areas. Any development within estuarine or public trust waters must be consistent with CAMA 7H Use Standards and local development

	regulations
	Policy 5: Appropriate land uses within the estuarine shoreline include any permissible land uses authorized by the Cape Carteret Zoning Ordinance and Flood Damage Prevention Ordinance that conform to CAMA development standards.
	Policy 6: Marina construction may be permitted in estuarine waters including those which are classified as primary nursery areas in accordance with the CAMA 7H Use Standards and local land development regulations. The Town will not permit commercial uses in connection with marinas and docking facilities. This policy exceeds CAMA 7H use standards since CAMA regulations will allow commercial activities with marina development.
	Policy 7: Cape Carteret recognizes the significance of the western Bogue Sound ORW designation. The town's development policies for the estuarine shoreline contiguous to waters classified as ORW shall be consistent with the CAMA 7H Use Standards.
	Policy 8: The town will permit the development of noncommercial docking facilities to serve individual residential lots in accordance with CAMA 7H Use Standards and town ordinances.
	Policy 9: The Town of Cape Carteret does not permit dry stack boat facilities within its planning jurisdiction. This policy is more restrictive than CAMA minimum use standards since the CAMA regulations will allow drystack storage facilities with marina development.
	Policy 10: Public mooring fields and mooring pilings are not permitted in Cape Carteret's planning jurisdiction. This policy exceeds CAMA 7H use standards.
	Policy 11: It is the town's policy that sound and estuarine system islands not be considered for intensive urban development. The town encourages the public or private land trust purchase, ownership, and conservation of sound and estuarine system islands. Any permissible use or development shall be in accordance with applicable CAMA standards and local land development regulations.
4.2.6 Areas of Environmental Concern	
Estuarine Waters and Public Trust Areas	**Policy 12:** Floating structures will not be permitted within the Cape Carteret planning jurisdiction. This policy is more restrictive than CAMA minimum use standards for floating homes since the CAMA regulations will allow floating homes within marinas.
	Policy 13: The town prohibits any filling of freshwater wetlands except as permitted by the US Army Corps of Engineers.
General	**Policy 14:** Replacement of existing structures within AECs shall be permitted in accordance with CAMA requirements.
	Policy 15: In regard to freshwater wetlands, the town will coordinate the review of land development plans with the US Army Corps of Engineers when site plans indicate development activities in areas identified as wetlands.
	Policy 16: Cape Carteret will permit bulkhead installation provided that all of the use standards of 15 NCAC 7H.0208(b)(7) are adhered to.
4.2.7 Areas of Local Concern	
	Policy 1: The town encourages the redevelopment of older, established residential neighborhoods at the same density and intensity of scale as that currently existing in the neighborhoods. Low density classified areas will

	require a minimum lot area of 20,000 square feet. Medium density classified areas will require a minimum lot area of 15,000 square feet.
	Policy 2: Cape Carteret supports the US Army Corps of Engineers in its efforts to maintain the Intracoastal Waterway.
	Policy 3: Cape Carteret supports efforts to promote the area for tourism development which is consistent with the town's land use policies. The town will promote tourist support businesses and services in its highway-oriented commercial areas.
	Policy 4: Cape Carteret will strive to improve and enhance the town's visual quality and attractiveness.
	Policy 5: The Town supports the development of a regional wastewater collection and treatment system.
	Policy 6: In order to keep its land development regulatory tools current and to ensure that such tools are effectively implementing the policies of this updated Land Use Plan, the town will investigate opportunities for grant assistance to update and revise its zoning ordinance and subdivision regulations.
	Policy 7: Cape Carteret supports the development of a sidewalk or pedestrian trail system along the NC Highway 24 and Taylor Notion Road corridors. Sidewalks and/or hike-bike trails shall be required in new subdivisions and commercial developments and in the redevelopment of existing subdivisions and commercial developments in accordance with the Town's Zoning and Subdivision Ordinances. The Town also supports a hike-bike trail connecting the West Carteret Library with the White Oak Elementary School.
	Policy 8: The town encourages the interconnection of streets between new developments located within the triangle formed by NC 58, NC 24, and Taylor Notion Road. New streets should interconnect Taylor Notion Road with extensions of existing Cape Carteret streets. The town also encourages new streets connecting the Quailwood Acres and Star Hill North II Subdivisions with NC Highway 24. Cooperation and coordination with the Town of Bogue is encouraged to ensure improved street connectivity.
	Policy 9: The Town encourages all property owners and developers to limit site clearing of natural vegetation and trees to the minimum practicable.
	Policy 10: The Town encourages the replacement of dead and diseased trees with a species natural to the area or otherwise suitable for the coastal environmental.
	Policy 11: The Town shall discourage any development or activity that will have a negative impact on historical, cultural and/or archeological resources.

4.3 Analysis of the Impact of Policies on Management Topics

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

Table 35 *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					
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

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 Cape Carteret's policies on the CRC land use plan management topics is provided below and in Appendix I.

4.3.1 Public Water Access

Very little opportunities exist within the current or future Cape Carteret planning jurisdiction for the development of additional public water accesses. There are no major undeveloped land areas located adjacent to public waterways. The Town's ability to expand its planning jurisdiction is severely limited since it is bounded on three sides by the municipalities of Bogue, Peletier, and Cedar Point. Consequently, expansion of the town's jurisdiction into undeveloped waterfront areas where additional public water access opportunities may exist is not feasible.

Seven public water access points have been developed at streets that terminate at the Bogue Sound shoreline. Since the Bogue Sound shoreline is almost completely developed, no additional public water accesses are anticipated. The existing public water accesses are deemed sufficient given the Town's current and projected population and its limited waterfront areas.

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

Cape Carteret is primarily a low density residential community. Because a public sewage collection and disposal system is not available in Cape Carteret, the intensity and density of land development is restricted. The Town's existing building intensities and densities are consistent with infrastructure availability and land suitability.

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. Maintenance of and compatibility with the low density character of the community is a major objective of the Town's policies. The Town's policies have a positive impact on the CRC land use compatibility goals and objectives.

4.3.3 Infrastructure Carrying Capacity

Cape Carteret 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. The majority of the Town's future land development will be infill development in areas that currently have most of the necessary infrastructure in place.

The Town's policies ensure that public infrastructure is located and managed in harmony with fragile environments and natural resource areas. Cape Carteret'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. Cape Carteret's policies support land development that has minimal adverse impacts on water quality. Best management practices are encouraged to minimize stormwater impacts. Coordination of comprehensive stormwater management practices and policies with adjoining municipalities is encouraged. Town policies support the continued use of land in conservation-designated areas for appropriate land uses that are compatible with their fragile nature. Cape Carteret's policies have a positive impact on the CRC water quality goals and objectives.

4.3.6 Local Areas of Concern

Cape Carteret's policies regarding local areas of concern support and have a positive impact on the CRC land use compatibility and infrastructure carrying capacity goals and objectives. The Town's policies encourage compatible infill development, street connectivity, and the provision of pedestrian facilities. Policies also encourage improvement and enhancement of the Town's visual quality and attractiveness.

4.4 Statement of Local Support Regarding Areas of Environmental Concern

The Town of Cape Carteret 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). Policy statements have been developed which exceed the requirements of CAMA regarding land use and development within AECs include the following items:

- **Marina construction**. The Town will not permit commercial uses in connection with marinas and docking facilities. This policy exceeds CAMA 7H use standards since CAMA regulations will allow commercial activities with marina development.
- **Dry Stack Facilities**. The Town of Cape Carteret does not permit dry stack boat facilities within its planning jurisdiction. This policy is more restrictive than CAMA minimum use standards since the CAMA regulations will allow dry stack storage facilities with marina development.
- **Public Mooring Fields.** Public mooring fields and mooring pilings are not permitted in Cape Carteret's planning jurisdiction. This policy exceeds CAMA 7H use standards since CAMA regulation will allow public mooring fields.
- **Floating Structures.** Floating structures are not permitted within the Cape Carteret planning jurisdiction. Floating structures are defined as any structure, not a boat, supported by a means of flotation, designed to be used without a permanent foundation, which is used or intended for human habitation or commerce. A structure will be considered a floating structure when it is inhabited or used for commercial purposes for more than thirty days in any one location. A boat may be deemed a floating structure when its means of propulsion has been removed or rendered inoperative and it contains at least 200 square feet of living space area. A boat is defined as a vessel or watercraft of any type or size specifically designed to be self-propelled, whether by engine, sail, oar, or paddle or other means, which is used to travel from place to place by water. This policy is more restrictive than CAMA minimum use standards for floating homes since the CAMA regulations will allow floating homes within marinas.

4.5 Future Land Use Map

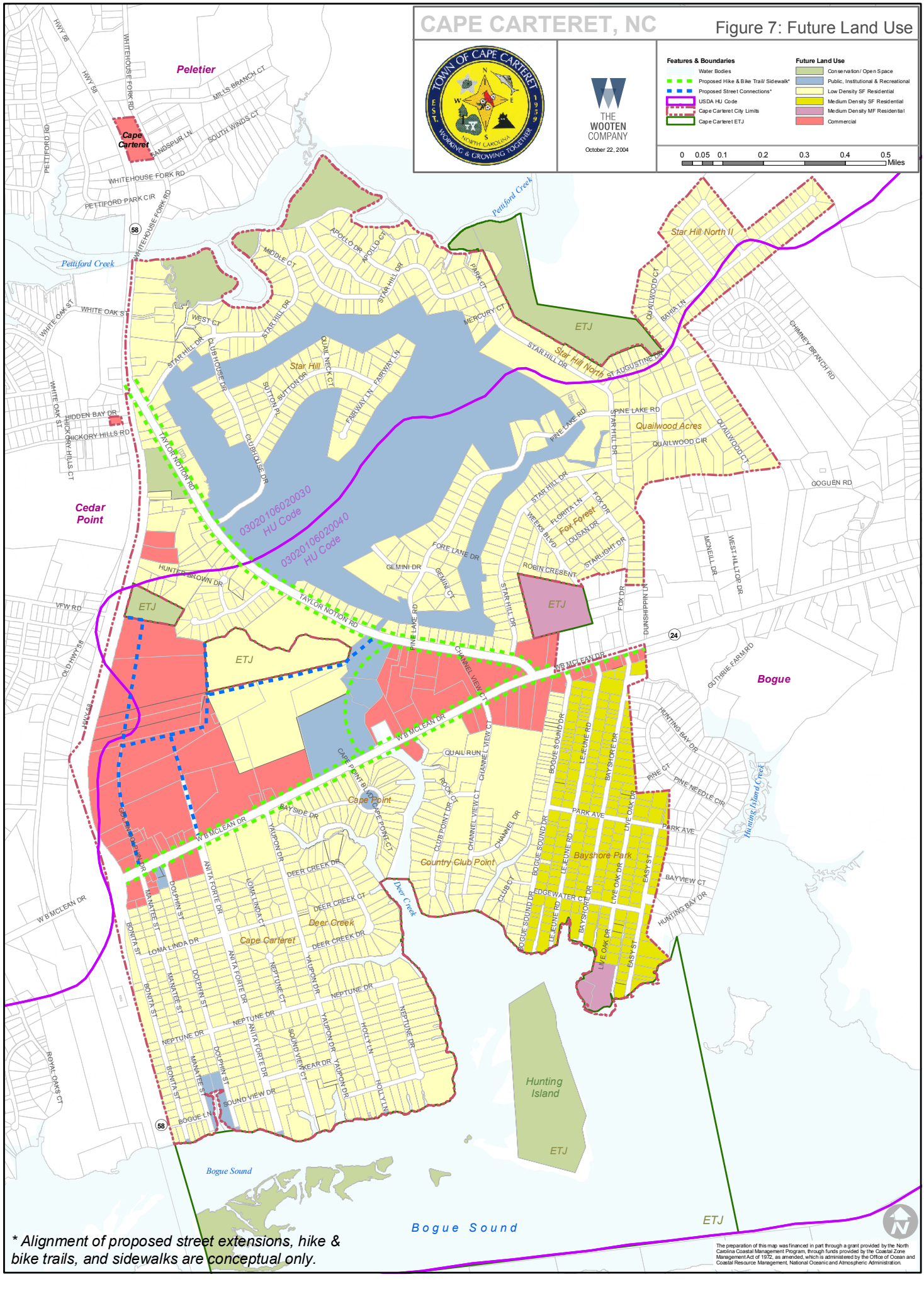
The Future Land Use Map for the Cape Carteret planning jurisdiction encompasses the Cape Carteret corporate limits and the Town's extraterritorial planning and zoning jurisdiction. The Town's Future Land Use Map classifications include the following categories and subcategories:

- Residential
  - Low Density Single-family Residential
  - Medium Density Single-family Residential
  - Medium Density Multi-family Residential
- Commercial
- Public, Institutional, and Recreational
- 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 7.

CAPE CARTERET, NC

Figure 7: Future Land Use



A. Residential Classifications

The Residential classification is subdivided into three subcategories: Low Density Single-family Residential, Medium Density Single-family Residential, and Medium Density Multi-family Residential.

Low Density Single-family Residential Classification. The Low Density Single-family Residential classification encompasses approximately 1.36 square miles (870 acres) or about 56.2 percent of the Town's planning jurisdiction. The majority of the residential properties within the Cape Carteret jurisdiction are classified as Low Density Single-family Residential including the Star Hill, Quailwood Acres, Fox Forest, Cape Carteret, Deer Creek, Country Club Point and Cape Point Subdivisions.

The Low Density Single-family 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 1 to 2 dwelling units per acre. Single-family detached residences on individual lots are the predominant types of dwellings within these areas. The minimum lot size is 20,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems. Land uses within Low Density Single-family Residential areas are compatible with the R-20 and R-30 zoning district classifications. Public water service is widely available throughout the Low Density Single-family Residential-classified areas.

The Town's goals and policies support the continued use of land in Low Density Single-family Residential-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.

Medium Density Single-family Residential Classification. The Medium Density Single-family Residential classification encompasses approximately 0.14 square miles (92 acres) or about 5.9 percent of the planning jurisdiction. The properties classified as Medium Density Single-family Residential are located in the southeast portion of the Town's jurisdiction and includes the Bayshore Park Subdivision.

The Medium Density Single-family Residential classification is intended to delineate lands where the predominant land use is higher density single-family residential developments and manufactured homes on individual lots. The residential density within this classification is generally 2-3 dwelling units per acre. The minimum lot size is 15,000 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 Single-family Residential areas are compatible with the R-10 zoning district classification. Public water service is widely available throughout this classification.

The Town's goals and policies support the use of land in Medium Density Single-family Residential-classified areas for single-family detached dwellings, manufactured homes, and for public and institutional land uses that support and that are compatible with this type of residential development.

Medium Density Multi-family Residential Classification. The Medium Density Multi-family Residential classification encompasses approximately 0.03 square miles (17 acres) or about 1.1 percent of the planning jurisdiction. Two small areas are classified as Medium Density Multi-family Residential. One is located north of NC Highway 24 between the Fox Forest Subdivision and NC 24. The second area is located in the southeastern portion of the jurisdiction adjacent to Bogue Sound at the end of Live Oak Drive.

The Medium Density Multi-family Residential classification is intended to delineate lands where the predominant land use is higher density residential developments, including apartments. The maximum residential density within this classification is approximately 5 dwelling units per acre. The minimum development area is 5 acres and a minimum of 7,920 square feet per dwelling unit is required unless a larger minimum lot area is required by the health department for land uses utilizing septic systems. Land uses within Medium Density Multi-family Residential areas are compatible with the R-10M zoning district classification. Public water service is widely available throughout this classification.

The Town's goals and policies support the use of land in Medium Density Multi-family Residential-classified areas for single-family detached and multifamily developments and for public and institutional land uses that support and that are compatible with this type of residential development.

B. Commercial Classification

The Commercial classification encompasses approximately 0.28 square miles (181 acres) or about 11.7 percent of the total planning jurisdiction. The properties classified as Commercial are located primarily along major road corridors including NC Highway 24 and NC Highway 58.

The 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 Commercial may also include public and institutional land uses. The minimum lot size is 20,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems. The maximum ground coverage for retail sales and shopping center uses is 40 percent of the gross land area. Land uses within Commercial areas are compatible with the B-10 and B-20 zoning district classifications. Public water service is needed to support the land uses characteristic of this classification. Streets with the capacity to accommodate higher traffic volumes are necessary to support commercial development.

Commercial-classified areas are anticipated to accommodate the most intensive land uses found in the Town's planning jurisdiction. The Town's goals and policies support the use of land in 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.

C. Public, Institutional, and Recreational Classification

The Public, Institutional, and Recreational classification encompasses approximately 0.41 square miles (265 acres) or about 17.1 percent of the planning jurisdictional area. The properties classified as Public and Institutional are scattered throughout the Town's planning jurisdiction. The largest individual tract within the Public, Institutional, and Recreational classification includes the Star Hill Golf and Country Club property located in the northern portion of Cape Carteret.

The Public, Institutional, and Recreational classification is intended to delineate large land areas that are used for intensive governmental, recreational, and educational purposes. Land uses within this classification include primarily government buildings and service facilities, public recreational facilities, public educational facilities, and large private institutional uses. Minimum lot sizes typically range from 20,000 to 40,000 square feet for low intensity uses to over 5 acres for more intensive land uses. Generally, public water service is needed to support the land uses characteristic of this classification. Streets with the capacity to accommodate higher traffic volumes are necessary to support the intensity of development expected within the Public, Institutional, and Recreational Classification.

D. Conservation/Open Space Classification

Conservation/Open Space areas 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 Hunting Island and marshes in Bogue Sound, the NC Coastal Land Trust tract located on the northeast periphery of Cape Carteret, marshland south of Pettiford Creek, and two small Croatan National Forest tracts located on the east side of NC Highway 58. These Conservation/Open Space-designated areas encompass approximately 122 acres or approximately 7.9 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 any existing land uses within the areas classified as Conservation/Open Space. Public utilities are not needed to support the types and intensities of land uses in these areas. Extensions of 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.

E. In-fill, Preservation, and Redevelopment Areas

The Town of Cape Carteret has not designated any specific areas for redevelopment. The areas classified as commercial along Hwy 24 may experience occasional redevelopment. The Town supports the rejuvenation of commercial business. However, the Town does not have any policies that address the issue.

Infill within existing residential neighborhoods shall be consistent with the established patter of development that gives the neighborhood its character. Due to the lack of available sanitary sewer, increasing the densities of existing residential neighborhoods is limited.

The Town does not have any historic neighborhood or historic properties.

4.6 Cost Estimates for Planned Community Facility Improvements

No major capital improvements are anticipated during the planning period.

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. There are areas where development may not be of highest suitability. Development constraints can be mitigated with utilities such as water and sewer.

The northern portion of the Town's planning jurisdiction adjacent to Pettiford Creek and the Bogue Sound and Deer Creek shorelines in the southern section of the planning jurisdiction contain the greatest concentrations of natural constraints, primarily floodplains and wetlands. Major undeveloped areas with significant natural constraints and low suitability ratings within the Cape Carteret 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 Cape Carteret 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 Cape Carteret planning jurisdiction by land suitability rating.

Table 36
Acreage by Land Suitability Rating

Suitability Rating	Total Acres	Percent
High	1,117.8	72.2%
Medium	232.7	15.0%
Low	0.0	0.0%
Least	197.2	12.7%
Totals	1,547.7	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 service 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 along the Bogue Sound shoreline. 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 37
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 Single-family Residential	870.39	56.2%	204.9	666	76.5%
Medium Density Single-family Residential	92.04	5.9%	33.3	59	63.8%
Medium Density Multi-family Residential	17.23	1.1%	6.6	11	61.8%
Commercial	181.19	11.7%	22.5	159	87.6%
Public, Institutional, and Recreational	264.89	17.1%	10.8	254	95.9%
Conservation/Open Space	121.80	7.9%	104.0	18	14.6%
Totals	1,547.54	100.0%	382.0	1,166	75.3%

Source: The Wooten Company

As shown in the above table, approximately 25 percent of the total Cape Carteret jurisdiction contains natural constraints that present limitations for future land 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 residential land area with projected residential land needs:

Table 38 *Comparison of Future Land Allocations with Projected Needs*			
Gross Acres Allocated on the Future Land Use Map	Existing Developed Acres on the Land Use Map	Gross Undeveloped Acres*	Acres Needed Through 2025 Based on projected pop. growth
Residential** 979 ac	491	488	486
Commercial 181 ac	90	91	92
Pubic and Institutional*** 265 ac	272	-7	34

Source: The Wooten Company

* Gross Future Land Use Map Residential Acres less Existing Residential Acres.
** Includes all future land use map residential classifications delineated in Section 4.5, A.
*** The future land use map depicts the conversion of existing institutional use acreage to commercial acreage based upon its existing location in commercially-zoned areas. Some existing institutional uses are classified in the future land use map as residential due to its location in residentially-zoned areas and its compatibility with residential uses.

Based upon this comparison, the projected 2025 residential land needs can be met with the estimated amount of available developable acreage in the current Cape Carteret jurisdiction. It should be noted, however, that this comparison assumes that all existing residential acreage does not contain natural constraints which, in reality, is not the case since some existing residential development is located within floodplains. Also, some vacant land within the Town's jurisdiction containing developmental constraints can be utilized by employing mitigative measures.

The future land use map totals 1,547 acres. Only 1,425 acres are actually developable due to dedicated open space/conservation classification acreage (121 acres). Of the 1,425 acres, 854 acres are already developed (491 residential, 91 commercial, 272 public/institutional). The remaining undeveloped land totals approximately 572 acres. The projected permanent and seasonal residential land needs for the Cape Carteret planning jurisdiction through 2025 totals 486 acres (see Table 27). As shown in Table 38, the projected residential land needs can be met with the estimated amount of available developable acreage in the current Cape Carteret planning jurisdiction. The projected total 2025 commercial land needs of 92 acres can also be met with the amount of current available developable commercial land. It is anticipated that future public and institutional land needs through 2025 (34 acres), which are expected to be low intensity, small-acreage uses, can be accommodated in residentially and commercially-designated areas.

4.9 Use of the Future Land Use Plan 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 Cape Carteret Future Land Use Map indicates Commercial use in the vicinity of the NC 24 and NC 58 intersection. Thus, it has been determined through the Land Use Plan that the commercial use of property in this area is desirable and is expected to occur. However, the actual commercial 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 commercial 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 commercial 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 commercial use is appropriate and desirable for the parcel.
- If the parcel is already zoned for commercial use, a zoning and 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 commercial use? Do poor soils, poor drainage, wetlands, flood hazards, etc. limit the use of all or a portion of the parcel for commercial 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 commercial 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 Cape Carteret 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 Cape Carteret 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 Zoning 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

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

- Zoning Ordinance
- Subdivision Ordinance
- Flood Damage Prevention Ordinance
- Sign Ordinance
- Waterways Ordinance (regulating marinas and boating)
- CAMA Land Use Plan Update, Certified in January 1998

The Town's land development management program is administered primarily by the Town Clerk and a part time Zoning Officer. The Town's land development regulations are applicable to all land areas located within the Cape Carteret planning and zoning jurisdiction.

The Town Clerk serves as staff support for the Cape Carteret Planning Board and the Cape Carteret Board of Adjustment. 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.

Building inspections throughout the Cape Carteret jurisdiction are administered by the Carteret County Building Inspections Department.

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:

- Amendment to the Subdivision Ordinance to better ensure connectivity between developing tracts and existing development.

5.3.2 Capital Improvements

No major capital improvements are anticipated during the planning period.

5.4 Implementation Plan and Schedule

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

5.4.1 Public Water Access Implementation Actions

1. **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. **FY06**: 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.
2. **FY08**: Review, and revise as determined appropriate, the Town 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. Seek financial assistance from DCM for a planning and implementation grant for a comprehensive update of the Town's zoning ordinance and subdivision regulations.

5.4.3 Infrastructure Carrying Capacity Implementation Actions

1. **Ongoing:** Utilize the Land Use Plan, zoning ordinance, subdivision regulations, and water extension policies to guide public infrastructure and services to areas where growth and development are desired.
2. **FY06**: The Town will investigate the feasibility of utilizing drywells to assist with alleviating surface drainage problems.

5.4.4 Natural Hazard Areas Implementation Actions

1. **Ongoing:** The Town will review its zoning ordinance, subdivision regulations, 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 and coordinating such management plan with adjoining municipalities and Carteret County.
2. **FY06:** The Town will review its zoning ordinance and subdivision regulations to determine if revisions are needed to include additional measures, such as the use of riparian buffers, the use of pervious materials for driveways and sidewalks, and the restriction of impervious surface coverage, to control stormwater discharges.
3. **FY07:** The Town will review the subdivision regulations to determine if revisions are needed to encourage the design and construction of subdivisions that limit surface runoff through natural topographic features, drywells, landscaping, and natural vegetation.
4. **Ongoing:** The Town will continue to require, through its subdivision regulations, 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 and subdivision regulations to determine if revisions are needed to include additional protective measures for AECs.

5.4.7 Areas of Local Concern Implementation Actions:

1. **FY06:** The Town will investigate a possible amendment to the subdivision regulations to ensure street connectivity between new developments and the existing street network, particularly in the triangle formed by Taylor Notion Road, NC 24, and NC 58.
2. **FY07:** The Town will investigate funding alternatives for the development of a sidewalk or pedestrian trail along NC Highway 24 and Taylor Notion Road.
3. **FY07:** The Town will investigate a possible amendment to eliminate the clear cutting of lots, restrict the cutting of healthy indigenous species, and encourage the replacement of trees proposed to be removed from a construction site.

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

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

Annual Performance Review

The Town of Cape Carteret 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 Planning Board 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 Cape Carteret 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.

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 (formerly the Soil 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 Wetlands Restoration 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 Cape Carteret Zoning Ordinance.
- Town of Cape Carteret Subdivision Ordinance.
- Town of Cape Carteret Waterways Ordinance.
- Town of Cape Carteret Flood Damage Prevention Ordinance.
- Town of Cape Carteret Sign Ordinance.
- *1998 Land Use Plan Update, Town of* Cape Carteret (certified in January 1998), The Wooten Company.
- *Carteret County Transportation Improvement Program Priorities for the 2002-2008 Transportation Improvement Program,* Carteret County Transportation Committee, November 1999.

Appendix B
Summary of Land Use Issues, Goals, and Objectives
Identified in the 1998 Cape Carteret Land Use Plan

Summary of 1998 Land Use and Development Issues

The major land use and development issues identified during the preparation of the 1998 land use plan update that will affect Cape Carteret during the next ten year period include the following (not presented here in any priority order):

Resource Protection Issues

- Stormwater runoff impacts.
- Water quality of surface and ground waters.
- Long-term solutions to wastewater treatment and disposal.
- Guiding growth to areas best suited to accommodate development.
- The impacts of floating homes.
- The demand for and impacts of marinas.

Resource Production and Management Issues

- The impact of land development activities on marine fisheries.
- The provision of public recreational space and water access.

Economic and Community Development Issues

- Maintaining low residential densities.
- Managing infill development in established residential areas.
- Commercial land use encroachment in residential areas.
- Managing strip commercial development adjacent to NC Highways 24 and 58.
- Coordination of comprehensive stormwater management practices and policies with adjoining local governments.
- Regional solutions to wastewater disposal needs.
- Provision of waterfront access.
- Promoting marina development.
- Signs and billboards.
- Annexation by adjoining municipalities of Cape Carteret's ETJ.
- Incorporation of new municipalities within the town's future growth areas.

Summary of Goals and Objectives from the 1998 Land Use Plan

Resource Protection

- The town's overall general goal concerning resource protection is to give the highest priority to the protection and management of the area's natural resources, to safeguard and perpetuate their biological, social, economic, and aesthetic values, and to ensure that development occurring within natural resource areas is compatible with the characteristics of the natural areas so as to minimize the likelihood of significant loss of private property and public resources.
- It is the town's intent that its policies concerning resource protection policies be consistent with CAMA 7H Use Standards except for the town's policies concerning drystack storage

facilities (Section 3.280, Policy 7) and floating homes (Section 3.280, Policy 8) which are more restrictive than the CAMA use standards.

Resource Production and Management

- The town's overall general policy concerning resource production and management is to support the effective management of the area's natural resources so as to ensure the continued environmental and economic well being of the Cape Carteret planning jurisdiction.
- The town will continue to consider the impacts on local and regional natural resources in all land development decisions and will seek to improve the cooperation and coordination with other public and private agencies involved with natural resource production and management. It is the town's intent that its policies concerning resource production and management be consistent with CAMA 7H Use Standards.

Economic and Community Development

- Cape Carteret's overall general policy concerning economic and community development is to consider growth of the community as a desirable objective.
- Further, the town will promote only those types of development that do not significantly impact natural resources and which retain and maintain the town's present character.

Public Participation

- The town will ensure a continuous planning process by conducting periodic reviews of the Land Use Plan's policies.

Appendix C
Housing Characteristics

	Cape Carteret	Carteret County	North Carolina
Total Housing Units	711	40,947	3,523,944
Occupied Housing Units	545	25,204	3,132,013
% Occupied	76.65%	61.55%	88.88%
No. Owner-Occupied	481	19,316	2,172,355
No. Renter-Occupied	64	5,888	959,658
% Owner-Occupied	88.26%	76.64%	69.56%
% Renter Occupied	11.74%	23.36%	30.72%
% W/1.01 or More Persons Per Room	0%	1.75%	3.01%
Median Value, Owner-Occupied Units	$141,000	$106,400	$95,800
Total Vacant Units	166	15,743	391,931
For Seasonal, Recreational Use	136	13,537	134,870
Homeowner Vacancy Rate	2.63%	2.92%	1.2%
Rental Vacancy Rate	.3%	5.39%	2.6%

Household Population
(Persons per Occupied Dwelling)

	1980	1990	2000
Cape Carteret	2.64	2.21	2.23
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 03-05-01 and 03-05-03

Source: NC Division of Water Quality

North Carolina Waterbodies Listed by Subbasin

Report Date: 02/04/05
Records Found: 75

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

Search Parameters:
Subbasin: 03-05-01
Class:
Name:
Desc:
Index#:

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Subbasin# 03-05-01						
Intracoastal Waterway	From New River to northeast mouth of Goose Creek	SA;HQW	06/01/56		White Oak	19-41-(0.5)
Banks Channel	From Browns Inlet to Intracoastal Waterway	SA;HQW	06/01/56		White Oak	19-41-6
Browns Inlet	From Atlantic Ocean to Intracoastal Waterway	SA;HQW	06/01/56		White Oak	19-41-7
Browns Creek	From source to Intracoastal Waterway	SA;HQW	06/01/56		White Oak	19-41-8
Shacklefoot Channel	From Bear Creek to Intracoastal Waterway	SA;HQW	06/01/56		White Oak	19-41-9
Bear Creek	From Shacklefoot Channel to Intracoastal Waterway	SA;HQW	06/01/56		White Oak	19-41-10
Bear Creek	From source to Intracoastal Waterway	SA;HQW	06/01/56		White Oak	19-41-11
Mill Creek	From source to Bear Creek	SA;HQW	06/01/56		White Oak	19-41-11-1
Saunders Creek	From Bear Creek to Intracoastal Waterway	SA;HQW	06/01/56		White Oak	19-41-12
Bear Inlet	From Atlantic Ocean to Intracoastal Waterway	SA;HQW	06/01/56		White Oak	19-41-13
Goose Creek	From source to Intracoastal Waterway	SA;HQW	06/01/56		White Oak	19-41-14
Intracoastal Waterway	From the northeast mouth of Goose Creek to the southwest mouth of Queen Creek	SA;ORW	01/01/90		White Oak	19-41-(14.5)
Cow Channel	From Bogue Inlet to Intracoastal Waterway	SA;ORW	01/01/90		White Oak	19-41-15
Intracoastal Waterway	From the southwest mouth of Queen Creek to Whiteoak River	SA;HQW	06/01/56		White Oak	19-41-(15.5)
Queen Creek	From source to Intracoastal Waterway	SA;HQW	06/01/56		White Oak	19-41-16
Bell Swamp	From source to Queen Creek	SA;HQW	06/01/56		White Oak	19-41-16-1
Pasture Branch	From source to Queen Creek	SA;HQW	06/01/56		White Oak	19-41-16-2

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Halls Creek	From source to Queen Creek	SA;HQW	06/01/56		White Oak	19-41-16-3
Parrot Swamp	From source to Queen Creek	SA;HQW	06/01/56		White Oak	19-41-16-4
Dicks Creek	From source to Queen Creek	SA;HQW	06/01/56		White Oak	19-41-16-5
Bogue Inlet	From Atlantic Ocean to Intracoastal Waterway	SA;ORW	01/01/90		White Oak	19-41-17
Bear Island ORW Area	All waters within an area north of Bear Island defined by a line from the western most point on Bear Island and running along the eastern shore of Sanders Creek to the northeast mouth of Goose Creek on the mainland, east to the southwest mouth of Queen Creek, then south to green marker #49, then northeast to the northeastern most point on Huggins Island, then southeast along the shoreline of Huggins Island to the southeastern most point of Huggins Island, then south to the northeastern most point on Dudley Island, then southwest along the shoreline of Dudley Island to the eastern tip of Bear Island, then to the western most point on Bear Island including Cow Channel	SA;ORW	01/01/90		White Oak	19-41-18
WHITE OAK RIVER	From source to Spring Branch	C	06/01/56		White Oak	20-(1)
North Fork White Oak River	From source to White Oak River	C	06/01/56		White Oak	20-2
South Fork White Oak River	From source to White Oak River	C	06/01/56		White Oak	20-3
Barnes Branch	From source to South Prong White Oak River	C	06/01/56		White Oak	20-3-1
Chinkapin Branch	From source to South Prong White Oak River	C	06/01/56		White Oak	20-3-2
Great Branch (Grape Branch)	From source to White Oak River	C	06/01/56		White Oak	20-4
Fork Branch	From source to White Oak River	C	06/01/56		White Oak	20-5
Mundine Branch	From source to White Oak River	C	06/01/56		White Oak	20-6
Gibson Branch	From source to White Oak River	C	06/01/56		White Oak	20-6.5

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Mirey Branch	From source to White Oak River	C	06/01/56		White Oak	20-7
Brick Kiln Branch	From source to White Oak River	C	06/01/56		White Oak	20-8
Black Swamp Creek	From source to White Oak River	C	06/01/56		White Oak	20-9
Catfish Lake	From source to Black Swamp Creek	C	06/01/56		White Oak	20-9-1
Starkeys Creek	From source to White Oak River	C	06/01/56		White Oak	20-10
Gravelly Branch	From source to White Oak River	C	06/01/56		White Oak	20-11
Holston Creek	From source to White Oak River	C	06/01/56		White Oak	20-12
Mulberry Creek	From source to White Oak River	C	06/01/56		White Oak	20-13
Spring Branch	From source to White Oak River	C	06/01/56		White Oak	20-14
Grants Creek	From source to Spring Branch	C	06/01/56		White Oak	20-14-1
Halls Branch (Cummins Creek)	From source to Grants Creek	C	06/01/56		White Oak	20-14-1-1
WHITE OAK RIVER	From Spring Branch to Hunters Creek	C;HQW	08/01/90		White Oak	20-(14.5)
Calebs Creek	From source to White Oak River	C	06/01/56		White Oak	20-15
Freemans Creek	From source to White Oak River	C	06/01/56		White Oak	20-16
Hunters Creek (Great Lake)	From source to White Oak River	C	06/01/56		White Oak	20-17
Wolf Swamp	From source to Hunters Creek	C	06/01/56		White Oak	20-17-1
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)
Webb Creek	From source to White Oak River	C	06/01/56		White Oak	20-19
Taylor Creek	From source to White Oak River	C	06/01/56		White Oak	20-20
Pitts Creek (Hargetts Creek)	From source to White Oak River	SA;HQW	06/01/56		White Oak	20-21
Cales Creek	From source to White Oak River	SA;HQW	06/01/56		White Oak	20-22

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Hadnot Creek	From source to White Oak River	SA;HQW	06/01/56		White Oak	20-23
Schoolhouse Branch	From source to Hadnot Creek	SA;HQW	06/01/56		White Oak	20-23-1
Steep Hill Branch	From source to Hadnot Creek	SA;HQW	06/01/56		White Oak	20-23-2
Caleb Branch (City Weeks Branch)	From source to Hadnot Creek	SA;HQW	06/01/56		White Oak	20-23-3
Godfry Branch	From source to White Oak River	SA;HQW	06/01/56		White Oak	20-24
Hargetts Creek	From source to White Oak River	C	06/01/56		White Oak	20-25
Holland Mill Creek	From source to White Oak River	SA;HQW	06/01/56		White Oak	20-26
Cartwheel Branch	From source to Holland Mill Creek	SA;HQW	06/01/56		White Oak	20-26-1
Hampton Bay	Entire Bay	SA;HQW	06/01/56		White Oak	20-27
Stevens Creek	From source to White Oak River	SA;HQW	06/01/56		White Oak	20-28
Pettiford Creek Bay	Entire Bay	SA;HQW	06/01/56		White Oak	20-29
Pettiford Creek	From source to Pettiford Creek Bay	SA;HQW	06/01/56		White Oak	20-29-1
Mill Creek	From source to Pettiford Creek	SA;HQW	06/01/56		White Oak	20-29-1-1
Starkey Creek	From source to Pettiford Creek Bay	SA;HQW	06/01/56		White Oak	20-29-2
Mullet Gut	From source to Starkey Creek	SA;HQW	06/01/56		White Oak	20-29-2-1
Dubling Creek	From source to White Oak River	SA;HQW	06/01/56		White Oak	20-30
Boathouse Creek	From source to White Oak River	SA;HQW	06/01/56		White Oak	20-31
White Oak River Restricted Area	That portion of White Oak River within an area bounded by a line running in an easterly direction from a point below Foster Creek to east end of Swansboro Bridge (N.C. Hwy. 24), thus across bridge to west end of bridge, thus running along shore line to a point below Foster Creek	SC	06/01/56		White Oak	20-32
Ward Creek	From source to White Oak River	SC	06/01/56		White Oak	20-33

Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Dennis Creek (Demkis Creek)	From source to White Oak River	SC	06/01/56		White Oak	20-34
Foster Creek	From source to White Oak River	SC	06/01/56		White Oak	20-35
Goose Creek	From source to Bogue Sound	SA;HQW	06/01/56		White Oak	20-36-4
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: 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)

Appendix F
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

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
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
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 -

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
							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

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
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
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 -

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
							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

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
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
Vascular Plant	*Rhexia cubensis*	West Indies Meadow-beauty	SR-P	-	S1	G4G5	Carteret -

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
							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

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
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	*Maritime Shrub Swamp*	-	-	-	S1	G1	Carteret -

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
Community							Current
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

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
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

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

Appendix G

Hazardous Weather affecting Cape Carteret since October 1998

Location	*Date*	*Type*	*Magnitude*	*Deaths*	*Injuries*	*Property Damage*	*Crop Damage*
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
Cape Carteret	11/2/1999	Thunderstorm Wind	52 kts.	0	0	0	0
Cape Carteret	4/15/2000	Tornado	F0	0	0	20K	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
Cape Carteret	4/1/2001	Tornado	F0	0	0	0	0
Cape Carteret	4/17/2001	Thunderstorm Wind	55 kts.	0	0	0	0
Cape Carteret	8/28/2001	Thunderstorm Wind	52 kts.	0	0	0	0
Carteret County	1/6/2002	High Wind	62 kts.	0	0	0	0
Carteret County	2/4/2002	High Wind	53 kts.	0	0	0	0
Carteret County	10/15/2002	High Wind	50 kts.	0	0	0	0
Carteret County	12/24/2002	High Wind	50 kts.	0	0	0	0
Carteret County	5/23/2003	High Wind	54 kts.	0	0	0	0
Eastern North Carolina	9/17/2003	Hurricane	Category II	0	0	435.6M	14.3M

Source: National Climatic Data Center

Appendix H

Summary of Policy Statements
from the 1998 Cape Carteret Land Use Plan

The town developed two policy statements that impose additional local requirements for Areas of Environmental Concern which would be more restrictive than the CAMA minimum use standards. The town's policies of prohibiting drystack storage facilities (Section 3.280, Policy 7) and floating homes (Section 3.280, Policy 8) are more restrictive than the CAMA regulations. Many of the policy statements from the previous plan (1992 Land Use Plan Update) have been retained.

The town's overall general policy concerning resource protection is to give the highest priority to the protection and management of the area's natural resources, to safeguard and perpetuate their biological, social, economic, and aesthetic values, and to ensure that development occurring within natural resource areas is compatible with the characteristics of the natural areas so as to minimize the likelihood of significant loss of private property and public resources. It is the town's intent that its policies concerning resource protection policies be consistent with CAMA 7H Use Standards, except as noted above.

The town's overall general policy concerning resource production and management is to support the effective management of the area's natural resources so as to ensure the continued environmental and economic well being of the Cape Carteret planning jurisdiction. The town will continue to consider the impacts on local and regional natural resources in all land development decisions and will seek to improve the cooperation and coordination with other public and private agencies involved with natural resource production and management. It is the town's intent that its policies concerning resource production and management be consistent with CAMA 7H Use Standards.

Cape Carteret's overall general policy concerning economic and community development is to consider growth of the community as a desirable objective. Further, the town will promote only those types of development that do not significantly impact natural resources and which retain and maintain the town's present character.

New policy statements were developed which address a variety of issues and include:

Resource Protection and Resource Production and Management Policies

- Restricting land uses in coastal wetlands to only those developments which are water-dependent and which will meet state and/or federal permitting requirements for acceptable impacts.
- Prohibiting the filling of freshwater wetlands except as permitted by the US Army Corps of Engineers.
- Permitting marina construction in coastal wetlands and in primary nursery areas in accordance with the CAMA 7H Use Standards, local zoning, and other land use regulations.
- Excluding development from sound and estuarine system islands.
- Making local development restrictions for that portion of the estuarine shoreline which is contiguous to waters classified as ORW no more restrictive than the CAMA 7H Use Standards.

- Requiring that a land development project proposing to use a package sewage treatment plant include (1) the formation of a legal, private entity to properly operate and maintain such package treatment plant and (2) the development of a contingency plan to own and operate such treatment plant should the private operation fail.

- Continuing to participate in meetings of the Regional Wastewater Task Force.

- Promoting the coordination with adjoining local government jurisdictions of comprehensive stormwater management practices and polices to enhance water quality.

- Promoting the use of best available management practices to minimize the degradation of water quality resulting from stormwater runoff.

- Encouraging marina siting and design which promotes proper flushing action.

- Permitting the development of noncommercial docking facilities to serve individual residential lots in accordance with CAMA 7H Use Standards.

- Prohibiting dry stack storage boat facilities, in conjunction with marina development, in accordance with the provisions of the town's marina ordinance.

- Opposing the location of floating structures within the Cape Carteret planning jurisdiction.

- Allowing public mooring fields in accordance with CAMA Use Standards.

Economic and Community Development Policies

- Supporting the management and direction of the town's growth and development in balance with the availability of municipal services.

- Promoting a variety of land uses which complement the residential, commercial, institutional, and recreational needs of the community. Industrial development is generally considered not to be desirable or compatible with the town's character and ability to provide municipal services.

- Maintaining current residential densities in order to preserve the overall low-density character of Cape Carteret's residential areas.

- Supporting local intergovernmental cooperation with regard to land use planning issues, such as ETJ areas, annexation agreements, thoroughfare planning, and regional sewage systems.

- Remaining committed to providing appropriate municipal services to support additional land development.

- Seeking to improve the town's capacity to provide municipal services.

- Considering an amendment to the town's subdivision regulations to require that new development be connected to a public water system whenever such water system is readily available to the property at the time of development.

- Continuing to support the exploration, assessment, and development of estuarine access opportunities.

- Considering annexing areas within the existing ETJ as these areas meet the statutory qualifications for annexation.

	Impact of Cape Carteret Policies on 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 34 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*	• *Encourage redevelopment* • *Improve aesthetics* • *Improve pedestrian facilities* • *Promote the interconnection of streets* • *Preserve natural vegetation*
4.2.1 Public Water Access Policies:						
• Policy 1	Beneficial					
• Policy 2	Beneficial					
• Policy 3	Beneficial	Beneficial				Beneficial
• Policy 4	Beneficial	Beneficial				
• Policy 5	Beneficial					
4.2.2 Land Use Compatibility Policies:						
• Policy 1		Beneficial		Beneficial		
• Policy 2		Beneficial				Beneficial
• Policy 3		Beneficial			Beneficial	Beneficial
• Policy 4		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			Beneficial
• Policy 10		Beneficial				Beneficial
• Policy 11		Beneficial				Beneficial
• Policy 12		Beneficial	Beneficial			Beneficial
• Policy 13		Beneficial				Beneficial
• Policy 14		Beneficial	Beneficial			Beneficial
• Policy 15		Beneficial	Beneficial			
• Policy 16		Beneficial			Beneficial	Beneficial
• Policy 17		Beneficial			Beneficial	
• Policy 18	Beneficial	Beneficial				Beneficial
4.2.3 Infrastructure Carrying Capacity Policies						
• Policy 1		Beneficial	Beneficial			Beneficial
• Policy 2			Beneficial			
• Policy 3		Beneficial	Beneficial			
• Policy 4		Beneficial	Beneficial		Beneficial	Beneficial
• Policy 5		Beneficial	Beneficial			
4.2.4 Natural Hazard Areas Policies:						
• Policy 1		Beneficial		Beneficial		
• Policy 2			Beneficial	Beneficial		
• Policy 3				Beneficial		
• Policy 4		Beneficial		Beneficial		
• Policy 5		Beneficial		Beneficial		Beneficial
4.2.5 Water Quality Policies:						
• Policy 1		Beneficial			Beneficial	
• Policy 2		Beneficial			Beneficial	
• Policy 3					Beneficial	
• Policy 4					Beneficial	
• Policy 5					Beneficial	
• Policy 6					Beneficial	
• Policy 7		Beneficial			Beneficial	
• Policy 8		Beneficial			Beneficial	
• Policy 9		Beneficial			Beneficial	
4.2.6 Areas of Environmental Concern Policies:						

• Policy 1		Beneficial			Beneficial	
• Policy 2	Beneficial	Beneficial				
• Policy 3		Beneficial			Beneficial	
• Policy 4		Beneficial			Beneficial	
• Policy 5		Beneficial		Beneficial		
• Policy 6	Beneficial	Beneficial				
• Policy 7		Beneficial			Beneficial	
• Policy 8	Beneficial	Beneficial				Beneficial
• Policy 9		Beneficial				Beneficial
• Policy 10		Beneficial				
• Policy 11		Beneficial				Beneficial
• Policy 12		Beneficial				
• Policy 13		Beneficial			Beneficial	
• Policy 14		Beneficial				Beneficial
• Policy 15		Beneficial			Beneficial	
• Policy 16		Beneficial				
4.2.7 Areas of Local Concern Policies:						
• Policy 1		Beneficial				Beneficial
• Policy 2	Beneficial					Beneficial
• Policy 3		Beneficial				Beneficial
• Policy 4		Beneficial				Beneficial
• Policy 5			Beneficial		Beneficial	Beneficial
• Policy 6		Beneficial				Beneficial
• Policy 7			Beneficial			Beneficial
• Policy 8			Beneficial			Beneficial
• Policy 9		Beneficial			Beneficial	Beneficial
• Policy 10						Beneficial
• Policy 11		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.

Appendix J

Maps and Land Use Plan Data Available at the Town Clerk's Office
at the Cape Carteret Town Hall

Maps

- Natural Features Map
- Composite Environmental Conditions Map
- Wetlands
- Floodplains Map
- Storm Surge Map
- Existing Land Use Map
- Water System Map
- Stormwater Management System Map
- Soils with Septic System Limitations
- Land Suitability Map
- Future Land Use Map

Data

- Cape Carteret Land Use Plan Update, 2005

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

Storm Drainage Problem Areas, May 2001

1. Star Hill Dr. between Middle Ct. and Apollo Dr.
   Problem: Catch basin is an open box (no grate) which is a safety hazard and requires regular maintenance to keep box clean. Also, it appears the joints for the pipe under the road are failing creating sink holes in the road.
   Action: Town is planning to replace the open box with a new catch basin with a standard grate and to replace the pipe under the road with a 24-inch pipe (or largest pipe which will physically fit) laid in the proper direction. Also, ditches east of catch basin need to be regraded down to the low point on each side of Star Hill Drive once new basin and pipe work has been completed.
2. Intersection of Star Hill Dr. and Apollo Dr. (south side of Star Hill Dr.).
   Problem: Water stands after rain events along the south side of the road and there are water valves and lines outside of the road making it difficult to construct drainage facilities in the right-of-way.
   Action: Grade area to a low point, pipe under Star Hill Drive, and then pipe down the north side of Apollo Drive to the existing ditch. Recommended starting pipe at downstream ditch and utilizing the largest pipe system which will allow sufficient cover under Star Hill Drive and provide maximum drainage capacity.
3. Mercury Ct. off of Star Hill Dr.
   Problem: Water stands after rain events in the cleared area which will be paved in the future.
   Action: Town plans to ditch down both sides of right-of-way from Mercury Ct. to existing ditch which discharges to existing ditch on Star Hill Drive. Ditch on Star Hill Drive may need to be regraded along west side of road north to an existing 15-inch CPP which discharges under road.
4. Sutton Dr. between Sutton Place and Quail Neck Ct.
   Problem: Standing water after rain events in the northeast quadrant of the Quail Neck Ct. and Sutton Dr. intersection and along both sides of Sutton Dr.
   Action: Town has placed a 12-inch CPP under Quail Neck Ct. to drain the northeast quadrant of the intersection and regraded ditches along Sutton Dr. down to where 6-inch PVC pipe crosses Sutton Dr. and then drains through a ditch to a piping system which goes across the golf course. According to the Town, this appears to have helped drainage in the area. However, if drainage problems persist on the south side of Sutton Dr., the 6-inch PVC should be replaced with a larger pipe.
5. Northeast end of Fairway Ln. (north side of the street).
   Problem: In past the few years it has been noted that water stands in a low area after large rain events. Looks as if area lots were built up and water has nowhere to flow.
   Action: Determined not to be significant problem at this time. If it becomes a more regular occurrence and a solution becomes necessary, an engineering study would be needed to determine where to go with the water.
6. Intersection of Pine Lake Rd. and Fore Lane Dr. (both sides of Fore Lane Dr. and both sides of Pine Lake Rd. north of the intersection).
   Problem: Standing water in areas listed above. There are no ditches along the roads or piping in this area.
   Action: A detailed engineered solution is needed to solve drainage problem in this area. Just moving the water downstream may overload the downstream system. See number 7 below.

7. North and south of intersection of Gemini Dr. and Pine Lake Rd. along the west side of Pine Lake Rd.

   Problem: The existing 8-inch piping is too small to carry the flows coming to it.

   Action: Recommend getting a detailed engineered solution in order to size system to help solve problems listed in number 6 above. Otherwise, replace 8-inch piping system with as large as pipe that will physically fit all the way to the pond north of Taylor Notion Road.
8. North side of street on Gemini Ct. (between intersection with Pine Lake and cul-de-sac).

   Problem: Pond on golf course overflows and drains through residential yard and over the road. Water stands on north side of Gemini Ct.

   Action: Town thinking of putting in basin on north side of Gemini Ct. in drainage easement and then piping to existing 12-inch pipe going down Pine Lake Dr. It is recommended that an engineering study be completed to determine if such piping would overwhelm the downstream drainage system creating another problem.
9. Area behind houses (along the back of the property) bounded by Lousan Dr., Fox Dr., Starlight Dr., and Weeks Blvd.

   Problem: Standing water after rain events. Ditch had been filled-in and water had no where to drain.

   Action: Town has placed approximately 200 feet of 12-inch CPP including 2 clean outs with grates in a 10-foot storm drainage easement along the back of the properties to an existing open ditch. According to Town, improvement seems to be working at this time.
10. North end of Loma Linda Ct. (along the property line on the west side of cul-de-sac).

    Problem: Area flooded a couple of times in the last few years. Lots around area have been built up creating a low area which can hold water.

    Action: Could possibly ditch or pipe from low area through easement beside of church to one of the ponds located in front of the church. Grades need to be shot along the proposed alignment to determine if ditching or piping is possible.
11. Just south of intersection of Quail Run and Channel View Ct. on the west side of Channel View Ct.

    Problem: Water stands after rain events on the west side of Channel View Ct. just south of intersection with Quail Run because the water does not have an outlet.

    Action: Town planning on piping from the west side to the east side of Channel View Ct. to an existing pond. No smaller than a 12-inch pipe should be used but recommend using a 15-inch pipe. Also recommend that the Town pursue their efforts in obtaining permission from the pond owner to clean out the existing pond.
12. South side and east side of Club Ct. just west of intersection with Bogue Sound Dr.

    Problem: Water stands after rain events on the east side of Club Ct. and extends out onto a vacant lot because the water does not have an outlet. Existing right-of-way not wide enough to construct a ditch.

    Action: Recommend that Town acquire an easement on the east side of Club Ct., grade a ditch to a low point, and then pipe (12-inch minimum) water to the channel under the road to a channel located to the west of Club Ct. CAMA should be consulted before starting any of this work. Most likely a CAMA permit would be needed to pipe any water to the channel in question. Note that Engineer could be helpful in obtaining any necessary permits.
13. Intersection of Park Ave. and Bayshore Dr. and extending north on east side of Bayshore Dr.

    Problem: All 4 quadrants of the Park Ave. and Bayshore Dr. flood and hold water during large rain events and water stands along the east side of Bayshore Dr. because there is no drainage system in area.

Action: Town is planning to construct a catch basin in each quadrant of the intersection and then pipe the water to the west down the north side of Park Ave. to an existing 15-inch RCP which crosses under Park Ave. to a ditch. In the field it was recommended that the Town use a 12 to 15-inch pipe and start at the downstream end at the existing culvert and lay pipe on as steep a grade as possible while maintaining sufficient cover under Bayshore Dr. However, after looking at the complexity of how the proposed system could affect the existing drainage system in the area, I would recommend having an Engineer study the area and design a system which would ensure that the downstream landowners would not be affected by the increase in runoff from the new upstream drainage system.

14. Both sides of Sound View Ct. north of intersection with Kear Dr. and north side of Kear Dr. from just west of intersection with Sound View Ct. to intersection with Youpon Dr.

    Problem: Water stands in the area and does not have an outlet.

    Action: Town has placed a 10-inch PVC pipe under Sound View Ct. (north side of intersection with Kear Dr.), ditched down both sides of Kear Dr. to existing ditch, and placed 10-inch PVC pipe under Kear Dr. Town says that this has solved problem along Kear Dr. The Town is planning on regrading the ditches along Sound View Ct. north of the intersection with Kear Dr. to drain to the existing piping system at the north end of Sound View Ct. which discharges into Deer Creek. Town should make sure regrading ditch will not overload downstream system to the point that it negatively affects any downstream landowners.

15. Both sides of Neptune Dr. east of Holly Ln. (Neptune Dr. closest to Bogue Sound).

    Problem: Existing 4-inch pipe east of intersection of Neptune Dr. and Holly Ln. is too small which causes water to backup into the street. The portion of Neptune Dr. which runs north/south does not have a drainage system and water stands in the area.

    Action: Town is presently working with CAMA to get approval to replace the 4-inch pipe which discharges into the sound with a larger pipe (preferably a 12-inch pipe). This would definitely help relieve flooding in the area of the small pipe. For the other area along Neptune Dr., the Town is planning on extending the 12-inch pipe down from the existing system which discharges into Deer Creek to the area ponding water and putting in a catch basin. Again, the Town should make sure adding to the existing system will not negatively effect downstream landowners.

Source: Storm Drainage Report, The Wooten Company, May 2001.

Implementation: The Town of Cape Carteret has implemented the recommendations listed above for items 1, 2, 3, 4, 6, 8, 9, 13, and 14. Items 7, 10, and 11 are proposed for future implementation. The recommendations for items 5, 12, and 15 are either not feasible to undertake at this time or will not be implemented. For item 15, the Town could not get DCM approval for the recommended increase in pipe size.

Appendix M
Population Projections

	US	*Certified Estimate*	*Projections*					
	Census 2000	**July 2002**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**
Carteret County	59,383	60,064	61,636	63,939	66,026	67,762	69,042	69,962
Cape Carteret Corporate Area	1,214	1,243						
Average rate of growth 1970-2000	1,214	1,243	1,410	1,606	1,865	2,125	2,469	2,813
Town to county ratio	1,214	1,243	1,233	1,279	1,321	1,355	1,381	1,399
Average	1,214	1,243	1,322	1,442	1,593	1,740	1,925	2,106
Cape Carteret Planning Jurisdiction	1,225*	1,254*	1,333	1,455	1,607	1,756	1,942	2,125

Sources: US Census, 1970-2000. 2002 Certified Population Estimates, NC State Data Center, October 2003. 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 Cape Carteret planning jurisdiction by The Wooten Company.

Carteret County projections by the NC State Data Center.

Cape Carteret corporate and planning jurisdiction projections by The Wooten Company.

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

Assumptions:

1. The average rate of growth (3.2% annualized rate) for the period 1970-2000 will remain constant through 2030.
2. The average ratio (2.0%) of the town's population to the Carteret County population for the period 1970-2000 will remain constant through 2030.
3. The ratio (100.9%) of the estimated 2000 planning jurisdiction population to the 2000 Cape Carteret corporate population will remain constant through 2030.

Appendix N
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 Cape Carteret to involve, inform and educate a broad cross-section of the community's populace. It is the intent of the Town of Cape Carteret 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 Cape Carteret Mayor and Board of Commissioners, the Town of Cape Carteret 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 Cape Carteret 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 Cape Carteret. The Town of Cape Carteret Town Clerk 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 Board of Commissioners Room at the Cape Carteret Town Hall, 102 Dolphin Street. The regularly scheduled Advisory Committee meetings will be held during the second 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 Cape Carteret. 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 Cape Carteret 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 Cape Carteret 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 Cape Carteret 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, Cape Carteret 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 Cape Carteret staff and/or Advisory Committee members to civic, business, church, and similar groups, as requested.
- Use of local CATV for meeting schedules, meeting notices, project progress reports, plan drafts, and other public educational materials.

12. Additional Meetings

In addition to the meetings outlined above and in Attachment B, The Town of Cape Carteret 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 Cape Carteret staff and amendments may be recommended. Any amendment to the Plan will be approved by the Town of Cape Carteret in the same manner as adoption of the original Plan.

Attachment A
Advisory Committee Membership
Town of Cape Carteret Land Use Plan Update

Name	*Address*	*Representing*	*Contact Information*
Sara Earnhardt	209 Neptune Court	Ole Cape Carteret	252-393-2339
Gordy Eure	207 Dolphin Street	Planning Board	252-393-6131
Linnie Dawsey	209 Taylor Notion Road	Board of Commissioners	252-393-6185
Fred Grube	117 Clubhouse Drive	Star Hill	252-393-8409
Lenore Hellwege	205 LeJeune Road	Board of Adjustment/Bayshore	252-393-6430
John Provetero	211 Channel Drive	Country Club Point	252-393-2087
Kevin White	550 Neptune Drive	Board of Commissioners	252-393-2519
Karen Zornes	102 Dolphin Street	Town Clerk/Local Project Coordinator	252-393-8483
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 Meeting Schedule
Town of Cape Carteret 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 Board of Commissioners Room at the Cape Carteret Town Hall, 102 Dolphin Street, Cape Carteret, 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. *Tideland News*

2. Local Public Access CATV station: Channel 10

3. Local radio stations: WRHT-FM
   WJNC-AM
   WBTB-AM
   WRNS-FM

4. Local television stations: WYDO
   WITN
   WNCT