

---

# Pender County CAMA Land Use Plan 2005 Update

May 2006

---

Core Land Use Plan

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

# TABLE OF CONTENTS

---

	<u>Page</u>
Overview	1
PART 1. Community Concerns and Aspirations	
1.1 Concerns and Aspirations	3
1.2 Planning Vision	5
PART 2. Information Base Summary	
2.1 Population	8
2.2 Housing	9
2.3 Local economy	9
2.4 Natural Systems	10
2.5 Existing Land Use and Development Trends	11
2.6 Water and Sewer	12
2.7 Land Suitability Analysis	13
PART 3. Plan for the Future – Land Use and Development Goals, Policies and Future Land Use Map	
3.1 Land Use and Development Goals	14
3.2 Pender County’s Future Land Use and Development Policies	15
CAMA Required Management Topics	16
Local Concerns	25
Definitions	34
3.3 Future Land Use Map and Land Classification Descriptions	38
PART 4. Tools for Managing Development	
4.1 Role and Status of the Land Use Plan	46
4.2 Existing Development Management Program	47
4.3 Additional Development Management Tools	55
4.4 Implementation Action Plan	56

PART 5.	Required Policy Analysis	
5.1	Overall Consistency with Management Topics	59
5.2	Consistency between Future Land Use Map and Land Use Plan Requirements	62
5.3	Analysis of the Impact of Policies on Management Topics	64
PART 6.	Detailed Planning Information Base	
Section 1	Population Growth, Housing, and Economy	
1.1	Population	75
1.2	Housing	77
1.3	Local Economy	81
Section II	Natural Systems Analysis	
2.1	Natural systems inventory	86
2.2	Composite environmental map	88
2.3	Summary environmental conditions	89
Section III	Analysis of Existing Land Use	
3.1	Existing Land Use	93
3.2	Future Land Needs	94
Section IV	Analysis of Community Facilities	
4.1	Water	96
4.2	Sewer	97
4.3	Highway System Improvements	97
4.4	Public Schools	99
Section V	Land Suitability Analysis	101
Section VI	Review of Current Policies	103

#### Tables

Table 1A	Analysis of Land Allocated to Future Land Use Classifications	43
Table 1B	Comparison Future Land Needs and Land Allocated to Future Land Use Classifications	44
Table 1C	Estimated Wastewater and Public Water Supply Capacity Requirements	45
Table 2A	Zoning Ordinance Summary	49
Table 2B	Compatibility Existing Zoning Districts with Future	

	Land Use Plan Map	51
Table 3A	Analysis of Impact of Pender County Policies on CRC Land Use Management Topics	65
Table 3B	Analysis of Impact of Pender County Policies on Areas of Local Concern	69
Table 4	Pender County and the Cape Fear Region Population, 1980-2000	75
Table 5	Pender County Population Trends, 1980-2000	76
Table 6	Permanent/Seasonal Housing Units	77
Table 7	Types of Housing Units	78
Table 8	Housing Units since 2000	79
Table 9	Population Estimate and Forecast	80
Table 10	Pender County Economic Indicators	81
Table 11	Employment by Industry	81
Table 12	Place of Work for Pender County Workers	82
Table 13	Wages and Salaries by Industry	83
Table 14	Changes in Pender County Agriculture 1987 to 2000	83
Table 15	Natural Resource Systems and Management Principles	86
Table 16	Composite Natural Features Table	88
Table 17	Summary of Water Quality	91
Table 18	Closed Shellfish Harvesting Areas	91
Table 19	Analysis of Existing Land Use	94
Table 20	Pender County Average Daily Membership (School attendance)	99
Table 21	Major Capital Improvements by School	100
Table 22	Land Suitability Analysis	101

#### Maps

	<u>Follows Page</u>
Environmental Composite Map	11
Generalized Land Use Map	12
Land Suitability Map	13
Future Land Use Map	39

# Pender County CAMA Land Use Plan 2005 Update

## Overview

---

Pender County's permanent population has been growing rapidly over the past two decades. The county has also experienced an upswing in the development of second-home and retirement communities. Working families and retirees alike take advantage of the county's beautiful, clean waters, its outdoor recreation opportunities, its picturesque landscape, and its rural lifestyle. The CAMA Land Use Plan is one of the tools that the county uses to manage its growth and development. The plan helps to ensure that new development and new land uses are consistent with the county's goal of maintaining its rural character; it helps the county plan for essential services; and it helps protect the essential natural resources that define the county's lifestyle.

The CAMA Land Use Plan serves both day-to-day and long-range functions. The day-to-day functions relate primarily to administration of the county's development management ordinances and the public's understanding and use of these ordinances for land use and development decisions regarding their own property. For elected officials, the Plan is a policy and decision guide on matters related to land use and land development. It does not have the status of a local ordinance or code, but the policies and the future land use map guide decisions on applicable ordinances and policies such as subdivision regulations or flood damage prevention ordinances. The Board of Commissioners can use the plan in their decision-making on capital and annual operating budgets.

This plan is the culmination of a 2-year land use planning process. The Board of Commissioners designated the Pender County Planning Board to oversee the update of the plan.<sup>1</sup> This Board spent many hours reviewing technical information and analyzing draft policies before endorsing the final draft.

---

<sup>1</sup> The Board of Commissioners at the beginning of the update process approved a Citizen Participation Plan. Digital copies of this document are available from the Planning Department.

The Planning Board provided numerous opportunities for residents and property owners to be involved in development of the plan. All Planning Board meetings were open; the Board held a series of six community workshops in the early stages of the update; and the Board held two open houses to get citizen input after the draft policies were completed.

The plan includes six parts:

1. Description of county *concerns and aspirations* and a planning vision for the county. Discussion of this plan component begins on page 3. It includes a sketch of the growth and development-related issues in the county that emerged from the citizen participation process. It also includes the planning vision that provides a valuable foundation for land use and development goals and the policies for growth and development.
2. *Summary of the analysis of existing and emerging trends*. This component of the plan, which begins on page 8, summarizes the technical information used for policy development. It includes trends and forecasts of population, housing and the local economy; it details the opportunities and limitations presented by the town's natural systems; the discussion and analysis addresses existing land use and recent trends; and it provides information on important community facilities. This part of the plan also includes a Land Suitability Map that provides the base for the County's Future Land Use Map.
3. *Future Land Use Plan*. The county's land use and development goals are found on page 14. These goals evolved directly from the planning vision and they provide a road map for working toward the planning. The land use and development policies, which begin on page 15, provide specific guidance on decisions, programs, and projects to help the county achieve its goals.
4. *Tools for managing development*. This component begins on page 44. It outlines the County's strategy and action plan for implementing its land use policies.
5. *Required policy analysis*. Beginning on page 53, this part of the plan includes analysis to ensure that the policies are consistent with the CRC land use management topics.
6. *Detailed analysis*. The part of the plan includes more detailed information on existing and emerging conditions than provided in Part 2. It begins on page 69.

# Part 1. Citizen Participation Process, Community Concerns, and Planning Vision

## 1.1 Concerns and Aspirations

The description of planning concerns and aspirations provides a backdrop and overall guidance for the update of the county's land use plan. Developing the description involved a two-step process. In step one, the Planning Board identified the general driving forces that will influence land use and development in Pender County over the planning horizon. These driving forces are summarized in Figure 1 below.

In step two, residents and property owners, in a series of six workshops throughout the county, identified the most important "...things to protect" and "...things to change" through the county's land use plan update process. The conclusions of these workshops are summarized in Figure 2.

The driving forces and resident ideas, opinions, and concerns are the basis for the Planning Vision included below.

**Figure 1. Driving Forces and Trends That Will Impact Future Land Use and Development in Pender County**

- Public sentiment concerning growth and development and the local policies that result.
- Increased residential development.
- Development of Pender County as a "bedroom" community for families that may work elsewhere.
- Level and type of business growth that the county will experience.
- Tourism development.
- Need for schools and school location.
- Services to address needs of growing population – What development patterns will allow County to deliver most efficiently?
- Need and ability to provide emergency services for existing and new development.
- Availability of hospital and related health services.
- Water and sewer – Decisions about the provision of these services and the areas where they are located could be major growth shapers in the county.
- Level and types of parks and recreation programs provided in the county.
- Development of the I-40 Exits.
- Environmental regulations with particular emphasis on soil limitations for septic tanks.
- Public access to the county's rivers, creeks, waterways, and sounds.
- Revised flood elevation data.

## Figure 2. What did the workshops tell us about land use and development?

---

- People value the rural character and lifestyle that is currently available in Pender County and would like to preserve it as the county's population continues to grow.
- People in various communities want similar things for the county, but they have different perspectives.
- Rural development patterns that are similar to current land use patterns should be maintained.
  - ... This favors overall low density development with more concentrated development in clusters and the traditional communities.
  - ... Almost all communities value their easy access to the Wilmington or Jacksonville areas but do not want to live in those types of urbanized settings.
  - ... Open spaces devoted farming and timbering is an important part of the current development pattern that is valued by residents.
  - ... People value preserved natural areas for their scenic value, wildlife habitat, and overall positive impact on the environment.
  - ... People also value the county's trees and would like to see them protected during the process of land development.
  - ... Heritage and tradition are important to Pender families and should be respected by the land use plan.
- Clean air and water are important environmental qualities that should be protected and enhanced by the land use plan.
  - ... In some communities, people feel that surface water quality is impaired and would like for the land use plan to address ways to improve it.
  - ... Most communities recognized the need for sewer and water to serve existing and new communities and to protect water quality.
  - ... Poor drainage is a problem in most communities. In many areas of the county where there is little or no topographic relief, it will be difficult to implement traditional stormwater management techniques. The additional challenge for the planning policies will be to address drainage and at the same time maintain the quality of the county's surface waters.
- Wetlands are an important natural system that performs many functions for the county. Only very low-density development should be planned for areas identified as wetlands.
- Access to public trust waters – ocean, sound, rivers, and creeks – is an important part of life in Pender County. In some areas, people judge access to be good and want to protect it. In other areas, people believe that access could be improved.
- In some communities, people feel that the balance between manufactured homes and conventional homes should be improved. At the same time, some people expressed the importance of maintaining a supply of affordable housing in the county.
- Traffic volumes and traffic safety is a concern in the eastern area of the county. In other areas, people value current low traffic volumes and low traffic congestion. The land use plan will need to address both protection and improvement of the road system.

- Several communities expressed the need for more jobs and higher wages for Pender County residents. There was also a concern about the amount of land available for job-related land uses.
  - Generally, people are satisfied with their access to community services such as schools, fire, rescue, libraries, and so on. Many communities identified good schools as something they value about living in Pender County. However, some people believe that access to public recreation facilities, possibly in conjunction with the schools, should be addressed in the plan.
  - Often transportation to essential services, such as medical appointments, for elders can be difficult in rural areas. Some people felt that more attention should be paid to public transportation for elders.
  - Feelings about the county's tax rate were varied, but generally the sentiment is that taxes should be moderate. There are land use and development alternatives that are linked somewhat to the cost of delivering some public services. The plan should explore these alternatives so that the Planning Board and the Board of Commissioners may consider them.
  - Regulations should be as flexible as possible, consistent with good stewardship of the county's resources.
- 

A digital copy of the Citizen Participation Plan that was executed in conjunction with the LUP update is available from the Pender County Planning Department.

## 1.2 Pender County's 2050 Vision

The 2050 Vision for Pender County is based on the values and concerns expressed by the residents and property owners who participated in the community workshops held throughout the county. The Vision provides an illustration of what the county wants to become and what it will be like in the future. **The Vision does not necessarily describe what exists.** The Vision also provides some basic land use and development principles that will guide goal setting for land use and development and the content of policies to achieve these goals.

*Pender County is recognized in southeastern North Carolina for its natural beauty and its quality of life. The county's scenic character is defined by clean rural highways and roads that run through productive farms, woodlands, and open spaces and that offer beautiful views of the county's sounds, rivers, and creeks. The county's quality of life is defined by its rural life-style, by small towns and stable communities, by diverse opportunities to earn a living, and by supportive community organizations. County residents are able to achieve this quality of life without unnecessarily restrictive regulations on decisions concerning use of the land.*

*The county offers a variety of choices in community settings for its residents. They range from more urban-type residential areas to rural development that includes very low-density residential districts, lower density traditional subdivisions and manufactured home parks. Urban-type development is located in service corridors in the eastern, central, and western areas or near its incorporated areas to the more where services are available. Homes on working farms are a major feature of the county's rural landscape.*

*Rural communities continue to be an important part of the county's development. These communities offer some basic services, such as food, auto supplies or post offices; they also offer unique residential opportunities; and many host schools that are a mainstay for the community.*

*The county has a variety of housing types to meet the needs of the families of all ages and income ranges. A substantial number of residences are single-family. But families can choose from a range of home construction options that offer quality, affordable housing. The county makes efforts to ensure that all residential communities, no matter what density or housing types, have the services necessary to ensure safe and healthy living.*

*Pender County's economy is stable. Farming and timbering remain important parts of the county's economy. The open spaces and vistas gained from working farms and managed woodlands contribute heavily to the county's quality of life.*

*The economy also includes a variety of businesses that take advantage of 21<sup>st</sup> century technology, that support the retirement and second-home markets, and that provide support growing resource-based tourism – fishing, hunting, and paddling. Pender County is also a residential base for families that have family members working in the surrounding region. The County works with local organizations, other local governments in the region, and the state DOT to make these workers' access to jobs outside of the county as safe and efficient as possible.*

*Business land uses and industrial uses that provide services and jobs are located so that they are convenient to the county's residential communities but do not conflict with the residential environment. In*

*addition, business and industrial land uses are located where transportation and utilities, and environmental conditions are optimal.*

*The County works diligently with the NC Department of Transportation, the county's municipalities, local organizations, and other local governments in the region to ensure the continued development of a high quality transportation system. The system includes major highway facilities that provide safe and efficient movement of people and goods throughout the county and good access to I-40. The state provides a high level of maintenance to existing roads and rights-of-way and quickly makes improvements to address safety problems. The cleanliness of the county's roadsides is a model for the region. The county encourages development patterns that enhance safety and protect the capacity of its existing roadway system.*

*Excellent county services support the quality of life offered by Pender County. The county is a safe place to live and work.*

- *The Sheriff's Department insures that the county has a low crime rate and that residents are free from the fear of crime.*
- *State-of-the-art fire and emergency medical services are quickly available throughout the county.*
- *The public schools and community college are accessible and provide an excellent foundation for life-long learning.*
- *Active and passive recreational opportunities abound for everyone – children, teens, adults, and seniors. Community and neighborhood parks and school-parks provide opportunities for and abundance of outdoor activities.*
- *A responsive county government keeps the taxes and fees to support these services within the reach of all county residents.*
- *A hospital that provides quality healthcare to county and nearby residents.*

*Pender County values the opinions of its residents and property owners and involves them in decisions regarding the County and its future. The county and its municipalities cooperate to guide land use and development in the areas immediately surrounding the incorporated areas in a manner that is consistent with county goals and that protects the interests of property owners.*

## Part 2. Information Base Summary

This part of the plan briefly summarizes a large body of technical information that is one of the tools that the Planning Board has used to develop policies and the Future Land Use Map. A more detailed presentation of this information is provided in Part 6, beginning on page 69.

### 2.1 Population

Between 1990 and 2000, Pender and Brunswick were the fastest growing counties in the Cape fear Region. Pender's growth during the decade was 42%. Population forecasts place Pender County's population at 95,900 in 2025, an increase of 40,800 residents and an annual growth rate of 4.4%.

Within the county, the Rocky Point and water-oriented Topsail Township were the fastest growing areas. Rocky Point, together with Burgaw and Union Townships, form a growth corridor along I-40.

During the 1990s, the percentage of the county's population in the working age group (25 to 54) increased significantly. The percentage of the pre-school and school age population declined; however, the number of persons in these age groups increased somewhat. The percent of persons in the older age groups remained stable.

<b>Population Growth Trends and Projections 1990—2025</b>		
Sources: US Census; Pender Planning Dept.; US Census		
Year	Cape Fear Region	Pender County
1990	249,711	28,855
2000	329,301	41,082
2010 (projected)	NA	63,200
2020 (projected)	NA	84,900
2025 (projected)	NA	95,900

## 2.2 Housing

Like most rural counties, owner-occupied housing dominates the housing stock in Pender. In 2000, 78% of all houses were owner-occupied. The percent of renter housing decreased from 29% in 1990 to 22% in 2000.

The average number of persons per house continued to decline over the past 20 years—from 2.91 in 1980 to 2.49 in 2000.

Most people live in single-family homes—59% in 2000; 35% live in manufactured homes.

The county added more than 3,500 housing units from 2000 through 2004. These new units were evenly divided between conventional and manufactured units.

Housing Units since 2000—Permits for New Units						
	2000	2001	2002	2003	2004	2000-04
Conventional homes	174	195	292	459	674	1,794
Manufactured Homes	359	480	421	283	202	1,745
Total	533	675	713	742	876	3,539

Source: Pender Planning Department

## 2.3 Economy

The county's per capita income increased by 258% between 1980 and 2000. This is a significant percentage growth increase and in buying power terms, incomes increased much faster than the rate of inflation. An increase to \$10,441 in 2000 would have kept pace with inflation.

While Pender's incomes are growing, the county still lags behind the region as a whole. Pender's per capita income is about 75% of the region as a whole.

According to the 2000 Census, 60% of Pender's workers commute outside of the county for employment; 38% work inside the county.

Pender County Profile	2000
Per capita income	
Pender County	\$17,882
Cape Fear Region	\$24,738
Total personal income (\$000)	\$818,817

Gross retail sales (\$000)	\$238,436
Total employed labor force	13,046

Source: 2000 Census

## 2.4 Natural Systems

This section provides a brief inventory of the county's natural systems and their management principles. The Planning Board used this information extensively to formulate and evaluate land use and development policies.

Natural System or Resource	Management Principle
Wetlands Coastal wetlands  Non-coastal wetlands	<ul style="list-style-type: none"> <li>No development or activity that would damage or alter natural functions - only those uses that require water access.</li> <li>Only development consistent with significant wetland values—water storage, shoreline stabilization, water quality protection, habitat, and recreation.</li> </ul>
Estuarine waters	Manage to maximize their benefits. No development that would damage biological, social, aesthetic, or economic values.
Estuarine shoreline	Ensure that development is compatible with dynamic nature of the shoreline, as well as the values and management objectives of the estuarine and shoreline system (AEC).
Soil limitations (septic systems) Slight to moderate  Severe	<ul style="list-style-type: none"> <li>Manage development intensity to be consistent with soil capabilities.</li> <li>Very low intensity development until central wastewater treatment system or proper alternative waste treatment systems is available.</li> </ul>
Natural hazards In 100-year flood (includes ocean hazard AEC)  In storm surge area	<ul style="list-style-type: none"> <li>Avoid if possible. Require any new development within flood hazard area to be constructed in manner that minimizes safety hazards and flood damage. No critical facilities in these areas.</li> <li>-Development located landward of the first line of stable vegetation.</li> <li>-Structures elevated to provide adequate separation from base flood elevation.</li> <li>-No alteration of sand dunes which would increase potential flood damage.</li> </ul>
Water quality ORW watersheds (areas draining to an Outstanding Resource Water)	Limits on development density, built-upon area, surface water discharges, and storm water runoff consistent with values of the resource.

<p>HQW watersheds (areas draining to a High Quality Water)</p>	
--	--

A *Composite Environmental Map* located on the following page shows the extent and overlap of the natural features described above. This map illustrates the location of 3 categories of land:

- Class I** — land with only minimal hazards or limitations.
- Class II** — land with development constraints that may be addressed by restrictions on types and intensity of land uses, special site planning, or provision of public services.
- Class III**— land with serious hazards or limitations or land where development may cause serious damage to natural systems.

## 2.5 Existing Land Use and Development Trends

The county’s development trends reflect the overall growth patterns of the county. Over the past five years, nearly 4,500 new land parcels were created for development. These parcels were 5 acres or less in size. Approximately 2,100, or 47%, were created along the US 17 — Coastal corridor; 530, or 12%, were in the Rocky Point area; and 500, or 11%, were in the Burgaw area. These three areas account for 70% of the development of this type in the county.

The influence of the county’s zoning ordinance on land use is evident in many areas. Before the ordinance was revised in early 2004, the predominant zoning district was RA, which allowed most uses either by right or by special use permit. As a result, a mixture of land uses, some of which may not be compatible, is present in many areas.

In addition, residential land use patterns show a scattering of medium density residential uses throughout the county. This scattered pattern is not consistent with the rural landscape desired by many residents.

The table below provides information on the amount of land currently allocated to various uses in the county.

Land Use Category	Acres
Residential	15,627
Commercial/business	850
Industrial	1,144
Transportation, communication, utilities	708
Institutional	1,241
Total for community uses	19,570
Agriculture-animal operations	1,633
Agriculture-crops	53,387
Forestry and other uses	456,145
Total	530,735

Source: Pender Planning Department GIS

A *Generalized Land Use Map* is found on the following page. It shows existing land use and development patterns in the county. This map is intended only to show general patterns and not information about specific lots or tracts. The map shows community land uses, which include residential, commercial, industrial, and so on; agricultural operations, which includes animal operations and crops; and major conservation areas that are managed by the State or other organizations.

The Planning Board studied a more detailed map of existing land use and development patterns during the update. A copy of this map is available for viewing in the County Planning Department.

## 2.6 Community Facilities—Water and Sewer

Water and sewer are important community facilities and services that play a major role in guiding growth and development and they are an important part of the county's effort to protect public health and its natural resources.

The county currently operates approximately 63.0 miles of water lines. The system is concentrated in the southern part of the county in the Rocky Point area. The county is in the process of expanding the system to the west, to the north between Rocky Point and St. Helena, and to the east along NC 210 to the Hampstead area. This system relies primarily on water supply from the Town of Wallace.

The Town of Burgaw supplies water within its corporate boundaries; the Maple Hill community receives water from the Chinquapin water system; and the Penderlea community is supplied by the Wallace system.

Burgaw operates the only major sewer system in the county. The Rocky Point-Topsail Water and Sewer District operates a small system in the Rocky Point area that serves public schools and the Del Labs business site.

The county has long range plans for a sewer force main that will connect from the NC 210 area along the I-40/US 117 corridor to the Town of Wallace system.

## **2.7 Land Suitability Analysis**

A land suitability analysis identifies land in the county that is most suitable for development. The analysis is not intended to “rule out” any land or site from development. It is intended to provide information to county officials and to property owners on land that may have fewer environmental and regulatory restrictions, land where services can be provided at lower cost, or land that is most attractive given its proximity to existing development or to the waterfront areas.

*A Land Suitability Map* is found on the following page. This map shows the results of the suitability analysis. It depicts 4 classes of land – least suited, low suitability, moderate suitability, and high suitability. The higher suitability areas are concentrated in corridors along roads where natural system limitations are lowest.

A GIS model provided by the Division of Coastal Management generated the Land Suitability Map. Details on this analysis are provided in Part 6.

## Part 3. Plan for the Future— Land Use and Development Goals, Policies, and Future Land Use Map

“The ‘Plan for the Future’ sets the (county’s) course of action to achieve its vision.”<sup>2</sup> The plan includes three components: Land use and development goals, land use policies, and a future land use map. The policies and the future land use map are a direct result of the county’s citizen participation process and extensive review by the Planning Board. As required, the policies and the future land use map address the land use management topics set by the Coastal Resources Commission.

### 3.1 Land Use and Development Goals

This section details Pender County’s future land use goals. These goals describe the *desired ends* toward which the land use plan and its policies are directed. They also describe the values and principles that guide the county’s development.

The goals are an outgrowth of the key issues and concerns identified by the Planning Board; the input that the Planning Board received at the community workshops and the open houses; the planning vision; and the technical analysis of existing and emerging trends. They provide a template for developing policies and programs. However, the goals are not part of the county’s land use and development policies.

#### Goals

Satisfactory access for residents and visitors to Pender County’s public trust waters for a range of activities

Land uses and land use patterns that are consistent with the capabilities and limitations of the county’s natural systems

Preserved natural and wildlife management areas, such as Holly Shelter and Angola Game lands, that have high biologic, economic, and scenic values

---

<sup>2</sup> NCDCM, *Technical Manual for Coastal Land Use Planning*, July 2002, pg. 62.

Mitigation of risks from storms and flooding

Better traffic flow and safety to accommodate the county's growing permanent population and its visitors

High quality waters in the county's rivers, creeks, and sounds that meet water quality standards and that are approved for shellfishing

Land use and development patterns that preserve the county's rural character with more intensive development located mainly in areas where community services are available and rural and environmentally sensitive areas are reserved for lower intensity development

Sound economic base that generates jobs for residents who wish to work in the county; adequate transportation and access to surrounding areas for residents who work outside the county

## **3.2 Pender County's Future Land Use and Development Policies**

### **Introduction**

Pender County's policies are the principles and decision guidelines, or courses of action that the County will use to reach its vision and accomplish its land use and development goals. While the policies are not regulatory, except for the requirements and standards for development and land use in Areas of Environmental Concern, the County will follow a deliberate process to ensure that its development and land use guidelines and its future land use decisions are consistent with the policies. Part 4 of the plan, Tools for Managing Development, contains a description of the steps that will be taken to address consistency between the policies and county development ordinances.

CAMA planning guidelines specify that local policies must address six management topics. These management topics include:

- Public access
- Land use compatibility
- Natural hazard areas

- Infrastructure carrying capacity
- Water quality, and
- Local concerns

The *local concern* management topic includes policies on a range of local issues, concerns, and opportunities related to preserving the county's rural character and ensuring that development respects the capabilities and constraints of natural systems, is compatible with surrounding land uses, and has services commensurate with density or intensity of development.

This section also includes a set of definitions to assist in the interpretation of the policies. The definitions begin on page 34.

None of the county's policies for AECs exceed state standards.

## **CAMA Required Management Topics**

### **A. Public Access Policies**

---

- 1) Pender County supports expansion of public access locations based on CAMA Site Classification Standards, through public and private actions as a high priority (See definitions section for Site Classification Standards).
  - a) The County will prepare an analysis of potential public trust water access sites and develop policies that will encourage the development of these sites for public trust water access.
  - b) The county will investigate use of property currently owned by public agencies for access sites.
  - c) When publicly owned property is suitable for development of an access site, the county will seek financial assistance for making required improvements, using the value of the property to satisfy local match requirements.
  - d) The county will encourage property owners to dedicate sites for public access.
  - e) The county will work cooperatively with its barrier island communities and the state to locate and develop access sites.
  - f) The county will encourage the municipalities to develop community access sites where appropriate.

- g) All access facilities will be designed and operated in a manner that minimizes any negative impacts on water quality and that minimizes any conflicts with other natural resources and surrounding land uses and where feasible, provide for universal accessibility.
- h) The county will encourage developers of residential projects to provide neighborhood public access sites for the residents of the area where opportunities are present.
- 2) Where practical, the county encourages joint development of piers and docks to serve new developments and nearby residential properties.
- 3) The county requires wet slip (publicly or privately owned docks for more than 5 vessels) and upland excavated marinas to provide access to public trust waters when practical. These facilities must be consistent with the policies in Section B.
- 4) The County supports CAMA Standards designed to limit the length of docks and piers as they project into public trust waters.
- 5) The County supports CAMA Standards regulating freestanding moorings and mooring fields.

## **B. Land Use Compatibility Policies**

---

- 1) The County designates the Estuarine and Public Trust Water AEC'S as Conservation Area I. Within this Area, any use, development, or construction activity that is not compatible with conservation and management of this AEC's biological, social, economic, and community values and is not water-dependent is prohibited (see land use category descriptions Conservation Area I).
  - a) Floating homes are not allowed in the County's planning jurisdiction. A "floating home" is a moored structure that is secured to piers or pilings and is used primarily as a residence and not as a boat.
  - b) New wet slip and upland marina basins (Marina – publicly or privately owned docks or facilities for more than 5 vessels and as additionally defined by the County) are permitted only in non-Outstanding Resource Waters. Development of joint piers for residential use that reduce the number of individual piers may be approved as an exception to this policy. Dry stack storage marinas will be encouraged as opposed to wet slip marinas or upland basins. (This policy is more stringent than the CAMA standard regarding marinas.)
- 2) The County designates Coastal Wetlands AEC, as Conservation Area I. Within this Area, any use, development, or construction ac-

- tivity that is not compatible with conservation and management of this AEC's biological, social, economic, and community values and is not water-dependent is prohibited (see land use category descriptions Conservation Area I).
- 3) Development in the Estuarine Shoreline AEC (75 feet for non-ORW areas and 575 feet for ORWs) should be consistent with the CAMA use standards so that water quality and valuable coastal resources are protected and preserved.
  - 4) The County will not approve a permit in the Estuarine Shoreline area that is known to be inconsistent with CAMA Standards or published North Carolina Regulations.
  - 5) The county discourages any new residential or commercial developments in the Estuarine Shoreline area unless it is low density, minimizes impervious surfaces, and installs systems to manage runoff that comply with requirements of the state and the county.
  - 6) Development regulations for the Estuarine Shoreline promulgated by state standards will be supported.
  - 7) The county will allow the installation of erosion control devices in freshwater swamps if all necessary local, state and federal permits can be obtained and all applicable regulations to protect freshwater swamps are followed.
  - 8) The county will not permit new residential or commercial development in the following hydric soils: Bohicket Silty Clay Loam, Carteret Fine Sand, Chewacla Loam, Croatan Muck, Dorovan Muck and Muckalee Loam. This group of soils is designated as Conservation Area I.
  - 9) Development adjacent to primary nursery areas will be permitted only when density, intensity and allowable lot coverage are consistent with North Carolina State Standards. The development density in these areas will be encouraged to be low density.
  - 10) The County will avoid undertaking any activity or permitting any activity that is known to destroy any remaining known habitat for loggerhead turtle nesting areas.
  - 11) The county encourages the preservation and hydrologic restoration, in perpetuity, of the Angola Bay Gamelands, Holly Shelter Game Preserve, and other designated public natural areas for the rare and valuable plants and animals they contain and for the vital role they play in recharging regional groundwater supplies.
  - 12) Pender County is opposed to the development of undeveloped barrier islands within its planning jurisdiction. The County supports initiatives by local, state, federal or private preservation organizations to purchase and maintain these environmentally sensitive areas for the benefit of all residents of the county, state and nation.

- 13) The County supports efforts to identify sensitive aquifer recharge areas.
- 14) The County supports public and private efforts to acquire and preserve sensitive natural areas and will work to identify these areas.
- 15) The county supports federal, state and local efforts to protect the quantity and quality of water in the region's groundwater system, whether such protection involves controls over the location and management of activities involving hazardous substances, restrictions on groundwater draw-downs, or any other activity which would jeopardize the short and long term viability of groundwater resources.
- 16) The county does not approve permits for any use that is in violation of adopted Coastal Resources Commission Policies, North Carolina or US Government regulations or laws when notified, in writing, by the appropriate agency that the project for which the permit is applied is in violation of such policies, regulations or laws.

## **C. Infrastructure Carrying Capacity**

---

### **Transportation**

- 1) Coordinated inter-governmental and regional planning for land development, transportation and water and sewer services shall be a high priority for the County. Regional efforts for transportation planning and advocacy for transportation improvements shall be supported as a very high priority for this effort.
- 2) The county will request and participate in regular updates of the County Thoroughfare Plan and insure that it reflects the desired land development patterns contained in adopted policies and reasonable provisions to protect the capacity of area thoroughfares and provide for emergency evacuation needs.
- 3) The county encourages land use patterns and site development that protect highway capacity.
- 4) The county will present a comprehensive list of transportation needs to the NCDOT each year.
- 5) The County supports public transportation services, including initiatives for mass transit, to preserve the capacity of existing roadways.
- 6) The County supports public transportation services that meet the special transportation needs of the elderly and disabled.

## Water & Sewer Service

- 1) Water and sewer extension priorities will include existing developed corridors, growth areas and clusters and areas where development is to be encouraged, where provision of services is financially feasible, or where job-oriented development is to be encouraged. Exceptions may include extensions to address public health problems. Areas with existing water and/or sewer service and areas where such services are planned are classified as Urban Growth or Transition Areas. These areas are planned for more intensive land uses.
- 2) Public sewer services shall generally avoid areas in the county used predominantly for agriculture and forestry activities. In order to protect these areas from development pressure where services are provided in such areas, the county will develop policies and procedures that provide protection from development pressures such as increased taxes. Regulations and extension policies will also discourage intense, high density and commercial development in these areas.
- 3) The County will review waste disposal operations, including off site waste water treatment systems, solid waste disposal operations and sludge disposal operations for compatibility with surrounding development and County Policy and Regulations.
- 4) Incentives will be provided when green space, of environmental or historical significance, is preserved above minimum standards and when the entire development is served by a community waste water treatment facility approved by the State of North Carolina and operated by a public entity or public utility.
- 5) The county will continue to upgrade and expand its piped water supply system. Emphasis is on development of a self-supporting system where costs are assigned in relative proportion to the benefits conveyed.
- 6) The county will establish and maintain utility extension and connection policies that address the timing, location, priorities and sequence, etc. of system expansion in coordination with specific growth management objectives.
- 7) Centralized sewer services shall generally avoid AECs except to address existing water quality issues.

## Stormwater Management

- 1) The County encourages site-specific stormwater management options that minimize runoff and non-point source discharges to estuarine and public trust waters.
- 2) The County will document and record problem drainage areas in a master file that is easily accessible for analysis. Alternative solutions, including service and drainage districts will be investigated to provide solutions.
- 3) Pender County will support the NC Division of Water Quality regulations regarding storm water runoff resulting from development activity through its permitting process.
- 4) The costs of storm water management, which are associated with an area's rapid growth, will be equitably distributed. The proponents (and beneficiaries) of development activity will be responsible for the costs of storm water management associated with their development projects.
- 5) The County will provide property owners and developers with available information and educational materials on effective methods to address water quality protection during construction and on-going operations.

## Other Facilities

- 1) The County supports advanced planning for the location of new public schools. Such advanced planning shall incorporate age-specific population projections, and projected residential growth patterns.
- 2) The County shall insure that its development standards provide for all new development to provide a proportionate share of the cost of new facilities to serve it including schools.
- 3) New development shall provide for open space and/or recreation facilities based on the intensity of the development or provide payments to insure the provision of such facilities on a large-scale, economically feasible basis for the area.
- 4) Planning for parks and open space will ensure that all areas of the county have access to appropriate facilities. The county will consider recreation and water access as acceptable multiple use objectives for natural & conservation areas, particularly when such facilities are passive in nature, providing access or facilities for non-motorized activities.

- 5) The county will encourage identification and appropriate recreational development of a system of open space greenways, hiking trails, and paddling trails within the county. The use of natural corridors such as streams, floodplains, and man-made corridors such as utility and transportation rights-of-way and easements will be emphasized.
- 6) In order to minimize the use of landfills and reduce the potential for groundwater and surface water contamination, Pender County encourages the recycling of paper, metal, glass, plastics, electronics, toxic materials and other reusable or environmentally damaging materials.

## **D. Natural Hazard Areas**

---

- 1) The county recognizes the risks to life and property that exist within its special flood hazard areas and related ocean hazard area AECs. The county will continue implementing measures that mitigate these risks and discourage new development activities that increase the potential for risk in these areas.
  - a) The County will continue to implement FEMA Standards in Special Flood Hazard areas to insure reasonable protection to properties in those areas.
  - b) The County will encourage the completion of detailed flood maps by appropriate agencies.
  - c) New development other than that necessary for water access and open space/recreation related activities shall be discouraged in the designated Floodway. Creation of new lots/parcels (New Development) other than for open space, recreation, water access, agricultural, forestry or other non-habitable structures in the designated floodway shall be prohibited.
  - d) Development in any designated Special Flood Hazard Area shall consist of low density/intensity activities or facilities.
  - e) The County will support CAMA use standards for the ocean hazard AECs through its permitting process. The County will in addition discourage any development on the uninhabited Barrier Islands within its jurisdiction.
- 2) The county will adopt & periodically update a Hazard Mitigation Plan that addresses known hazards in the county.
- 3) The County will review new development proposals for adequate access to major exit routes during hazardous emergency conditions. The County will cooperate with and encourage NCDOT to provide adequate evacuation routes for all areas of the County.

## E. Water Quality Policies

---

- 1) Pender County recognizes the importance of water quality to preserving the life-style and economic well being of its residents and property owners. The county will implement measures within its authority to address activities that are known to diminish water quality, including development in known wetlands.
  - a) The county shall establish a 575-foot buffer around ORWs that are undeveloped to protect water quality. Within this area, the county will allow only low-density development, shore line vegetative buffers and storm water standards that are consistent with preserving and restoring water quality.
  - b) Pender County shall support a vegetated buffer program along streams and water bodies to preserve, maintain, and protect the quality of area waters.
  - c) The county supports location, design, and operation requirements for wet slip and upland marinas that minimize any negative impacts on water quality. New wet slip and upland marina basins (Marina – publicly or privately owned docks or facilities for more than 5 vessels and as additionally defined by the County) are permitted only in non-Outstanding Resource Waters. Development of joint piers for residential use that reduce the number of individual piers may be approved as an exception to this policy. Dry stack storage marinas will be encouraged as opposed to wet slip marinas or upland basins.
  - d) The county strongly encourages “cluster” and “green space” development and other techniques to reduce the impervious surfaces associated with new development or significant re-development. County development regulations will provide incentives to encourage this type development.
- 2) The county supports the state’s soil erosion and sedimentation control program and its stormwater management program by requiring proper permits prior to issuance of building permits or approval of preliminary plats for subdivisions.
- 3) The County supports State land use and development regulations designed to protect and enhance water quality in Outstanding Resource Waters (ORWs) and High Quality Waters (HQWs) located in non-coastal waters.
- 4) The county strongly encourages farmers and timber operators to employ accepted “best management practices” to minimize the impact of these operations on water quality.

- 5) The County will encourage regulated wetlands that are delineated and known to the County to be preserved as open space or for open space related activities, including agriculture, forestry, recreation, and other non-fill or impervious surface activities and facilities allowed by applicable State and Federal Regulations or other very low density activities.

## LOCAL CONCERNS

### A. Maintaining Pender County's Rural Lifestyle

---

- 1) Pender County encourages land uses and development patterns that maintain the county's rural lifestyle. Protecting the rural lifestyle encompasses the following planning objectives:
  - a) Cluster development patterns that incorporate significant open space and protect viable farm and timber operations;
  - b) Limiting community services to areas planned for higher intensity development;
  - c) Accommodating traditional business activities in the rural areas;
  - d) Protection of the county's natural resources, such as sounds, rivers, and creeks and wetlands; and
  - e) residential, commercial, and industrial development patterns that address the county's rural development and open space objectives, have access to appropriate service levels, and are compatible with surrounding land uses.
- 2) Specific land use and development policies to achieve these objectives are detailed below.

### B. General Development Patterns

---

- 1) Pender County encourages development that contributes the county's rural open space character. Clustering of development and preservation of open space will be considered in all development proposals. Intensive land uses and high-density development should be limited to areas where existing services are available with access to major transportation facilities.
- 2) County actions concerning infrastructure and regulations will direct new development first to compact targeted Urban Growth, or Transition Areas. New intensive or higher density development is discouraged in new locations in rural areas, conservation areas, existing and prime agricultural lands or active forestry areas.
- 3) The County encourages development that has densities appropriate for its location. Location factors shall include whether the development is within an environmentally sensitive area, the type of sewage treatment available to the site, and the proximity of the site to existing community services and transportation facilities.
- 4) County development policy and regulations shall provide for flexibility in development of Home Based Business Services with acces-

- sory retail uses, especially in the Rural, Rural Cluster and Transition Areas.
- 5) All new development (residential, commercial, institutional and industrial related including extraction activities) shall have or provide reasonable access to a publicly maintained road or a road constructed to Pender County Standards with established permanent provisions for maintenance.
  - 6) All new development shall provide for appropriate facilities that promote the reduction of litter and illegal disposal of trash, litter and garbage.
  - 7) County and public facilities and facilities funded by the county should set examples for building design, landscaping, buffers, open space, landscaping, litter control, storm water management, use compatibility and policies that are imposed upon the private sector.
  - 8) New major development or development of high density or intensity should provide urban type infrastructure including sidewalks, water and sewer services by public entities or public utilities and open space, recreation facilities, school site and facilities or payments in lieu of the services or facilities.
  - 9) All major development proposals shall be required to identify regulated wetlands as part of the submission and review process. County development regulations shall encourage these areas to be preserved or restricted as open space or for open space related activities, including agriculture, forestry, recreation, and other non-fill or impervious surface activities and facilities allowed by applicable State and Federal Regulations or other very low density activities.
  - 10) Efforts to identify, designate and preserve sites, buildings, equipment, uses and areas of significance shall be supported as a means of enhancing the County's economy by tourism development.
  - 11) All new development shall be encouraged to limit light pollution.

## **C. Residential Development Patterns**

---

- 1) Pender County seeks to accommodate the development and appropriate placement of a variety of housing types, including site built homes, apartments, townhouses, accessory living units, and manufactured homes. The county does not allow the use of any structure not recognized as a permanent residential structure under the North Carolina Building Code to be set up for permanent residency purposes.

- 2) Factors in determining preferred locations for higher density residential development shall include: close proximity to employment and shopping centers, access to major thoroughfares and transit systems, the availability of public services and facilities, and compatibility with adjacent areas and land uses.
- 3) Established residential neighborhoods and communities will be protected from incompatible uses and unwanted traffic to ensure their continued existence as major housing resources. Existing housing shall be encouraged to meet or exceed minimum standards for health, safety and welfare.
- 4) Low density clustered residential uses providing a variety of housing types including multi-family and transient residential may be acceptable in rural areas when adequate water and sewer is provided and overall density standards of the area are maintained.
- 5) The protection and rehabilitation of existing viable residential neighborhoods shall be a priority for all development activities, so that such areas will continue to exist as a housing source for the County's varied populace.
- 6) Major residential development or residential development that is not very low density that would expose its inhabitants to incompatible uses or hazards will be prohibited.

## **D. Commercial Development**

---

- 1) Major retail centers should be located near the intersections of major roadways. These sites should have access to basic community services and should be developed in a manner that maintains traffic safety and minimizes impacts to roadway capacity. Major commercial centers are best suited for retail and service activities that generate high volumes of traffic, require large parking areas, and serve countywide markets.
- 2) Highway commercial corridors should be clustered along segments of highways with reasonable landscape requirements including street (canopy) trees and contain land uses that require high visibility and good road access which are mutually compatible and reinforcing in use and design. This type development should be designed to minimize signage, access points, and uncontrolled individual site development. Creation of new small sites with individual access along the area's major streets and highways shall be discouraged.
- 3) Neighborhood and convenience commercial centers should be encouraged to locate where there is good vehicular and pedestrian access with preference on a collector street.

- 4) Rural area commercial development should be encouraged to locate near crossroad centers or other locations with good access and should be limited to local convenience stores, farm supply stores, and generally accepted rural business establishments.
- 5) Multiple (more than three) individual new small lot development with direct access along the county's major thoroughfares and collectors is discouraged for all type uses.
- 6) Incompatible commercial encroachment within or immediately adjoining existing viable residential areas is not allowed. Such incompatible encroachments often include, but are not limited to, automobile oriented uses such as service stations, car lots, car washes, drive through restaurants, and other uses generating high traffic volumes, noise, hazards, etc.
- 7) Office, institutional, multi-family development and similar high intensity uses shall be encouraged to locate as a transitional land use between residential areas and commercial and industrial activities of higher intensity and major traffic arteries, where appropriate.
- 8) All commercial development should provide reasonable landscaping that emphasizes the interior of expansive parking areas with substantial tree plantings and perimeter buffers with street (canopy) trees emphasized.
- 9) Development regulations shall give special consideration to reuse or development of existing commercial and industrial buildings as long as adequate measures are imposed to insure no hazards are created for adjacent development and reasonable perimeter buffers and landscaping is provided.
- 10) County development policy and regulations shall provide for flexibility in development of Home Based Business Services with accessory retail uses, especially in the Rural, Rural Cluster and Transition Areas.
- 11) The County will encourage the preservation of existing significant trees.
- 12) The County shall provide for an environment that supports the creation of small business in the appropriate location.

## **E. Industrial & Business Development**

---

- 1) The County shall encourage a public service and regulatory environment conducive to industrial development, compatible with environmental quality considerations and the availability of resources.
- 2) Industrial development should not be located in areas that would diminish the desirability of existing and planned non-industrial uses,

- nor shall incompatible non-industrial uses be allowed to encroach upon existing or planned industrial sites.
- 3) The county encourages advanced planning for industrial and major business uses to identify sites that are physically suited for such uses, that have basic water and sewer services (or services can be readily extended), and that are compatible with existing and planned residential areas and neighborhoods. The county will use the criteria contained in the state's "Certified Industrial Site" as an additional guide in identifying high priority sites. These criteria include the following:
    - a) Minimum of 10 acres capable of supporting a 50,000 square-foot building plus parking and ancillary uses.
    - b) Direct access to a roadway meeting NCDOT standards for tractor/trailer use.
    - c) Wetlands must be delineated.
    - d) Site must be substantially out of floodplain.
    - e) Site and intended uses must be compatible with surrounding land uses.
    - f) Ability to manage stormwater runoff onsite in a manner that minimizes impacts on water quality.
  - 4) County development policy and regulations should direct the development of new manufacturing, warehousing, export related facilities, and similar land uses to areas with the following characteristics:
    - a) Locations that have easy access to major transportation facilities.
    - b) Locations and sites that do not encroach upon or cause incompatibilities with existing residential areas or institutional facilities.
    - c) Sites with adequate services and facilities.
    - d) Conservation areas shall be preserved.
    - e) Site development that provides adequate open/green space, buffers and landscaping.
  - 5) The County will encourage development of Industrial/Business Parks for multiple users with adequate services and reasonable perimeter vegetative buffers and landscaping. Development and other standards should provide reasonable incentives to encourage this development type.
  - 6) Low intensity manufacturing uses may be located in or near areas developed with other uses as long as the site has access to adequate thoroughfares and reasonable buffering, green space and landscaping is provided.
  - 7) Development regulations shall recognize the economic benefits of tourism, and community image especially as it applies to the areas'

- major gateways and travel corridors. Development standards shall provide for requirements that enhance the area's image, appearance and ability to attract and improve its income from tourism. Such measures will emphasize street (canopy) trees, perimeter vegetative buffering and landscaping.
- 8) Development regulations shall give special consideration to reuse or development of existing commercial and industrial buildings as long as adequate measures are imposed to insure no hazards are created for adjacent development and reasonable perimeter buffers and landscaping is provided including street (canopy) trees.
  - 9) County development policy and regulations shall provide for flexibility in development of Home Based Business Services with accessory retail uses, especially in the Rural, Rural Cluster and Transition Areas.
  - 10) All industrial and commercial development should provide reasonable landscaping that emphasizes the interior of expansive parking areas with substantial tree plantings and perimeter buffers with street (canopy) trees emphasized.
  - 11) Industrial & Business Development Policies shall apply equally to industrial type operations such as mineral extraction, large-scale hog and poultry production, and other forms of production that fit the characteristics, if not the traditional definition of an industry.
  - 12) Extraction activities shall provide for reclamation of the site to a purpose or use that is compatible with existing uses adjacent to the site and that are for the benefit of the community and in accord with adopted plans and policies for the area. Reclamation shall be based on actions and conditions that will implement the proposed reclamation purpose and plan. County policy and development standards shall provide for safety during extraction activities and upon reclamation of the site. Extraction activities shall comply with all state and federal regulations relating to ground water preservation.

## **F. Agriculture, Forestry & Open Space**

---

- 1) Rural and active agricultural area lands having a high productive potential shall be conserved to the extent possible, for continuing agricultural use. In addition to agriculture, very low-density residential activities shall be the preferred land uses in these areas. Expansion of existing viable residential areas and traditional uses associated with rural areas will be permitted.
- 2) Farms and woodlands shall be recognized as an integral part of the planning area's open space system.

- 3) Centralized sewer services shall generally avoid areas in the county intended primarily for agriculture in order to protect farmland from development pressures brought about by such sewers. If extension into or through active agricultural areas is contemplated, an analysis of the impact of the extension on agricultural activities will be completed.
- 4) Pender County supports short and long-term efforts to protect important natural wildlife and recreation areas, including particularly the Holly Shelter Game Lands and the Angola Bay Game Land, by directing growth away from these and other identified natural areas.
- 5) County actions should provide protection to existing agricultural and forestry activities from incompatible uses, including all activities other than very low density or intensity uses.

## **G. Hazards**

---

- 1) Public safety areas will be established around all known hazard areas in the County. Such areas include large public game land management areas, large privately held forestry tracts and other areas established as Local Hazard Areas by the County. Such areas including the buffer area shall be restricted for construction of any buildings, or be left as open space related uses.
- 2) As a result of previous major flood damage Pender County recognizes the serious hazards associated with the riverine floodway and will adopt development controls that prohibit new development other than water access and open space recreation related activities in this area. New development consists of the creation of new lots.
  - a) Service connections for any activities other than water access and open space/recreation related activities in the riverine floodway area are not allowed.
  - b) Any new subdivision of land for residential, transient residential, commercial, industrial and other uses will be prohibited in the designated floodway area, unless it is common area, open space, or for related uses.
- 3) Pender County development regulations shall provide for transient recreational/residential structures such as campers and recreational vehicles be removed to or stored in secure locations during hazardous weather conditions, including high wind or flood hazards. These structures shall only be set up in facilities with services to accommodate them and not in any floodway area.

## H. Drainage

---

- 1) All new development must provide evidence of the following:
  - a) existing drainage facilities on site and downstream can accommodate at least the 10 year storm water discharge for the development; and
  - b) accommodate the 10 year storm water discharge for existing development up stream and down stream in the drainage basin, or
  - c) provide improvements to drainage facilities on the site and down stream (to the recipient perennial stream) to accommodate the 10 year storm for the development and existing development in the drainage basin, or
  - d) limit the storm water discharge for the 25 year storm for the development to the pre-development discharge.
- 2) Minor development activities must provide evidence that the development has access to a drainage facility to a perennial stream or natural drainage way or provide other evidence that the site will drain without causing flooding to the site or upstream or downstream properties for the 10 year storm.

## I. Access

---

- 1) All new development shall provide adequate access and internal street systems to ensure the convenience and safety of all residents, employees, and/or users. Adequate access shall include the following:
  - a) Meet minimum standards for access to the development and its components that will insure rapid and unimpeded access for all emergency and other public services.
  - b) All new residential development shall provide access to the units of the development that meet design requirements and construction specifications for Secondary Road Standards or equivalent standards for Pender County.
  - c) All new development shall provide for "connectivity" to adjacent developments and property for continuity of streets, parks, drainage facilities, pedestrian trails, access ways and other common areas or public facilities.
  - d) Pedestrian access facilities including sidewalks, walking paths, bike trails, etc. should be considered as necessary infrastructure for all new major or high density and intensity development.

- e) All new development shall provide for reasonable development of anticipated future thoroughfares and access.
- 2) Access for higher density development shall typically not be provided through lower density development, unless adequate thoroughfares exist or are provided.
- 3) New major development or development of high density or intensity should provide urban type infrastructure including sidewalks, water and sewer services by public entities or public utilities and open space, recreation facilities, school site and facilities or payments in lieu of the services or facilities.
- 4) All new development shall be required to meet access standards that preserve the traffic carrying capacity of the public roads to which it is connected. Connection to existing and potential future streets, access ways and parking areas of existing and anticipated development shall be encouraged.
- 5) All new development (residential, commercial, institutional and industrial related including extraction activities) shall have or provide reasonable access to a publicly maintained road or a road constructed to Pender County Standards with established permanent provisions for maintenance.

## **J. Site Development**

---

- 1) County development policies and regulations shall encourage and provide incentives for the following:
  - a) Residential development that provides substantial recreation or open space.
  - b) Commercial, industrial, warehousing and related development in designated parks with provision of services, infrastructure, maintenance of common facilities, open space, buffers and landscaping.
  - c) All development that provides infrastructure (sidewalks, curb and guttering, public utility operated water and sewer services, etc.) open space, recreation facilities, clustered development, decreases impervious surfaces, or uses vegetative conveyances above the minimum requirements of the County Development Standards.
  - d) Residential development consisting of a variety of multiple housing types that utilizes clustering of units and preservation of open space, when overall density specifications are met.
  - e) All new lots created in Pender County should meet minimum sanitation requirements of NC Environmental Health Rules for

separation of wells and septic systems for new lots under normal conditions without variances to those rules.

- 2) Offsite utilities for all new development shall be owned and operated by a public entity or public utility or development and maintenance standards shall be adhered to that will insure ready access to and maintenance of those facilities.
- 3) New development and redevelopment shall provide for preservation of existing trees that are indigenous or traditional to the area or region and especially such trees that are in critical locations on the site to be developed.
- 4) Off premise signs should be strictly regulated for size, height, etc., and to appropriate business areas with significant spacing and design standards and not permitted in rural, residential, gateway entrance areas or scenic locations.
- 5) On premise signs should be strictly limited as to size, location and number on any site to be developed or redeveloped.
- 6) The county shall provide for regulation of development, especially in its gateway corridors, that emphasizes layout, access control, design, landscaping, street (canopy) trees and buffers.
- 7) All new development shall provide for buffers and landscaping of street and boundary areas that emphasizes trees as opposed to just grass and shrubs. Street (canopy) trees shall be emphasized. This standard may be addressed by preserving existing vegetation or new plantings.
- 8) All new development shall provide for appropriate facilities that promote the reduction of litter and illegal disposal of trash, litter and garbage.

## Definitions

- 1) *Create*: Involve the county staff, Planning Board, Board of Commissioners and other public and private organizations to further the intent of the policy.
- 2) *Continue*: Follow past and present procedures and processes to maintain a particular policy.
- 3) *Encourage*: Further the policy by ensuring that decisions, such as subdivision approvals, highway improvements, and public utility extensions, are consistent with the intent.
- 4) *Support*: Employ county staff and solicit assistance from related state and local agencies to further the policy; take affirmative ac-

tion, such as submitting grant applications or writing letters of support for grants or facilities, on projects that further the policy.

- 5) *Seek or work*: Use county resources, cooperate and act in a manner, and take actions that further the intent of the policy.
- 6) *Neighborhood access*. Small facilities that are primarily intended to provide access to residents and property owners within a few miles of the site. These sites may have ramps or paddling access, bicycle racks, limited parking, picnic facilities, litter receptacles, and other improvements that do not conflict with surrounding land uses.
- 7) *Community access*. Larger access facilities that are planned and designed to serve broader areas, groups of neighborhoods, and larger numbers of people than neighborhood sites. Improvements at these sites will be similar to neighborhood access facilities but may also include opportunities for activities such as nature study. Compatibility with surrounding land use and security are key considerations in the location and development of community access.
- 8) *Regional ocean/sound access*. Ocean and sound access facilities that are planned and designed to serve county residents and visitors to the county's barrier island communities. Improvements may include parking, cross-overs, boat ramps, piers, restrooms and possibly showers, parking and other facilities. Compatibility with surrounding land use and security are key considerations in the location and development of regional access.
- 9) *Estuarine Shoreline AEC*: The area extends landward 75 feet from high or normal high water for non-ORW areas and 575 feet for ORWs.
- 10) *High Quality Waters (HQW)*: Waters designated by the NC Environmental Management Commission as possessing special qualities including excellent water quality, Critical Habitat areas, or WS-I and WS-II water supplies. Development activities that require a Sedimentation and Erosion Control Plan or approved local erosion and sedimentation control program, and that drain to and are within one mile of HQWs, must control runoff using either a low density or high density option. In addition, the Division of Land Resources requires more stringent sedimentation controls for land-disturbing projects within one mile of, and draining to, HQWs.

- 11) *Outstanding Resource Waters (ORW)*: Designated by the NC Environmental Management Commission as unique and special surface waters that are not impacted by pollution and have some outstanding resource values. Special protection measures that apply to North Carolina ORWs are set forth in state water quality regulations (15A NCAC 2B .0225). At a minimum, no new discharges or expansions of existing discharges are permitted and stormwater controls for most new developments are required.
- 12) *Major Commercial Development*: development that clears or disturbs more than one acre of land or creates more than one acre of impervious surface.
- 13) *Major Residential Development*: development that involves the creation of more than three new lots or building sites on an existing tract of land or on contiguous tracts of land under single ownership or involves the disturbance of more than one acre of impervious surface.
- 14) *New Development*: includes the creation of new lots or parcels.
- 15) *Net Development Density*: is defined as the number of units per acre of "usable land" applicable to the type development.
- 16) *"Usable Land" for Single Family Detached Residential Development*: may include all project land area that is not classified as Conservation and not included as public or private streets.
- 17) *"Usable Land" for Non-Single Family Residential Development*: may include all project land area not classified as Conservation and not included as impervious parking, access or streets.
- 18) *High Net Density*: five (5) residential units per usable acre of project land, based on services available.
- 19) *Moderate Net Density*: four (4) residential units per usable acre of project land, based on services available.
- 20) *Low Net Density*: two (2) residential units per usable acre of project land, based on services available.
- 21) *Very Low Net Density*: one (1) residential unit per usable acre of project land.

- 22) *Limited Net Density*: two (2) residential units per acre of usable project land with a mandatory five (5) additional acres permanently reserved for open space/conservation uses for the two units, based on compliance with State and Federal Regulations.
- 23) *Open Space*: an area permanently restricted and preserved by covenant, easement, recorded map or other means, for agricultural, forestry, passive or active recreation uses, natural areas and does not contain impervious surfaces except for those buildings serving a recreation activity on the site.
- 24) *Floodway*: an area designated as "Floodway" by the Federal Emergency Management Agency and shown on a Map approved by that agency.

### 3.3 Future Land Use Map and Land Classification Descriptions

CAMA land use planning guidelines require that the plan contain a future land use map that depicts the County's growth and development policies and the desired future patterns of land development. The map must give due consideration to the planning area's natural system constraints, its existing land uses, and its policies related to highways, water, wastewater treatment, and stormwater management. The map also reflects the county's *planning vision* and its *planning goals* as established under the CAMA Planning Guidelines. It describes where the county desires growth to occur at appropriate densities and it shows the general location of resources that the county wishes to protect or conserve. The future land use map also provides a guide to local, state, and federal agencies for planning projects that are located in Pender County or that will impact the county. Unlike the zoning map, the map is not intended to prescribe the applicability of the county's policies to a specific parcel.

Pender County's future land use map has 5 major land classifications. These include the following:

- Conservation**
- Urban Growth Area**
- Transition Area**
- Rural Clusters**
- Rural Area**

These land use classifications show where community development should occur and where land should be devoted to conservation and rural uses. They do not specify the detailed location of land uses like residential, commercial, industrial, and so on. However, the descriptions of the land classifications are part of the land use plan policies.

The policy intent of each of these land use categories is described in the following section. The future land use map is intended to depict the application of the county's policies on all development activities. Due to scale and other limitations, the map must be considered a guide only and not a substitute for on-site investigations. If there are conflicts between

the policies, the descriptions of the land use classifications and the future land use map; the policies and classification descriptions are controlling.

The development densities referenced in this section are defined in the glossary.

The Future Land Use Map is found on the following page.

## Conservation Areas

The Conservation classification has two purposes. First, this classification provides for the protection and long-term management of Pender County's significant and irreplaceable natural systems. These areas have high environmental, scenic, recreational, economic, and life-style values. Second, the classification helps the county to mitigate the risks to life and property associated with wind, water and other hazards that would result from development in these areas. The Conservation Areas are generally consistent with the areas evaluated as having the *least suitability* for development on the Land Suitability Analysis.

The conservation classification is divided into the sub-classes Conservation I and Conservation II that more closely reflect the land use and development capabilities and limitations of the county's natural systems. Each of these sub-classes has specific land use and development objectives and policies, which are described below.

### Conservation I

The Conservation I classification includes land and water features where there are **serious** hazards to personal safety or property, where new development would cause serious damage to the values of natural systems, or where new development is not permitted by local, state, or federal policy. The following specific land and water features are included in this classification:

- Estuarine waters
- Public trust waters
- Coastal wetlands
- Severely limited hydric soils: Bohicket Silty Clay Loam, Carteret Fine Sand, Chewacla Loam, Croatan Muck, Dorovan Muck, and Muckalee Loam

- Floodways<sup>3</sup>
- Managed open space and natural areas<sup>4</sup>

The county discourages any land uses and development in these areas that will result in exposure of people or property to unwarranted risks from natural hazards or that are not consistent with conservation and protection of the biological, aesthetic, economic, life-style, and water management values of the resources located here. In addition to local policies that do not permit new development in floodways and in the hydric soils included in this land classification, the county will not knowingly issue permits or approve developments that are under its jurisdiction that conflict with the CRC use standards for estuarine and public trust waters.

As examples, only public or private open space or uses that require water access and that cannot function elsewhere are appropriate in the Conservation I classification.

## **Conservation II**

The Conservation II classification is established as an overlay that applies policies which restrict development in all of the non-conservation land classes. The classification includes areas where new development may impact public health or areas where there are significant development limitations that are addressed by building and site development standards, density limits, impervious surface limits, and other methods to mitigate or to minimize the impact of development. The following specific land features are included in this classification:

- Non-coastal wetlands
- Water supply watersheds

While limitations in this land use classification may be less severe than Conservation I, land uses and development in Conservation II present significantly elevated risks to public health or they have the potential to

---

<sup>3</sup> The floodway is the area of the floodplain where the water is likely to be deepest and where flow is of extremely high velocity. It is the area of the floodplain that should be reserved (kept free of obstructions) to allow floodwaters to move downstream. Placing fill or buildings in a floodway may block the flow of water and increase flood heights.

<sup>4</sup> Lands owned by state agencies or non-profit conservancies that are maintained for resource management or permanent open space.

negatively impact the values of the resources located here. Development activity within this zone also has direct and secondary impacts that influence water quality. And finally, development within this zone affects scenic values and habitat that are so important to the overall quality of life in the county.

The county allows *limited net density* residential development in the Conservation II overlay.

While the *Estuarine Shoreline AEC* and *Special Flood Hazard Areas* are not specifically included in the Conservation II classification, the county has specific policies that address new development in these areas. In the Estuarine Shoreline AEC, it is the county's policy to discourage any new residential or commercial development unless it is low density, minimizes impervious surfaces, and installs systems to manage runoff that comply with state and local requirements. In addition, the county supports state standards for development in the Estuarine Shoreline.

The county will continue to implement FEMA standards for new development in Special Flood Hazard Areas.

Agricultural operations that follow "Agricultural Best Management Practices" and forestry operations that follow "Forestry Best Management Practices" are not restricted in this area.

### **Urban Growth Area**

This land classification provides for the continued development of areas provided with water and/or sewer services or where the county is actively engaged in planning these community services. These areas also have excellent access to the regional transportation system for a mixture of more intensive commercial and industrial or job creating uses and a range of residential land uses and housing types. It is focused on the Rocky Point area and the Highway 17 Corridor.

This area is planned for *high net density* for residential development. This density is dependent upon the types and levels of services that are available.

The Town of Surf City is annexing and extending urban services into areas outside of its current planning jurisdiction. If the Town's water and sewer services are available to areas within the *urban growth area* the County will encourage connection to these services according to the service

policies of the Town. If the service areas are within the Town's planning jurisdiction, either the ETJ or incorporated area, then Surf City's development policies will apply. If the areas do not fall within the Town's planning jurisdiction, then County development policies will apply.

### **Transition Area**

This land classification provides for areas of more intensive community development where the county is making plans to develop public services, particularly water and sewer services, and where access to transportation is excellent. Development will include residential uses, commercial and office uses, and employment uses, such as manufacturing and distribution that can take advantage of the services and transportation access available.

This area is planned for *moderate net density* for residential development. This density is dependent upon the types and levels of services that are available.

### **Rural Clusters**

This land classification recognizes the small concentrations of distinct residential communities that maybe associated with a church, other institutional or non-residential use in the Rural Areas. The primary purpose of this classification is to implement the County's Policy of "preserving existing viable residential neighborhoods." These concentrations or clusters may have water service, near-by fire service, a church or school and in some cases are located in an area with very limited services.

In order to preserve these areas as a viable source of housing, the County recognizes the need for some expansion of the housing stock at low net density standards. This expansion should be primarily internal to the boundaries of the area. External expansion of the area can cause encroachment into conservation areas and rural farm and forestry areas, including intensive livestock operations and fire hazards near large forestry lands. Any external expansion should be at the same density as the Rural Classification.

These areas have traditionally been primarily residential. Home-based businesses, neighbor service and retail businesses may however also be compatible uses in this classification.

This area is planned for *low net density* residential development.

## Rural Area

This land classification provides for agricultural and forestry operations that are key to the preservation of the county's rural landscape and that remain a major part of the county's economic base. It is intended that this classification provide protection to these activities from encroachment by higher density residential development and other activities that may be incompatible with intensive farm activities, including livestock operations. In addition to farm and timber operations, the Rural Area provides for very low-density residential uses, home-based businesses, other businesses traditionally associated with rural farm areas and extraction activities. Major job-creating activities that are compatible with farms, forestry and very low-density development are appropriate in this area

Public sewer service will not be provided in the Rural Area unless it addresses a public health problem or it supports a job-creating opportunity. If services are extended to or through a Rural Area, county connection policies will ensure that agricultural and forestry operations are protected from the unwanted impacts of more intensive development.

This area is planned for *very low net density* residential development.

## Allocation of Land to Various Land Use Classifications

The CAMA planning guidelines require an analysis of the amount of land allocated to each of the land use classifications shown on the future land use map and a comparison with the land needs analysis shown in Part 6, Section 3.2 Future Land Needs. Table 1A shows an estimate of the total land allocated to each classification and the net useable acres. Table 2B provides estimates of land needs in each classification and a comparison with the land area allocated. The amount of land allocated in each classification is consistent with the projection of need.

**Table 1A**  
**Analysis of Land Allocated to Future Land Use Classifications**

Land Classification	Vacant Acres Allocated <sup>(a)</sup>	Acres in Conservation II	Net useable acres
Urban growth	80,800	45,950	33,000

Transition	25,200	20,300	5,000
Rural cluster	13,300	10,355	3,000
Rural	175,700	NA	NA
Conservation I	236,000	NA	NA

Source: WBFI

(a) Based on existing land use information provided by the Pender County Planning Department.

**Table 1B**  
**Comparison Future Land Needs and Land Allocated to Future Land Use Classifications**

2005 - 2025 Projected population Increase	46,803			
2005 - 2025 Projected household Increase (2.00 persons/hshld.)	20,801			
Planned development allocation	Urban growth area	Transition area	Rural cluster	Rural area
Population	30,422	4,680	2,340	9,361
Households	13,521	2,080	1,040	4,160
Projection adjustment (1.5)	20,281	3,120	1,560	6,240
Projected gross density (households/acre)	0.6	0.6	0.67	0.05
Acres needed	33,000	5,000	3,000	83,000
Acres allocated to classification	34,850	4,900	2,945	NA

Source: WBFI

Notes:

- (a) Based on population growth targeted for each land classification, estimated household growth at 2.0 persons per household, projected population growth of 41,000 to 2025, and adjustment factor of 1.5.
- (b) Assumed gross development density based on definitions, pages 35, 36.

This estimate of future land needs, based on the density assumptions, matches projected needs.

## Cost of Required Community Facility Extensions

The land use patterns shown on the future land use map are not dependent upon extension of public community facilities. However, Table 1C below provides a very general assessment of the wastewater treatment and water supply impacts of the planned future development patterns and the density/intensity of future land uses. The projections are based on generally accepted planning guidelines and are not intended to substitute for more detailed engineering analysis required for wastewater and water supply planning.

**Table 1C**  
**Estimated Wastewater and Public Water Supply Capacity Requirements**  
**Future Land Use Plan Map**

Planned allocation of households	Urban growth area	Transition area	Rural cluster	Rural area
Population	30,422	4,680	2,340	9,361
Wastewater demand (gallons/day)				
Residential	2,129,536	327,621	no sewer anticipated	no sewer anticipated
Commercial	456,329	70,204		
Industrial reserve	323,233	49,728		
Water demand (gallons/day)				
Residential	1,673,207	257,416	128,708	water supply primarily individual wells
Commercial	608,439	93,606	46,803	
Industrial	152,110	23,401	11,701	

Source: WBF

## Part 4. Tools for Managing Development

This section of the plan describes Pender County's strategy and action plan for implementing its land use policies. There are four major parts:

- Description of the role of the land use plan in local decision-making.
- Review of the county's existing development management program and its role in implementing the plan.
- Description of additional tools that will be used to implement the plan.
- Action plan and schedule that highlights the major steps that will be taken to implement the plan.

Each of these elements is described in more detail below.

### 4.1 Role and Status of Plan

The CAMA Land Use Plan will serve both day-to-day and long-range functions. The day-to-day functions relate primarily to the County's administrative staff on preparation and administration of development management ordinances and the public's understanding and use of these ordinances for land use and development decisions regarding their own property.

For the Board of Commissioners, the Plan will be a policy and decision guide on matters related to land use and land development in the County planning area. It will not have the status of a local ordinance or code, except in matters related to development or land use within Areas of Environmental Concern, but the policies and the future land use map will guide decisions on applicable ordinances and policies such as the zoning ordinance and subdivision regulations. The plan will also be used in the Board of Commissioners' decision-making on the capital and annual operating budgets. The Board will review the implementation plan periodically and make necessary adjustments based on budgetary considerations, coordination with other projects, and community needs. Changes in the implementation strategy will be transmitted to the Division of Coastal Management.

Another key use of the Plan is for *consistency determinations* by the Division of Coastal Management on major development permits, and by

other state and federal agencies on the consistency of their projects and programs with local plans and policies.

The future land use map is not intended to prescribe the applicability of the policies to a specific parcel or tract. This is the role of documents such as the zoning map or flood hazard maps.

The plan will also be a useful tool for others as outlined below.

- **Property owners and developers**— Plan will provide guidance on the types of land uses and development that are desired by the community. The policies will help owners or developers formulate proposals that are consistent with the goals and objectives of the county, thereby increasing the likelihood of approval. Finally, the plan provides base information that will help owners and developers understand the capabilities and limitations of their property.
- **Community members at large**— Plan will provide information that will permit residents and property owners to better understand plans for public projects or private development and will provide a reference when supporting or opposing such proposals.
- **Administrative staff**— The staff of the County will use the plan as a tool for evaluating development proposals and for preparing plans for public facilities. Staff will also check existing ordinances for consistency with the plan and recommend any necessary adjustments to the Planning Board and/or Board of Commissioners. Staff will also use the plan and implementation strategy when preparing its budget recommendations and will make reference to the plan when preparing applications for grants and other assistance.
- **Planning Board**— The planning board will use the plan and its policies to determine consistency of project plans and development proposals with community goals and objectives in making decisions to grant or deny requests, such as an ordinance amendment, special use permit, or subdivision plat, or to approve project plans.

## 4.2 Existing Development Management Program

Pender County enforces a system of ordinances that are designed to manage the development of the county's land resources in a manner that provides for a range of residential opportunities, provides for retail and community support services, provides places to work, and protects

the county's valuable natural resources. The ordinances and regulations include the following:

- Zoning ordinance
- Subdivision regulations
- Planned Development District
- Mobile Home – Travel Trailer Park Ordinance
- Flood Hazard Prevention Ordinance

For the purposes of the CAMA Land Use Plan Update, the zoning ordinance, subdivision regulations, and the flood hazard prevention ordinance are the primary development management tools. These ordinances are summarized briefly below.

#### 4.2.1 Zoning

The zoning ordinance is one of the county's key tools for implementing its land use and development policies. Recently updated, the Pender County zoning ordinance is designed to balance its objectives for preserving and protecting essential natural systems, agricultural and forestry base, and open space with the need to accommodate development patterns that provide a range of living and working options for residents and that make the delivery of public services efficient.

To accomplish this purpose the ordinance includes residential, business, and industrial zoning districts that ensure compatibility among land uses, that prescribe density and lot coverage limits, and that provide for buffering where necessary to address potential land use conflicts.

The ordinance also contains a *useable lot limitation* that helps ensure that future development is consistent with the capabilities and limitations of the county's natural systems. The ordinance defines "useable lot area" as the **"required portion of the minimum lot size that does not include hydric soils, regulated wetlands or floodways."**

The essential components of the ordinance are shown in Table 2A.

**Table 2A  
Zoning Ordinance Summary**

Zoning District	Density	Useable Lot Area Limit	District Purpose
R-20 Residential District	SF=2.2 units/ac Dplx=2.9 units/ac	95%	District for low to moderate density single-family residential purposes. Regulations permit development compatible with moderate density standards while providing limited growth. Accommodates residential opportunities where residents are willing to assume the cost of providing many of their own services and amenities. Maximizes protection of resources and conservation of open space.
R20C Residential District (Conventional Housing)	SF=2.2 units/ac Dplx=2.9 units/ac	95%	Similar to R-20, except development restricted to housing constructed as set forth in the North Carolina Residential Building Code.
R15 Residential District	SF=2.9 units/ac Dplx=3.5 units/ac	100%	Medium density residential district where lots have access to community water or sewer system approved by the State Utilities Commission.
R10 Residential District	SF=4.4 units/ac Dplx=5.8 units/ac	100%	Higher density residential district where lots have access to community water or sewer system approved by the State Utilities Commission.
B1 Business District (Neighborhood)	Min. lot = 1 ac	95%	Provides convenient shopping facilities primarily of necessity goods and personal services required to serve a neighborhood. Districts may not be smaller than one (1) acre in area.
B2 Business District (Highway)	Min. lot = ½ ac	95%	Provide for proper grouping and development of roadside business uses that will best accommodate the needs of the motoring public and businesses demanding high volume traffic. Districts may not be smaller than five acres in area.
B3 Business District (Scenic/Gateway)	Min. lot = ½ ac	95%	Commercial district that encourages new landscaping, preservation and protection of existing trees for new commercial development, along roadways that serves as major access ways and gateways into Pender County. Allows for uses that provide retail products and services for the tourist trade and a broad local neighborhood area. Districts may not be smaller than three acres in area.

Zoning District	Density	Useable Lot Area Limit	District Purpose
I1 Industrial District (Light)	Min. lot = 1 ac	NA	Provides areas for industrial, warehousing, and storage uses that do not create an excessive amount of noise, odor, smoke, dust, air borne debris, or other objectionable characteristics which might be detrimental to surrounding areas. Districts may not be less than five (5) acres in area.
I2 Industrial District (Heavy)	Min. lot = 1 ac	NA	Primarily for basic manufacturing and processing industries with characteristics that may not be compatible with residential, or commercial and service uses. The district is customarily located on larger tracts of land with good highway and rail access, buffered from residential districts by other more compatible uses. Districts may not be less than five (5) acres in area.
A Airport District	Min. lot = 1 ac	NA	Minimize aircraft hazards by excessive density; prohibit the development of places of assembly such as schools, hospitals, rest homes, or other uses that tend to concentrate large numbers of people. Also to prevent creation of hazards near the airport that may endanger the lives and property of the users of the airport.
RT Rural Transition District	SF=2.2 units/ac Dplx=2.9 units/ac	95%	District established primarily for moderate density single-family residential and moderate intensity commercial activities. Existing development typically exhibits characteristics of a transition to a mixed, higher density development. Regulations of the district are to permit controlled commercial activities, of a non-objectionable, non-hazardous nature to surrounding neighborhoods.
RA Rural Agricultural District	SF=1.0 units/ac Dplx=1.4 units/ac (60,000 sqft lot required for duplex)	55%	District established for agricultural, forestry, limited extraction, very low density dispersed large lot single family residential, and low intensity non-residential uses. It also encourages rural farming and related activities, and the open space these activities provide. Accommodates very low density dispersed large lot residential and non-residential development not requiring urban services while maintaining prime farmland and a rural life style.

Zoning District	Density	Useable Lot Area Limit	District Purpose
FA Flood Hazard Area District	SF=2.2 units/ac Dplx=2.9 units/ac	95%	District is established to include the riverine and coastal water related FEMA designated Special Flood Hazard Areas. Boundaries of this district coincide with the boundaries of Flood Hazard Areas shown on the FEMA Flood Maps.
PD Planned Development District	12 units per ac.		Encourages detailed planning and development of entire tracts as a whole and in a unified manner. Allows flexibility in layout and design and encourages protection of critical natural systems and provision of community open space. Approval of plans by Planning Board required.
WS CA Watershed Critical Area	SF = ½ units/ac Dplx. not allowed	50%	Watershed critical Area District is the land up stream and nearest the public water supply intake and usually extends one half mile from the intake as designated by the NC Environmental Management Commission. New residential developments shall be permitted at a maximum of one dwelling unit per two acres. No new development shall exceed 24% total lot coverage.
WS PA Watershed Protected Area	SF = ½ units/ac Dplx. not allowed	50%	Watershed Protected Area District is the land up stream from the public water supply intake and typically extends ten miles from the intake. New residential development shall be permitted at a maximum of one dwelling unit per two acres. No new development shall exceed 24% total lot coverage.

Table 2B illustrates the relationship of the land use and development policies, the future land use plan map and the existing zoning ordinance. The table shows that the existing zoning ordinance has a high level of consistency with the policies and land use plan map. The consistency review will address the policies of the Conservation II classification and the existing zoning districts. This review may indicate the need for an additional overlay district.

**Table 2B  
Compatibility Existing Zoning Districts with Future Land Use Plan Map**

Current zoning districts	PD	R-20C	R-20	R-15	R-10	RT	RA	FA	B-1	B-2	B-3	I-1	I-2	A	WS-CA-PA
Minimum lot size		20000	20000	15000	10000	20000	40000	20000	40000	20000	20000	40000	40000	40000	90000
Max. lot coverage		42%	42%	46%	49%	39%	49%	39%	44%	38%	38%	44%	44%	52%	24%
Max. building height (ft)	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
<b>Future Land Use Map Classifications and Planned Net Development Densities</b>	<b>General Compatibility with Existing Zoning Districts</b>														
Conservation I NA	+✓	+✓	+✓	+✓	+✓	+✓	+✓	+✓	+✓	+✓	+✓	+✓	+✓	+✓	+✓
Conservation II 2 units per acre+5 acres required for open space	X	X	X	X	X	X	X	+✓	X	X	X	X	X	X	+✓
Rural Up to 1 unit/useable <sup>(a)</sup> acre	✓	✓-	✓-	✓-	✓-	✓	+✓	✓	+✓	✓-	✓-	✓	✓	✓	+✓
Rural clusters Up to 2 units/useable acre	✓	+✓	+✓	✓-	✓-	+✓	+✓	✓	+✓	✓	✓	✓	✓	✓	+✓
Transition Up to 4 units/useable acre	✓	+✓	+✓	+✓	+✓	+✓	+✓	✓	+✓	+✓	+✓	+✓	+✓	✓	+✓

Urban growth Up to 5 units/useable acre	✓	+✓	+✓	+✓	+✓	+✓	+✓	✓	+✓	+✓	+✓	+✓	+✓	✓	+✓
--	---	----	----	----	----	----	----	---	----	----	----	----	----	---	----

- +✓ Existing zoning district very compatible with FLUM classification
- ✓ Existing zoning district somewhat compatible with FLUM classification; care must be used in application of district to support plan
- ✓- Existing zoning district not compatible with FLUM classification.
- X Not applicable
- <sup>(a)</sup> Useable acre defined as portion of required lot area that does not include hydric soils, regulated wetlands, or the floodway area.

## 4.2.2 Subdivision Regulations

The county's subdivision regulations provide guidelines and requirements that must be followed when land is subdivided for sale or for development of residential or other categories of land use. The regulations prescribe a process for plat development and approval and specify the types of improvements, such as roads or wastewater treatment systems, that must be installed and the minimum standards for these improvements. The regulations ensure that future purchasers will be able to make adequate use of the property and that the public will not incur any unforeseen liability for the provision of public services.

The basic components of the subdivision regulations are outlined below.

1. Soil suitability analysis indicating the suitability of the property for individual septic tanks or a Construction Authorization Permit for each lot unless community sewer is available and a conditioned approval for connection is submitted. The soil suitability analysis of the property shall also indicate the suitability of the soil for the type structures proposed.
  - A. Detailed description of any proposed waste water system and system maintenance arrangements and procedures to serve lots that are not suitable for traditional on site septic systems, along with a map showing the proposed location of the off site components of the system, including lines.
2. Street construction and street drainage plans must meet DOT design and construction standards or the county's private street standards.
3. Any development with any lot sizes less than 20,000 sq. ft. or net densities of 2.1 units per acre or less are required to have either a community water or sewer system. Any development where lot sizes are less than 15,000 sq. ft. or net densities of 2.9 units per acre or less must have a community water system and a sewer system.
4. The ordinance requires approval by the NC Division of Coastal Management for any development located in an Area of Environmental Concern.
5. The development must have a Sedimentation and Erosion Control Plan that meets NC Land Quality standards and that is approved by the Division of Land Quality.
6. The development must have a Storm Water Management Plan that is approved by the NC Water Quality Division. In addition, the development must have a drainage system that is designed by a registered surveyor or engineer.

7. The preliminary plat for the subdivision must show any wetlands present on the site and must have approval if the wetlands are involved in the development.

The subdivision ordinance defines three types of subdivisions. *Major subdivisions* contain more than 10 lots; *minor subdivisions* have 10 or fewer lots; *family subdivisions* are intended for the transfer of property to a family member and may not have more than 3 lots; and *three-lot* subdivisions have 3 or fewer lots and each lot must have direct access to a public street or an access easement. The ordinance has submittal requirements, improvement standards, and review procedures for each type of subdivision.

### **4.2.3 Flood Hazard Ordinance**

The Pender County Flood Hazard Ordinance contains development standards that are designed to prevent unreasonable risks to life and property from flooding. The ordinance generally requires elevation of the lowest floor above the base flood level for residential and non-residential construction. Non-residential construction in A-zones may be flood proofed.

Manufactured homes, in general, must be elevated above the base flood level and anchored to prevent lateral movement.

Development in the V-zones, or High hazard Flood Area, must meet the requirements of the Coastal Area Management Act for development in this area.

## **4.3 Additional Development Management Tools**

### **4.3.1 Ordinances**

As described above, Pender County has a comprehensive group of ordinances and regulations to implement its CAMA land use and development policies and no new ordinances are anticipated. A group of adjustments to the current ordinances are identified in the policies. These adjustments are listed below. In addition, the county will conduct a complete review of the current ordinances for consistency with the policies. If there are material inconsistencies, amendments will be prepared for consideration by the Planning Board and the Board of Commissioners.

The policies indicate that the county will need to consider the following specific amendments to zoning, subdivision regulations, and flood damage prevention ordinances:

1. Development incentives package to encourage developers and property owners to utilize cluster development and other flexible site planning techniques to conserve open space and natural areas, set aside water access and recreation areas, and to minimize runoff.
2. Amend flood damage prevention ordinance to implement floodway development policy.

The consistency review and ordinance adjustments will be scheduled in the action plan.

### **4.3.2 Projects**

A series of projects that do not involve the county's ordinances will be undertaken to support implementation of the plan. These projects are listed below.

1. Prepare an analysis of potential public trust water access sites, including sites owned by public agencies and non-profits, and develop policies to encourage development of suitable sites.
2. Work with non-profit organizations and public agencies to present information on property owner benefits of dedicating access sites.
3. Create a master file documenting problem drainage areas to assist in investigating alternative solutions.
4. Request update of the Thoroughfare Plan.
5. Assemble an information brochure for property owners and developers on effective methods to address water quality protection.

## **4.4 Implementation Action Plan**

The chart below shows the implementation action plan for the CAMA Land Use Plan. The action plan is a separate section of the land use plan to avoid any confusion between policies and implementation measures and to allow the county and to focus on the steps and actions that are required to implement the policies for growth and development.

Some of the policies contained in the plan are benchmarks for many land use decisions that will be made in coming years by the county and property owners. Other policies require public action for implementation. These policies are addressed in the action plan.

The 8 actions outlined in the Action Plan in this section are an ambitious work plan for the county. We anticipate that these actions can be initiated within the 6-year planning period. However, it will be necessary to assess the work plan each year. This assessment will include several factors: funding availability, shifting priorities that may dictate rescheduling, adding or dropping projects, and project completion schedules.

# Pender County CAMA Land Use Plan

## Action Plan and Schedule

### 05/06 to 10/11

Task	2005	2006	2007	2008	2009	2010	2011
Consistency review	✱ 7/8	✱ 6/30					
Prepare development incentives package		✱ 7/2	✱ 7/2				
Amendment to Flood Damage Prevention Ordinance to implement floodway limits			✱ 7/2	✱ 7/2			
Analysis potential public trust access sites							
Create master file of problem drainage areas				✱ 7/2	✱ 6/23		
Develop information on property owner benefits of dedicating access sites					✱ 6/29	✱ 6/29	
Request update of the Thoroughfare Plan				✱ 6/29			
Develop information brochure on effective methods to address water quality protection.						✱ 6/26	✱ 7/3

## Part 5. Required Policy Analysis

The Land Use Plan Guidelines require the county to “demonstrate how the land use and development goals, policies, and future land use map ... will guide development in a manner that is consistent with the specific management goal(s), planning objective(s), and land use plan requirements of each Management Topic. In addition, the county must “describe the type and extent of analysis completed to determine the impact of CAMA Land Use Plan policies on the management topics...” If any negative impacts are identified, the plan must describe approaches that will be used to mitigate the negative impacts.

This part provides details on each of the required evaluations. Section 5.1 describes the consistency of the policies and the future land use map with the management topics, and Section 5.2 reviews the analysis that was completed to determine impacts of the specific policies on the management topics.

### 5.1 Overall Consistency with Management Topics

This section demonstrates that the policies in the plan will provide overall guidance for land use and development that is consistent with the goals, objectives, and requirements of the management topics. It includes a summary of the general thrust of the policies developed for each management topic.

#### 5.1.1 Public access

The plan’s access policies are intended to provide “satisfactory access for residents and visitors to the county’s public trust waters for a range of activities.” The policies include guidelines for the types and frequency of access location that are consistent with the CAMA access policy. They are designed to increase public access by capitalizing on property owned by public and non-profit organizations; by seeking cooperative arrangements with other local, state and federal agencies; and encouraging private landowners and developers to dedicate public access sites. The policies require *universal accessibility* where feasible. To initiate implementation, the county will catalogue potential public trust access sites.

### **5.1.2 Land use compatibility**

The goal is to continue “land uses and land use patterns that are consistent with the capabilities and limitations of the county’s natural systems.” The plan protects the county’s estuarine waters, wetlands and estuarine shoreline to ensure that their role in water quality is maintained. The plan incorporates CAMA development standards to address development of AECs and to ensure that land uses and facilities are designed in a manner that protects their biological, economic, and community values.

The county’s wildlife management areas and unique natural areas that are owned by public and non-profit organizations are important natural resources and they are protected by policies and the conservation land use classification to ensure only appropriate uses.

The plan recognizes the role of non-coastal wetlands and classifies them as conservation to encourage compatible development.

### **5.1.3 Infrastructure carrying capacity**

The plan’s infrastructure goals focus on transportation and water and sewer services to address the rapid growth in permanent and seasonal population. The policies ensure that there is a link between future development density and intensity and the capacity of the transportation system. The policies encourage land use patterns that protect existing highway capacity. The plan also includes a long-term goal for mass transit to preserve highway capacity.

Water and sewer policies ensure protection of conservation areas, rural areas, and prime farmlands by limiting water and sewer extensions in these areas to the extent possible. Likewise, the policies center on extensions only to areas planned for higher density and intensity development and land uses – urban growth areas and transition areas.

Stormwater policies include support of the existing state permitting system to address runoff, sedimentation, pollution, and flooding associated with development and an information program for property owners and developers.

### **5.1.4 Natural and man-made hazards**

The plan’s goal is to “mitigate risks from storms and flooding.” The plan includes three key policies to address this goal. First, the plan is designed to mitigate risks to life and property in special flood hazard areas through

continued enforcement of the provisions of the flood damage prevention ordinance. Second, the plan opposes development of currently undeveloped barrier islands where risks are significantly elevated. And third, the plan does not allow new development in designated floodways.

The plan commits to periodic updates of the Hazard Mitigation Plan.

### **5.1.5 Water quality**

The plan's water quality goal is "high quality water in the county's sounds, rivers, and creeks." The plan employs several methods to address this goal:

- establishes density controls in ORW shoreline area;
- encourages vegetated stream buffers;
- guides the location, design and operation of marinas to minimize water quality impacts, with "dry-stacks" encouraged as an alternative;
- encourages joint development of docks and piers to reduce water quality impacts;
- encourages flexible site design and incentives to reduce impervious surfaces;
- supports soil erosion and sedimentation control to protect water quality; and
- supports state development standards for ORWs and HQWs in non-coastal waters

### **5.1.6 Local concerns**

Local concerns in Pender County focus on preserving the county's rural character and lifestyle. The plan includes "rural character and lifestyle policies" that address the following objectives:

- Cluster development patterns that incorporate significant open space and protect viable farm and timber operations;
- Limiting community services to areas planned for higher intensity development;
- Accommodating traditional business activities in the rural areas;
- Protection of the county's natural resources, such as sounds, rivers, and creeks and wetlands; and
- Residential, commercial, and industrial development patterns that address the county's rural development and open space objectives, have access to appropriate service levels, and are compatible with surrounding land uses.

## 5.2 Consistency between Future Land Use Map and Land Use Plan Requirements

### 5.2.1 Residential density.

The residential density levels depicted on the Future Land Use Map are consistent with the capabilities of the planning area's natural systems. The following are the target residential densities established for each of the land use classifications:

Conservation I	NA
Conservation II	2 units/acre plus 5 acres reserved for open space/conservation
Urban Growth Area	5 units/useable acre
Transition Area	4 units/useable acre
Rural Clusters	2 units/useable acre
Rural Area	1 unit/useable acre

The Conservation II classification is established as an "overlay" that affects the planned densities in the urban growth, transition, rural clusters, and rural areas where non-coastal wetlands or watershed protection areas are located. For example, the density for an urban growth area that contains the Conservation II overlay is 2 units/acre plus 5 acres reserved for open space/conservation

### 5.2.2 Comparison of environmental composite map, land suitability map, and future land use map.

There are no material differences between these maps. The lower capability areas depicted on the Composite Map (follows page 11) *and the lower suitability areas on the Land Suitability Map* (follows page 13) show very similar spatial patterns. These areas are classified as Conservation I and Conservation II on the Future Land Use Map.

### 5.2.3 Natural hazards.

- (1) The county's policies discourage development on the undeveloped barrier islands within its planning jurisdiction. The policy also supports public and private efforts to acquire and preserve these islands. These policies ensure that risks to life and property in the high hazard flood areas are reasonable.
- (2) The county will continue to enforce FEMA standards in special flood hazard areas through implementation of its flood damage prevention ordinance.
- (3) The plan does not allow new development in any designated floodways unless it is required for water access or is used for open space and/or conservation purposes.
- (4) The plan establishes safety buffers around the county's wildlife management areas and managed natural areas, such as Holly Shelter and Angola Games lands. Development density within these buffers is controlled to reduce the amount of property and the number of people that may be subjected to higher risks from events such as fires.
- (5) The plan provides linkages between development review, the Thoroughfare Plan, and the capacity of evacuation routes to ensure that residents are able to evacuate in emergencies.

### 5.2.4 Protection of shellfishing waters.

- (1) With the exception of the urban growth areas, the land use patterns depicted on the future land use map are low density and support the county's aims to control non-point source pollution, one of the main culprits in the closure of shellfish harvesting areas. In the urban growth areas where net allowable densities are higher, the county's site development policies ensure that all feasible measures will be taken to manage non-point source pollution.
- (2) The policies adopt the CAMA standards for coastal wetlands and for the estuarine shoreline. In addition, development in the estuarine shoreline must be low density. These restrictions will help protect shellfishing waters.
- (3) Local policies encourage flexible site planning to permit reduction of impervious surfaces. The policies also call for vegetated stream buffers and incentives are planned for installation of vegetative conveyances.
- (4) The policies support the current state soil erosion and sedimentation control requirements.

### 5.3 Analysis of the Impact of Policies on Management Topics

The analysis of the impacts of Pender County's land use policies on the CRC Management Topics is shown in the matrix in Tables 3A and 3B. Care was taken in development of the policies to ensure that none of the policies negatively impacted or was detrimental to the goals and objectives of the management topics. As shown in the matrix, many of the policies actually have beneficial impacts across more than one management topic.

Because there are no negative impacts, no mitigation measures are required.

**Table 3A. Analysis of Impact of Pender County Policies on CRC Land Use Management Topics**

	Public Access	Land Use	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality
<p><b>Management Topic Benchmarks</b> →</p> <p><b>Policy Categories</b></p> <p>↓</p>	<p>Do the policies establish criteria for frequency and types of access facilities?</p> <p>Does the plan provide access for all segments of community, including those with disabilities?</p>	<p>Do policies result in land use and development patterns that protect natural systems?</p> <p>Do policies allow economic development?</p>	<p>Are land use and development patterns encouraged by the policies consistent with location and capacity of water, sewer, roads, and stormwater facilities?</p>	<p>Do the policies have location, density, and intensity criteria to help new development and redevelopment avoid or withstand hazards?</p>	<p>Do the policies prevent or control non-point source discharges?</p> <p>Do the policies protect open shellfishing waters or help restore conditionally closed shellfishing waters?</p>
<b>I.A. Public Access</b>	<p><b>Beneficial impact</b></p> <p>Establishes guidelines for type and frequency of access locations</p> <p>Seeks to incorporate sites in public or non-profit ownership</p> <p>Cooperative relationship with state and municipalities to create access</p>	<p><b>Beneficial impact</b></p> <p>Protects natural resources by ensuring design and development of access locations address conflicts with natural and to protect water quality</p>	<b>Neutral</b>	<b>Neutral</b>	<p><b>Beneficial</b></p> <p>Seeks overall reduction in number of piers and docks, which may affect water quality</p>
<b>I.B. Land Use Compatibility</b>	<p><b>Beneficial</b></p> <p>Supports state, federal, and non-profit efforts to purchase and maintain undeveloped barrier islands</p>	<p><b>Beneficial</b></p> <p>New development that impacts sensitive natural systems generally not allowed</p> <p>Only low density development allowed in estuarine shoreline area and site development must meet</p>	<p><b>Beneficial</b></p> <p>Protects long-term viability of groundwater resources, which will continue as major source of water supply for many residents</p>	<p><b>Beneficial</b></p> <p>Opposes development of undeveloped barrier islands where there are elevated risks to life and property</p>	<p><b>Beneficial</b></p> <p>Non-point source pollution managed by maintaining low density development, minimizing impervious surfaces, and requiring appropriate drainage systems in shoreline zone</p>

	Public Access	Land Use	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality
		<p>local and CAMA standards</p> <p>Development in non-coastal wetlands and watershed protection areas requires reservation of conservation</p> <p>Supports efforts to identify and protect aquifer re-charge areas and groundwater resources</p>			
<p><b>I.C. Infrastructure Carrying Capacity</b></p> <p>Transportation</p> <p>Water and sewer</p> <p>Stormwater</p> <p>Other facilities</p>	Neutral	<p><b>Beneficial</b></p> <p>Development incentives will be available to encourage preservation of green space and protection of environmentally sensitive areas</p> <p>Sewer services generally required to avoid AECs</p> <p>Capitalizes on natural corridors for open space, greenway systems, hiking and paddling trails</p>	<p><b>Beneficial</b></p> <p>Encourages development patterns consistent with thoroughfare plans</p> <p>Protects capacity of existing highways</p> <p>Includes long-term goal for public transportation system to preserve roadway capacity</p> <p>Water and sewer extensions limited to development corridors and areas planned for urban-type growth</p> <p>Extension and connection policies will address timing, location, priorities, and sequence of utility</p>	Neutral	<p><b>Beneficial</b></p> <p>Stormwater management policies encourage site specific options to minimize non-point source discharges to estuarine and public trust waters</p> <p>Central sewers generally not extended to AECs in order to avoid higher density development pressures</p>

	Public Access	Land Use	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality
			<p>connection.</p> <p>Plan provides comprehensive approach to stormwater management and non-point source pollution</p> <p>Provides guidelines for planning for schools and parks</p>		
I.D. Natural Hazard Areas	Neutral	Neutral	<p><b>Beneficial</b></p> <p>Links Hazard Mitigation Plan with Thoroughfare Planning Process to help ensure adequate evacuation routes</p> <p>Land development proposals reviewed for adequate access to evacuation routes</p>	<p><b>Beneficial</b></p> <p>Enforce FEMA standards in special flood hazard areas</p> <p>Local policies <i>low density or low intensity</i> development in Special Flood Hazard areas</p> <p>No new development in designated floodways</p> <p>New development on undeveloped barrier islands discouraged</p> <p>County will periodically update its Hazard Mitigation Plan</p> <p>Support for completion of flood maps as tools to manage development in hazard areas</p>	Neutral
I.E. Water Quality	Neutral	Neutral	Neutral	Neutral	Beneficial

	Public Access	Land Use	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality
					<p>Establishes density controls in ORW shoreline area to protect water quality</p> <p>Vegetated stream buffers protect water quality</p> <p>Encourages location, design and operation of marinas to minimize water quality impacts; "dry-stacks" encouraged as alternative</p> <p>Encourages joint development of docks and piers to reduce water quality impact</p> <p>Flexible site design and incentives to reduce impervious surfaces</p> <p>Supports soil erosion and sedimentation control to protect water quality</p> <p>Supports state development standards for ORWs and HQWs in non-coastal waters</p> <p>Encourages farmers and timber operators to use "best management practices"</p>



					<p>with access to thoroughfares and transit, with available services and facilities, and that are compatible with surrounding uses</p> <p>Encourages protection and rehabilitation of existing neighborhoods</p>
<p><b>II.D. Commercial Development</b></p>	<p><b>Neutral</b></p>	<p><b>Beneficial</b></p> <p>Encourages major retail centers to locate where access is excellent and where basic community services are available</p>	<p><b>Beneficial</b></p> <p>Encourages flexibility to allow development of home-based businesses with accessory retail uses in rural, rural cluster, and transition areas</p>	<p><b>Neutral</b></p>	<p><b>Beneficial</b></p> <p>Encourages commercial and business uses to preserve trees and to install appropriate landscaping and perimeter buffers</p> <p>Encourage location of commercial uses based on function and potential impacts</p> <p>Major retail center—good highway access and close to available services</p> <p>Highway commercial—clustered along highways; good visibility and access are required</p> <p>Neighborhood &amp; convenience – good vehicular and pedestrian access</p> <p>Ribbon-type high-</p>

					<p>way commercial discouraged</p> <p>Rural commercial development – locations near cross-road centers and limited to generally accepted rural businesses</p>
<b>II.E. Industrial and Business Development</b>	<b>Neutral</b>	<p><b>Beneficial</b></p> <p>Encourages for industrial sites that are physically suited and that have basic water and sewer</p> <p>Directs industrial uses to sites that have good access and adequate services and facilities</p>	<p><b>Beneficial</b></p> <p>Encourages flexibility to allow development of home-based businesses with accessory retail uses in rural, rural cluster, and transition areas</p>	<p><b>Beneficial</b></p> <p>Requires sites out of flood plain, delineation of wetlands, and properly managed runoff</p> <p>Requires preservation of conservation areas when industrial sites are developed</p>	<p><b>Beneficial</b></p> <p>Encourages industrial land uses to preserve trees and install appropriate landscaping and perimeter buffers</p> <p>Directs industrial uses to locations that do not encroach on existing uses</p>
<b>II.F. Agriculture, Forestry, and Open Space</b>	<p><b>Beneficial</b></p> <p>Allows only very low density uses in farm and timber areas</p> <p>Directs growth away from important natural wildlife and recreation areas</p> <p>Recognizes farms and woodlands as integral part of county's open space system</p>	<p><b>Beneficial</b></p> <p>Discourages sewer in agriculture areas; requires impact analysis if sewer must be routed through these areas</p>	<p><b>Beneficial</b></p> <p>Allows traditional rural uses in agricultural areas</p>	<p><b>Neutral</b></p>	<p><b>Beneficial</b></p> <p>Allows only very low density residential activities in agricultural areas</p>
<b>II.G. Hazards</b>	<b>Neutral</b>	<b>Neutral</b>	<b>Neutral</b>	<p><b>Beneficial</b></p> <p>Prevents new development in designated</p>	<b>Neutral</b>

				riverine floodways, except for water access, open space, and/or recreation	
<b>II.H. Drainage</b>	<b>Neutral</b>	<b>Neutral</b>	<b>Neutral</b>	<b>Beneficial</b> Ensures that new development has proper stormwater management facilities and that it does not contribute to upstream or downstream flooding	<b>Neutral</b>
<b>II.I. Access</b>	<b>Neutral</b>	<b>Neutral</b>	<b>Neutral</b>	<b>Neutral</b>	<b>Neutral</b>
<b>II.J. Site Development</b>	<b>Beneficial</b> Encourages development incentives for the following: <ul style="list-style-type: none"> <li>▪ Residential development that provide substantial open space</li> <li>▪ Commercial, business, and industrial uses that are developed in a park-setting and that provide basic services</li> <li>▪ Development that provides infrastructure, open space, clustered site plan, reduced impervious surfaces, and/or vegeta-</li> </ul>	<b>Neutral</b>	<b>Neutral</b>	<b>Beneficial</b> Ensures that on-site wastewater treatment systems meet NC Environmental Health rules Ensures that off-site utilities are properly operated by a public entity or a public utility	<b>Beneficial</b> Encourages preservation of trees and installation of appropriate landscaping Includes guidelines for on-premise and off-premise signs to make them compatible with county's rural character

	<p>tive conveyances</p> <ul style="list-style-type: none"><li>▪ Residential development that incorporates a variety of housing types</li></ul>				
--	--	--	--	--	--

## Part 6. Detailed Planning Information Base

Part 6 of the Land Use Plan provides a technical information base and a summary of existing policies. Its purpose is to suggest alternatives and to support formulation of the county's land use and development policies. This part includes the following sections:

- Section I     Population, Housing and Economy
- Section II    Natural Systems Analysis
- Section III   Analysis of Existing Land Use and Development
- Section IV    Analysis of Community Facilities
- Section V     Land Suitability Analysis
- Section VI    Review of Current Plans and Policies

The following series of maps was prepared to support the analysis of population growth, natural systems, and existing land use. These maps are not included in this report but are available from the Pender County Planning Department.

- Population Growth Map
- Estuarine Systems Map
- Soil Suitability Map
- Natural Hazard Map
- Fragile Areas Map
- Community Facilities Maps
  - Water
  - Sewer
  - Highways

The Environmental Composite Map, the Existing Land Use Map, and the Land Suitability Map are located in Part 2 of this plan.

# Section I Population Growth, Housing, and Economy

## 1.1 Population

### 1.1.1 Permanent population trends and current estimate

#### 1.1.1.1 Regional and county growth trends

Table 4 shows Pender County's population growth over the past 20 years compared to the other counties in the Cape Fear Region. For the two decades, Brunswick County grew by the largest percentage (104%) but Pender's growth, at 85%, was second. During the 1990s, Brunswick and Pender led the region in percentage population growth.

The national trend of population movement to coastal areas, growth of retirement communities, expansion of the Wilmington urban area, and I-40 access influence growth in Pender.

**Table 4**  
**Pender County and the Cape Fear Region Population**  
**1980-2000**

County	Total Population			Percent Change	
	1980	1990	2000	1990-2000	1980-2000
Cape Fear Region	212,547	249,711	329,301	32%	55%
Brunswick	35,777	50,985	73,143	43%	104%
Columbus	51,037	49,587	54,749	10%	7%
New Hanover	103,471	120,284	160,327	33%	55%
Pender	22,262	28,855	41,082	42%	85%
Pender % of region population	10%	12%	12%	-	-

Source: NC Data Center; Bureau of the Census

#### 1.1.1.2 County growth trends

Table 5 shows the county's population changes during the 1990s. The county's permanent population grew by more than 12,000 persons between 1990 and 2000 – an increase of 42.4%. At an average household size of 2.49 persons, this growth is equivalent to adding nearly 10 families every week during the decade.

**Table 5**  
**Pender County Population Trends**  
**1980-2000**

Township	Total Population			Percent Population Increase	
	1980	1990	2000	1980-1990	1990-2000
Burgaw	4,946	5,515	7,474	11.5	35.5
Canetuck	357	369	361	3.4	- 2.2
Caswell	1,027	1,016	1,172	- 1.1	15.4
Columbia	1,747	1,790	2,179	2.5	21.7
Grady	1,372	1,725	2,192	25.7	27.1
Holly	1,651	2,095	2,263	26.9	8.0
Long Creek	1,164	1,280	1,854	10.0	44.8
Rocky Point	1,943	3,377	5,786	73.8	71.3
Topsail	4,563	8,403	13,806	84.2	64.3
Union	3,445	3,285	3,995	- 4.6	21.6
County total	22,215	28,855	41,082	29.9	42.4

Source: US Census of Population and Housing

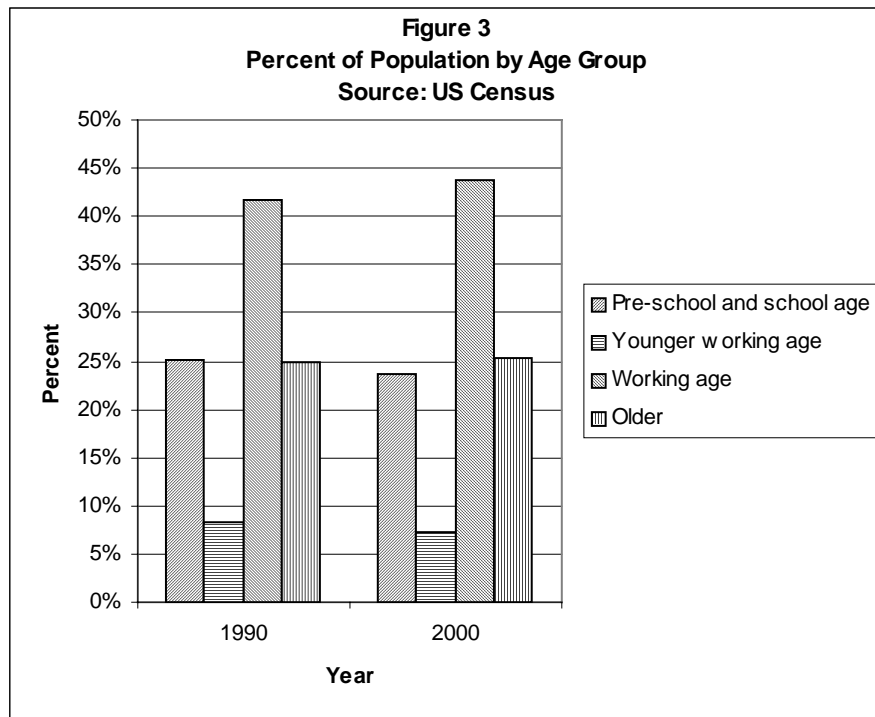
In terms of percentage population, the Rocky Point Township (71% increase) is the fastest growing area of the county, followed by water-oriented Topsail Township (64% increase). Rocky Point, together with Burgaw and Union Townships, forms a growth corridor along I-40. These I-40 corridor townships accounted for more than 40% of the county's growth during the 90s.

Topsail Township grew by 64% during the 90s, adding more than 5,000 persons.

Holly Township showed a significant reduction in its population growth – from 27% in the 80s to 8% in the 90s.

### 1.1.2 Population age characteristics

Figure 3, based on Census data, shows the relative changes in the county's population age characteristics over the past two decades. The figure illustrates the following trends:



- The most significant shift in the age structure between 1980 and 2000 was the increase in the number of working age people (ages 25 to 54) residing in the county. In 1980, approximately 36% of the population was in this age group; in 2000, the percentage of working age population was 44%.
- As a percent of the total, the older population group remained relatively stable during the 20-year period.
- The pre-school/school age and the younger working age groups declined as percent of total population. However, the number of persons in these age groups increased somewhat between 1980 and 2000.

## 1.2 Housing

### 1.2.1 Housing characteristics

**Table 6**  
**Permanent/Seasonal Units**  
**Occupancy-Tenure-Household Size**

	1980	1990	2000
Total housing units	10,292	15,437	20,798
Permanent housing units	8,632	12,935	16,995
% of total	84%	84%	82%

Occupied units	7,511	8,610	12,251
Vacant permanent units (estimated)	1,121	1,800	1,900
% of total units	13%	14%	11%
Seasonal units	1,660	2,502	2,881
% of total units	19%	19%	17%
Owner units	6,244	9,182	13,260
% of permanent units	72%	71%	78%
Renter units	1,267	1,930	2,794
Average household size	2.91	2.57	2.49

Sources: NC Data Center; Bureau of the Census

- Growth in housing units in 1990s tracked changes in population – 35% increase in total housing units during the decade.
- The number of seasonal units, as percent of total, remained steady for the 20-year period. (In 1990 and 2000, the number of vacant housing units includes permanent units and seasonal units. In 1980, vacant units were only counted for year-round housing units. )
- Like most rural counties, owner units dominate the stock of permanent housing units. Between 1990 and 2000, the share of owner units increased from 71% to 78%.
- Average household size continues to decline – from 2.91 persons per household in 1980 to 2.49 in 2000.

## 1.2.2 Types of Units

**Table 7**  
**Types of Housing Units**

Units in structure	1990		2000	
	Number	%	Number	%
Single-family detached	9,267	60.0%	12,235	58.8%
2 units	453	2.9%	454	2.2%
3 or 4 units	169	1.1%	197	0.9%
5 to 9 units	175	1.1%	189	0.9%
10 to 19 units	180	1.2%	164	0.8%
20 units >	138	0.9%	194	0.9%

Units in structure	1990		2000	
	Number	%	Number	%
Mobile homes	4,929	31.9%	7,328	35.2%
Other	126	0.8%	37	0.2%

Sources: NC State Data Center; Bureau of the Census

- Single-family detached housing units and mobile homes are the dominant types of housing units in the county. Approximately 59% of total housing units were single-family 35% were mobile homes in 2000. This is a slight decline in the percentage of single-family homes and a slight increase in the percentage of mobile homes.
- Only 6% of the county's housing units are in structures with 2 units or more.

### 1.2.3 Building permits

**Table 8**

**Housing Units since 2000 – Permits for New Units**

	Total 2000	2001	2002	2003	2004	2000-04
Conventional homes	174	195	292	459	674	1,794
Manufactured Homes	359	480	421	283	202	1,745
Total	533	675	713	742	876	3,539

Sources: Census; Pender Planning Department

- Pender County averaged more than 700 residential building permits yearly for the first 5 years of the decade. This permit activity equates to a population increase of 1,762 persons per year, assuming the year 2000 average family size.
- New residential units were almost evenly divided between conventional and manufactured housing units over the past five years.
- For “stick-built” housing, the single-family home still dominates, and it is reasonable to expect this trend to continue. For the foreseeable future, attached units and multifamily structures will not be a significant part of the county's housing stock.

## 1.2.4 Current population estimates and projections

**Table 9**  
**Population Estimate and Forecast**  
**Permanent, Seasonal, and Peak Population**

Year	Population Forecast				
	County Pro- jection (Pender Planning Dept.)	Planning Area	Rounded	Seasonal Population (est.)	Peak Popula- tion (est.)
2005	50,948	48,618	48,600	3,600	52,200
2010	63,185	60,366	60,400	4,000	64,400
2015	73,841	72,019	72,000	4,500	76,500
2020	84,893	83,768	83,800	5,000	88,800
2025	99,900	95,421	95,400	5,400	100,800

Sources: 2000 Census; Pender Co. Planning; WBF1

- Total county and planning area permanent population projected to grow at a high rate over the next 20 years – approximately 4.4% per year.
- Growth of more than 46,800 permanent residents in the planning area will have significant impacts on the county. At current average household size (2.49 persons), this growth translates to an addition of nearly 19,000 households in planning area alone – about 18 houses per week through the planning period. Average family size is declining and through the forecast period it is likely to reach 2.0 persons per family. This translates to nearly 23,000 new families in the county.
- Seasonal population is based on share of seasonal housing in the planning area and an assumption that an average of 8 individuals will occupy seasonal housing during the summer. Approximately 13% of the county's seasonal housing units were counted in the planning area in 2000.
- Increases in the seasonal population will add to the growth of housing – between 200 and 300 more housing units over the forecast period.

## 1.3 Local Economy

### 1.3.1 General Economic Indicators

**Table 10**  
**Pender County Economic Indicators**

	1980	1990	2000	Percent change		
				1980-90	1990-2000	1980-2000
Per capita income						
Pender County	\$ 4,996	\$ 11,460	\$ 17,882	129%	56%	258%
Cape Fear Region	Na	\$15,778	\$24,738	Na	57%	Na
Total personal income (\$000)	\$ 151,202	\$ 408,512	\$ 818,817	170%	100%	442%
Gross retail sales (\$000)	na	na	\$ 238,436	na	na	na
Total employed labor force	6,603	9,416	13,046	43%	39%	98%

Sources: US Bureau of the Census; Bureau of Economic Analysis

- Pender per capita income increased by 258% over the past 20 years. This is a significant percentage growth and in buying power terms, incomes increased much faster than the rate of inflation during the 1980 to 2000 period— an increase to \$10,441 in 2000 would have kept pace with inflation.
- While incomes are growing, the county still lags behind the Cape Fear Region as a whole. Per capita income in Pender County is approximately 75% of the total regional per capita income.

### 1.3.2 How are people employed?

**Table 11**  
**Employment by Industry**

	1990	% of Total	2000	% of Total	1990-2000 % inc.
Agriculture, forestry, fishing, and hunting	661	5.2%	630	3.5%	-4.7%
Mining	29	0.2%	na	na	na
Construction	1412	11.1%	2468	13.8%	74.8%
Manufacturing	2942	23.0%	2632	14.7%	-10.5%
Wholesale trade	689	5.4%	645	3.6%	-6.4%
Retail trade	1961	15.4%	2367	13.2%	20.7%
Transportation and warehousing, information, communications and other public utilities	716	5.6%	1237	6.9%	72.8%

Finance, insurance, real estate, and leasing	457	3.6%	749	4.2%	63.9%
Management, administration, and services	3361	26.3%	6059	33.9%	80.3%
Public administration	537	4.2%	1109	6.2%	106.5%
Total employment	12765	100.0%	17896	100.0%	40.2%

Source: NC State Data Center; WBFI

- Employment in the county's resource-based industries sustained mild employment decreases during the 1990s, a common trend in eastern North Carolina. Some of these declines are related to a restructuring of the businesses.
- Manufacturing jobs declined in Pender over the decade, but the decreases were not as severe as those experienced by other regions. Manufacturing lost approximately 300 jobs between 1990 and 2000.
- Management jobs, along with transportation and utilities, finance-insurance-real estate, and construction were the major non-governmental growth areas.
- Public administration increased by 106%.

### 1.3.3 Where do people work?

Table 12 shows where people who live in Pender County work. Just over 60% of the county's workers commute to jobs outside of the county and only 38% work inside the county. The pattern of commuting workers underscores Pender County's role as a residential community for the entire southeastern region of North Carolina.

**Table 12**  
**Place of Work for Pender County Workers, Age 16 and Older**

	Number	Percent
Total workers	17,732	100.0
Worked in North Carolina	17,549	99.0
Worked in Pender County	6,765	38.2
Worked outside Pender County	10,784	60.8
Worked outside North Carolina	183	1.0

U.S. Census Bureau Census 2000

### 1.3.4 Where do people earn wages and salaries?

**Table 13**  
**Wages and Salaries by Industry**

	1990 (\$000)	2000 (\$000)	1990-2000 % increase (CPI Benchmark +32%)
Farm earnings	\$ 16,423	\$ 24,494	49.1%
Non-farm earnings	\$ 131,586	\$ 276,623	110.2%
Agricultural services, forestry, and fishing	\$ 4,586	\$ 8,511	85.6%
Mining	na	na	na
Construction	\$ 15,361	\$ 30,750	100.2%
Manufacturing	\$ 20,766	\$ 44,018	112.0%
Transportation, communications, and public utilities	\$ 5,531	\$ 13,251	139.6%
Wholesale trade	\$ 5,704	\$ 16,214	184.3%
Retail trade	\$ 21,861	\$ 24,193	10.7%
Finance, insurance, and real estate	\$ 3,998	na	na
Services	\$ 18,359	\$ 52,140	184.0%
Government earnings			
Federal civilian	\$ 2,382	\$ 4,413	85.3%
Federal military	\$ 1,035	\$ 1,572	51.9%
State and local	\$ 29,958	\$ 71,222	137.7%

Sources: NC State Data Center; Bureau of the Census

- Even though total farm employment declined between 1990 and 2000, farm earnings increased by nearly 50% for the decade.
- Wholesale trade followed closely by “services” was the big winner in terms of total earnings increase. Earnings in transportation-communications-public utilities also showed a significant increase of nearly 140%.
- When compared to other areas, the 112% increase in earnings in manufacturing is a surprising change.

### 1.3.4 Changes in Agriculture

**Table 14**  
**Changes in Pender County Agriculture**  
**1987 to 2000**

	1987	1990	1992	1997	2000
Total cropland (acres)	41,183	na	39,855	41,510	na

Number of farms	393	na	331	283	na
Ave. size of farms (acres)	179	na	197	243	na
Total personal farm income (\$000)	\$ 11,964	\$ 16,423	\$ 25,862	\$ 37,307	\$ 24,494

Source: NC State Data Center; Census of Agriculture

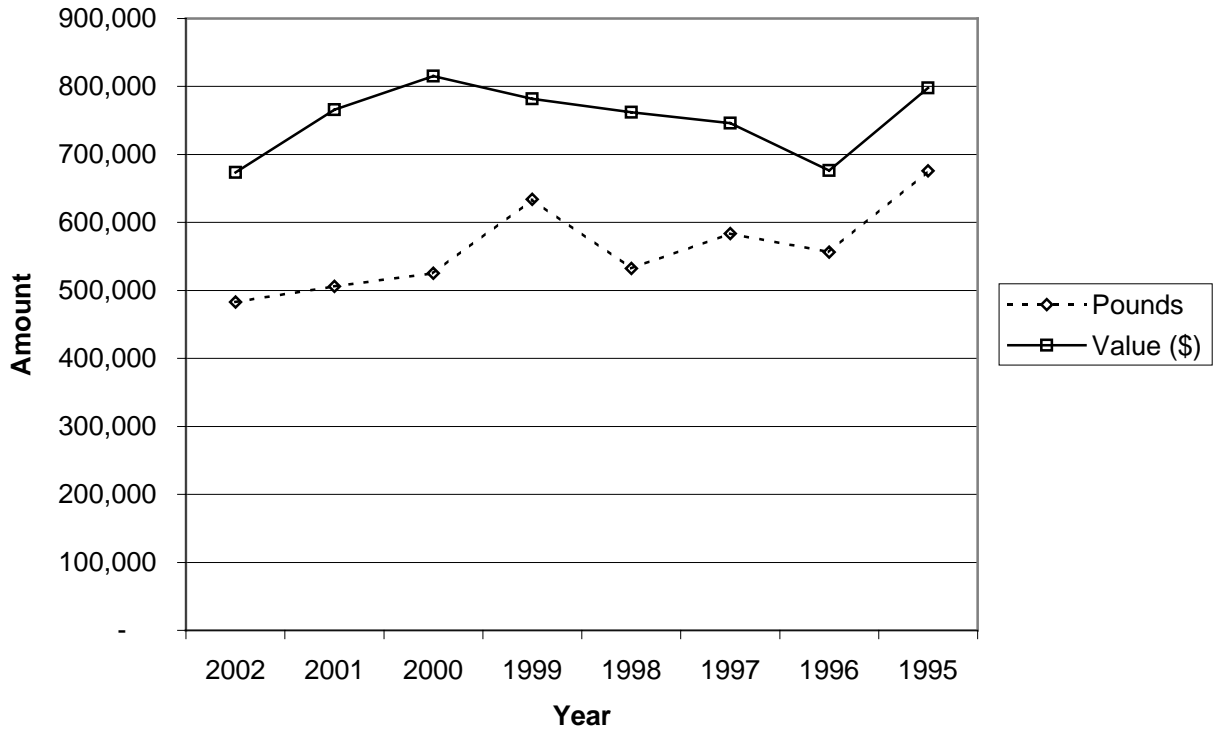
- The amount of harvested cropland in Pender County remained stable through the 1990s. Approximately 41,000 acres are in agricultural production.
- Changes in the structure of farming are evident. Between 1987 and 1997 (most recent available statistics), the number of farms in the county decreased from nearly 400 to 280 – 28% decline. At the same time, the average size of farms increased by 36%.
- Farming remains an important part of the Pender economy. Income from farms shows a positive trend. Between 1990 and 2000, the census reports an increase in total personal farm income of nearly 50%. (Different data bases may account for apparent discrepancies in income data between 1990 and 2000)

### 1.3.5 State of Commercial Fishing

- The amount of commercial fish landings in Pender County varies from year-to-year, but the overall trend is down. Between 1995 and the end of 2002, the fish landings by weight decreased by nearly a third.
- Total value, however, remained fairly constant over that 8-year period.

### Commercial Fish Landings

Source: NC Division of Marine Fisheries



## Section II Natural Systems Analysis

This section provides a description of Pender County’s natural environment and its suitability or limitations for development. The section includes 3 parts:

- 1) Mapping and analysis of major natural features and systems;
- 2) A summary or composite analysis and map of environmental systems;
- 3) A description of the county’s environmental conditions with focus on water quality and natural hazards.

### 2.1 Inventory, Mapping and Analysis

The inventory of natural systems addresses the topics outlined in the CAMA land use planning guidelines. These topics are listed below:

#### Inventory of Natural Systems

- Areas of Environmental Concern
- Soil characteristics – septic tank limitations
- Water quality classifications
- Natural hazard areas and storm surge areas
- Non-coastal wetlands
- Primary nursery areas
- Environmentally fragile areas

These systems and their management principles are summarized in Table 15.

**Table 15  
Natural Resource Systems and Management Principles**

Natural System or Resource	<u>Management Principle</u>
<b>Wetlands</b> Coastal wetlands	No development or activity that would damage or alter natural functions. Allow only those uses that require water access.

<p>Non-coastal, exceptional or substantial significance</p> <p>Non-coastal, beneficial</p> <p>Those areas that are inundated or saturated by surface or ground water at a frequency or duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.</p>	<p>Development should be consistent with significant wetland values: water storage, shoreline stabilization, water quality protection, habitat, and recreation.</p>
<p><b>Estuarine waters</b></p>	<p>Manage to maximize their benefits to man and the estuarine and ocean system. No development that would damage biological, social, aesthetic, and economic values of estuarine waters.</p>
<p><b>Estuarine shoreline</b></p> <p>Non-ocean shorelines extending from the normal high water level or normal water level along the estuarine waters, estuaries, sounds, bays, fresh and brackish waters, and public trust areas for a distance of 75 feet landward. For shorelines immediately contiguous to waters classified as Outstanding Resource Waters, the estuarine shoreline extends 575 feet landward from the normal high water level or normal water level.</p>	<p>Ensure that shoreline development is compatible with the dynamic nature of coastal shorelines as well as the values and the management objectives of the estuarine and ocean system.</p>
<p><b>Soil limitations (septic)</b></p> <p>Slight to moderate</p> <p>Severe</p>	<p>Manage development intensity to be consistent with soil capabilities. Encourage only very low intensity development until central system or proper alternative waste treatment systems are available.</p>
<p><b>Natural hazards</b></p> <p>In 100-year flood (includes ocean hazard AECs)</p> <p>In storm surge area</p>	<p>Avoid if possible. Require any new development within flood hazard area to be constructed in a manner that minimizes safety hazards and flood damage. No critical facilities in flood hazard areas.</p> <ul style="list-style-type: none"> <li>- Development located landward of the first line of stable natural vegetation.</li> <li>- Structures elevated to provide adequate separation from base flood elevation level,</li> <li>- No alteration of sand dunes which would increase potential flood damage.</li> </ul>
<p><b>Water quality</b></p> <p>ORW watersheds</p> <p>Areas draining to surface waters designated as Outstanding Resource Waters by the Environmental Management Commission</p>	<p>Limits on development density, built-upon area, surface water discharges, and stormwater runoff consistent with values of resource.</p>
<p>HQW watersheds</p> <p>Areas within 1-mile of surface waters designated as High Quality Waters by the Environmental Management</p>	<p>Limits on development density, built-upon area, surface water discharges and stormwater runoff consistent with</p>

Commission.	values of resource.
Wellhead protection areas	None applicable at this time.
Water supply protection watersheds	Protect water supply from stormwater runoff and infiltration of wastewater. Limit development density and lot coverage to appropriate levels.
<b>Fragile areas and resources</b> Natural heritage areas	Discourage incompatible development. Provide information on significance and sensitivity of area.
Maritime forests	No significant remnants.
Protected open space	Establish buffer areas for managing development where appropriate.

## 2.2 Composite Environmental Map

The Composite Map of environmental conditions shows the extent and overlap of the features described in this section. Using the limitations and opportunities that the features have for development as a guide, the map shows the location of the following three categories of land:

- Class I** – land containing only minimal hazards and limitations that may be addressed by commonly accepted land planning and development practices;
- Class II** – land containing development hazards and limitations that may be addressed by methods such as restrictions on types of land uses; special site planning; or the provision of public services; and
- Class III** – land containing serious hazards for development or lands where the impact of development may cause serious damage to the functions of natural systems.

Table 16 shows the features that are included in each class. A *Composite Natural Features Map* is found in Part 2 of this report.

**Table 16**  
**Composite Natural Features Table**

	Class I	Class II	Class III
Wetlands			
Coastal wetlands			✓
Non-coastal, exceptional or substantial significance			✓

	Class I	Class II	Class III
Non-coastal, beneficial		✓	
Estuarine waters			✓
Estuarine shoreline		✓	
Soil limitations (septic)			
Slight to moderate	✓		
Severe			✓
Hazards			
In 100-year flood (includes ocean hazard AECs)		✓	
In storm surge area		✓	
Water quality			
ORW watersheds		✓	
HQW watersheds		✓	
Wellhead protection areas		✓	
Water supply protection watersheds		✓	
Fragile areas and resources			
Natural heritage areas		✓	
Maritime forests		✓	
Protected open space			✓

Source: WBFI

## 2.3 Summary Environmental Conditions

### 2.3.1 Water quality

The Cape Fear River Basinwide Plan prepared by the NC Division of Water Quality is the primary source for information regarding water quality in Pender County. The basinwide plan information is supplemented by mapping of water quality classifications, shellfish harvesting areas, and hydrology provided by the NC Division of Coastal Management.

The county's estuarine waters have a range of primary and supplemental classifications. These are shown below:

SA HQW  
SA HQW NSW  
SB Sw NSW  
SC HQW NSW  
SC NSW

SC Sw HQW NSW  
 SC Sw NSW  
 SC Sw NSW HQW

Each of these classifications is described in the following table:

DWQ Primary Saltwater Classifications	
Class SC	All tidal salt waters protected for secondary recreation such as fishing, boating and other activities involving minimal skin contact; aquatic life propagation and survival; and wildlife. Stormwater controls are required and there are no categorical restrictions on discharges.
Class SB	Surface waters that are used for primary recreation, including frequent or organized swimming and all SC uses. Stormwater controls are required under and there are no categorical restrictions on discharges.
Class SA	Surface waters that are used for shellfishing or marketing purposes and all SC and SB uses. All SA waters are also HQW by definition. Stormwater controls are required. No domestic discharges are permitted in these waters.
DWQ SUPPLEMENTAL CLASSIFICATIONS. Supplemental classifications are sometimes added by DWQ to the primary classifications to provide additional protection to waters with special uses or values.	
High Quality Waters (HQW)	Supplemental classification intended to protect waters with quality higher than state water quality standards. In general, there are two means by which a water body may be classified as HQW. They may be HQW by definition or they may qualify for HQW and then be supplementally classified as HQW through the rule-making process. The following are HQW by definition: <ul style="list-style-type: none"> <li>• SA (shellfishing),</li> <li>• ORW</li> <li>• Waters designated as Primary Nursery Areas or other functional nursery areas</li> </ul>
Nutrient Sensitive Waters (NSW)	Supplemental classification intended for waters needing additional nutrient management due to their being subject to excessive growth of microscopic or macroscopic vegetation. In general, management strategies for point and non-point source pollution control require control of nutrients (nitrogen and/or phosphorus usually) such that excessive growths of vegetation are reduced or prevented and there is no increase in nutrients over target levels. Management strategies are site-specific.
Swamp Waters (Sw)	Supplemental classification intended to recognize those waters that generally have naturally occurring very low velocities, low pH and low dissolved oxygen. No specific restrictions on discharge types or development are involved.
Primary Nursery Areas (PNA)	PNAs are located in the upper portions of creeks and bays. These areas are usually shallow with soft muddy bottoms and surrounded by marshes and wetlands. Low salinity and the abundance of food in these areas are ideal for young fish and shellfish.  To protect juveniles, many commercial fishing activities are prohibited in these waters; including the use of trawl nets, seine nets, dredges or any me-

	chanical methods used for taking clams or oysters. If a violator is caught in a Primary Nursery Area, he is faced with a very substantial penalty.
--	--

Table 17 provides a summary of water quality in Pender County surface waters. Overall, water quality is good to high, with a limited number of impaired or partially supporting streams noted.

**Table 17  
Summary of Water Quality  
Pender County**

Subbasin number/location	Area (square miles)	Water quality assessment
03-06-16 Extreme western Pender	11.6	Brown's Creek near Elizabethtown only impaired stream in subbasin.
03-06-17 Western Pender	96.0	3.8 miles of CFR near International Paper are partially supporting.
03-06-19 Very small area in western Pender	NA	Includes the Black River watershed. No specific data available.
03-06-20 Large western Pender watershed	343.0	Includes Moores Creek and the Black River. Overall water quality good. No impaired waters.
03-06-22 Northwestern Pender	150.0	Includes NE Cape Fear. All streams classified as good or fair-good.
03-06-23 Central and north-eastern Pender	4,070.0	Includes NECFR, Burgaw Creek, and 52 other stream segments. Overall water quality good.
03-06-24 Topsail Sound and AIWW	642.0	All waters classified as high quality.

Source: NC Division of Water Quality, Cape Fear River Basinwide Plan, 2000.

Table 18 shows the areas in Pender County closed to shellfishing. There are approximately 350 acres closed. The largest areas are Old Topsail Creek and Mill Creek, which account for approximately 80% of the closed areas.

**Table 18  
Closed Shellfish Harvesting Areas**

Location	Approximate Area Closed (acres)
Stump Sound area	3.2
Upper Beckys Creek, approximately 0.5 miles above AIWW	38.1
Sears Landing	5.6
Upper Virginia Creek, approximately 0.8	21.8

Location	Approximate Area Closed (acres)
miles above AIWW	
Large area of upper Old Topsail Creek, approximately 0.4 mile above AIWW	165.2
Most of Mill Creek, beginning at the AIWW	111.5
Area adjacent to Forest Sound Marina (by statute)	1.7
Area adjacent to Harbor Village Marina	0.5
Area adjacent to Queen's Grant, Topsail Island	1.4
Area adjacent to Surf City Marina	0.5
Total area closed	349.5

Source: NC Division of Coastal Management, CAMA Land Use Plan Mapping

## **Section III      Analysis of Existing Land Use and Development**

This section shows a “snapshot” of the current situation in the county with respect to how the land is currently used and what development trends are emerging. It provides a base for projecting the county’s future land use needs and forecasting the future location of development. This section includes a map that shows overall land use patterns; a table that evaluates existing land use; and a forecast of future land use needs.

A map of generalized existing land use is provided in Part 2 of this report. A more detailed Existing Land Use Map is found on the following page.

### **3.1 Existing land use**

#### **3.1.1 Development and Land Use Trends**

The county’s development trends reflect the overall growth patterns of the county. Over the past five years, nearly 4,500 new land parcels were created for development. These parcels were 5 acres or less in size. Approximately 2,100, or 47%, were created along the US 17 — Coastal corridor; 530, or 12%, were in the Rocky Point area; and 500, or 11%, were in the Burgaw area. These three areas account for 70% of the development of this type in the county.

The influence of the county’s zoning ordinance on land use is evident in many areas. Before the ordinance was revised in early 2004, the predominant zoning district was RA, which allowed most uses either by right or by special use permit. As a result, a mixture of land uses, some of which may not be compatible, is present in many areas.

In addition, residential land use patterns show a scattering of medium density residential uses throughout the county. This scattered pattern is not consistent with the rural landscape desired by many residents.

The Planning Board studied a detailed map of existing land uses and development patterns during the plan update. A copy of this map may be viewed at the County Planning Department.

#### **3.1.2 Analysis of Existing Land Uses**

Table 19 shows the amount of land in Pender’s unincorporated area that is allocated to various land uses. The data in the table is based on existing land use at the tax parcel level. The acreage assigned to each land use category

does not reflect land uses such as highway and railroad rights-of-way, utility easements, and drainage easements that are an essential component of existing land use. A common rule-of-thumb assigns an additional 20% of land area for these uses to calculate “gross land use” acreage.

This table shows the importance of agriculture and forestry to the overall land use patterns of the county. Approximately 10% of the county is devoted to agricultural operations and nearly 55% to forestry.

Within the group of community uses, residential is the dominant land use. Nearly 80% of the land in this group of uses is residential. An estimated total of nearly 20,000 net acres, or nearly 24,000 gross acres (net acreage times 20% multiplier), are devoted to community uses.

**Table 19  
Analysis of Existing Land Use**

Land Use Category	Net Acres	Gross Acres (Net X 1.2)	Percent of Total
Residential	15,627	18,752	79.9
Commercial/business	850	1,020	4.3
Industrial	1,144	1,373	5.9
Transportation, communication, utilities	708	850	3.6
Institutional	1,241	1,489	6.3
Total for community uses	19,570	23,484	100.0
Agriculture-animal operations	1,633		
Agriculture-crops	53,387		
Forestry	289,596		
Conservation	102,405		
Other	64,144		
Total	530,735		

Sources: Pender County Planning Department; WBF

### 3.2 Future land needs

Table 1B, page 44, shows the estimate of land needed for planned future land uses and development. The estimate is based on the following considerations:

- (1) Projected population growth and related increases in households between 2005 and 2025;
- (2) Net density and gross density estimated for each of the future land use classifications; and
- (3) Adjustment multiplier factor of 1.5 to account for flexibility and projection accuracy.

The projected population increase between 2005 and 2025 is 48,600 (Table 6) and the increase in households is estimated at 20,800 (average household size = 2.00 persons). The overall estimated gross development density for ur-

ban and community development is approximately 1.0 household/2.0 acres or 1.1 persons per acre. Using these assumptions, the land needed for future development is 41,000 acres.

## Section IV      Analysis of Community Facilities

The analysis of community facilities evaluates the county's water, sewer, and highway facilities.

### 4.1 Water

The County and several local governments and water and sewer districts operate water systems in the planning area.

The county's system includes approximately 63.0 miles of lines. The system is concentrated in the southern part of the county in the Rocky Point area. The Town of Wallace supplies the current system via a connector that runs along the US 117/I-40 corridor. In addition to the system that is developed in the Rocky Point area, a line along NC 11 serves a small system in the Pender Lea community.

Working through the Rocky Point-Topsail Water and Sewer District, Pender County is in the process of expanding its water system. "Phase III" of the system, which is currently under construction, will expand the Rocky Point system along NC 210 to the west and it will include a connector along NC 210 to the east to provide service to the Hampstead area ending generally at Topsail High School.

The County has also received approval of grants and loans to design and construct Phase IV of the system. This expansion will serve the Town of St. Helena and the area to the east along New Road, and bounded by Old River Road and Stag Park Road. The County expects to begin design in July 2004 and construction in 2005.

Phase V of the system is planned to serve the un-served area in the US 17-Intracoastal Waterway corridor from Topsail High School northeast to the Onslow County line. Due to the demographics of the population residing in this area, design and construction of this part of the system will use loans to be repaid from system revenues. The schedule for Phase V is the same as Phase IV.

Maple Hill is served by a water system that includes approximately 25.0 miles of lines. This system is supplied by the Chinquapin system in Duplin County, which uses wells. This system has a 12-hour well supply of 0.648 million gallons. It projects that 2020 demand on the system will be 0.443 million gallons.

Burgaw also operates a system using ground water supply. This system includes 33.0 miles of lines. The system has a 12-hour supply capacity of 0.82 million

gallons. Its storage capacity is 0.675 million gallons. July usage is approximately 0.5 million gallons.

## 4.2 Sewer

The Town of Burgaw operates the only major sewer system in the planning area. The Burgaw system received a Rural Center grant to study upgrade and expansion. The system discharges to the Osgood Canal.

The Rocky Point-Topsail Water and Sewer District owns a small collection system that discharges to the Wilmington-New Hanover sewer system. This system has a capacity limit of 75,000 gallons per day. It only serves the public schools in the Rocky Point area and the Del Labs business site.

The Water and Sewer District has plans for a major force main that will connect from the NC 210 area to the Town of Wallace sewer system. The treatment limit on this facility will be 2.0 million gallons per day of wastewater.

## 4.3 Highway system improvements

A thoroughfare plan was developed for Pender County in early 1998. The plan includes a functional classification system for the county's highways; identifies highways with capacity deficiencies; and makes recommendations for roadway upgrades and expansions, and new facilities where appropriate. The plan also identifies structurally deficient and obsolete bridges and recommendations for replacements.

The following table shows the recommended highway projects and the bridge replacements that have not been addressed to date.

Interstates and Principal Arterials		Minor Arterials	Major Collectors	Minor Collectors
I-40	US 17	US 421	US 117 NC 11 NC 50 NC 53 NC 210	NC 133 SR 1001 (Willard Rd.) SR 1002 (Island Cr. Rd.) SR 1120 (Malpass Corner Rd.) SR 1121 (Bell-Williams Rd.) SR 1128 (Point Caswell Rd.) SR 1201 (Beatty's Ridge Rd.) SR 1209 (Shiloh Rd.) SR 1216 (Piney Woods Rd.) SR 1305 (Doctors Cr. Rd.) SR 1332 (Penderlea Rd.) SR 1336 (Horse Branch Rd.) SR 1347 (Old Savannah Rd.) SR 1400 (Highsmith Rd.) SR 1533 (Shepards Rd.)

The functional classification of Pender County highways is shown in the following table:

<p><b>Interstates and Principal Arterials.</b> Routes that serve corridor movements with substantial statewide or interstate travel characteristics. Links urban areas with populations generally greater than 5,000.</p> <p><b>Minor Arterials.</b> Link cities and towns and other major traffic generators.</p> <p><b>Major Collectors.</b> Provide connections between rural communities and from rural communities to principal arterial roads, such as an interstate or other major facility such as I-40 or US 17. Typically, these are 2-lane facilities that are designed for low speeds and short travel distances. They disperse traffic from the arterial system. Major collectors may also provide access to property. However, preserving traffic capacity should be considered in determining appropriate land uses, frequency of driveway connections and so on.</p> <p><b>Minor Collectors.</b> Collect traffic from local roads and bring all developed areas within a reasonable distance of a major collector road. Minor collectors may also provide access to property.</p> <p><b>Local Roads.</b> Provide basic access to residential and commercial properties and they are connected to major or minor collectors.</p>
---

The following highways were determined to have capacity deficiencies:

- US 421/NC 11 between Wards Corner and the SR 1209 intersection.
- NC 11 from I-40 to the Duplin County line.
- NC 210 from SR 1002 near Hampstead to its intersection with NC 133 at Rocky Point.

The current Transportation Improvement Program (TIP), which is the NCDOT's 8-year highway budget, includes two major projects recommended by the Thoroughfare Plan:

The first is an I-40 – US 17 connector and 4-laning of US 17 from the Pender-New Hanover line to the eastern city limits at Holly Ridge. Some of these improvements are on the existing right-of-way; some are in new locations. This project is under construction.

The second project is a 2-lane by-pass around Burgaw. This improvement extends from NC 53 east at SR 1340 to NC 53 west near SR 1508.

The TIP also recommends widening of US 117 to 4-lane freeway from Burgaw to the New Hanover County line. This project is not currently in the TIP.

The Thoroughfare Plan includes recommendations for replacement of a number of bridges that are structurally deficient or obsolete. Three bridge replacement are included in the current TIP:

Bridge #21, NC 210 – construction to begin in 2006.  
 Bridge #116, SR 1520 – construction scheduled to begin in 2004-05  
 Bridge #47, SR 1206 (White Oak Swamp) – construction scheduled  
 2004-05.

#### 4.4 Public Schools

The Pender County public school system is impacted by the overall population growth in the county. According to the 2000 Census, the school age population groups increased from 5,332 in 1990 to 7,369 in 2000 – an increase of approximately 38% over the 10-year period. According to information provided by the schools, actual enrollment figures over the last 10 years are comparable. Average Daily Membership (ADM) for the entire system increased from 5,340 in 1994-95 to 6,954 in 2003-04, or 30%. These ADM figures more accurately reflect increases in school age population.

Projections show that these increases will continue. Table 20 shows projections in ADM to 2008. These projections show an average annual increase of 1.4%. The table also shows actual ADM for the past 5 years. Actual experience is consistently higher than projections.

**Table 20**  
**Pender County Average Daily Membership**  
**Projections and Actual**

Year	Projected ADM	Actual ADM	Difference
1999	6,401	6,451	-50
2000	6,550	6,561	-11
2001	6,652	6,759	-107
2002	6,770	6,819	-49
2003	6,909	7,008	-99
2004	7,010		
2005	7,118		
2006	7,188		
2007	7,258		
2008	7,328		
1999-2008	927		
Annual Percent Increase	1.4%	1.7%	

Source: Pender County Schools

The Board of Education is reviewing a capital improvement program that identifies the major investments required to address increasing school enrollment. Table 21 below summarizes these improvements.

**Table 21  
Major Capital Improvements by School**

Facility	Current Capacity	Current Enrollment	Major Capital Improvements
Topsail HS	471	680	<ul style="list-style-type: none"> <li>• 22 new classrooms, plus physical education weight room</li> <li>• expand cafeteria and library</li> <li>• renovate existing facilities</li> <li>• upgrade accessibility and parking</li> <li>• HVAC improvements</li> </ul>
Topsail MS	522	557	<ul style="list-style-type: none"> <li>• new freestanding gym with 6 classrooms</li> <li>• on-site wastewater system upgrades</li> </ul>
Burgaw Elementary	337	540	<ul style="list-style-type: none"> <li>• alternatives include new school or land acquisition and expansion of existing school</li> </ul>
Pender HS	750	675	<ul style="list-style-type: none"> <li>• renovate</li> <li>• update track</li> <li>• parking lot, pave driveway, repair sidewalks</li> <li>• site accessibility</li> </ul>
Penderlea School	552	509	<ul style="list-style-type: none"> <li>• new K-1 classroom and multipurpose room</li> <li>• repairs and renovations to existing buildings</li> <li>• site drainage improvements</li> <li>• site handicapped accessibility</li> </ul>
Topsail Area Elementary Schools			<ul style="list-style-type: none"> <li>• one 10,000 square-foot classroom addition at each school</li> </ul>
North	550	600	
South	550	500	
Cape Fear Elementary and MS	n.a.	n.a.	<ul style="list-style-type: none"> <li>• new 12-classroom addition</li> </ul>
Heide Trask HS	n.a.	n.a.	<ul style="list-style-type: none"> <li>• new cultural arts facility plus classrooms</li> </ul>
Burgaw MS	308	280	<ul style="list-style-type: none"> <li>• 6-classroom addition</li> <li>• demolish old science building</li> <li>• general renovations</li> </ul>
West Pender MS	338	250	<ul style="list-style-type: none"> <li>• general renovations</li> <li>• improve site handicapped accessibility</li> </ul>
Rocky Point Primary	388	392	<ul style="list-style-type: none"> <li>• new 6-classroom addition</li> <li>• sewer system connection</li> <li>• general renovations</li> </ul>
Pender Learning Center	60	100	<ul style="list-style-type: none"> <li>• reviewing 3 options: new building existing site, expand existing building, and add facility to Cape Fear campus</li> </ul>
Central Office			<ul style="list-style-type: none"> <li>• construct 8,000 square-foot office addition to replace 10 deteriorated mobile units</li> </ul>

Source: Pender County Schools

## Section V Land Suitability Analysis

Land suitability analysis is a process for identifying land in the county that is most suitable for development. The analysis is not intended to “rule out” any land or site from development. It is intended to provide information to local decision-makers on land that may have fewer environmental and regulatory restrictions, land where services can be provided at lower cost, or land that is most attractive given its proximity to existing development or to the water-front areas.

The analysis includes three steps:

- Step 1 Identify factors to be considered – natural constraints, such as wetlands, availability of water and sewer, proximity to existing developed areas.
- Step 2 Estimate a rating for the suitability factors – how suitable is site with a particular factor for development. To aid in the analysis, ratings are assigned numerical scores.
- Step 3 Determine the importance of each factor – 1 for important, 2 for very important, and 3 for essential.

Each of these steps was reviewed with the Planning Board before the analysis is finalized.

Table 22 shows the factors that are included in the analysis, the rating assigned to each, and the relative importance of each factor.

**Table 22  
Land Suitability Analysis**

Suitability factor	Factor Rating				Weight
	Not interested	Not attractive	Somewhat attractive	Very attractive	
	0	-2	1	2	
Coastal Wetlands	Inside	Outside			
Exceptional and Substantial Non-coastal Wetlands	Inside	Outside			
Estuarine Waters	Inside	Outside			

Protected Lands	Inside	Outside			
Beneficial Non-coastal Wetlands		Inside		Outside	1
Storm Surge Areas		Inside		Outside	2
Soils with septic limitations		Severe	Moderate	Slight	2
Flood Zones		Inside		Outside	2
HQW/ORW Watersheds		Inside		Outside	1
Significant Natural Heritage Areas		< 500'		> 500'	1
Hazardous Substance Disposal Sites		< 500'		> 500'	1
NPDES Sites		< 500'		> 500'	1
Wastewater Treatment Plants		< 500'		> 500'	1
Municipal Sewer Discharge Points		< 500'		> 500'	1
Land Application Sites		< 500'		> 500'	1
Airports		< 500'		> 500'	1
Developed Land		> 1 mi	.5 - 1 mi	< .5 mi	1
Primary Roads		> 1 mi	.5 - 1 mi	< .5 mi	2
Water Pipes		> .5 mi	.25 - .5 mi	< .25 mi	3
Sewer Pipes		> .5 mi	.25 - .5 mi	< .25 mi	3
Assigned weight: 1 = Important 2 = Very important 3 = Most important for development					

Source: WBF

The Land Suitability Map, which is located in Part 2, shows land suitability in the county according to these factors. It contains 4 classes of land – least suited, low suitability, moderate suitability, and high suitability. The higher suitability areas are concentrated in corridors along roads where natural system limitations are lowest.

A GIS model provided by the Division of Coastal Management generated the Land Suitability Map.

## Section V      Review of Current Plans and Policies

Pender County has two major plans that help manage its land resources. Both of these plans were developed and adopted during the 1990s. The County's CAMA Land Use Plan was certified in 1991 and it has provided guidance for decisions regarding coastal resources, land use and development. In 1998, the County developed the 2020 Growth Management Plan to address the current and long-range implications of accelerating growth and development.

The following is a synopsis of the policies and principles contained in these plans. These policies will provide the backdrop for the policies developed for the 2005 CAMA Land Use Plan Update.

### 5.1    1991 CAMA LUP Policies

#### Natural system and resource protection

---

- No loss AECs through development
- Development restrictions in sensitive areas
  - Support development only outside hydric soils
  - Restrict development  $0 \leq 5$  feet above mean high water
- 1000-ft buffer around ORWs; no new/expanded marinas adjacent to ORWs
- Supports permitting for "404" wetlands; allow bulkheading in freshwater swamps if permits obtained
- Manage stormwater to protect water quality
  - Protect vegetated riparian buffers
  - Require "bmps" in new development
  - Restrict density in areas adjacent to sensitive waters
- Marinas or dry stack
  - None Rich's Inlet to New Topsail Inlet
  - No dry stack in ORW areas
- Upland marinas
  - Allowed Old Topsail Creek north to Pender/Onslow line
  - Not allowed Futch, Mill, Old Topsail, or any ORW area
- No floating homes
- Dry stack no taller than 35 ft;
- No development of sound or estuarine islands
- Encourages state to protect oyster rocks

## **Community services and facilities**

---

- Regulate land uses near groundwater sources to protect supply
- Supports package treatment plants that meet state and federal regulations
- Identify drainage problems and work to solve
- Establish waterfront access program
- Provide adequate sites/facilities for solid waste disposal
- Beach renourishment projects responsibility of Surf City and Topsail
- Supports state policies on erosion control, public access, highway improvements, and dredging operations; supports State Port and military facilities in region

## **Resource-based industries**

---

- Discourage higher density development on prime farmland ( $\leq 20,000$  sq. ft.)
- Planting/harvesting trees in upland areas encouraged; harvesting in conservation areas adjacent to streams discouraged
- Individual review of each mining operation; federal/state permits required

## **Urban growth patterns/land use**

---

- Supports industries consistent with County's concern for environmental quality; no industries with heavy emissions or discharges
- Supports state/federal regulations to mitigate impact of industrial siting on environmentally sensitive areas
- Full disclosure of costs and benefits (to Pender) of major energy facility; impact assessment required
- Off-shore exploration and inshore refinery facilities not allowed; inshore energy permitted subject to zoning and state/federal permits
- No hazardous waste incinerator allowed
- No off-road vehicles allowed on County's barrier islands

## **Storm hazard mitigation and flood evacuation**

---

- Continually review and update evacuation plan and to implement it in appropriate emergencies
- Continue to limit development in the floodways

## 5.2 20-20 Growth Management Plan Policies

### Overall growth management

---

- Encourage distinct “town and country” or “village and country” growth patterns that preserve open space and farm and timber land, minimize service costs, and minimize traffic congestion
- Encourages cooperative regional plans for highways, water and sewer, parks, and other services and facilities that can be tailored to meet the specific needs of Pender County’s unincorporated communities and municipalities

### Infrastructure and services

---

#### Transportation

- Plan for transportation systems that meet the range of needs in the county and that promotes the location of specific facilities to encourage the county’s desired growth and development patterns
- Encourage variety of transportation options – sidewalks, bikeways, public transit...
- Compact development patterns to make public transit more cost-effective; special attention to needs of seniors and disabled
- Encourage “connected” systems – subdivision to subdivision; no access to higher intensity use through low intensity use
- Supports Hampstead by-pass

#### Water and sewer

- Supports regional solutions to water and sewer; no centralized sewer in areas planned for agriculture and timber production; no water/sewer extensions that could result in scattered, non-directed development
- Package plants supported where central sewer no available
- Cutting-edge wastewater treatment technology encouraged

#### Stormwater

- Encourages stormwater management to protect primary nursery areas
- County may employ more stringent stormwater requirements than state to protect water quality
- Supports retention of vegetative buffers to manage stormwater
- County will seek designs on all projects that address existing poor drainage conditions and prevent unacceptable ponding; post development runoff will be minimized
- County will develop master drainage plan to address existing drainage problems and to protect water quality

- Require development in 100-year flood hazard area controlled to meet FEMA guidelines and current technology
- No septic tanks within the 100-year flood plain

### **Schools**

---

Advanced planning for sites in accordance with projected development patterns

### **Parks**

---

- Parks should address multiple objectives – natural area conservation, visual enhancement, cultural/historic preservation, watershed protection, and flood damage prevention
- System of greenways and trails is encouraged
- Park-school concept supported
- Provision for public water access is a priority

### **Solid waste**

---

Encourages solid waste management program that encourages waste reduction and recycling, controls illegal dumping and littering, sets standards for appearance of waste management sites

### **Costs of development**

---

- Supporting community facilities planning and budgeting process for major public facilities
- Requires that costs of new growth and development be paid by those responsible through “impact fees” and user fees

### **Development types**

---

#### **Industrial development**

- Supports maintaining a service and regulatory environment that is conducive to industrial development
- Encourages industrial location on land that is physically suitable and that has unique location advantages; industry and employment uses should have direct access to appropriate transportation facilities; encourages new industrial development on sites in existing parks
- “Heavy” industrial uses must be buffered from non-industrial areas; “light” uses should be located near existing built-up areas for convenience but design/site development must ensure compatibility

#### **Commercial and office**

- Strip commercial development is discouraged

- Commercial centers should be located at major intersections
- Neighborhood and convenience commercial centers should have good vehicular and pedestrian access
- Highway oriented uses should be located in areas that already have compatible business uses; design should address signage, driveway access, and lighting and encourage shared facilities
- Office and institutional uses may serve as a transition between higher and lower intensity land uses

### **Housing and neighborhood development**

- Development density must relate to physical capability of the land, type of wastewater treatment available, and proximity of the site to existing urban services; higher density development should be close to commercial services, have access to transportation facilities, and have access to urban services
- Development encouraged to employ “green space” design
- County will protect existing residential areas
- Manufactured housing must resemble site-built housing when located in or near an area of site-built housing
- New development must provide for required infrastructure at the time of development
- No more than 3 lots allowed on unimproved, private roads
- Housing development that “leapfrogs” existing development is discouraged

### **Waterfront/waterborne development**

---

Dry stack storage preferred over wet-slip marinas to minimize consumption of public trust waters

### **Resource protection and use**

---

#### **Agriculture and rural areas**

- Agriculture and very low density residential activities are preferred land uses in rural and active agricultural areas
- Infrastructure development and extensions will be designed to direct development to existing built-up areas
- County actions will protect existing agricultural and forestry activities

#### **Natural systems and natural resources** (policies similar to 1991 CAMA LUP)

- Supports CAMA major and minor development permit process to protect resources
- Encourages protection of Angola Game Lands and Holly Shelter Game Preserve

- Permits development outside “hydric” soil areas as defined by Pender County

### **Historic and cultural resources**

---

Encourages preservation of the county’s historic and cultural sites

### **Community appearance**

---

- Identifies entrance corridors as priorities for appearance improvement programs
- Encourages landscaping of existing and new commercial developments and parking areas
- Encourages sign policies that enhance community identify and create a high quality business image

## **5.3 Implementation actions**

Pender County has been very active in developing and adopting tools to implement the policies in the 1991 CAMA Land Use Plan and the 2020 Growth Management Plan.

In 2001, the County made major revisions to its Flood Damage Prevention Ordinance and to the Mobile Home and Travel Trailer Park Ordinance. These revised ordinances were adopted on October 15, 2001 and December 17, 2001, respectively.

In 2003, the County made major revisions to its zoning ordinance to make it more consistent with the policies in the Land Use Plan and the 2020 growth management policies. This revised ordinance was effective on November 11, 2003.

The County sought and received an amendment to its local enabling legislation for subdivision regulation that allowed the county to use the state definition of *subdivision* in its Subdivision Regulations. This change will help ensure that all significant subdivisions comply with the County’s requirements and will improve the effectiveness of the development management program.