

# ONSLOW COUNTY

## COMPREHENSIVE PLAN (CAMA Core Land Use Plan)

### EXECUTIVE SUMMARY

Adopted by the Onslow County Board of Commissioners: April 20, 2009  
Certified by the Coastal Resources Commission: \_\_\_\_\_, 2009

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ONslow COUNTY  
CAMA CORE LAND USE PLAN  
EXECUTIVE SUMMARY

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# **EXECUTIVE SUMMARY**

## **I. PREFACE**

Onslow County and its participating municipalities of Holly Ridge and Richlands face many challenges. From 1980 to 2000, the County grew from 112,784 to 150,355 population, a 33.3% increase. North Carolina's population increased from 5,880,095 to 8,049,313, a 36.8% increase.

In order to respond to the complex issues which confront Onslow County and its participating municipalities, this plan should comprehensively set goals and objectives. It should provide for a continuous planning process which is timely and responsive to the needs and desires of the County. Finally, the plan should provide a legal basis for land use regulations and a guide for capital improvements planning.

Once the plan is prepared, the County must realize that the plan is not the end of the process. The County and its participating municipalities must continuously work at accomplishing plan implementation and establishing an effective planning program. Onslow County must view the preparation of this document as the first step in a continually evolving process.

## **II. INTRODUCTION**

### **A. BACKGROUND**

In the early 1970s, North Carolina and other coastal states found that their precious coastal areas, including coastal sound and estuarine areas like those within Onslow County, were under threat from pollution caused by population growth, industrial development, and increased recreational usage. In response to these threats, the North Carolina legislature passed CAMA in 1974.

The NCAC 7B guidelines provide that each of the 20 coastal counties and the municipalities within those counties prepare and adopt a CAMA Core Land Use Plan that meets the planning requirements adopted by the Coastal Resources Commission (CRC). If a County chooses not to prepare a plan, the guidelines specify that the CRC will prepare and adopt a CAMA Land Use Plan for that County and the municipalities in the County which choose not to prepare their own plan. Municipalities not preparing their own plan will be included in the plan for the County in which the municipality is located. The towns of Holly Ridge and Richlands participated in the development of the land use plan.

As the threats to the coastal environment have only increased since CAMA's adoption, the following goals for coastal management set by CAMA in 1974 continue to summarize the benefits of planning in protecting sensitive coastal areas:

- (1) To provide a management system capable of preserving and managing the natural ecological conditions of the estuarine system, the barrier dune system, and the beaches, so as to safeguard and perpetuate their natural productivity and their biological, economic, and aesthetic values;
- (2) To ensure that the development or preservation of the land and water resources of the coastal area proceeds in a manner consistent with the capability of the land and water for development, use, or preservation based on ecological considerations;
- (3) To ensure the orderly and balanced use and preservation of our coastal resources on behalf of the people of North Carolina and the nation;
- (4) To establish policies, guidelines, and standards for:
  - (a) Protection, preservation, and conservation of natural resources including but not limited to water use, scenic vistas, and fish and wildlife; and management of transitional or intensely developed areas and areas especially suited to intensive use or development, as well as areas of significant natural value;
  - (b) The economic development of the coastal area, including but not limited to construction, location and design of industries, port facilities, commercial establishments, and other developments;
  - (c) Recreation and tourist facilities and parklands;
  - (d) Transportation and circulation patterns for the coastal area including major thoroughfares, transportation routes, navigation channels and harbors, and other public utilities and facilities;
  - (e) Preservation and enhancement of the historic, cultural, and scientific aspects of the coastal area;
  - (f) Protection of present common-law and statutory public rights in the lands and waters of the coastal area (Source: N.C.G.S. 113A-102).

The data, analysis, goals, objectives, and implementing actions developed to complete the CAMA Land Use Plan (CAMA LUP) will be used to implement those policies formulated through the county's Citizen's Comprehensive Plan adopted in 2003. This document, together with the Comprehensive Plan, will provide consistent and comprehensive guidance for the physical development of the County.

Specifically, the CAMA LUP will be used by the North Carolina Coastal Resources Commission (CRC) to determine whether any given development proposal subject to a major CAMA permit is consistent with the County's goals for its future development and for environmental protection (see text box for a description of the CAMA permit system). No CAMA permits shall be issued for any proposal which is inconsistent with any of the policies contained within this plan. The CAMA LUP will be used by the County's Planning Board and Board of Commissioners to determine the appropriateness of zoning classifications at specific sites and other land use decisions. Together, these planning documents will help guide the future land use within Onslow County and its participating municipalities. The policies and implementing actions which are included in this plan apply to the County and its participating municipalities. Demographic and natural systems profiles for the towns of Holly Ridge and Richlands are provided in Appendix I.

## B. HISTORY OF PLANNING IN ONSLOW COUNTY

Onslow County conducted its initial land use planning document in 1975. Since that time, the County has undergone several land use planning efforts in an attempt to manage growth that has occurred as a result of varying factors. During the 1980s, the Camp Lejeune Marine Base experienced substantial personnel expansion. This shift had a significant impact on the County's economy and land use trends. The County completed a basic land use planning document in 1981, which laid out a basic framework for how the County should develop in light of the mounting development pressures.

In 1991, the County adopted a CAMA Land Use Plan that, to some extent, expanded upon the efforts of the 1981 Land Use Plan. At this point, CAMA land use plans had a primary focus on the protection of Areas of Environmental Concern (AECs), but land use trends and policies related to land use and infrastructure concerns were addressed.

The County's initial comprehensive planning document, "Agenda for Change: Operation Onslow," was adopted by the Onslow County Board of Commissioners in July, 1995. This plan cited specific strategic policies, and assigned implementation tasks for each policy outlined in the document. The 1995 plan addressed a broad range of County issues and concerns ranging from land use topics to law enforcement and education. The Steering Committee for this plan was comprised of a citizen panel with oversight from the County staff members.

In 1997, the County adopted a CAMA Land Use Plan Updated to their existing 1991 plan. As with the 1991 plan, this document's primary concern was protection of AECs. This plan provides a review of the County's demographic trends, as well as community facilities services and needs, but does provide a detailed discussion of land use trends. An impediment to conducting detailed land use analysis at this time was a lack of affordable technology to complete the task. The 1997 plan has been essentially utilized as a document to regulate development within defined AECs, but has not served as a land use planning tool for the County.

On April 7, 2003, the Onslow County Board of Commissioners adopted the "Citizen's Comprehensive Plan for Onslow County." This document served as an update to the 1995 plan, "Agenda for Change." The "Citizen's Comprehensive Plan" utilized an extensive panel of citizens serving on four separate committees that addressed the following areas of concern: Land Use and Housing, Environmental Protection and Use, Transportation and Major Facilities, and Economy and Culture. This plan drew from the 1995 document as basis for determining where the County has been, and what direction the County should go with respect to development, environmental initiatives, and community services/infrastructure development and expansion. This plan included several detailed mapping efforts including a Land Suitability Map and a Growth Strategies Map. This document is the first true land use planning tool that Onslow County had developed.

This Fiscal Year 2005-2006/2006-2007 CAMA Core Land Use Plan will officially serve as an update to the County's 1997 CAMA Land Use Plan. Additionally, the County will use this opportunity to incorporate the goals, policies, and implementing actions from the 2003 Comprehensive Plan into one planning document. This plan will update the County's existing land use map, land suitability map, and future land use map (Growth Strategies map). Once completed, it is anticipated that this document will serve as the county's sole land use planning tool. Through incorporating the direction and focus of past planning efforts, the County may truly establish a grounded course of action to address the future land and community service needs of Onslow County.

#### C. REGULATORY AUTHORITY AND PLANNING MODEL

This plan is intended to fulfill the Coastal Area Management Act (CAMA) requirements for the preparation of a Core CAMA Land Use Plan. This plan is organized to adhere to 15A NCAC 7B requirements, specifically rule .0702, which specifies the required content of CAMA land use plans.

On December 31, 2007, copies of this draft land use plan were provided to Pender County, Duplin County, Jones County, Carteret County, the Town of Swansboro, the City of Jacksonville, the Town of Surf City, the Town of Topsail Beach, and the Town of North Topsail Beach with a request for review and comment. As of May 19, 2008, no comments had been received from any of the jurisdictions.

#### D. PLANNING PROCESS AND CITIZEN PARTICIPATION

At the beginning of the preparation of this document, Onslow County adopted a Citizen Participation Plan which is intended to ensure that all interested citizens have an opportunity to participate in the development of this plan through both oral and written comments. The citizen input received during the development of this plan has greatly influenced the final contents of the plan and its policies.

The Onslow County Board of Commissioners has designated a Land Use Plan Advisory Committee (LUPAC) for the CAMA LUP development process). The LUPAC's role was to discharge all duties required of a "principal local board" as defined at 15A NCAC 7I.0506, essentially overseeing and guiding the CAMA LUP development process and providing extensive input to the County's planning consultant, Holland Consulting Planners, Inc., as well as making a recommendation to the Board of Commissioners regarding adoption of the CAMA LUP.

The Onslow County LUPAC is composed of the following members:

Delma Collins	Pauline Joos
Richard L. Green	Pauline Kopka
Jerry Lynn Hinnant, Jr.	Dale Schmidt
David W. Stipe	Brian Wheat
Mercedes Stewart	

Following adoption of this Plan by the Onslow County Board of Commissioner on April 20, 2009, it was submitted to the CRC for certification. Certification of the plan was achieved on <Insert CRC certification date here>.

### **III. ONSLOW COUNTY COMMUNITY VISION**

Onslow County will grow as a balanced community, reflecting its heritage based on natural resources, rural culture, positive military influence, and a diversified economy. The County's future will be guided by a productive collaborative effort of its citizens, local units of government, and service providers. The following statements define the County's intent for the future:

- Onslow County shall employ advanced planning for orderly growth, so as to ensure the efficient use of land according to its suitability for development; the cost-effective, coordinated provision of infrastructure and services; the proper design and livability of its communities, neighborhoods and rural areas; harmony with the Marine Corps Air Station Camp Lejeune; and the continued preservation and productivity of its farms, woodlands, wetlands, and estuarine areas.
- Onslow County shall provide (or encourage others to provide) necessary infrastructure and services consistent with properly managed growth and desirable economic development. Priorities shall include a balanced, multi-modal transportation system; assured sources of quality drinking water; carefully planned wastewater treatment services; effective, environmentally sound stormwater management; and fiscally efficient, environmentally responsible solid waste management.

- Onslow County shall encourage the long-term management and wise use of its natural resources including, particularly, ocean and estuarine area resources, surface and ground water systems, wetland and floodplain ecosystems, and other important natural areas. Management efforts shall work to protect the natural productivity of these areas and their critical role in storm protection and hazard mitigation.
- Onslow County shall seek to ensure a high quality of life for its citizens, by working to attract and expand a diversified economic base (including a strong military component); ample parks and recreation facilities; an active arts and cultural community; affordable, quality health and elder care; an excellent public school system; sustained interest in the area's history and traditions; and area-wide support for community cleanliness and beauty.

#### **IV. IDENTIFICATION OF KEY ISSUES**

This land use plan will attempt to assess all issues and concerns that may affect the growth and natural environment in Onslow County over the 20-year planning period. Due to resource and time limitations, however, primary or "key" issues must be identified and prioritized. These key issues are those that the County will spend additional resources in analyzing, assessing and developing goals, policies, objectives and implementing tasks to address over the planning period.

In order to identify these issues, the County held two Issues Identification Meetings on November 14, 2005, and November 17, 2005. These meetings were widely advertised, through direct solicitation of citizens with known interests in civic affairs and representatives of organizations with interest in these affairs. Additionally, a notice was sent to popular retail and commercial locations for posting and was published twice in the Jacksonville Daily News newspaper.

At the meetings, the County's planning consultant, Holland Consulting Planners, Inc., provided an overview of the CAMA Land Use Planning process and then broke the assembled group at each meeting into smaller groups to "brainstorm" issues that the group adjudged to be significant to Onslow County's growth and environment over the planning period. These issues were then listed on large writing pads and affixed to the wall of the Jacksonville Commons Middle School Cafeteria and Dixon Middle School Cafeteria where the meetings were held. At the end of the each meeting, participants received 10 "votes" and identified their 10 top issues (1 vote per issue - no "multi-voting" with multiple votes per issue). The results are recorded below.

Issues Identification (Ranked in Priority Order) - November 14, 2005

RANK	ISSUE	SCORE
1	Incentives for low-impact development and stormwater pond alternatives	15
2	Control stormwater runoff	13
3	True bypass (west side)	11
4*	Preserve existing natural barriers	10
5*	Loss of farmland to development	10
6*	Include sidewalk and greenway plans within developments to accommodate pedestrians and bicycles	10
7*	Wetland preservation	9
8*	Planning for water supply and sewer treatment systems	9
9*	Maintain water flow: (1) vegetation, (2) wildlife (beavers)	8
10*	Diversifying the economy/providing for better paying jobs	8
11*	Stream classification impact analysis of development	8
12*	Avoid clear-cutting land	7
13*	Septic system maintenance programs and information programs	7
14*	Incorporate clean-up of roadside areas	7
15*	Evacuation routes	7
16*	Home for C & D debris other than landfill	6
17*	Improve vegetation along rights-of-ways	6
18*	Protecting surface water quality	6
19*	Containing sprawl/implementing zoning	6
20*	Continued promotion of agri-tourism	5
21*	Improving highway access	5
22*	Low income development areas affordable	5
23	Develop jobs for children	4
24*	Permitting for residential fill	3
25*	Wildlife preserve areas	3
26*	Don't encroach on base training	3
27*	Control trash burning and vegetation	3
28*	Improve gateways of Onslow County	2
29*	Planned communities for retirees	2
30*	Establish erosion control higher standards	2
31	Additional child care spaces	1
32	Utility company herbicides in ditches	0

\*Indicates a tie score.

Issues Identification (Ranked in Priority Order) - November 17, 2005

RANK	ISSUE	SCORE
1	Planning for water supply and sewer treatment systems	13
2*	Stormwater control	11
3*	Protection of primary nursery areas	11
4	Better ocean access for boaters (dredging) Marine Base participation	10
5*	Protecting surface water quality	8
6*	Containing sprawl/implementing zoning	8
7*	Preservation of open space for recreation	8
8*	Diversifying the economy/providing for better paying jobs	7
9*	Education of the public over buffer zones and water quality issues	7
10*	Maintenance of public property (vegetation) right-of-way	6
11*	Improving highway access	6
12*	Requirements for maintaining undeveloped lots	5
13*	Quality of life/fitness facilities (recreation)	5
14*	Erosion control	5
15*	Building setbacks on waterfront development	5
16*	Need for more industry (jobs)	5
17*	Educate commercial fisherman on resource protection and aquaculture methods	5
18*	County-wide transit system	4
19*	Impact of capital improvements on taxpayers	4
20*	Need for more medical specialist	4
21*	Promote aquaculture (Dixon School)	4
22*	Lifeguards on county beaches	3
23*	YM/WCA	3
24	Need for county swimming pool	2

\*Indicates a tie score.

In addition, based on the results of these meetings a survey was developed and mailed out to a sampling of the county's absentee property owners. A total of 1,027 surveys were sent out; 183 completed questionnaires were received.

## V. POPULATION SUMMARY

Historical population growth and forecast of population growth are summarized in the following tables.

Table 1: Onslow County  
Population Growth by Township\*

Township	1970	1980	1990	2000	'70 to '80	'80 to '90	'90 to '00	'70 to '00
Jacksonville	55,737	54,111	74,123	59,053	-2.9%	37.0%	-20.3%	5.9%
Richlands	7,572	9,006	10,708	12,497	18.9%	18.9%	16.7%	65.0%
Stump Sound	5,545	7,500	10,148	12,025	35.3%	35.3%	18.5%	116.9%
Swansboro	20,800	23,380	28,651	15,103	12.4%	22.5%	-47.3%	-27.4%
White Oak	13,472	18,787	26,208	17,144	39.5%	39.5%	-34.6%	27.3%
Camp Lejeune**	N/A	N/A	N/A	34,452	N/A	N/A	N/A	N/A
Hofmann Forest**	N/A	N/A	N/A	81	N/A	N/A	N/A	N/A
Onslow County	103,126	112,784	149,838	150,355	9.4%	32.9%	0.3%	45.8%

\*2005 estimates are not available by township.

\*\*In the 2000 Census, Camp Lejeune and Hofmann Forest were included as separate entities when broken down by Township. In 1970, 1980, and 1990, they were included as part of the five townships. The negative growth in the Swansboro Township is directly related to the fact that a portion of the Camp Lejeune population was once counted as part of the Swansboro Township.

Source: 2000 US Census.

Table 2: Onslow County  
Seasonal Population

Housing Type	Number of Units	Persons Per Unit	Seasonal Population
Campsites	440	3.50	1,540
Public Access Parking Spaces*	884	4.00	3,536
Seasonal Housing Units	2,906	4.00	11,624
Transient Boat Slips	165	3.00	495
Total			17,195
Permanent Population	157,738		
Peak Seasonal Population	17,195		
Total Peak Population	174,933		

\*All public beach access sites are located within North Topsail Beach.

Source: Holland Consulting Planners, Inc.

Table 3: Onslow County  
Permanent and Seasonal Population Forecasts

	1970	1980	1990	2000	2010	2020
Total housing units	24,547	35,437	47,526	55,726	63,185	69,323
Total population	103,126	112,784	149,838	150,355	157,963	166,376
Persons per housing unit	4.2	3.2	3.2	2.7	2.5	2.4
Vacant housing units	1,585	3,932	6,868	7,604	9,478	11,092
% of all housing vacant	6.0%	11.0%	14.0%	14.0%	15.0%	16.0%
Seasonal housing units	201	1,198	1,870	2,906	3,791	4,853
% of all housing seasonal	1%	3.0%	4.0%	5.0%	6.0%	7.0%

Source: US Census, NC State Data Center, and Glen Harbeck Associates.

Table 4: Onslow County Non-Military  
Population Projections

	2000	2007	2010	2020	2030	% Change '00-'30
Low Growth Scenario	150,355	162,745	166,175	167,661	166,283	10.6%
High Growth Scenario*	150,355	163,121	177,446	212,264	233,221	55.1%

\*The high growth scenario accounts for growth within the City of Jacksonville, as well as the County overall.  
Source: Low Growth Scenario - NC Office of State Planning; High Growth Scenario - based on ONWASA Water and Wastewater Resources Plan.

Table 5: Onslow County  
Population Projections/Historical Growth (NC Office of State Planning - Low Growth Scenario)  
and Military Personnel Expansion - Induced Growth

2000	2007	2010	2020	2030	% Change '00-'30
150,355	168,753	185,283	195,509	194,131	29.12%

Source: Low Growth Scenario - NC Office of State Planning; US Department of Defense/US Marine Corps.

The following provides a summary of the significant demographic factors:

- From 1970 to 2005, Onslow County's population increased by 53.0%, one of the highest rates of growth in Region P.
- Currently, the county's population is almost evenly distributed amongst the county's three townships, with the exception of Jacksonville.

- The county has experienced a very modest growth rate outside of the sharp population influx experienced during the 1980s.
- From 1970 to 2005, Onslow County's white population has decreased while the black population has increased slightly.
- The county's male population exceeds the female population by approximately 10%.
- Through high school and Associate degree level, the county ranks ahead of the state in educational attainment. However, for Bachelor's and Professional degree attainment, the county ranks behind the state.
- The total population tied to the Camp Lejeune Marine Base (personnel, dependants, and civilian employees) is currently 146,344.

## **VI. HOUSING SUMMARY**

- According to the 2000 US Census, Onslow County contains a total of 55,726 dwelling units, of which approximately 13.6% are vacant. Out of the 86.4% occupied units, 50.2% are owner-occupied and 36.2% are rental properties.
- The median age of all residential structures in the county is 25 years.
- The percentage of homes in Onslow County with 3+ bedrooms is 61.4%, compared to 60.8% for the state overall.
- Onslow County has a much higher percentage of modular housing (24.4%) than the state average (16.4%).
- Approximately 88% of all current owner occupants moved into their homes within Onslow County since 1980.

## **VII. EMPLOYMENT AND ECONOMY SUMMARY**

- Onslow County compares favorably to all other North Carolina counties in all economic categories, with the exception of average weekly wage, which the county ranks 94<sup>th</sup> out of 100 counties.
- The unemployment rate for the county as of 3<sup>rd</sup> Quarter FY05 is 5.5% which is slightly higher than the state overall (5.1%).

- According to the 2000 US Census the counties unemployment rate (12.9%) is slightly lower than the state overall (15.2%).
- Median income for Onslow County is \$33,756, compared to \$39,184 for North Carolina overall.
- The leading employment industries in the county are education, health, and social services employing 22.2% of the population, and retail trade at 15.3%. The industry employing the least number of individuals are wholesale trade (1.9%).
- Onslow County ranks 30 in total agricultural production within North Carolina. The counties agricultural production is comprised predominantly of livestock production, although the county ranks in the top 50<sup>th</sup> percentile for crop production as well.
- The industries in the county with the highest recorded weekly wage is utility work with a weekly wage of \$938, wholesale trade at \$775, and transportation and warehousing at 730%.
- According to the Onslow County/Jacksonville Chamber of Commerce, there are 19 industrial facilities operating in Onslow County. Of these Convergys employees the largest number of individuals (600).

### **VIII. ENVIRONMENTAL CONDITIONS**

Onslow County is located in three river basins: Cape Fear River Basin, White Oak River Basin, and Neuse River Basin. Subbasins are geographic areas that represent part of a watershed/basin, made up of a combination of drainage areas and/or distinct hydroponic features, all draining to the primary watershed. The County is located in six subbasins which are listed below.

<u>Cape Fear River Basin</u>	<u>White Oak River Basin</u>	<u>Neuse River Basin</u>
Subbasin 03-06-22	Subbasin 03-05-01	Subbasin 03-04-11
Subbasin 03-06-23	Subbasin 03-05-02	
Subbasin 03-06-24		

In North Carolina, water quality is assessed primarily at the watershed or river basin level due to the their interconnectedness. Basinwide water quality plans are prepared by the North Carolina Division of Water Quality (DWQ) for each of the 17 major river basins in the State and updated at five year intervals. The Cape Fear River Basin Water Quality Plan was updated in October 2005, the White Oak River Basin Water Quality Plan was updated in November 2001, and the Neuse River Basin Water Quality Plan was updated in July 2002.

Basinwide planning goals include:

- Identify water quality problems and restore full use to Impaired waters.
- Identify and protect high value resource waters.
- Protect unimpaired waters, yet allow for reasonable economic growth.

The preceding goals are accomplished through the following objectives:

- Collaborate with other agencies to develop appropriate management strategies.
- Assure equitable distribution of waste assimilative capacity.
- Better evaluate cumulative effects of pollution.
- Improve public awareness and involvement.

The following provides a summary of existing conditions in each river basin and subbasin. Also included are DWQ recommendations for the subbasin. Information was obtained from the water quality plans.

A. WATER QUALITY (CAPE FEAR RIVER BASIN)

The Cape Fear River Basin is contained entirely within the State of North Carolina. Only three other basins lie entirely within the state's boundaries. The basin originates in the upper Piedmont portion of the state in Rockingham and Forsyth Counties and flows southeast to the Atlantic Ocean. There are five major drainage basins: Haw River, Deep River, Northeast Cape Fear River, Black River, and the Cape Fear River. The population is centered around the Triad, Triangle, Fayetteville, and Wilmington areas. The highest population growths are expected to occur in the upper basin and in the coastal areas. The basin encompasses all or portions of 26 counties and 115 municipalities.

<b><i>Cape Fear River Basin Statistics</i></b>	
Total Land Area in Onslow County:	122,601 acres
Percentage of County in Basin:	23.1%
Total Area:	9,149 sq. miles
Freshwater Stream Miles:	6,386
Freshwater Lakes Acres:	31,135
Estuarine Acres:	31,753
Coastline Miles:	61
No. of Counties:	26
No. of Municipalities:	115
No. of Subbasins:	24
Population (1990):	1,465,451
Population (2000):	1,834,545*
Pop. Density (2000):	197 persons/sq. mi.*

**1. Subbasin 03-06-22**

This subbasin is located in seven counties and includes the Northeast Cape Fear River, Rockfish Creek, Muddy Creek, and Limestone Creek. Land use is largely forest/wetland and agriculture. Many of the streams drain the wetlands. There are 13 permitted dischargers in the subbasin and 449 registered swine operations. The largest dischargers are wastewater treatment plants: Wallace WWTP #1 (1 MGD), Wallace WWTP #2 (4.4 MGD), and Guilford East Mill WWTP (1.5 MGD).

Waters are classified according to their best intended uses. Determining how well a water body supports its designated uses is an important method of interpreting water quality data and assessing water quality. In subbasin 03-06-22, use support ratings were assigned for aquatic life and recreation. Appendices III and IV provide a comprehensive listing of use support ratings and impaired waterbodies for stream segments within Onslow County. Twenty-nine percent (29%) of waters evaluated for aquatic life were supporting, twenty-nine percent (29%) were impaired and forty-two percent (42%) were not rated. Ninety-six percent (96%) of waters evaluated for recreation were supporting and four percent (4%) were impaired. All waters in the subbasin are considered impaired for fish consumption. In 2002, the NC Department of Health and Human Services developed new guidelines to advise people as to what fish are safe to eat. DWQ considers uses of waters with a consumption advice or advisory for one or more species of fish to be impaired. Elevated methylmercury levels have been found in shark, swordfish, king mackerel, tilefish, largemouth bass, bowfin (or blackfish) and chain pickerel (or jack), and these fish species fall under the guidelines.

***Subbasin 03-06-22 Description***

Total Land Area in Onslow County: 25,497 acres  
 Percentage of County in Subbasin: 4.8%

**Land and Water**

Total area:	829 mi <sup>2</sup>
Land area:	828 mi <sup>2</sup>
Water area:	1 mi <sup>2</sup>

**Population Statistics**

2000 Est. pop.:	54,835 people
Pop. Density:	66 persons/mi <sup>2</sup>

**Land Cover**

Forest/Wetland:	58.6%
Surface Water:	0.3%
Urban:	1.3%
Cultivated Crop:	30.3%
Pasture/Managed Herbaceous:	9.6%

**Counties**

Duplin, Jones, Lenoir, Onslow, Pender, Sampson, and Wayne

**Municipalities**

Beulaville, Calypso, Faison, Greenevers, Harrells, Kenansville, Pink Hill, Rose Hill, Teachey, and Wallace

Stressors for water quality in this subbasin are: Chlorophyll a, Low Dissolved Oxygen, Habitat Degradation, and Fecal Coliform Bacteria. A possible source for Habitat Degradation is Land Clearing. Sources of the other stressors are unknown.

2005 Recommendations for Impaired Waters (taken from the Water Quality Plan)

\*NOTE: None of these waterbodies fall within Onslow County\*

*Goshen Swamp:* The NC Division of Water Quality will continue to monitor this watershed and require Dean Pickle and Specialty Products to reduce chloride discharges.

*Muddy Creek:* The NC Division of Water Quality will continue to monitor this watershed and determine stressors to the quality of the water.

*Northeast Cape Fear River:* The NC Division of Water quality will continue to monitor this watershed and use the NPDES compliance process to address permit violations.

*Panther Creek:* The NC Division of Water Quality will continue to monitor this watershed and require Dean Pickle and Specialty Products to reduce chloride discharges.

## 2. Subbasin 03-06-23

This subbasin is located in four counties and includes the Northeast Cape Fear River, Burnt Mill Creek, Smith Creek and Burgaw Creek. Land use is mostly forested with some agriculture and areas of increasing development north of Wilmington. Many of the streams in this subbasin do not flow during summer months. There are seven individual NPDES wastewater discharge permits in the subbasin, one registered horse operation, and 52 registered swine operations. The largest dischargers are Global Nuclear Fuels (1.9 MGD) and Elementis Chromium (1 MGD).

In subbasin 03-06-23, use support ratings were assigned for aquatic life and recreation. Appendices III and IV provide a comprehensive listing of use support ratings and impaired waterbodies for stream segments within Onslow County. Fifty-one and one half percent (51.5%) of waters evaluated for aquatic life were supporting, sixteen percent (16.3%) were impaired and thirty-two percent (32.2%) were not rated. Almost seventy-eight percent (77.7%) of waters evaluated for recreation were supporting and twenty-two percent (22.3%) were not rated. All waters in the subbasin are considered impaired for fish consumption.

Stressors for water quality in this subbasin are: Chlorophyll a, Low Dissolved Oxygen, Habitat Degradation, Fecal Coliform Bacteria, Toxic Impacts, and Total Suspended Solids. Sources for Chlorophyll a are agriculture, impervious surfaces, and WWTP NPDES; the source for Low Dissolved Oxygen is WWTP NPDES; the source for Habitat Degradation is MS4 NPDES; the source for Fecal Coliform Bacteria is impervious surfaces; the source for Toxic Impacts is MS4 NPDES; and the source for Total Suspended Solids is WWTP NPDES. Some stressor sources in the subbasin are unknown.

### ***Subbasin 03-06-23 Description***

Total Land Area in Onslow County: 77,764 acres  
Percentage of County in Subbasin: 14.6%

#### **Land and Water**

Total area:	795 mi <sup>2</sup>
Land area:	789 mi <sup>2</sup>
Water area:	6 mi <sup>2</sup>

#### **Population Statistics**

2000 Est. pop.:	117,200 people
Pop. Density:	148persons/mi <sup>2</sup>

#### **Land Cover**

Forest/Wetland:	82.5%
Surface Water:	0.9%
Urban:	2.1%
Cultivated Crop:	11.2%
Pasture/Managed Herbaceous:	3.2%

#### **Counties**

Duplin, New Hanover, Onslow, and Pender

#### **Municipalities**

Burgaw, Holly Ridge, Saint Helena, Watha, and Wilmington

2005 Recommendations for Impaired Waters (taken from the Water Quality Plan)

\*NOTE: None of these stream segments fall within Onslow County\*

*Burgaw Creek:* The NC Division of Water Quality will continue to monitor the Burgaw Creek watershed. DWQ recommends that the Burgaw WWTP optimize plant processes to reduce nutrients that may be causing algal blooms in Burgaw Creek.

*Burnt Mill Creek:* The NC Division of Water Quality will continue to monitor the Burnt Mill Creek watershed. The watershed will remain on the 303(d) list of Impaired waters. DWQ will work with NCEEP and watershed stakeholders to assist where possible in the implementation of the restoration strategy.

*Northeast Cape Fear River:* This watershed will be added to the 303(d) list of Impaired waters.

*Long Creek.* DWQ will continue to monitor the Long Creek watershed and evaluate impacts of NPDES discharges into Long Creek. DWQ will research the effectiveness of agricultural BMPs on the watershed's water quality.

*Smith Creek:* DWQ will continue to monitor the Smith Creek watershed. The NPDES compliance process will be used to address the significant permit violations noted above. The watershed will be added to the 303(d) list of Impaired waters.

### **3. Subbasin 03-06-24**

This subbasin is located in three counties and includes Masonboro Sound, Topsail Sound and the Intracoastal Waterway (ICWW). The entire subbasin drains into the ICWW and the Atlantic Ocean. The population is primarily located within Wilmington and the beach communities. There are three individual NPDES wastewater discharge permits in the subbasin and one registered swine operation.

In subbasin 03-06-24, use support ratings were assigned for aquatic life and recreation. Appendices III and IV provide a comprehensive listing of use support ratings and impaired waterbodies for stream segments within Onslow County. Ninety-four percent (94%) of waters evaluated for aquatic life were supporting and four percent (4%) were impaired. One hundred percent (100.0%) of waters evaluated for recreation were supporting. All waters in the subbasin are considered impaired for fish consumption.

Stressors for water quality in this subbasin are: Low Dissolved Oxygen and Fecal Coliform Bacteria. The source for Low Dissolved Oxygen is MS4 NPDES. Sources for Fecal Coliform Bacteria are marinas, MS4 NPDES, and impervious surfaces. Some stressor sources in the subbasin are unknown.

2005 Recommendations for Impaired Waters (taken from the Water Quality Plan)

\*NOTE: Stream segments located within Onslow County are in **bold**\*

*Banks Channel:* Specific areas of the channel will be added to the 303(d) list of Impaired waters.

***Batts Mill Creek, County Line Branch, and Cypress Branch: These segments will be added to the 303(d) list of Impaired waters.***

*Beckys Creek:* Beckys Creek will be added to the 303(d) list of Impaired waters.

***Everett Bay: Everett Bay will be added to the 303(d) list of Impaired waters.***

*Everett Creek:* Everett Creek will be added to the 303(d) list of Impaired waters.

*Futch Creek:* Specific segments of Futch Creek will be added to the 303(d) list of Impaired waters.

*Hewletts Creek:* Specific segments of Hewletts Creek will be added to the 303(d) list of Impaired waters.

*Howe Creek:* Howe Creek will be added to the 303(d) list of Impaired waters.

*Intracoastal Waterway:* Specific segments will be added to the 303(d) list of Impaired waters. DWQ will work with Wilmington and New Hanover County to identify potential sources of bacteria and oxygen-consuming materials.

***Subbasin 03-06-24 Description***

Total Land Area in Onslow County: 19,340 acres  
Percentage of County in Subbasin: 3.6%

**Land and Water**

Total area:	162 mi <sup>2</sup>
Land area:	142 mi <sup>2</sup>
Water area:	20mi <sup>2</sup>

**Population Statistics**

2000 Est. pop.:	58,658 people
Pop. Density:	361 persons/mi <sup>2</sup>

**Land Cover**

Forest/Wetland:	63.0%
Surface Water:	17.5%
Urban:	8.3%
Cultivated Crop:	6.7%
Pasture/Managed Herbaceous:	4.5%

**Counties**

New Hanover, Onslow, and Pender

**Municipalities**

Carolina Beach, Holly Ridge, North Topsail Beach, Surf City, Topsail, Wilmington, and Wrightsville Beach

*Masonboro Sound ORW Area:* Specific segments will be added to the 303(d) list of Impaired waters.

*Mill Creek:* Mill Creek will be added to the 303(d) list of Impaired waters.

*Virginia Creek and Mullett Run:* Both creeks will be added to the 303(d) list of Impaired waters.

*Nixons Creek:* Nixons Creek will be added to the 303(d) list of Impaired waters.

*Old Mill Creek:* Old Mill Creek will be added to the 303(d) list of Impaired waters.

*Old Topsail Creek:* Specific segments of Old Topsail Creek will be added to the 303(d) list of Impaired waters.

*Pages Creek:* Specific segments of Pages Creek will be added to the 303(d) list of Impaired waters.

***Stump Sound and Stump Sound ORW:* Both segments will be added to the 303(d) list of Impaired waters.**

***Topsail Sound:* Specific segments of Topsail Sound will be added to the 303(d) list of Impaired waters.**

***Topsail Sound and Middle Sound ORW Area:* Specific segments of this ORW area will be added to the 303(d) list of Impaired waters.**

***Turkey Creek:* Specific segments of Turkey Creek will be added to the 303(d) list of Impaired waters.**

*Whiskey Creek:* Whiskey Creek will be added to the 303(d) list of Impaired waters.

#### **4. Registered Animal Operations within Cape Fear River Basin**

The following table provides a summary of registered animal operations within Cape Fear River Subbasins 03-06-22, 03-06-23, and 03-06-24. It should be noted that the only registered animal operations within this River Basin consists of swine production. The number of operations in the subbasins that fall within Onslow County can be summarized as follows: Subbasin 03-06-22 - fourteen; Subbasin 03-06-23 - twenty; Subbasin 03-06-24 - one.

Table 6: Cape Fear River Basin  
Registered Animal Operations

Subbasin	Swine		
	No. of Facilities	No. of Animals	Total Steady State Live Weight*
44625	404	787,900	217,781,138
44990	46	204,757	25,636,095
45356	1	1,800	243,000

\*Steady State Live Weight (SSLW) is the result, in pounds, after a conversion factor has been applied to the number (head count) of swine, cattle, or poultry on a farm. The conversion factors, which come from the Natural Resource Conservation Service (NRCS) guidelines, vary depending on the type of animals on the farm and the type of operation (for example, there are five types of hog farms). Since the amount of waste produced varies by the size of the animal, SSLW is the best way to compare the sizes of the farms. Source: NC Division of Water Quality Cape Fear River Basinwide Water Quality Management Plan.

**B. WATER QUALITY (WHITE OAK RIVER BASIN)**

The White Oak River Basin is contained entirely within the southern coastal plain. There are four separate river systems within the basin: the New River and its tributaries, the White Oak River and its tributaries, the Newport River and its tributaries, and the North River. In addition to these rivers, Bogue and Core Sounds are also in the basin. The New River watershed is the largest and most populated of the watersheds and is located entirely within Onslow County. The City of Jacksonville is located within this watershed. The river drains into the Atlantic Ocean. The White Oak watershed is the second largest watershed in the basin and is located just east of the New River. The river drains into the Atlantic Ocean. The Newport River watershed is located east of the White Oak watershed. The watershed originates in Craven County and drains into the Atlantic Ocean near Morehead City. The North River is located west of Core Sound. The watershed originates in Carteret County and drains into Back Sound near Harkers Island. The basin encompasses all or portions of 4 counties and 16 municipalities.

<b><i>White Oak River Basin Statistics</i></b>
Total Land Area in Onslow County: 402,118 acres
Percentage of County in Basin: 75.8%
Total Area: 1,264 sq. miles
Stream Miles: 446
Estuarine Acres: 130,009
Atlantic Coastline: 91
No. of Counties: 4
No. of Municipalities: 16
No. of Subbasins: 5
Population (1990): 146,240
Estimated Pop. (2015): 188,403*
Pop. Density (1990): 141 persons/sq. mi.*

**1. Subbasin 03-05-01**

This subbasin is located in four counties and includes the White Oak River, Queens Creek, and Bear Creek. Land use is largely forest and preserved as such in the Croatan National Forest and Hofmann State Forest. The majority of the population is in Swansboro and Cape Carteret.

There are nine minor dischargers and six registered animal operations in the subbasin. The largest discharger is the Swansboro WWTP.

In subbasin 03-05-01, use support ratings were assigned for aquatic life and secondary recreation, fish consumption, primary recreation, and shellfish harvesting. Eighty-six percent (86%) of the miles and one hundred percent (100%) of the acreage of water evaluated for aquatic life and secondary recreation were supporting. Coastal miles were not rated for aquatic life and secondary recreation. One hundred percent (100%) of coastal miles were impaired for fish consumption. Sixty-five percent (65%) of waters were supporting for primary recreation. One hundred percent (100%) of the coastal miles were supporting for primary recreation. Fifty-nine percent (59%) of water acreage was impaired for shellfish harvesting. All waters in the subbasin are considered impaired for fish consumption.

***Subbasin 03-05-01 Description***

Total Land Area in Onslow County: 106,884 acres  
Percentage of County in Subbasin: 20.1%

**Land and Water**

Total area: 351 mi<sup>2</sup>  
Land area: 322 mi<sup>2</sup>  
Water area: 29 mi<sup>2</sup>

**Population Statistics**

1990 Est. pop.: 39,388 people  
Pop. Density: 122 persons/mi<sup>2</sup>

**Land Cover**

Forest/Wetland: 76%  
Surface Water: 8%  
Urban: 1%  
Cultivated Crop: 11%  
Pasture/Managed  
Herbaceous: 3%

**Water Area**

Stream Miles: 116  
Estuarine Acres: 11,567  
Coastal Miles: 8  
Shellfish Harvest Acres: 11,239

Stressors for water quality in this subbasin are: Low Dissolved Oxygen and low pH measurements. A possible source is swamp drainage into the White Oak River.

2002 Recommendations for Impaired Waters (taken from the Water Quality Plan)

\*NOTE: Stream segments located within Onslow County are in **bold**\*

***Bear Creek:* The NC Cooperative Extension Service is using BMPs in the watershed to assist with reducing fecal coliform bacteria so as to restore shellfish harvesting.**

***Queens Creek and tributaries:* The NC Coastal Federation has purchased conservation easements along Queens Creek.**

***White Oak River and tributaries:* The NC Coastal Federation has purchased land along the White Oak River for conservation and demonstration projects.**

**The *Atlantic Coastline* in this subbasin will be added to the 303(d) list of Impaired waters.**

## 2. Subbasin 03-05-02

This subbasin is located entirely within Onslow County and includes the New River, Northeast Creek, and the Intracoastal Waterway. The City of Jacksonville is located within this subbasin, which is the most populated municipality in the White Oak River Basin.

In subbasin 03-05-02, use support ratings were assigned for aquatic life and secondary recreation, fish consumption, primary recreation, and shellfish harvesting. Thirty-six percent (36%) of the miles and ninety-six percent (96%) of the acreage of water evaluated for aquatic life and secondary recreation were supporting. Coastal miles were not rated for aquatic life and secondary recreation. One hundred percent (100%) of waters were determined to be impaired for fish consumption. Seventy-eight percent (78%) of the acreage and one hundred percent (100%) of coastal miles were supporting for primary recreation. Seventy-eight percent (78%) of the acreage was impaired for shellfish harvesting.

### ***Subbasin 03-05-02 Description***

Total Land Area in Onslow County: 295,234 acres  
Percentage of County in Subbasin: 55.6%

#### **Land and Water**

Total area:	462 mi <sup>2</sup>
Land area:	419 mi <sup>2</sup>
Water area:	43 mi <sup>2</sup>

#### **Population Statistics**

1998 Est. pop.:	84,359 people
Pop. Density:	201 persons/mi <sup>2</sup>

#### **Land Cover**

Forest/Wetland:	67%
Surface Water:	9%
Urban:	4%
Cultivated Crop:	13%
Pasture/Managed Herbaceous:	7%

#### **Water Area**

Stream Miles:	208
Estuarine Acres:	21,865
Coastal Miles:	15
Shellfish Harvest Acres:	11,122

Stressors for water quality in this subbasin are nutrient enrichment and fecal coliform bacteria. Possible sources are stormwater runoff and WWTP dischargers.

2002 Recommendations for Impaired Waters (taken from the Water Quality Plan)

\*NOTE: Stream segments located within Onslow County are in **bold**\*

***Little Northeast Creek: The four minor dischargers should pursue alternatives to discharge. DWQ will pursue the reclassification of the creek to reflect swampy conditions.***

***Southwest Creek: New dischargers and discharge expansions should not be permitted. DWQ will pursue the reclassification of the creek to reflect swampy conditions.***

***New River: DWQ recommends that the City of Jacksonville protect primary recreation and aquatic life as part of their stormwater program. DWQ will continue to monitor nutrients in the river to assess the risk of algal blooms to aquatic life.***

### **3. Registered Animal Operations within White Oak River Basin**

The following table provides a summary of registered animal operations within White Oak River Subbasins 03-05-01 and 03-05-02. It should be noted that the only registered animal operations within this River Basin consists of swine production. All of the swine operations listed within Subbasin 03-05-02 are located within Onslow County, while only four of those listed within Subbasin 03-05-01 are located within the County.

Table 7: White Oak River Basin  
Registered Animal Operations

Subbasin	Swine		
	No. of Facilities	No. of Animals	Total Steady State Live Weight*
36954	6	20852	2263920
37319	38	150427	17956695

\*Steady State Live Weight (SSLW) is the result, in pounds, after a conversion factor has been applied to the number (head count) of swine, cattle, or poultry on a farm. The conversion factors, which come from the Natural Resource Conservation Service (NRCS) guidelines, vary depending on the type of animals on the farm and the type of operation (for example, there are five types of hog farms). Since the amount of waste produced varies by the size of the animal, SSLW is the best way to compare the sizes of the farms. Source: NC Division of Water Quality White Oak River Basinwide Water Quality Management Plan.

#### **C. WATER QUALITY (NEUSE RIVER BASIN)**

The Neuse River Basin is the third largest river basin in the state and one of four that are contained entirely within the state. The basin originates in the north central portion of the state in Person and Orange Counties and flows southeast to tidal waters upstream of New Bern. There are seven major tributaries within the basin: the Eno and Flat Rivers, Crabtree Creek, Swift Creek, Little River, Contentnea Creek, and Trent River. The population is centered around Raleigh, Durham, Hillsborough, Cary, Apex, and Wake Forest. However, there is significant population in other areas of the basin such as Goldsboro, Wilson, Greenville, Kinston, New Bern, and Havelock. The basin encompasses all or portions of 18 counties and 74 municipalities. It should be noted that there are no registered animal operations within this River Basin.

<b><i>Neuse River Basin Statistics</i></b>
Total Land Area in Onslow County: 5,967 acres
Percentage of County in Basin: 1.1%
Total Area: 6,235 sq. miles
Freshwater Stream Miles: 3,497
Freshwater Lakes Acres: 16,414
Estuarine Acres: 369,977
Coastline Miles: 21
No. of Counties: 18
No. of Municipalities: 74
No. of Subbasins: 14
Population (2000): 1,353,617*
Pop. Density (2000): 211 persons/sq. mi.*

## 1. Subbasin 03-04-11

Subbasin 03-04-11 is mostly forest and agriculture with over 38,000 acres of public land largely associated with Croatan National Forest and Hofmann State Forest. There are three NPDES wastewater discharge permits in the subbasin and 64 registered animal operations.

In subbasin 03-04-11, use support ratings were assigned for aquatic life and secondary recreation, primary recreation, and fish consumption. One hundred percent (100%) of acres and 40.5% of miles were rated supporting for aquatic life and secondary recreation. One hundred percent (100%) of acres were rated supporting for primary recreation. All waters in the subbasin are considered impaired for fish consumption.

2002 Recommendations for Impaired Waters  
(taken from the Water Quality Plan) \*None of these stream segments fall within Onslow County\*

*Trent River:* DWQ will investigate the potential for low flows to impact biological communities.

*Beaver Creek:* DWQ will continue to monitor Beaver Creek and continue to develop criteria that can be used to assign a bioclassification for future monitoring.

In addition to the data included in the Basinwide Water Quality Plans, the Onslow County On-Site Water Protection Supervisor has indicated that there are no health care/water quality problems resulting from nonpoint source pollution. However, septic tank failures have occurred throughout the County. It is noted that some systems are 60 years old or older. Onslow County has fully complied with Phase II stormwater requirements. The County has implemented a Comprehensive Stormwater Management Program.

### ***Subbasin 03-04-11 Description***

Total Land Area in Onslow County: 5,967  
Percentage of Subbasin in County: 1.1%

#### **Land and Water**

Total area:	444 mi <sup>2</sup>
Land area:	443 mi <sup>2</sup>
Water area:	1 mi <sup>2</sup>

#### **Population Statistics**

2000 Est. pop.:	15,914 people
Pop. Density:	36 persons/mi <sup>2</sup>

#### **Land Cover**

Forest/Wetland:	70.1%
Surface Water:	0.3%
Urban:	1.5%
Cultivated Crop:	24.7%
Pasture/Managed Herbaceous:	2.4%

#### **Counties**

Jones, Lenoir, and Onslow

#### **Municipalities**

Trenton and River Bend

## **IX. ANALYSIS OF LAND USE AND DEVELOPMENT**

*Refer to Appendix I for data on the participating municipalities of Holly Ridge and Richlands.*

### **A. INTRODUCTION**

The Division of Coastal Management Land Use Plan Guidelines (15A NCAC 7B.0207) require that existing land uses and water uses be mapped. Protection of water quality is a major concern in Onslow County. The protection of water quality is clearly linked to the location of land uses within the county. The land and water use maps should be utilized as working documents and serve as a basis for the development of the future land use map(s). The existing land use map aids in showing the relationship of land use to water quality. The Coastal Management Land Use Plan Guidelines require that this section of the plan address the following:

- Table that shows estimates of the land area allocated to each land use;
- Description of any land use conflicts;
- Description of any land use – water quality conflicts;
- Description of development trends using indicators. These development trends may include, but are not limited to the following: building permits and platted but un-built lots; and
- Location of areas expected to experience development during the five years following plan certification by the CRC and a description of any potential conflicts with Class II or Class III land identified in the natural systems analysis.

### **B. LAND USE IN RELATION TO WATER QUALITY**

This section analyzes how land use in Onslow County's planning jurisdiction relates to water quality. This section has been compiled with information provided by the North Carolina Division of Water Quality (DWQ). Under the Basinwide Management Program, the DWQ completes Basinwide Water Quality Plans. (Note: Please refer to Section V.B.3., Environmental Conditions).

Basinwide water quality planning is a non-regulatory, watershed-based approach to restoring and protecting the quality of North Carolina's surface waters. Preparation of a basinwide water quality plan is a five-year process, which is divided into three phases. While these plans are prepared by the DWQ, their implementation and the protection of water quality entails the coordinated efforts of many agencies, local governments, and stakeholder groups in the state. The first cycle of plans was completed in 1998, but each plan is updated at five-year intervals.

The results of the monitoring efforts are not intended to provide precise conclusions about pollutant budgets for specific watersheds. Since the assessment methodology is geared toward general conclusions, it is important not to manipulate the data to support policy decisions beyond the accuracy of the data.

Two primary methods of water quality testing were performed in Onslow County's planning jurisdiction. The details of this methodology are described below so that the information on the results of this testing can be better understood. The methods utilized were Ambient Monitoring System and Fish Tissue Analysis. DWQ also observes water bodies for the existence of algal blooms, which are an indication of poor water quality.

The Ambient Monitoring System (AMS) is a network of stream, lake, and estuarine (saltwater) water quality monitoring stations (about 420 statewide) strategically located for the collection of physical and chemical water quality data (or parameters). Water quality parameters are arranged by freshwater or saltwater water body classification and corresponding water quality standards. Under this arrangement, waters are assigned minimum monthly parameters with additional parameters assigned to waters with classifications such as trout waters and water supplies.

Since fish spend their entire lives in the aquatic environment, they incorporate chemicals from this environment into their body tissues. Therefore, by analyzing fish tissue, determinations about what chemicals are in the water can be made. Contamination of aquatic resources, including freshwater, estuarine, and marine fish and shellfish species has been documented for heavy metals, pesticides, and other complex organic compounds. Once these contaminants reach surface waters, they may be available for bioaccumulation either directly or through aquatic food webs and may accumulate in fish and shellfish tissues. Therefore, results from fish tissue monitoring can serve as an important indicator of contamination of sediments and surface water. Fish tissue analysis results are also used as indicators for human health concerns, fish and wildlife health concerns, and the presence and concentrations of various chemicals in the ecosystem.

In evaluating fish tissue analysis results, several different types of criteria are used. Human health concerns related to fish consumption are screened by comparing results with federal Food and Drug Administration (FDA) *action levels* and US Environmental Protection Agency (EPA) recommended *screening values* for contaminants.

C. LAND USE SUMMARY

The following table provides approximate land use acreage summaries for the Onslow County planning jurisdiction. Onslow County includes a total of 456,733.8 acres.

Table 8: Onslow County  
2006 Existing Land Use Acreages\*

<b>Land Use</b>	<b>Acreage</b>	<b>Percentage</b>
<u>Residential</u>		
Single-Family Residential	16,544.1	3.62%
Multi-Family Residential	98.8	0.02%
Residential Agricultural	68,601.1	15.02%
Manufactured Home Park	<u>1,113.0</u>	<u>0.24%</u>
Subtotal	86,357.0	18.90%
<u>Office &amp; Institutional</u>		
O&I	272.2	0.06%
Church	78.2	0.02%
Recreation	472.3	0.10%
School	<u>50.5</u>	<u>0.01%</u>
Subtotal	873.2	0.19%
<u>Commercial</u>		
Commercial	970.4	0.21%
Mixed Use	<u>42.9</u>	<u>0.01%</u>
Subtotal	1,013.3	0.22%
<u>Industrial</u>	6373.4	1.40%
<u>Transportation/Utilities</u>		
Airport	655.5	0.14%
Utilities	<u>41.8</u>	<u>0.01%</u>
Subtotal	697.3	0.15%
<u>Vacant</u>	175,184.1	38.36%
<u>Non-County Jurisdiction</u>		
Forest Lands	43,590.9	9.54%
NC State Property	516.3	0.11%
Camp Lejeune MCAS	<u>142,128.3</u>	<u>31.12%</u>
Subtotal	<u>186,235.5</u>	<u>40.77%</u>
<b>Grand Total</b>	<b>456,733.8</b>	<b>100.00%</b>

\*NOTE: Acreages do not include the County's municipalities.

Source: Holland Consulting Planners, Inc.

## **X. LAND USE/DEVELOPMENT GOALS AND IMPLEMENTING ACTIONS**

### **A. INTRODUCTION**

The purposes of the Coastal Resources Commission (CRC) management topics are to ensure that CAMA Land Use Plans support the goals of CAMA, to define the CRC's expectations for the land use planning process, and to give the CRC a substantive basis for review and certification of CAMA Land Use Plans. Each of the following management topics (Public Access, Land Use Compatibility, Infrastructure Carrying Capacity, Natural Hazard Areas, Water Quality, and Local Areas of Concern) include three components: a management goal, a statement of the CRC's planning objective, and requirements for the CAMA Land Use Plan. These policies also apply to the Town of Richlands and the Town of Holly Ridge planning jurisdictions. Most of the policies and implementing actions are continuing activities. In most situations, specific timelines are not applicable.

Please note: Policies and Implementing Actions are numbered consecutively throughout this document with the letter "P" denoting a policy and the letter "I" denoting an implementing action.

The policies and implementing actions frequently utilize the following words: should, continue, encourage, enhance, identify, implement, maintain, prevent, promote, protect, provide, strengthen, support, work. The intent of these words is defined below:

- Should: An officially adopted course or method of action intended to be followed to implement the community goals. Though not mandatory as "shall," it is still an obligatory course of action unless clear reasons can be identified that an exception is warranted. County staff and Planning Board involved at all levels from planning to implementation.
- Shall/Will: Expresses determination to implement/take action.
- Continue: Follow past and present procedures to maintain desired goal, usually with County staff involved at all levels from planning to implementation.
- Encourage: Foster the desired goal through County policies. Could involve County financial assistance.
- Enhance: Improve current goal to a desired state through the use of policies and County staff at all levels of planning. This could include financial support.
- Identify: Catalog and confirm resource or desired item(s) through the use of County staff and actions.

- Implement: Execute actions intended to guide the accomplishment of the Plan recommendations.
- Maintain: Keep in good condition the desired state of affairs through the use of County policies and staff. Financial assistance should be provided if needed.
- Prevent: Stop described event through the use of appropriate County policies, staff actions, Planning Board actions, and County finances, if needed.
- Promote: Advance the desired state through the use of County policies and Planning Boards and staff activity at all levels of planning. This may include financial support.
- Protect: Guard against a deterioration of the desired state through the use of County policies, staff, and, if needed, financial assistance.
- Provide: Take the lead role in supplying the needed financial and staff support to achieve the desired goal. The County is typically involved in all aspects from planning to implementation to maintenance.
- Strengthen: Improve and reinforce the desired goal through the use of County policies, staff, and, if necessary, financial assistance.
- Support: Supply the needed staff support, policies, and financial assistance at all levels to achieve the desired goal.
- Work: Cooperate and act in a manner through the use of County staff, actions, and policies to create the desired goal.

## B. IMPACT OF CAMA LAND USE PLAN POLICIES ON MANAGEMENT TOPICS

The development of this land use plan has relied heavily on the CAMA-prescribed land suitability analysis which is included in Section V.D of the CAMA Land Use Plan. It is intended that this document is supportive of the CAMA regulations for protection of AECs (15A NCAC 7H).

This plan is intended to support the Onslow County vision statement which was developed based on the key issues identified on pages 7-8 of this executive summary and the CAMA AEC regulations. No negative impacts are anticipated by the implementation of the goals, objectives, and policies which are included in this plan.

Note: It is intended that all policies are consistent with (do not exceed) applicable State and Federal requirements when State and Federal requirements apply.

C. PUBLIC ACCESS

**1. Management Goal**

Onslow County will maximize public and private access to its estuarine shorelines and public trust waters for pedestrian, boating, and visual access.

**2. Planning Objective**

Onslow County will utilize local, state, federal, and private funds to provide improved recreational and commercial fishing access to its public trust waters.

**3. Land Use Plan Requirements**

The following are Onslow County's policies/implementing actions for shoreline access. All policies are continuing activities.

**Policies:**

- P.1 Onslow County encourages the State of North Carolina, as well as all area local governments, to diligently pursue the purchase or donation of fee simple ownership or easement for development of waterfront properties for public use, particularly regarding boating access.
- P.2 When waterfront properties are developed, Onslow County encourages the incorporation of significant common open space along the water's edge, rather than a row of exclusive waterfront lots, so as to equally benefit all properties in the development, and to forge an attitude of common interest and community spirit.
- P.3 Future park development and open space preservation shall be planned to provide for the proper distribution of recreation and open space opportunities within the County.
- P.4 In determining future sites for park, recreation, and water access facilities, multiple objectives for natural area conservation, visual enhancement, promotion of cultural and historic preservation, watershed and floodprone area protection shall be considered.

- P.5 Land acquisition for new park, recreation, and shoreline access sites in advance of need shall be encouraged to achieve desirable locations at cost effective levels.
- P.6 All new residential development shall provide for adequate open space and recreation area, including shoreline access, in proportion to the demand created by the development. This may be determined according to the number of dwelling units in the development and/or by a percentage of the total acreage in the development.
- P.7 Given the limited number of boating access sites in Onslow County, a rapidly growing population, extensive water resource areas, and a diminishing number of properties suitable for boating access, the County shall make the provision of additional boating access areas a high priority for property acquisition.
- P.8 Onslow County opposes the loss/abandonment of any facilities dedicated to public shoreline/water access.
- P.9 Onslow County supports providing shoreline access for persons with disabilities.
- P.10 Onslow County supports the frequency of shoreline access as defined by 15A NCAC 7M, Section .0300, Shorefront Access Policies.
- P.11 Onslow County supports the development of estuarine access areas to ensure adequate shoreline access within all areas of the County. Areas that have traditionally been used by the public will be given special attention.
- P.12 Onslow County supports the preservation of commercial fishing access sites.

**Implementing Actions:**

- I.1 Onslow County will consider preparing a shoreline access plan and requesting Division of Coastal Management funding for the preparation of the plan. The plan shall address the following:
- Preservation of existing public and private access sites.
  - Procedures to secure/support the establishment of additional public and private access sites.
  - Identification of potential access sites.
  - Establishment of boating access sites in the Swansboro Township, Sneads Ferry, New River, and White Oak River.

- Preservation of commercial fishing access along all shorelines within County's jurisdiction to include:
  - » Provision of commercial fishing dock facilities.
  - » Ensure zoning is supportive of commercial fishing access.
  - » Identify potential sites for a commercial fishing upland marina.
  - » Determine/identify easements which may be used for commercial fishing access.

***Schedule: Fiscal Year 2010-2011.***

I.2 Onslow County will pursue funding under the North Carolina CAMA Shoreline Access funding program (15A NCAC 7M, Section .0300, Shorefront Access Policies).

***Schedule: Continuing Activity.***

I.3 Onslow County will pursue private sources of funding for the development of shoreline access facilities, including donation of land. ***Schedule: Continuing Activity.***

I.4 Onslow County will establish a capital reserve fund (budget line item) for the purchase and development of shoreline access sites. ***Schedule: Fiscal Year 2010-2011.***

I.5 Onslow County will amend its subdivision regulations, as allowed by State law, to require *land dedication for open space and parks* including shoreline access sites in proportion to the size of the development or number of housing units being created and/or provide for the collection of a *fee in lieu of land dedication* for the purpose of parkland acquisition. NOTE: This may be included in the preparation of an Onslow County Unified Development Ordinance. ***Schedule: Fiscal Year 2008-2009 and continuing.***

I.6 Onslow County will establish an educational brochure and disseminate shoreline access information including, at a minimum, the following:

- Location of access sites.
- Education of property owners as to the tax benefits of donating *conservation easements*.
- Continued support for the promotion and use of area waterways for paddle boating and recreational development.
- Illustrate the advantages of developing waterfront properties with common open space along shoreline areas.

***Schedule: Fiscal Year 2010-2011.***

D. LAND USE COMPATIBILITY

**1. Management Goal**

Onslow County and its participating municipalities will support a comprehensive planning program, including implementation of this plan to accomplish orderly growth and ensure the efficient use of land according to its suitability for development, proper design of its communities, preservation of neighborhoods and rural areas, cost effective and coordinated provision of infrastructure and the preservation of farms, woodlands, wetlands, and estuarine areas.

**2. Planning Objectives**

- a. Adopt policies and implementing actions which will support the concepts of "smart growth."
- b. Adopt policies and implementing actions which will balance the protection of natural resources/fragile areas with economic development.
- c. Adopt policies and implementing actions which will minimize inconsistent/conflicting land uses.
- d. Adopt policies and implementing actions which support the continued positive existence of the Onslow County civilian and military communities.
- e. Adopt policies and implementing actions which will provide direction to the day-to-day local decision making process.

**3. Land Use Plan Requirements**

15A NCAC 7H guidelines require that CAMA certified Land Use Plans address the following land use compatibility concerns:

- a. Establish building intensity and density criteria, such as floor area ratio and units per acre, consistent with the land suitability analysis for each land use designation on the Future Land Use Map.
- b. Establish local mitigation criteria and concepts. These may include, but are not limited to, the following: cluster subdivision design, and enacting local buffers, impervious surface limits, and innovative stormwater management alternatives.

In addition to these requirements, Onslow County's land use compatibility policies and implementing actions should address affordable housing, housing standards, in-fill development, control of strip development, green space preservation, infrastructure development (including transportation), and compatible economic development.

**Policies - Residential:**

- P.13 Onslow County shall encourage development to occur at densities appropriate for their 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 urban services.
- P.14 Developments in the unincorporated areas of the County shall be encouraged to employ cluster development as an environmentally sound, economically cost-effective, and visually attractive alternative to large lot sprawl.
- P.15 Onslow County will support the protection and rehabilitation of viable neighborhoods to ensure their continued existence as a major housing source. Housing shall be required to meet or exceed minimum standards for health, safety, and welfare.
- P.16 Onslow County will discourage residential development which will expose residents to the harmful effects of incompatible development or to environmental hazards.
- P.17 Onslow County will encourage flexible land planning and development practices to create neighborhoods which better safeguard land, water, energy, and historic resources.
- P.18 Onslow County will encourage all residential development to accommodate/provide adequate infrastructure.
- P.19 Onslow County will discourage all forms of housing development from "leapfrogging" into the countryside, thereby destroying the rural character of Onslow County, breaking up farmland, and making the provision of urban services more costly to homebuyers and taxpayers.
- P.20 Onslow County will seek to accommodate the development and appropriate placement of a variety of housing types, including site built homes, apartments, townhouses, garage apartments, accessory living units, and manufactured homes.

- P.21 Onslow County shall discourage residential and commercial strip development along the county's primary roads. Flag lots shall also not be permitted along primary roads unless justified by unusual or unforeseeable parcel or topographic constraints.
- P.22 New residential developments shall provide for the installation of paved public roadway and associated drainage infrastructure at the time of development.
- P.23 Onslow County and its participating municipalities support provision of diversity in housing including price, style, and type (i.e., single-family/multi-family).
- P.24 Onslow County and its participating municipalities will emphasize the provision of affordable housing.
- P.25 Onslow County and its participating municipalities support smart growth land use concepts for residential development.
- P.26 Onslow County and its participating municipalities will encourage the location of residential developments with emphasis on convenience to town or core/nodal-based services to reduce transportation, infrastructure, and service delivery costs.
- P.27 Onslow County and its participating municipalities will support redevelopment/revitalization in areas that have substandard housing conditions.
- P.28 Onslow County and its participating municipalities support revisions to the North Carolina General Statutes which would allow the local imposition of special legislation or impact fees levied against land developers in order to establish a revenue source to support the additional demand for services such as roads, schools, sewer infrastructure, improved water supply systems, and recreational facilities.
- P.29 Onslow County and its participating municipalities support utilization of office/institutional development or open space areas as acceptable transitional space between light industrial and commercial development and adjacent residential land uses.
- P.30 Onslow County and its participating municipalities support greater residential densities in areas that are already accessible to sewer service(s). Agricultural and low-density residential land uses should be located in areas that do not have or do not plan to have central sewer service. The distribution of land uses are included on the future land use map and associated densities are provided in Section VI.E.2, Locational Aspects of Land Use, page 226 of the CAMA Land Use Plan.

## **Implementing Actions - Residential:**

I.7 The Onslow County Future Land Use Map reflects a suitability analysis. The considerations for the location of residential land uses include the following analyses which should be relied on to influence future land use decisions:

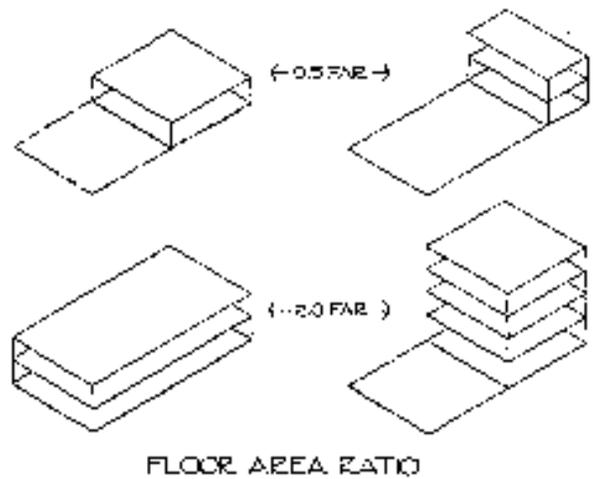
- Suitability for moderate- to high-intensity residential development with sewer - based on soil suitability for structural support and septic systems, proximity to a municipality, proximity to Jacksonville or ONWASA water lines, proximity to Jacksonville or ONWASA sewer lines, proximity to private centralized sewer systems, proximity to designated commercial development/activity center/node, proximity to school, proximity to fire service and emergency management service, existing land use, and location regarding Base flight path zones.
- Suitability for moderate- to high-intensity residential development without sewer - based on soil suitability for structural support and sewer systems, proximity to a municipality, proximity to Jacksonville or ONWASA water lines, proximity to designated commercial development/activity center/node, proximity to school, proximity to fire service and emergency management service, existing land use, and location regarding Base flight path zones.
- Suitability for low-density residential development with sewer - based on soil suitability for structural support and septic systems, proximity to a municipality, proximity to Jacksonville or ONWASA water lines, proximity to Jacksonville or ONWASA sewer lines, proximity to private centralized sewer systems, proximity to designated commercial development/activity center/node, proximity to school, proximity to fire service and emergency management service, existing land use, and location regarding Base flight path zones.
- Suitability for low-density residential development without sewer - based on soil suitability for structural support and septic systems, proximity to a municipality, proximity to Jacksonville or ONWASA water lines, proximity to designated commercial development/ activity center/node, proximity to school, proximity to fire service and emergency management service, existing land use, and location regarding Base flight path zones.

***Schedule: Continuing Activities.***

I.8 Onslow County will prepare a Unified Development Ordinance (UDO). A UDO will merge zoning, subdivision, and other development regulations into a single ordinance as permitted by NCGS 153A (NOTE: A UDO will not address ordinances adopted under the county's general ordinance-making authority such as noise or nuisance lot ordinances). Preparation of the UDO should include but not necessarily be limited to the following:

- Establishing floor area ratio requirements to ensure that development is consistent with the density and intensity requirements of this plan.

*Comment.* Floor area ratio (FAR) is determined by dividing the gross floor area of all buildings on a lot by the area of that lot. The floor area ratio (FAR) was developed as a more refined and adaptable measure of intensity than building coverage. It expresses in one measure, instead of several, the mathematical relation between volume of building and unit of land. However, FAR cannot replace more traditional bulk controls entirely. Often, it is not a sufficient height control nor does it regulate the placement of the building on the site.



- Reducing/controlling driveway entrances/connections, especially along major roads.
- Improving the control of flag lots, especially along major roads.
- Requiring access to residential lots which is internal to subdivisions.
- Requiring traffic impact studies for larger subdivisions.
- Supporting the following growth principles:
  - Encourage compact building design.
  - Create a range of housing opportunities and choices.
  - Create walkable neighborhoods.
  - Foster distinctive, attractive communities with a strong sense of place.
  - Preserve open space, farmland, natural beauty, and critical environmental areas.
  - Strengthen and direct developments towards existing communities.
  - Provide a variety of transportation choices.
  - Make development decisions predictable, fair, and cost effective.

- Encourage community and stakeholder collaboration in development decisions.
- Considering inclusionary zoning to address affordable housing.
- Requiring buffers/transition areas between residential and nonresidential development.
- Encouraging cluster development.
- Improving/strengthening zoning regulations to protect agricultural and forestry use.
- Requiring open space preservation (coordinate with Future Land Use Map).
- Including Planned Unit Development regulations.
- Considering inclusion of low impact development standards to address stormwater impacts.
- Improving subdivision interconnectivity requirements.
- Ensuring that the UDO is consistent with current state statutes.
- Providing for residential/nonresidential mixed use zoning.
- Requiring sidewalks in subdivisions.
- Requiring that private roads are constructed to NCDOT standards.
- Consider actions to support the NCDOT Strategic Highway Corridors initiative.
- Requiring impact studies for all “major” residential rezonings.
- Adjusting the zoning map to accomplish greater consistency with the Future Land Use Map.
- Curtailing the proliferation of residential lots stripped along major highways.
- Using zoning to discourage/curtail development from encroaching upon the Albert J. Ellis Airport.
- Encouraging commercial development to locate in clusters/nodes.
- Incorporating commercial off-street parking requirements which (1) require parking to be located to the side or rear of businesses, (2) require adjoining parking lots to be connected, and (3) support the use of structured parking.
- Incorporating/coordinating with a voluntary agricultural district program.
- Incorporating zoning provisions to support the preservation of commercial fishing.
- Addressing sustainable energy issues, including structure siting for optimal solar access, green roofs and cool roofs, wind energy generation and transmission issues, and parking lot shading.
- Incorporating the JLUS Implementation Committee Report recommendations (included as Appendix X to the CAMA Land Use Plan).

***Schedule: Fiscal Year 2009-2010 and continuing.***

- I.9 The Onslow County Planning Board and Board of Commissioners will consult this Land Use Plan concerning all decisions, including rezoning and subdivision approvals, which will affect residential land use. ***Schedule: Continuing Activity.***
- I.10 Onslow County will continue to pursue Community Development, NC Housing Finance Agency, and US Department of Agriculture funds from state and federal sources for rehabilitation or redevelopment of substandard housing. ***Schedule: Continuing Activity.***
- I.11 Onslow County will enforce its minimum housing code to require the improvement or removal of substandard housing. ***Schedule: Continuing Activity.***
- I.12 Onslow County and its participating municipalities will permit residential development to occur in response to market needs provided that the following criteria are met:
- (1) Due respect is offered to all aspects of the environment.
  - (2) If deficient community facilities and services are identified, the County should attempt to improve such to the point of adequately meeting demands.
  - (3) Additional residential development should concurrently involve planning for improvements to community facilities and services if excess capacity does not exist within those facilities and services.
  - (4) Residential development is consistent with other County policies and the land use map contained in this plan update which reflects adequate suitability analysis.

This implementing action will be enforced through Onslow County's and its participating municipalities' zoning and subdivision ordinances (NOTE: This will include the Onslow County UDO once it is adopted). ***Schedule: Continuing Activity.***

- I.13 All residential development proposals shall be closely coordinated with ONWASA, affected municipal infrastructure systems, and the Onslow County School System. ***Schedule: Continuing Activity.***

### **Policies - Commercial:**

- P.31 Onslow County actively supports preservation/protection of its commercial fishing activities and operations.

- P.32 Onslow County supports commercial development in areas of environmental concern that is consistent/supports 15A NCAC 7H and is water dependent, including commercial fishing.
- P.33 Onslow County and its participating municipalities strongly support commercial nodes and the prohibition of strip commercialization along its highways.
- P.34 Onslow County encourages/supports commercial development (nodes) at the intersections of major roads consistent with the County's future land use map.
- P.35 Onslow County and its participating municipalities will support highway beautification and landscaping of commercial areas.
- P.36 Onslow County and its participating municipalities support utilization of office and institutional development as a transitional buffer between residential and commercial development.
- P.37 Onslow County supports a wide range of shopping choices and services.
- P.38 Onslow County supports locating large commercial centers adjacent to the intersections of major roadways and convenient to mass transit routes; planned concentrations of employment and housing should be encouraged to locate convenient to these centers.
- P.39 Onslow County will support the following commercial design and locational considerations:
- Commercial and office development shall be encouraged to located in mixed-use shopping centers and office parks to minimize the proliferation of strip development.
  - Mixed-use developments, planned from the outset, which allow for a compatible mixture of uses with a pedestrian scale and design, are encouraged. Similarly, businesses may be located adjoining (and therefore convenient to) an existing residential area, when such businesses can be shown to satisfy design considerations similar to a newly planned, pedestrian-scaled, mixed use development.
  - Neighborhood and convenience commercial centers should be encouraged to locate at the intersection of a collector street or secondary street with a street of equal or greater size. They may also be near other neighborhood facilities such as schools and parks.

- Highway oriented commercial uses should be clustered along segments of highways and contain land uses which are mutually compatible and reinforcing in use and design; they should be designed in such a way as to minimize signage, access points, and uncontrolled strip development.
- Commercial uses shall be encouraged to develop by consolidation and expansion of existing commercially zoned property, when such consolidation and expansion does not encroach upon a viable residential area.
- Strip development along the area's major streets and highways shall be discouraged. Existing strip development shall be reduced and/or development standards should be made more restrictive when redevelopment opportunities permit. New strip development on isolated single lots along major streets and highways shall be discouraged.
- Attractive, environmentally beneficial landscaping shall be provided by new commercial or office developments, and in the rehabilitation and upgrading of existing developments. Effective buffering shall be provided when commercial or office development adjoins existing or planned residential uses.
- New or redeveloped commercial development along major county roadways shall be encouraged to retain or create a buffer of trees adjoining the road right-of-way. The intent is to retain or create the look of "corridors of trees" along the County's major travel ways.
- Office and institutional development shall be encouraged to locate as a transitional land use between residential areas and commercial and industrial activities of higher intensity, where appropriate. "Activities of higher intensity" are typically automobile oriented commercial development but may also include heavily traveled thoroughfares.
- Businesses shall be encouraged to coordinate their site designs with other nearby businesses. Design factors should include, at a minimum, shared or connected parking and access, convenient pedestrian and vehicular movement, and consistent sign standards.
- Commercial and office development shall be encouraged to employ low profile signage and subtle outdoor lighting consistent with attractive building appearance and design, and to reduce light pollution. New, as well as replacement, signage and lighting shall be subject to this policy.

## **Implementing Actions - Commercial:**

I.14 The Onslow County Future Land Use Map reflects a suitability analysis. The considerations for the location of commercial land uses including the following analysis which should be relied on to influence future land use decisions:

- Suitability for Commercial Development/Activity Centers/Nodes with sewer - based on soil suitability for structural support and septic systems, proximity to a municipality, proximity to Jacksonville or ONWASA water lines, proximity to Jacksonville or ONWASA sewer lines, proximity to intersecting major thoroughfares, proximity to existing commercial use, proximity to fire service and emergency management service, existing land use, and location regarding Base flight path zones.
- Suitability for Commercial Development/Activity Centers/Nodes without sewer - based on soil suitability, proximity to a municipality, proximity to Jacksonville or ONWASA water lines, proximity to intersecting major thoroughfares, proximity to existing commercial use, proximity to fire service and emergency management service, existing land use, and location regarding Base flight path zones.

***Schedule: Continuing Activities.***

I.15 The preparation of an Onslow County UDO (see I.8, some residential standards will affect commercial development) will include the following commercial considerations:

- Support preservation of the County's commercial fishing enterprises.
- Provide controls to limit strip commercialization.
- Improve site planning/requirements for planned building groups.
- Improve signage standards.
- Improve landscaping requirements.
- Require traffic impact studies.
- Require impact analysis for "major" commercial development(s).
- Establish commercial building design standards.
- Include mixed use zoning.

***Schedule: Fiscal Year 2008-2009 and continuing.***

I.16 When intensive development is initiated, specific development plans will be prepared for each commercial development node as shown on the Future Land Use Map. ***Schedule: Continuing Activity.***

- I.17 All commercial development proposals should be coordinated with ONWASA and affected municipal infrastructure systems. ***Schedule: Continuing Activity.***
- I.18 Onslow County will support commercial forestry activities, provided significant adverse impacts on natural resource systems are fully mitigated. Such activities should be considered in accordance with the standards and recommendations of the US Forest Service. The County also advocates the voluntary participation of commercial forestry interests in the State of North Carolina's best management practice program for forestry management. ***Schedule: Continuing Activity.***

**Policies – Industrial:**

- P.40 Onslow County will support the following industrial locational policies:
- Heavy industries (large physical plants, extensive land requirements, and low worker to land ratios) will be directed to locations remote from existing incompatible non-industrial land uses.
  - Heavy industries should have direct access to major public transportation facilities and supporting public infrastructure.
  - Light industries (lower impact/generally smaller than heavy industry) should have easy access to major transportation facilities and infrastructure but be compatible with nearby residential areas and not introduce additional traffic into residential areas.
  - Industrial development shall not be located in areas that would diminish the desirability of existing and planned non-industrial areas, nor shall incompatible non-industrial uses be allowed to encroach upon existing or planned industrial sites.
  - Industrial development shall be located on land that is physically suitable and has unique locational advantages for industry. Advanced planning for the identification of such land shall be encouraged.
  - Industrial uses should be located in or near existing built up areas to take advantage of available services and to minimize home to work distances. Careful design and/or buffering shall be required to ensure compatibility with surrounding areas.

- Warehousing, storage, and distribution facilities shall have access to appropriate thoroughfares and shall be visually buffered according to their location.
  - New industrial development shall be encouraged to locate in existing and/or planned mixed-use industrial parks.
- P.41 Heavy industrial uses shall be separated from incompatible, non-industrial areas by natural and man-made features such as green belts, major transportation facilities, transitional land uses, and/or other suitable means.
- P.42 Onslow County shall encourage a public service and regulatory environment conducive to industrial development, compatible with environmental quality considerations and the availability of public financial resources.
- P.43 Onslow County will support the preservation of commercial fishing as a valuable industry.
- P.44 Onslow County supports the provision of both public and private dockage for commercial fishing, including upland marinas.
- P.45 Onslow County supports properly permitted Class I and Class II mining activities within its borders.
- P.46 Onslow County supports the recruitment and siting of environmentally compatible industrial uses in areas that are already similarly developed or in public or private industrial parks to minimize the sacrifice of prime agricultural lands for such development.
- P.47 Onslow County will continue to support an active industrial recruitment program giving preference to low pollution, light industrial uses.

### **Implementing Actions – Industrial**

- I.19 The Onslow County Future Land Use Map reflects a suitability analysis. The considerations for the location of residential land uses include the following analyses which should be relied on to influence future land use decisions:
- Suitability for Industrial Development - based on soil suitability, proximity to a municipality, proximity to Jacksonville or ONWASA water lines, proximity to Jacksonville or ONWASA sewer lines, proximity to major

thoroughfares, proximity to designated commercial development/activity center/node, existing land use, and location regarding Base Flight Path Zones.

***Schedule: Continuing Activity.***

I.20 The preparation of an Onslow County UDO shall include the following industrial considerations:

- Address preservation and enhancement of the County's industrial fishing enterprises.
- Improve site planning and subdivision requirements for industrial development.
- Require traffic impact studies (where applicable).
- Require impact analysis for "major" industrial development(s).
- Address light industrial development/location in industrial park locations.
- Address aquaculture activities/production.
- Address wind energy generation and transmission issues, including height exceptions for wind turbines.

***Schedule: Fiscal Year 2008-2009 and continuing.***

I.21 Industrial development within fragile areas and areas with low land suitability is acceptable, only if the following conditions are met:

- (1) CAMA minor or major permits can be obtained (compliance with 15A NCAC 7H).
- (2) Applicable UDO provisions are met.
- (3) No industrial use will be permitted within coastal wetlands, estuarine waters, and public trust waters, unless such use is water-related and fully complies with 15A NCAC 7H.

This policy applies to both new industrial development and to expansion of existing industrial facilities. ***Schedule: Continuing Activity.***

I.22 The protected lands and natural heritage areas should be protected from negative impacts resulting from industrial development and/or expansion through implementation of the UDO. ***Schedule: Continuing Activity.***

I.23 Onslow County will regulate mining activities by enforcing its UDO regulations and relying on state permitting agencies. The County will take a more active stance regarding the State permitting authorities and their oversight of mining activities by communicating grievances to the appropriate State agencies and officials.

***Schedule: Continuing Activity.***

## **Policies – Agricultural and Forestry Preservation**

- P.48 Rural lands already devoted to active agricultural and forestry uses or having a high productive potential for such uses shall be conserved, to the extent possible, for appropriate agricultural and/or forestry use.
- P.49 Farms and woodlands shall be recognized as an integral part of the County's open space system.
- P.50 New development shall be discouraged from "leapfrogging" from existing urban areas to locations in the midst of active agricultural or forestry areas.
- P.51 Onslow County regulatory actions should protect existing agricultural and forestry activities from incompatible land uses.

## **Implementing Actions – Agricultural and Forestry Preservation:**

- I.24 The Onslow County Future Land Use Map reflects a suitability analysis. The considerations for the location of residential land uses include the following analyses which should be relied on to influence future land use decisions:
- Suitability for Agricultural Development - based on soil suitability and existing land use.
  - Suitability for Forestry Development - based on levels of soil suitability and existing land use.
- Schedule: Continuing Activity.***
- I.25 All zoning decisions and revisions to the future land use map should be based on consideration of and consistent with policies P.48 to P.51. ***Schedule: Continuing Activity.***
- I.26 The preparation of the Onslow County UDO should support policies P.48 to P.51 through establishment of agricultural/forestry preservation districts. Such districts should limit development to agricultural or forestry activities and directly related residential activities and directly support nonresidential activities. ***Schedule: Fiscal Year 2008-2009 and continuing.***
- I.27 Onslow County will support agricultural and forestry best management practices. ***Schedule: Continuing Activity.***

## **Policies – Conservation:**

- P.52 Onslow County and its participating municipalities support protection/preservation of all AECs (15A NCAC 7H). Only residential, commercial, and industrial development which meets 15A NCAC 7H use standards will be allowed in estuarine shoreline, estuarine water, and public trust areas.
- P.53 Onslow County supports efforts to maintain and enhance public and private gamelands, including habitat protection and management, and the proper management of hunting clubs and hunting activities.
- P.54 Onslow County shall encourage the acquisition of high quality tracts of maritime forest for conservation purposes.
- P.55 Onslow County shall avoid undertaking any activity or approving of any activity that would destroy remaining habitat for loggerhead turtle nesting.
- P.56 Onslow County shall support the wise use of barrier islands within the planning jurisdiction of Onslow County. The County encourages initiatives at the local, state, or federal government level to manage these environmentally sensitive areas for the benefit of all residents of the County, state, and nation.
- P.57 Onslow County shall take no action which would irreparably harm the long term viability of valuable natural heritage sites in the County. If action must be taken to achieve public health safety and welfare objectives, project designs shall seek to incorporate features which preserve and protect natural features as an integral part of the project design.
- P.58 Onslow County will support beach municipalities in maintenance/protection of beaches as a valuable natural resource as well as protecting shorelines under County jurisdiction.
- P.59 Onslow County supports increasing usable open space in major subdivisions.
- P.60 Onslow County supports forestation to maintain key wildlife species.
- P.61 Onslow County supports reuse of existing/abandoned commercial and industrial sites in lieu of developing valuable open space.
- P.62 Commercial forestry activities shall be supported in Onslow County, provided significant adverse impacts on natural resource systems are fully mitigated.

- P.63 Mining activities that would jeopardize the short- or long-term viability of valuable natural resources or create hazardous conditions in Onslow County shall not be permitted.
- P.64 Onslow County supports efforts to maintain and enhance the fisheries resource of its waters, including water quality protection measures, nursery and habitat preservation, proper fisheries management and enforcement, aquaculture development, and artificial reef activities.
- P.65 Onslow County shall discourage the use of off-road vehicles in all fragile areas because of potential adverse environmental impacts.

### **Implementing Actions – Conservation**

- I.28 The Onslow County Future Land Use Map reflects a suitability analysis. The considerations for the location of residential land uses include the following analyses which should be relied on to influence future land use decisions:
- Suitability for Natural Conservation - based on flood hazard, storm surge, wetlands, protected lands, significant natural heritage areas, proximity to fisheries nursery areas, proximity to anadromous fishing spawning areas, and existing land use.  
***Schedule: Continuing Activity.***
- I.29 Onslow County shall work proactively with the Hofmann Forest Foundation and NC State University, and the State of North Carolina to act as a proper steward for the long-term management and use of this important natural resource area.  
***Schedule: Continuing Activity.***
- I.30 The preparation of an Onslow County UDO should include the following conservation considerations:
- Address wetlands/swamp protection.
  - Require bike paths/trails adjacent to natural areas under public ownership and/or for which such access is appropriate.
  - Address preservation of all AECs.
  - Require cluster development where needed to protect natural areas and resources.
  - Address preservation/protection of natural heritage areas and protected lands.

- Require open space preservation in subdivisions that protects natural areas and resources.
- Identify and preserve prime agricultural and forest lands.
- Require the following to be delineated on all preliminary subdivision plats for lands within and adjacent to the proposed subdivision: AECs, prime farmlands, 404 wetlands, significant natural heritage areas, protected areas, historic sites, 100-year floodplain areas, and public gamelands.
- Limit development within maritime forests, if unavoidable, to no more than one dwelling unit per five acres. In no case shall more than 12% of a building site property be cleared or otherwise disturbed.
- Encourage developments which support the NC Wildlife Resources Commission's "Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality" (refer to the following website for a copy of this memo: [www.ncwildlife.org/pg07\\_wildlifespeciescon/pg7c3\\_impacts.pdf](http://www.ncwildlife.org/pg07_wildlifespeciescon/pg7c3_impacts.pdf)).

***Schedule: Fiscal Year 2008-2009 and continuing.***

I.31 Onslow County will work with economic development agencies to promote reuse of abandoned commercial and industrial sites, and to explore funding opportunities for brownfield site cleanup and redevelopment. ***Schedule: Continuing Activity.***

I.32 Onslow County will consider the adoption of a tree preservation program which will address the following:

- Require increased buffering along areas of deforestation or clear cutting.
- Recommend vegetative medians as a best management plan as highways are expanded or improved when feasible.
- Educate the public of the benefits of controlled burns on "natural areas" by certified professional foresters.

***Schedule: Fiscal Year 2010-2011.***

I.33 Onslow County will coordinate all housing code enforcement/redevelopment/public works projects with the NC Division of Archives and History to ensure preservation and identification of significant historic structures and archaeological sites. ***Schedule: Continuing Activity.***

I.34 Onslow County will collaborate with universities to provide areas for sampling and access for water quality studies. ***Schedule: Continuing Activity.***

I.35 Onslow County will undertake the following activities to increase public awareness of, and educate the public about, environmental issues and the need to protect natural areas and resources:

- (1) Expand public awareness of the importance of natural areas and resources.
  - Prepare a newsletter for public distribution.
  - Present programs to schools and civic organizations.
  - Promote youth interest in environmental issues with local activities (e.g., beach cleanup, turtle watches, boat rides, field trips to protected lands, ecologically-oriented day camps, roadside cleanup activities, etc.)
  - Provide information on G10 Government Public Access TV Channel.
- (2) Prepare quick facts for consumers and developers with list of action items that help protect these environments.
- (3) Advise property owners on backyard conservation activities that protect streams and rivers.
- (4) Expand the Onslow County website with links to local, regional, state, and national agencies and groups focusing on environmental issues.

***Schedule: Continuing Activities.***

**Policies – Stormwater Control**

- P.66 Onslow County supports federal, state, and local efforts to protect the quality of surface area waters, whether such protection involves controls over point source discharges, surface runoff, or other appropriate means, including upstream activities.
- P.67 Onslow County supports coordinated efforts to preserve and protect the ecological and flood hazard benefits of freshwater wetlands, as protected under Section 404 of the Clean Water Act of 1972.
- P.68 Onslow County supports the City of Jacksonville Wilson Bay Initiative.
- P.69 Onslow County supports agricultural and forestry best management practices.
- P.70 Onslow County will encourage the use of constructed wetlands to receive stormwater runoff.
- P.71 Onslow County and its participating municipalities will continue to support a proactive role in the development of stormwater management and design standards intended to protect the quality of the County's streams, rivers, marshes, and estuarine systems.

- P.72 Onslow County and its participating municipalities will support reducing soil erosion, runoff, and sedimentation to minimize the adverse effects on surface and subsurface water quality.

### **Implementing Actions – Stormwater Control**

- I.36 The preparation of an Onslow County UDO should include the following stormwater considerations:
- A program of vegetated buffers adjacent to all streams, rivers, marshes, and estuarine waters in the County, with the intent of reducing the flow of nutrients and other contaminants into area surface waters.
  - Accomplish stormwater runoff management to replicate predevelopment conditions where feasible and practicable in accordance with state requirements.
  - Incorporate agricultural and forestry best management practices.
  - Reduce impervious surface areas and encourage use of pervious paving materials.
  - Encourage the use of constructed wetlands to receive stormwater runoff.
  - Improve regulation, design, and maintenance of detention and retention facilities.
  - Encourage preservation of environmentally-significant natural drainage areas.
  - Establish “clear cutting” limitations for vegetation.
  - Incorporate low impact development (LID) standards encouraging design that uses the natural capacity of land to soak up rainfall and prevent contaminated stormwater runoff from entering waterbodies.
  - Incorporate living shoreline considerations. A living shoreline relies on shoreline stabilization through natural vegetation and preservation of wildlife habitats.

***Schedule: Fiscal Year 2008-2009 and continuing.***

- I.37 Onslow County will formulate an educational program to inform the public of its need for adequate stormwater management. ***Schedule: Fiscal Year 2010-2011 and continuing.***
- I.38 Onslow County will develop a program to support clearance of streams following major storm events. ***Schedule: Fiscal Year 2010-2011 and continuing.***
- I.39 Onslow County will take the lead in coordinating and fostering interlocal cooperation among state, local, and federal enforcement programs. ***Schedule: Continuing Activity.***

- I.40 Onslow County will create an action plan to acquire strategic sites and properties to protect and restore water quality. Sites will be targeted according to a comprehensive selection method, and will be acquired from willing property owners by partnerships with the nonprofit community and state and federal agencies. ***Schedule: Fiscal Year 2010-2011 and continuing.***
- I.41 Onslow County will identify sites for water quality “retrofit” to reduce or eliminate unwanted runoff. The County will work with state agencies and non-profit organizations to secure funding to address targeted sites. ***Schedule: Continuing Activity.***
- I.42 Onslow County will consider adoption of a stormwater utility ordinance. ***Schedule: Fiscal Year 2010-2011.***
- I.43 Onslow County will rely on the state to enforce stormwater regulations. ***Schedule: Continuing Activity.***

E. INFRASTRUCTURE CARRYING CAPACITY

**1. Management Goal**

Onslow County will support (or encourage others to support) necessary infrastructure and services consistent with properly managed growth and desirable economic development. Priorities shall include a balanced, multi-modal transportation system; assured sources of quality drinking water; carefully planned wastewater treatment services; effective, environmentally sound stormwater management; and fiscally efficient, environmentally responsible solid waste management.

**2. Planning Objective**

Onslow County and its participating municipalities will encourage/require that the future needs as identified in this document be considered in all future infrastructure planning.

**3. Land Use Plan Requirements**

The following are Onslow County’s and its participating municipalities’ policies for infrastructure carrying capacity.

## **Policies – Water and Sewer**

- P.73 Onslow County shall continue to work proactively with ONWASA, the City of Jacksonville, the military, and private service providers on regional solutions to water and sewer services.
- P.74 Centralized water and sewer services should be concentrated within targeted service areas, where development densities will make the provision of services economically efficient, or where the characteristics of the land make it particularly well suited for development.
- P.75 Centralized sewer services shall generally avoid parts of the county intended primarily for agriculture to protect farmland from development pressures brought about by such sewers. Exceptions to this policy may include extensions for major economic development initiatives, and extensions to address imminent public health problems or related environmental hazards.
- P.76 Major extensions of water and sewer services that could result in scattered, non-directed development and costly provision of other urban services shall be discouraged.
- P.77 The County shall support the provision and/or expansion of centralized sewer services when such services:
- (1) Will result in the development of new or expanded industry and the creation of permanent jobs and salaries at levels commensurate with the level of support required.
  - (2) Will result in a positive payback to the County's taxpayers, in terms of the taxes generated by the new development versus the costs incurred.
  - (3) Will encourage a more compact development pattern in areas adjoining existing urban areas, thereby conserving farmland and other open spaces.
  - (4) Will serve to steer dense development away from valuable environmental areas, such as floodplains, water supply watersheds and fragile, highly productive coastal ecosystems.
  - (5) Will not burden taxpayers in areas of the County not served by such services.
  - (6) Will comply with the other policies contained in this plan.
- P.78 Development away from centralized sewage treatment facilities may employ package sewage treatment plants or other alternative sewage treatment systems as a means of achieving more efficient land use. Such systems shall be (1) designed for assimilation into centralized systems and (2) bonded so as to guarantee their proper operation and management for the life of the system.

- P.79 Onslow County and its participating municipalities support wastewater treatment in areas of need that is responsive to the conservation policies and implementing actions identified in the CAMA Land Use Plan.
- P.80 Onslow County and its participating municipalities support directing more intensive land uses to areas that have existing or planned infrastructure.
- P.81 Onslow County and its participating municipalities support the enforcement of Health Department regulations and local development regulations regarding lot sizes and waste disposal system placement.
- P.82 Onslow County and its participating municipalities will encourage re-use of effluent for irrigation. Where feasible, package treatment plants should use treated effluent for irrigation.
- P.83 Onslow County and its participating municipalities will encourage the NC Department of Environment and Natural Resources to investigate the feasibility of using alternative waste processing systems such as flushless toilets, incineration, and artificial wetlands in areas with severe soil limitations.
- P.84 Onslow County supports the construction of lines to and through conservation areas to serve development which meets all applicable state and federal regulations.
- P.85 Onslow County supports wetlands "created" to aid in treating waste effluent.

### **Implementing Actions – Water and Sewer**

- I.44 When considering new public facilities and private developments, Onslow County will review new proposals against the Future Land Use Map to ensure consistency. If the proposal is inconsistent, the proposal will be revised or the County will review the Land Use Plan to see if revision is needed. ***Schedule: Continuing Activity.***
- I.45 Malfunctioning septic tanks will be inspected by the Onslow County Health Department and corrective action required for implementation by the owner. ***Schedule: Continuing Activity.***
- I.46 Onslow County and its participating municipalities will encourage ONWASA to implement state of the art vigorous control and monitoring for possible contamination of its primary water sources including the Castle Hayne Aquifer. ***Schedule: Continuing Activity.***

- I.47 Onslow County will encourage ONWASA to coordinate its project(s) planning with the future land use map when considering new public facilities and service to private development. ***Schedule: Continuing Activity.***
- I.48 Onslow County will annually consider its water and sewer policies to ensure that public/private cooperation in the provision of infrastructure to serve new development is encouraged. Such review will be coordinated with ONWASA, the City of Jacksonville, and the military. ***Schedule: Continuing Activity.***
- I.49 Onslow County will rely on the Department of Environment and Natural Resources to oversee the operation and management of all package treatment plants in the County. ***Schedule: Continuing Activity.***
- I.50 Onslow County will support only water systems which are constructed with lines designed and sized for adequate fire protection and sufficient water pressure. ***Schedule: Continuing Activity.***
- I.51 Onslow County will consider the adoption of a local ordinance requiring water-conserving plumbing fixtures in all new construction. ***Schedule: Fiscal Year 2010-2011.***
- I.52 As part of its UDO deliberation, Onslow County will consider the adoption of an adequate public facilities ordinance (APFO) which will require that public facilities and services be available when needed to serve new development at a defined/acceptable level of service. The development of an APFO should be coordinated with ONWASA and the City of Jacksonville. ***Schedule: Fiscal Year 2008-2009 and continuing.***
- I.53 Onslow County will consider developing an inter-governmental agreement (IGA) with the City of Jacksonville, ONWASA, and other service providers. Such an agreement would address growth within defined service areas and establish participants responsibilities through a cooperative growth management program. The IGA may include: infrastructure projects, public safety, administrative procedures, standards for public facilities, extraterritorial jurisdiction, and other areas of concern. ***Schedule: Fiscal Year 2010-2011 and continuing.***
- I.54 Onslow County will coordinate with the City of Jacksonville to ensure that County and City decisions regarding the type and intensity of land uses within and adjacent to the ETJ area are consistent with the County and City Future Land Use Maps. ***Schedule: Continuing Activity.***

- I.55 Onslow County will coordinate with the City of Jacksonville to ensure that residential development relying on wells and/or on-site wastewater systems will be limited to anticipated areas where centralized water and wastewater systems are in place or will be provided. ***Schedule: Continuing Activity.***
- I.56 Onslow County will seek mutually acceptable standards for public facilities and services with ONWASA, the military, and the City of Jacksonville to ensure that services can be provided relatively seamlessly across jurisdictional boundaries. ***Schedule: Continuing Activity.***
- I.57 Onslow County will require development applications to include an analysis of the development's infrastructure and service demands relative to the available capacity. ***Schedule: Continuing Activity.***
- I.58 Onslow County will coordinate wastewater and water treatment facility improvements with land use planning to ensure appropriately-sized infrastructure to meet projected demand derived from the Future Land Use Map, and revising the Future Land Use Map, as necessary, to reflect proposed infrastructure improvements. ***Schedule: Continuing Activity.***

**Policies – Solid Waste:**

- P.86 Onslow County supports efforts and measures to efficiently and economically collect and dispose of solid waste, and supports recycling and the establishment and maintenance of recycling centers.
- P.87 Local area requirements for solid waste collection and disposal shall continue to be anticipated through advanced, cooperative planning between the County, its municipalities, and area service providers.
- P.88 The County shall continue to pursue a variety of waste reduction strategies, including waste prevention, source reduction, recycling and reuse.
- P.89 Onslow County encourages residential composting and mulching, as well as the development and use of regional sites for recycling of organic materials and yard waste in larger volumes.
- P.90 Onslow County supports educational programs that reduce litter and illegal dumping, encourage recycling and reuse, and encourage participation in programs such as Adopt-A-Highway and the Governors Litter Sweep.

- P.91 Onslow County supports solid waste program financing strategies so as to (1) ensure that the solid waste program is self-supporting and (2) discourage illegal dumping. Part (2) may require mandatory service commitments by all homes and businesses, and a universal fee schedule.

### **Implementing Actions – Solid Waste:**

- I.59 Onslow County shall enforce harsh penalties against those who would seek to dump trash illegally. ***Schedule: Continuing Activity.***
- I.60 County waste convenience/collection and recycling sites shall continue to be designed, located, improved, and maintained to facilitate their use. There shall be no household tipping fees at any County waste collection facility, provided the universal fee (P.165) has been paid. ***Schedule: Continuing Activity.***
- I.61 Onslow County will continue to support implementation of the Onslow County Ten-Year Solid Waste Plan. ***Schedule: Continuing Activity.***

### **Policies – Transportation:**

- P.92 Transportation planning shall be employed to promote a hierarchical, functional transportation system, to prioritize needed improvements, and to promote the proper arrangement of land patterns by controlling the location of streets, highways, trails, and other modes of transportation.
- P.93 A program of improvements and maintenance to maximize the use of existing roadways shall be employed as a cost effective and environmentally sound means of meeting area transportation needs.
- P.94 Onslow County supports and shall fully participate in regional transportation and lobbying efforts.
- P.95 The construction of bikeways, sidewalks, and trails shall be encouraged on or across new roadways and roadway expansions, and new development as part of the UDO initiative. Particular attention should be given to the priority bicycle and pedestrian needs as submitted for inclusion in the State Transportation Improvement Program.
- P.96 The County shall encourage street connections between adjoining residential neighborhoods, as well as connections between parking lots of adjoining commercial developments.

- P.97 Access to higher intensity development shall generally not be permitted through an area of lower intensity development. For example, access to a multi-family development, major park facility, or other large traffic generator should not be permitted through a single-family residential neighborhood.
- P.98 Onslow County supports efforts to provide for greater choice and lower airfares at Albert Ellis Airport, thereby increasing passenger volume and enhancing opportunities for continued improvements at the airport. The County also encourages on-going efforts to improve roadway access to the airport.
- P.99 Onslow County and its participating municipalities' continued use and planned development of the Atlantic Intracoastal Waterway, including dredging, will be encouraged.
- P.100 Onslow County and its participating municipalities support cost effective public transportation.
- P.101 Onslow County and its participating municipalities support the provision of safe evacuation routes.
- P.102 Onslow County and its participating municipalities support implementation of the 2007-2013 North Carolina Transportation Improvement Program.
- P.103 Onslow County and its participating municipalities support maintaining an effective signage and addressing system for all streets, roads, and highways.
- P.104 Onslow County supports the provision, enhancement, and/or prevention of loss of existing access for public fishing when bridges are replaced or improved.
- P.105 Onslow County will ensure that future development along key corridors is consistent with the proposed improvements and alignments to avoid costly acquisitions or roadway realignments in the future. In addition to protecting right-of-way through official maps, major street plans and setbacks, the County will exercise greater control of access to arterial streets (e.g., driveways, local and collector streets) to preserve street capacity.
- P.106 Onslow County will continue to integrate transportation planning with land use planning to ensure that proposed transportation improvements safely and compatibly meet demands from planned development.

P.107 Onslow County will support maintaining an adequate transportation network including:

- Maintaining adequate road capacity and minimizing delays due to traffic congestion;
- Maintaining road safety, so that roads are safe for drivers, pedestrians, and bicyclists, as well as the residents and businesses located along the roads;
- Protecting primary road corridors from inappropriate development patterns;
- Protecting scenic road corridors from clearing and encroachment of development.

### **Implementing Actions – Transportation:**

I.62 Onslow County will prepare a Unified Development Ordinance which should include the following transportation considerations:

- (1) Support interconnected street systems for residential and non-residential development.
- (2) Support limited access from development along all roads and highways to provide safe ingress and egress.
- (3) Support subdivision development which utilizes the North Carolina Department of Transportation Traditional Neighborhood Development Street Design Guidelines. A Traditional Neighborhood Development (TND) is a human scale, walkable community with moderate to high residential densities and a mixed use core. Compared with conventional suburban developments, TNDs have a higher potential to increase modal split by encouraging and accommodating alternate transportation modes. TNDs also have a higher potential for capturing internal trips, thus reducing vehicle miles traveled. A dense network of narrow streets with reduced curb radii is fundamental to TND design. This network serves to both slow and disperse vehicular traffic and provide a pedestrian friendly atmosphere. Such alternate guidelines are encouraged by NCDOT when the overall design ensures that non-vehicular travel is to be afforded every practical accommodation that does not adversely affect safety considerations. The overall function, comfort, and safety of a multi-purpose or “shared” street are more important than its vehicular efficiency alone. TNDs have a high proportion of interconnected streets, sidewalks, and paths. Streets and rights-of-way are shared between vehicles (moving and parked), bicycles, and pedestrians. The dense network of TND streets functions in an interdependent manner, providing continuous routes that enhance non-vehicular travel. Most TND streets are designed to minimize through traffic by the design of the street and the location of land uses. Streets are designed to only be as wide as needed to accommodate the usual vehicular mix for that street while providing adequate access for moving vans,

garbage trucks, fire engines, and school buses. It is NCDOT's intent that the development encourage walking and biking, enhance transit service opportunities, and improve traffic safety through promoting low speed, cautious driving, while fully accommodating the needs of pedestrians and bicyclists. Such developments should have the potential to reduce the number of external vehicle trips, and thus vehicle miles traveled, by 15% or more through provision of commercial, recreational, and other resident-oriented destinations within a walkable community. Traffic impacts, both on-site and off-site, should be minimized.

- (4) Employ adequate level of service standards on public roadways to accommodate the safe and efficient flow of traffic. Strive to achieve a level of service C or better on arterial, minor arterial, and collector streets for existing and design year traffic projections. Level of service D may be approved on a case-by-case basis for congested areas. New development should be required to demonstrate that it will not reduce levels of service below adopted standards.
- (5) Enhance connectivity in neighborhoods by reducing reliance on private streets and cul-de-sacs in order to improve the County's ability to provide safe and efficient public services.
- (6) Support maintaining an effective signage and addressing system for all streets, roads, and highways.
- (7) Require where reasonably possible the utilization of frontage roads in non-residential development along federal and state major highways.
- (8) Establish a requirement for reverse frontage lots within subdivisions to orient lots towards internal subdivision streets, not secondary roads and highways.
- (9) Require the construction of acceleration/deceleration lanes for the entrances to major commercial and residential developments.
- (10) Establish traffic impact study requirements. Such studies should demonstrate that level of service will not be reduced.
- (11) Encourage the development of joint or shared driveways in newly approved subdivisions.
- (12) Incorporate requirements for the construction of bike and pedestrian paths in major subdivisions.
- (13) Protect air space for the Albert J. Ellis Airport and the MCAS New River Air Station to include:
  - Height restrictions;
  - Adoption and enforcement of Air Installation Compatible Use Zones (AICUZ) and Installation Compatible Use Zones (ICUZ) compliant zoning regulations;
  - Agriculture and open space preservation adjacent to critical operation areas such as firing ranges and flight lines;

- Federal Aviation Administration review and comment on proposed structures.

(14) Support the NCDOT Strategic Highway Corridors initiative.

**Schedule: Fiscal Year 2008-2009 and continuing.**

I.63 Onslow County will continue to support bikeways, pedestrian paths, and blueways by implementing the following:

- Encourage appropriate thoroughfares (state-maintained roads) to include bike lanes as they are designed and expanded.
- Coordinate efforts for construction of bike and pedestrian paths with County and municipal park systems.
- Include bike and pedestrian trails at all County parks.
- Secure access to and provide for bike and pedestrian trails along rivers and streams.
- As part of the UDO initiative, Onslow County shall consider developing requirements for bikeways and pedestrian paths to access schools and other key destination points where practicable.

**Schedule: Continuing Activity.**

I.64 Onslow County will encourage the following actions to support maintenance of safe hurricane evacuation routes:

- Identify and support improvements to roads that serve as hurricane evacuation routes.
- Encourage routine bridge and culvert maintenance, and raise bridges over streams that have documented flooding during significant rain events.
- Support the planning and implementation of regional roadways.

**Schedule: Continuing Activity.**

I.65 Onslow County will coordinate all proposed development with the 2007-2013 Transportation Improvement Program. **Schedule: Continuing Activity.**

I.66 Onslow County will support and consider improvements to the following roads in all planning considerations and review/approval of project proposals:

- NC 53, Piney Green Road.
- NC 24 approach to the Marine base.
- North West Bridge Road
- US 258 approach to Richlands.
- Queen Creek Road.
- Old Maplehurst Road

**Schedule: Continuing Activity.**

- I.67 Onslow County will coordinate land use planning and transportation considerations with the Jacksonville Urban Area Metropolitan Planning Organization and the Down East Rural Planning Organization. ***Schedule: Continuing Activity.***
- I.68 Onslow County will support public transportation services and will encourage through public service announcements private taxi, bus, and van services as alternative to the private automobile. The special transportation needs of the elderly and disabled will be emphasized. To assist in making such services economical, the County will encourage in-fill and compact land development patterns. ***Schedule: Continuing Activity.***

F. NATURAL HAZARD AREAS

**1. Management Goal**

Onslow County will encourage the long-term management and wise use of its natural resources. The County will protect/maintain its floodplains, shorelines, and other coastal features for their natural storm protection functions.

**2. Planning Objective**

Onslow County will support policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, including those subject to erosion, high winds, storm surge, flooding, or sea level rise.

**3. Land Use Plan Requirements**

The following are Onslow County's policies/implementing actions for natural hazard areas. All policies are continuing activities.

**Policies – Natural Hazard Areas**

- P.108 Onslow County will require development within areas susceptible to sea level rise, shoreline erosion, and/or wetland loss to consider such conditions in project design and development.
- P.109 In the event development(s) is (are) threatened by shoreline loss, the County shall support the AEC use standards governing shoreline protection and management.
- P.110 Onslow County supports educating the public concerning the problems/impacts of developing/locating in natural hazard areas.

- P.111 Onslow County will support development which will minimize flooding and resulting damage to life and property during normal and significant rainfall events in order to restore and preserve water quality so residents and visitors can enjoy water-related activities.
- P.112 Onslow County supports the installation of properly engineered and permitted bulkheads to protect against erosion and sea level rise.
- P.113 Onslow County supports the US Army Corps of Engineers' regulations, the applicable guidelines of the Coastal Area Management Act, and the use of local land use ordinances to regulate development of fresh water swamps, marshes, and 404 wetlands.
- P.114 Onslow County supports relocation of structures endangered by erosion, if the relocated structure will be in compliance with all applicable policies and regulations.
- P.115 Onslow County supports cooperation with local, state, and federal efforts to inform the public of the anticipated effects of sea level rise.
- P.116 Onslow County supports hazard mitigation planning. The Land Use Plan and the Hazard Mitigation Plan should be consistent with one another. When either are revised, the other should be reviewed for consistency. Should there ever be conflicting policies, the Land Use Plan shall take precedence.
- P.117 Onslow County supports strengthening local regulations to discourage/decrease the density of development within floodprone areas, including areas impacted by Category 4 and 5 generated storm surge and sea level rise.

### **Implementing Actions – Natural Hazard Areas**

- I.69 Onslow County will monitor development proposals for compliance with Section 404 of the Clean Water Act and will continue to enforce local land use ordinances to regulate development of fresh water swamps, marshes, and 404 wetlands.  
***Schedule: Continuing Activity.***
- I.70 As part of the development of a UDO, Onslow County will review and consider strengthening its floodplain ordinance and participate in the National Flood Insurance Program. Subdivision regulations will be enforced – requiring elevation monuments to be set so that floodplain elevations can be more easily determined.  
***Schedule: Fiscal Year 2008-2009 and continuing.***

- I.71 Onslow County will continue to permit the redevelopment of previously developed areas provided all applicable policies, regulations, and ordinances are complied with. Redevelopment, including infrastructure, should be designed to withstand natural hazards. Relocation out of natural hazard areas is encouraged. ***Schedule: Continuing Activity.***
- I.72 Onslow County will utilize the future land use map as a development management tool. The map is coordinated with the land suitability map and proposed infrastructure map. The land use densities specified by the future land use categories will be supported. ***Schedule: Continuing Activity.***
- I.73 As part of the hazard mitigation planning process, Onslow County will support educating its citizens and businesses on the importance of properly storing hazardous materials. ***Schedule: Continuing Activity.***
- I.74 Onslow County will review its local regulations to ensure that fuel and chemical storage tanks are installed above ground in all flood hazard areas. ***Schedule: Fiscal Year 2009-2010.***
- I.75 Onslow County will develop an educational program designed to advise the public of the potential problems associated with development/location in natural hazard areas. The educational material will be displayed on the Onslow County website and distributed in informational brochures prepared by the County. ***Schedule: Fiscal Year 2009-2010 and continuing.***

G. WATER QUALITY

**1. Management Goal**

In keeping with the Onslow County vision statement, the County will protect its environmental assets to preserve sound and ocean water quality. This includes consideration of the waters in all coastal wetlands, estuarine waters, both natural and man-made drainage corridors, and groundwater resources.

**2. Planning Objective**

Onslow County's water quality planning objective is to adopt/enforce implementing actions which will support the Cape Fear, White Oak, and Neuse River Basin water quality management plans and to maintain water quality and improve/eliminate impaired waters.

### **3. Land Use Plan Requirements**

The following policies/implementing actions are intended to control nonpoint discharges and to protect shellfishing waters. The reader should refer to I.8, floor area ratio requirements, page 36; the conservation policies/implementing actions, page 46; and the stormwater policies/implementing actions, page 49.

#### **Policies – Water Quality**

- P.118 Onslow County supports the goals of the Cape Fear, White Oak, and Neuse River Basin Water Quality Management Plans.
- P.119 Onslow County will oppose all aquaculture activities which will have a negative impact on water quality.
- P.120 Onslow County supports the guidelines of the Coastal Area Management Act and the efforts and programs of the NC Department of Environment and Natural Resources, Division of Coastal Management and the Coastal Resources Commission to protect/preserve the coastal wetlands, estuarine waters, estuarine shorelines, 404 wetlands, and public trust waters of the County.
- P.121 Onslow County supports commercial and recreational fishing and will cooperate with other local governments and state and federal agencies to control pollution to improve water quality so that commercial and recreational fishing will increase.
- P.122 Onslow County recognizes the value of water quality maintenance to the protection of fragile areas and supports the control of stormwater runoff to aid in the preservation of water quality. The County will support existing state regulations relating to stormwater runoff resulting from development (Stormwater Disposal Policy 15 NCAC 2H.001-.1003 and CAMA rule 15A NCAC 7H.0205-.2008). The County also supports development of more stringent impervious surface requirements based on the following DWQ findings:
- Areas with impervious surfaces of 10% or greater can be linked to local stream degradation.
  - Biological diversity has been shown to drop when impervious surfaces increase beyond 10-15%.
  - Stream stability is affected when impervious surfaces approach 10% in an area.
  - Estuaries generally degrade with impervious surfaces of 10% or greater.
  - Sensitive fish species loss increases after about 12% impervious surface.

- P.123 Onslow County supports the policy that all public and private projects will be designed to limit stormwater runoff into coastal waters and areas of environmental concern.
- P.124 Onslow County supports the following actions by the General Assembly and the Governor:
- Sufficient state funding should be appropriated to initiate a program of incentives grants to address pollution of our rivers from both point sources and nonpoint sources.
  - An ongoing source of state funding should be developed to provide continuous support for an incentives grant program.
  - The decision-making process for the award of incentives grants should involve river basin organizations representing local governments and other interest groups in the review of all applications for state funding.
  - The ongoing effort of the Department of Environment and Natural Resources to develop administrative rules implementing the White Oak River Basin Management Strategy should continue to involve local government officials in the development, review, and refinement of the proposal.
- P.125 Onslow County supports and encourages the activities of the state's Shellfish Management Program. The County shall continue to promote estuarine water quality through its stormwater management planning and stormwater runoff policies.
- P.126 Onslow County's groundwater resources, including but not limited to the Castle Hayne Aquifer, shall be recognized as an invaluable source of public and private potable water and shall receive the highest level of protection when considering County policies, standards, and actions.
- P.127 Onslow County supports a reduction of dependence on septic tanks within the County and its participating municipalities in order to improve water quality.
- P.128 Onslow County supports federal, state, and local efforts to protect the quantity and quality of water in the Cape Fear, White Oak, and Neuse Rivers, whether such protection involves controls over point source discharges, surface runoff, interbasin water transfers, or other appropriate means, including upstream activities.

- P.129 Onslow County supports a program of vegetated buffers adjacent to all streams, rivers, marshes, and estuarine waters in the County, with the intent of reducing the flow of nutrients and other contaminants into area surface waters.
- P.130 Onslow County supports low impact development (LID). NOTE: LID is an ecologically friendly approach to site development and stormwater management that aims to minimize development impacts to land, water, and air. The approach emphasizes the integration of site design and planning techniques that conserve natural systems and hydrologic functions on a site. Low impact development is not a land use control, but a management and design strategy that is integrated into the proposed land use. It has also been shown to decrease costs to developers and to increase the desirability and value of the property. LID practices can also benefit the environment by helping maintain the integrity of a natural ecosystem and protecting water quality.
- P.131 Onslow County opposes the disposal of any toxic wastes, as defined in the US Environmental Protection Agency's Listing of Hazardous Substances and Priority Pollutants (developed pursuant to the Clean Water Act of 1977), within its planning jurisdiction.
- P.132 Onslow County supports regulation of underground storage tanks in order to protect its groundwater resources.
- P.133 Onslow County supports the policy that all State of North Carolina projects should be designed to limit to the extent possible stormwater runoff into coastal waters.
- P.134 Onslow County supports protection of those waters known to be of the highest quality or supporting biological communities of special importance.
- P.135 Onslow County supports development practices which minimize the discharge of wastewater from package treatment plants and septic tanks into any areas classified as coastal wetlands, freshwater wetlands (404), or natural heritage areas. This policy does not apply to constructed wetlands.
- P.136 Onslow County opposes the location of floating homes and mooring fields within its jurisdiction.
- P.137 Onslow County supports continued state funding of the incentive-based Community Conservation Assistance Program to install best management practices on urban, suburban, and rural lands to help treat polluted stormwater runoff and improve water quality in the County.

## **Implementing Actions – Water Quality**

I.76 Onslow County should implement the following actions through preparation of a UDO (see I.8, page 36) to improve water quality:

- Incorporate LID standards.
- Use watershed-based land use planning.
- Protect sensitive natural areas, including coastal wetlands.
- Establish buffer network.
- Minimize impervious cover in site design.
- Limit erosion during construction.
- Maintain coastal growth measures.
- Restoration of impaired waters.
- Management of the cause and sources of pollution to ensure the protection of those waters currently supporting their uses allowing for reasonable economic growth.
- Reduction of nutrients in Onslow County waters.

***Schedule: Fiscal Year 2008-2009 and continuing.***

I.77 Onslow County should include regulations for aquaculture activities in the preparation of the UDO (see I.8, page 36). ***Schedule: Fiscal Year 2008-2009 and continuing.***

I.78 Onslow County should include consideration of underground chemical and gasoline storage regulations in the preparation of its UDO (see I.8, page 36) to ensure a minimum of risk to local groundwater resources. ***Schedule: Fiscal Year 2008-2009 and continuing.***

I.79 Onslow County should continuously enforce, through the development and zoning permit process, all current regulations of the NC State Building Code and NC Division of Health Services relating to building construction and septic tank installation/replacement in areas with soils restrictions. ***Schedule: Continuing Activity.***

I.80 Through a public awareness/education program, Onslow County will support the following water quality and water conservation related actions:

- Avoid planting turf in areas that are hard to water such as steep inclines and isolated strips along sidewalks and driveways.
- Use the garbage disposal sparingly; compost instead.
- Plant during the spring and fall when the water requirements are lower.

- Use a layer of organic mulch around plants to reduce evaporation.
- Divide your watering cycle into shorter periods to reduce runoff and allow for better absorption.
- Only water lawns when needed.
- Adjust lawn mowers to a higher setting. Longer grass shades root systems and holds soil moisture better than a closely clipped lawn.
- Use porous materials for walkways and patios to keep water in the yard and prevent wasteful runoff.
- Direct downspouts and other runoff towards shrubs and trees, or collect and use water in gardens.
- Limit watering of lawns to no more than one inch of water per week.
- Reduce the amount of grass in yards by planting shrubs, and organic ground cover.
- Do not water lawns on windy days.
- When watering grass on steep slopes, use a soaker hose to prevent wasteful runoff.
- While fertilizers promote plant growth, they also increase water consumption. Apply the minimum amount of fertilizer needed based on soil test.
- When adding or replacing a flower or shrub, choose a low water use plant for year-round landscape color.
- Landscape with natural vegetation trees, plants, and groundcovers. The local conservation office has more information about these water thrifty plants.
- Water only as rapidly as the soil can absorb the water.
- Aerate or "punch holes" in lawns about six inches apart so water will reach the roots rather than run off the surface.

***Schedule: Fiscal Year 2009-2010 and continuing.***

- I.81 Onslow County will adopt a water use plan to address floating home and mooring field issues/control. ***Schedule: Fiscal Year 2010-2011.***
- I.82 Onslow County will comply with CAMA and the NC Department of Environment and Natural Resources stormwater runoff regulations, and by coordinating local development activities involving chemical storage or underground storage tank installation/abandonment with Onslow County Emergency Management personnel and the Groundwater Section of the NC Department of Environment and Natural Resources. The County will plan for an adequate long-range water supply. In the planning process, Onslow County will cooperate with adjacent counties to protect water resources. ***Schedule: Continuing Activity.***

- I.83 Onslow County will continuously enforce, through the development and zoning permit process, all current regulations of the NC State Building Code and North Carolina Division of Health Services relating to building construction and septic tank installation/replacement in areas with soils restrictions. ***Schedule: Continuing Activity.***
- I.84 Onslow County supports regulation of well fields and land uses near such fields by the North Carolina Department of Health and Natural Resources. ***Schedule: Continuing Activity.***
- I.85 Onslow County will monitor and coordinate with appropriate state and private agencies the control of invasive aquatic weeds. ***Schedule: Continuing Activity.***

H. LOCAL AREAS OF CONCERN

**1. Management Goal**

Onslow County supports and will reflect the overall CAMA goals in its planning for local concerns. Those CAMA goals are stated on page 2 of this plan. The County will also seek to ensure a high quality of life for its citizens, by working to attract and expand a diversified economic base (including a strong military component), ample parks and recreation facilities, an active arts and cultural community, affordable, quality health and elder care, an excellent public school system, sustained interest in the area's history and traditions, and area-wide support for community cleanliness and beauty

**2. Planning Objectives**

Defined local policies/implementing actions should broaden the scope of this document as a "comprehensive plan" and include emphasis on: cultural and historic sites, community appearance, economic development, military/community cooperation, general health/human services, redevelopment, and funding options.

**3. Land Use Plan Requirements**

The following provides Onslow County's policies/implementing actions for areas of local concerns.

**Policies – Cultural and Historic Sites**

- P.138 Onslow County supports preservation of historic sites, buildings, written records, and oral history.

- P.139 Onslow County encourages efforts to protect cultural and historic resources to preserve their cultural, educational, and aesthetic values and qualities.
- P.140 The County supports local, state, and federal efforts to protect historic properties within the County and to perpetuate its cultural heritage.
- P.141 Onslow County will encourage multiple and appropriate adaptive reuse of historic resources.
- P.142 Onslow County will encourage the development of the tourism and educational potential of the area's architectural, historic, and cultural resources.
- P.143 Onslow County will discourage the destruction of its significant architectural, historic, and archaeological resources.
- P.144 Onslow County will support, to the extent possible, efforts to restore downtown Jacksonville as the cultural and social center of Onslow County. Similar efforts in other urban centers of the County, such as Richlands, Swansboro, Holly Ridge, and Sneads Ferry, shall also be supported.

#### **Implementing Actions – Cultural and Historic Sites**

- I.86 Onslow County will support a County-wide survey of historical sites by local volunteers or state and federal agencies and will seek grant monies for the complete inventory of historically significant structures and sites. ***Schedule: Fiscal Year 2009-2010 and continuing.***
- I.87 Onslow County will coordinate housing code enforcement/redevelopment projects with the NC Division of Archives and History to ensure that any significant architectural details or buildings are identified and preserved. ***Schedule: Continuing Activity.***
- I.88 Onslow County will coordinate public works projects with the NC Division of Archives and History to ensure the identification and preservation of significant archaeological sites. ***Schedule: Continuing Activity.***
- I.89 Onslow County will support establishment of local historic preservation districts. This will include the possible development of zoning regulations when the County's UDO is prepared (see I.8, page 36). ***Schedule: Fiscal Year 2008-2009 and continuing.***

- I.90 Onslow County will support public education of significant historic sites by placing an inventory of significant historic sites/properties on the Onslow County website.  
***Schedule: Fiscal Year 2009-2010 and continuing.***

### **Policies – Economic Development**

- P.145 Onslow County supports the Marine Corps Base Camp Lejeune and the New River Air Station as the primary economic engines of the local economy. County actions shall be consistent with preserving and protecting this pivotal major industry.
- P.146 Onslow County will encourage new and expanding industries and businesses which: (1) diversify the local economy, (2) train and utilize a more highly skilled labor force, and (3) increase per capita income.
- P.147 Onslow County shall protect, enhance, and encourage a high quality of life, including the conservation and management of natural and man-made resources, as an effective component of an economic development and diversification strategy.
- P.148 Onslow County supports travel and tourism industry which is compatible with a high quality of life – as a means to facilitate diversification in the local economy.
- P.149 Onslow County shall seek to foster an agricultural industry that is compatible with a high quality of life – as a means to facilitate diversification in the local economy.
- P.150 Onslow County will promote coordination of economic development resources among various local institutional agencies and seek regional cooperation and interaction among areas with shared economic interests.
- P.151 Onslow County will support a pro-business/pro-growth attitude, balanced by a concern for preserving the natural assets and quality of life factors that make the area attractive to visitors and permanent residents alike.
- P.152 Onslow County supports the proper management of growth, including wise land use planning, and the coordinated provision of water and sewer utilities, as important factors in economic development.
- P.153 Onslow County supports on-going efforts to retain and enhance commercial air service at Albert J. Ellis Airport.
- P.154 Onslow County supports applicable state and federal programs regarding economic and community development, especially those programs related to better jobs, water quality, fisheries, sustainable energy generation, and water and land transportation system improvements.

P.155 Onslow County will encourage industrial and commercial development in areas with existing infrastructure that does not infringe on environmentally sensitive areas.

P.156 Onslow County supports preservation of its commercial fishing industry.

P.157 Onslow County will pursue/support state/federal funding opportunities for commercial or industrial projects to enhance economic development.

### **Implementing Actions – Economic Development**

I.91 In order to support tourism, commercial fishing, and provide a solid foundation for overall economic development, Onslow County will:

- Encourage the appropriate state and/or federal agencies to take lead roles in the effort to establish a State program for regular channel maintenance.
- Seek the continued assistance of the United States Coast Guard in marking channels.
- Request assistance from the United States Coast Guard to remove abandoned or sunken vessels.
- Request that the United States Soil Conservation Service take the lead role in providing technical assistance to accomplish “snagging” and general stream/river cleanup.
- Request that cleanup programs be coordinated among local, state, and federal agencies as appropriate.
- Request that local, state, and federal agencies work together to develop a plan of action to deal with abandoned or sunken vessels.
- Request that all sand and dredge spoil materials be stockpiled.

***Schedule: All work items listed above are Continuing Activities.***

I.92 Onslow County will implement the following activities to support economic development:

- Formulate and expand local incentives to attract industry.
  - Support the continued inventory of unused business facilities.
  - Support County water and sewer systems and other infrastructure.
  - Support and enhance incubator programs for startup businesses.
  - Identify and recruit industries that are compatible with and complement Onslow County’s geography, culture, and climate.
  - Create awareness of incentives for the employment of the elderly.

- Encourage clean industry to locate in Onslow County to promote a healthy environment.
  - Support businesses involved with computer software business, medical technology, and telecommunications.
  - Promote awareness of service industry catering to tourists' opportunities.
  - Support sustainable ocean-based aquaculture and energy generation and transmission as economic development initiatives, as feasible.
- Expand opportunities (both public and private) for employment and procurement by using local vendors.

***Schedule: Continuing Activities.***

- I.93 Onslow County will continue to support, within the County, the activities of the North Carolina Division of Travel and Tourism; specifically, the monitoring of tourism-related industry, efforts to promote tourism-related commercial activity, and efforts to enhance and provide shoreline resources. ***Schedule: Continuing Activity.***
- I.94 The County will support projects that will increase public access to shoreline areas. ***Schedule: Continuing Activity.***
- I.95 Onslow County will support North Carolina Department of Transportation projects to improve access to and within the County. ***Schedule: Continuing Activity.***
- I.96 Onslow County will investigate strategies such as providing self-guided tour materials to increase tourist activity at local historic sites. ***Schedule: Fiscal Year 2009-2010 and continuing.***
- I.97 Onslow County will conduct a survey of the incomes of business and property owners to determine owner eligibility for possible grant-funded commercial rehabilitation. ***Schedule: Continuing Activity.***
- I.98 Onslow County will develop a specific plan of action to preserve its commercial fishing industry to include but not be limited to the following:
- Preserving existing seafood operations.
  - Encouraging the use of new technologies and practices.
  - Preventing conflicts between existing and future seafood operations and new residential/commercial development.
  - Planning for reuse of land on and near failed and failing seafood operations.

- Encouraging the use of new technologies and practices, including ocean-based aquaculture.

***Schedule: Fiscal Year 2009-2010.***

- I.99 Onslow County will encourage all aquaculture activities which meet applicable local, state, and federal policies and permit requirements. However, the County reserves the right to comment on all aquaculture activities that require Department of Environment and Natural Resources permitting. ***Schedule: Continuing Activity.***

### **Policies – Military/Community Cooperation**

- P.158 Onslow County will support coordinated intergovernmental and military-community planning for land use and development, transportation, utilities, environmental management, law enforcement and public safety, education, recreation, tourism, and economic development.

- P.159 Onslow County encourages special committees, advisory panels, educational forums, workshops, leadership seminars, community meetings, and media contacts to enhance the level of community involvement and awareness of military-community issues.

- P.160 Onslow County supports working proactively with the Marine Corps Base Camp Lejeune, and the New River Air Station, to determine those policies and actions that will strengthen the operational viability of the military while also enhancing the community at large.

- P.161 In support of military personnel, Onslow County will provide for an enhanced quality of life in the area, including better housing, more and better parks, cleaner coastal waters, better schools, more efficient land use patterns, more attractive development and scenic beauty, protection of important natural resources, and continued economic development.

### **Implementing Actions – Military/Community Cooperation**

- I.100 Onslow County will continue to support the recommendations of the Onslow County Joint Land Use Study, February 2003. ***Schedule: Continuing Activity.***

- I.101 Onslow County will review its zoning in those areas adjoining the Marine Corps Base to provide buffer areas to mitigate encroachment by incompatible land uses. This will be accomplished during preparation of the Onslow County UDO (see I.8, page 36). ***Schedule: Fiscal Year 2008-2009 and continuing.***

- I.102 Onslow County will continue to work cooperatively for the effective operation of ONWASA, the Onslow Water and Sewer Authority. Operations employ utilities extensions wisely to direct new growth to locations away from mission critical activity areas of the military base. ***Schedule: Continuing Activity.***
- I.103 Onslow County will continue to support cooperative agreements with the military for the provision of police, fire, and EMS services. ***Schedule: Continuing Activity.***
- I.104 During the implementation of this plan, Onslow County will support the following mutually supporting interests which are identified in the 2003 Citizen's Comprehensive Plan for Onslow County:
- What Camp Lejeune Believes the Community Wants
    - » A base that maintains or expands its current population.
    - » Continued good relations with base.
    - » More tax revenues.
    - » Continued cooperation in police, fire, EMS, emergency response.
    - » More access to base land for recreation (hunting, boating).
    - » Base waste water capacity.
    - » Base water.
    - » A voice in base infrastructure and economic development that impacts community.
    - » Improved quality of life.
    - » Better schools.
    - » Wide range of jobs.
    - » Better commercial air service.
    - » Expanded business development and less competition from the base.
    - » Minimize range noise.
  
  - What Camp Lejeune Wants
    - » Improved operational viability in future years.
    - » Continued good relations with community.
    - » Support for the Department of Defense mission.
    - » Continued cooperation in police, fire, EMS, and emergency response.
    - » Support of infrastructure improvements to facilitate strategic deployment.
    - » Buffer areas to mitigate encroachment.
    - » Local government actions that ensure compatible development adjacent to base boundaries.

- » Joint planning with community for utilities and land use.
- » Improved quality of life.
- » Better schools.
- » Wide range of jobs.
- » Improved off base housing.
- » Community support for PPV business development on base.
- » Improve the percent of eligible families supported with on-base housing.

***Schedule: Continuing Activities.***

**Policies – General Health and Human Services Needs**

- P.162 Onslow County supports advanced planning for the location of new public schools. Such locations shall serve to reinforce compact growth rather than promoting sprawl in more rural locations. New elementary school locations shall be viewed as a cornerstone of the neighborhoods they are intended to service.
- P.163 Onslow County encourages offers of land for the siting of new schools, particularly in conjunction with new development. Acceptance of such properties shall be based on approved criteria and cooperative planning with the County school administration.
- P.164 Onslow County supports site planning for traffic management and safety in the vicinity of public schools.
- P.165 Onslow County supports the mission of Coastal Carolina Community College in meeting the educational and job readiness requirements of area residents.
- P.166 Onslow County supports the efforts of the County Library System in fostering the development of a literate and well-informed resident population.
- P.167 Onslow County supports efforts to equitably assign the costs of new school construction based on those benefitting most directly from the new facilities. This will include soliciting Department of Defense funding support for additional school facilities.
- P.168 Onslow County supports intergovernmental cooperation with its municipalities.
- P.169 Onslow County supports the continued provision of solid waste disposal, law enforcement, and educational services to all citizens of the County.

- P.170 Onslow County supports North Carolina Division of Waste Management regulation of underground storage tanks.
- P.171 Onslow County generally supports efforts, initiatives, and programs – both public and private – that provide new buildings and facilities, or serve to make existing buildings and facilities accessible and available to physically challenged persons.
- P.172 Onslow County supports efforts and initiatives to provide quality, affordable health care to its citizens including support of the construction of a hospital or primary care facility in or near the County, and the continued effective operation of the Onslow County Health Department.
- P.173 Onslow County supports improvement and expansion of fire protection and emergency management services including fire/rescue services.
- P.174 Onslow County generally supports efforts, programs, laws, and regulations that create a safe, crime free environment for its citizens and visitors.
- P.175 Onslow County supports, subject to available funds, a comprehensive recreational program to provide a broad range of recreational facilities for its citizens.
- P.176 Onslow County supports future park development and open space preservation which will provide for the distribution of recreation and open space opportunities within the County.
- P.177 In determining future sites for park, recreation, and water access facilities, multiple objectives for natural area conservation, visual enhancement, promotion of cultural and historic preservation, watershed and flood prone area protection shall be considered.
- P.178 Onslow County shall continue to work cooperatively with the County school system to maximize the use of recreation facilities located at existing public school sites, and to foster the joint development of additional public park facilities at new public school sites.
- P.179 Onslow County supports identifying, planning for, and developing a system of open space greenways and hiking trails within the County. The use of (1) natural corridors such as streams and floodplains, and (2) man-made corridors such as utility and transportation rights-of-way and easements, shall be emphasized.

- P.180 Onslow County shall work proactively with other local and state governments, utility companies, industries, and other major landowners in the development of walking and bicycling trails for the public.
- P.181 Land acquisition for new park, recreation, and shoreline access sites in advance of need shall be encouraged to achieve desirable locations at cost effective levels.

### **Implementing Actions – General Health and Human Services Needs**

- I.105 Onslow County will prepare an adequate public facilities ordinance, as part of the preparation of the Onslow County UDO, to require that public facilities are available to support/service any approved developments (see I.8, page 36). **Schedule: Fiscal Year 2008-2009 and continuing.**
- I.106 Onslow County will incorporate the provisions of NCGS 153A-331 in the preparation of an Onslow County UDO to ensure that during the approval process of the subdivision of land the consideration of/requirement for recreation and fees dedicating school site reservation and construction of community service facilities is included. **Schedule: Fiscal Year 2008-2009 and continuing.**
- I.107 To effectively manage Onslow County's investment in existing and proposed community facilities and services, the County will:
- Develop a specific capital improvements plan (CIP) with emphasis placed on services and facilities which affect growth and development. **Schedule: Fiscal Year 2010-2011.**
  - Provide the Onslow County Board of Education with locational information for all residential development. **Schedule: Continuing Activity.**
  - If the Onslow County Board of Education identifies specific school sites/properties for future acquisition, the County will amend this plan to identify those sites on the future land use map. **Schedule: Continuing Activity.**
- I.108 Onslow County will continue to provide governmental services including solid waste disposal, law enforcement, educational services, and fire/rescue services to all areas of the County to accommodate anticipated growth. **Schedule: Continuing Activity.**

- I.109 Onslow County will prepare and update annually a capital facilities improvements plan (CIP). **Schedule: Fiscal Year 2009-2010 and continuing.**
- I.110 Onslow County will seek grant monies and/or technical assistance to study the development of a recreational facilities plan (update of the 1998 Park and Recreational Master Plan). This plan should address greenways, canoe trails, and programs for donating/preserving conservation easements. **Schedule: Fiscal Year 2009-2010 and continuing.**
- I.111 Onslow County will encourage developers to incorporate new school sites into the overall design of subdivisions and mixed use planning developments. **Schedule: Continuing Activity.**
- I.112 Onslow County will seek state and federal technical and financial assistance to provide facilities for physically challenged persons. **Schedule: Continuing Activity.**
- I.113 Onslow County will investigate, with the Institute of Government, the use of impact fees as a way of making new development pay for the services demanded. **Schedule: Fiscal Year 2009-2010.**
- I.114 Onslow County will seek educational grants to subsidize in-county continuing education by nearby colleges and universities and support community education programs. **Schedule: Continuing Activity.**
- I.115 Onslow County will implement the following concerning potential releases from home heating oil underground storage tanks:
- Removal of any abandoned or out-of-use underground storage tanks as recommended by the NCDENR Wilmington Regional Office Underground Storage Tank (UST) section.
  - Installation and maintenance of above-ground fuel tanks in accordance with applicable local, state, and federal regulations.
  - Contain and properly restore areas impacted by any chemical or petroleum spills. Ensure that spills of significant quantity are reported to the NC Department of Environment and Natural Resources, Division of Water Quality (Wilmington Regional Office).

- Report immediately to the local Fire Marshall any soils excavated during demolition or construction that show evidence of chemical or petroleum contamination to determine whether explosion or inhalation hazards exist.  
***Schedule: Continuing Activities.***

I.116 Onslow County will implement the following activities to support health care:

- Prevention/intervention.
  - » Expand the Onslow County website with links to federal, state, and local organizations that focus on wellness and/or provide health care resources.
  - » Sponsor public health fairs.
  - » Support wellness initiatives via bike rallies, marathons, fishing tournaments, etc., that provide the County a link with regional and private resources.
  - » Work with state and federal legislators to obtain grant money for initiatives to reduce health care costs.
- Crisis management – individual and area-wide.
  - » Work with local religious groups to provide emergency support systems for large scale or traumatic events.
  - » Continue County-wide test drills of the County's emergency preparedness system.

***Schedule: Continuing Activities.***

I.117 Onslow County will improve the distribution of information on County programs through the following actions:

- Identify existing outlets that are accessible to all citizens to distribute information about County-wide services.
  - » County government.
  - » Municipal governments.
  - » Nonprofit and other civic organizations.
- Create new outlets to distribute information on County-wide services.
  - » Information center at the County government complex.
  - » "How to/Where to" guide for County residents.
  - » Towns and County help each other in distribution of printed information and brochures.
  - » Create a "County Corner" at public libraries where information is available to citizens.

***Schedule: Continuing Activities.***

I.118 Onslow County will coordinate its development with that contained in municipal jurisdictions by supporting the following:

- Coordinate with municipalities to ensure that municipality and County decisions regarding the type and intensity of land uses within and adjacent to the municipal planning areas are consistent with the Future Land Use Map.
- Coordinate with the municipalities to ensure that all new development requiring wells and/or on-site wastewater systems will not be permitted in designated municipal/ONWASA service areas, whenever practicable.
- Seek mutually acceptable standards for public facilities and services with the municipalities to ensure that services can be provided relatively seamlessly across jurisdictional boundaries. While service standards should be the same for similar types of development, regardless of the location of development, they should differentiate the type of planned development (urban, suburban, or rural).
- Coordinate municipal capital improvements plans with those of the County, school districts and other service providers to more efficiently serve the community.

***Schedule: Continuing Activities.***

### **Policies – Community Appearance**

P.182 The important economic, tourism, and community image benefits of attractive major travel corridors through Onslow County shall be recognized. Such entryway corridors shall receive priority attention for improved appearance and development standards, including landscaping, signage, and tree preservation.

P.183 Landscape improvements at existing and new commercial developments, particularly as related to breaking up and softening the appearance of expansive parking areas, shall be encouraged.

P.184 Onslow County shall discourage the inappropriate use of manufactured or site built homes for storage or their abandonment without proper disposal.

P.185 New development, redevelopment, rehabilitation and maintenance of structures and sites should be consistent and supportive of the neighborhood and architectural context of the surrounding area.

- P.186 The significance of street trees in providing visual relief, summer cooling, improved air quality, and livability shall be recognized through public policies to encourage their planting and maintenance.
- P.187 Sign policies and standards shall be periodically updated to enhance community identity and create a high quality business image.
- P.188 Littering of public roadsides and properties, whether from individual "litterbugs" or drivers of inadequately covered trucks, shall not be tolerated. Those who would abuse our local environment and denigrate the image of our area shall be held accountable through appropriate programs and enforcement of litter laws.

### **Implementing Actions – Community Appearance**

- I.119 Onslow County will continue to support its Keep Onslow Beautiful (KOB) program. Specific programs include:

- Swat a Litter Bug Program.
- Loan a Litter Receptacle Program.
- Environmental Elf Program.
- Living Tribute Tree Program.

***Schedule: Continuing Activity.***

- I.120 Onslow County will incorporate building appearance (commercial design standards), landscaping, and signage regulations into the UDO to support the community appearance policies. This will include consideration of special highway corridors along Highways 17, 258, 24, 210, 50, and 53. ***Schedule: Fiscal Year 2008-2009 and continuing.***

- I.121 Onslow County will designate a Community Appearance Committee or Commission with a charge to establish guidelines and procedures for community appearance awards and to conduct studies and make recommendations addressing problems of litter on beaches and along roads. ***Schedule: Fiscal Year 2009-2010 and continuing.*** Example activities will include the following:

- Promote "Adopt-a-Beach," "Beach Sweep," and/or "Adopt-a-Highway" programs and educate the public through local media concerning community appearance needs.
- Use prison labor to clean up and remove debris from road rights-of-way.
- Select recipients of Community Appearance awards and advise the Board on methods by which the community's appearance might be improved including

studies and recommendations as may be necessary to address the problem of litter on beaches and along roads.

- I.122 Onslow County will continue to enforce its junked/inoperable vehicle ordinance to require the removal of junked/abandoned vehicles. ***Schedule: Continuing Activity.***
- I.123 Onslow County will continue to implement current actions to remove abandoned manufactured homes. ***Schedule: Continuing Activity.***

### **Policies – Redevelopment**

- P.189 Onslow County supports repair and reconstruction of privately-owned substandard dwelling units through private funds and/or grants. It supports the enforcement of existing regulations of the District Health Department regarding sanitary conditions.
- P.190 Onslow County will not displace families or unreasonably require building demolition.
- P.191 Onslow County will support redevelopment as specified in the County's Hazard Mitigation Plan.
- P.192 Onslow County supports and encourages the restoration and/or appropriate adaptive reuse of significant and architecturally important historic and cultural structures and sites.

### **Implementing Actions – Redevelopment**

- I.124 Onslow County will seek state and federal financial and technical assistance for community improvements. The County may apply for Community Development Block Grants for the rehabilitation of areas of substandard housing by identifying such areas. ***Schedule: Continuing Activity.***
- I.125 Onslow County will consider updating its minimum housing code. ***Schedule: Fiscal Year 2009-2010.***
- I.126 Onslow County will allow the reconstruction of any structures demolished by natural disaster which will comply with all applicable local and state regulations. ***Schedule: Continuing Activity.***

- I.127 Onslow County will consider accepting donations of unbuildable lots. ***Schedule: Continuing Activity.***
- I.128 Onslow County will consider the need to purchase unbuildable lots on a case-by-case basis. ***Schedule: Continuing Activity.***
- I.129 Onslow County will cooperate with owners who may have to move threatened structures to safer locations and will expedite local permit approvals. ***Schedule: Continuing Activity.***
- I.130 Onslow County will consider the following actions in redevelopment/revitalization areas:
- Waive or reduce administrative, inspection, and/or connection fees to:
    - » Encourage desirable redevelopment proposals that provide for jobs and improved wages.
    - » Stimulate additional redevelopment activity.
    - » Preserve the County’s historic properties.
    - » Support public purpose projects.
  - Revise the development regulations to be responsive to innovative development proposals and existing conditions, including:
    - » Waive site plan requirements for redevelopment proposals if there is no substantial change in use or structure.
    - » Reduce site plan requirements for redevelopment proposals if there is a minor (to be defined in the development regulations) change in use or structure.
- Schedule: Continuing Activities.***

**Implementing Actions – Funding Options:**

- I.131 Onslow County will continue to support state and federal programs that are deemed necessary, cost-effective, and within the administrative and fiscal capabilities of Onslow County. ***Schedule: Continuing Activity.*** These include but are not limited to the following:
- Community Development Block Grant Program.
  - Area Agency on Aging.
  - Emergency Medical Services.
  - JTPA Work Program.
  - Coastal Area Management Act, including shoreline access funds.
  - Small Business Association.

- Economic Development Administration Funds.
- Farmer's Home Administration – Federal Grant Program.
- Federal Emergency Management Program.
- Aid to Families with Dependent Children.
- MEDICAID.
- Day Care.
- Crisis Intervention.
- Department of Defense.

I.132 Onslow County will selectively support state and federal programs related to Onslow County. The County, through its Boards, Commissions, and Committees, will monitor state and federal programs and regulations. It will use opportunities as they are presented to voice support for or to disagree with programs and regulations that are proposed by state and federal agencies. ***Schedule: Continuing Activity.***

I.133 Onslow County officials will continue to work with the US Army Corps of Engineers and any other state and federal agencies to ensure continued dredging and maintenance of channels and rivers as needed to keep these facilities open to navigation. These efforts shall comply with applicable state and federal regulations. Providing borrow or spoil areas and provision of easements for work will be determined on case-by-case basis. The County would encourage spoil material being placed in those areas where easements for such use already exist. Channel maintenance has major economic significance and is worthy of state and federal funding. ***Schedule: Continuing Activity.***

**APPENDIX I**  
**LAND USE PLAN PROFILE**  
**HOLLY RIDGE AND RICHLANDS, NORTH CAROLINA**

# I. TOWN OF HOLLY RIDGE

## A. POPULATION

### 1. Population and Race

The Town of Holly Ridge is located at the junction of US Highway 17 and NC Highway 50. Holly Ridge citizens comprise 0.5% of the Onslow County population. The Town's rate of growth appears to be on a decreasing trend, experiencing a 48.8% population increase between 1980 and 1990 and a 14.1% increase between 1990 and 2000. Females comprise 53.7% of the population. Over the last twenty years there has been a slight shift in the racial composition of the Town. The overall percentage of the white population decreased 7.2 percentage points between 1980 and 1990 and decreased 5.7 percentage points between 1990 and 2000 for a total decrease of 13 percentage points, slightly higher than the 3.4 percentage point decrease for the county. The black population percentage increased 5.5 percentage points between 1980 and 1990 and increased 3.6 percentage points between 1990 and 2000 for a total increase of 9.1 percentage points, whereas the county's black population decreased 1.9 percentage points. The other races saw slight increases between 1980 and 2000 in Holly Ridge and the county. Persons with Hispanic origin were reported for the first time in the 2000 Census. In Holly Ridge, 3.9% of residents were reported to be of Hispanic or Latino origin compared to 7.2% in the county. Following is a breakdown of the change in population by race for the Town of Holly Ridge and Onslow County from 1980 to 2000.

Table I-1: Town of Holly Ridge and Onslow County Racial Composition, 1980-2000

	Holly Ridge		Onslow County	
	Total	Percentage	Total	Percentage
<b>1980 Population</b>	<b>489</b>	<b>100.0%</b>	<b>112,784</b>	<b>100.0%</b>
White	454	92.8%	85,123	75.5%
Black	27	5.5%	23,006	20.4%
Other	8	1.6%	4,655	4.1%
<b>1990 Population</b>	<b>728</b>	<b>100.0%</b>	<b>149,838</b>	<b>100.0%</b>
White	623	85.6%	111,939	74.7%
Black	80	11.0%	29,808	19.9%
American Indian, Eskimo, Aleut	7	1.0%	939	0.6%
Asian or other Pacific Islander	18	2.5%	2,994	2.0%
Other	0	0.0%	4,158	2.8%
<b>2000 Population</b>	<b>831</b>	<b>100.0%</b>	<b>150,355</b>	<b>100.0%</b>
White	663	79.8%	108,351	72.1%
Black	121	14.6%	27,790	18.5%
American Indian and Alaska Native	11	1.3%	1,108	0.7%
Asian	5	0.6%	2,526	1.7%
Native Hawaiian and Other Pac. Is.	1	0.1%	283	0.2%
Other race	21	2.5%	5,449	3.6%
Two or more races	9	1.1%	4,848	3.2%
Hispanic or Latino (of any race)	32	3.9%	10,896	7.2%

Source: North Carolina State Data Center.

## 2. Age Composition

Between 1990 and 2000, the Town experienced increases in all of the age groups listed in the table below except the 5 to 9, 10 to 14, and 15 to 19 age groups. The largest age group during both censuses was the 25 to 34 age group which represented 15.9% of the town's population in 1990 and 15.0% in 2000. Comparatively, the 25 to 34 age group was the largest in the county in 1990 but that age group slipped to the second largest behind the 20 to 24 age group in 2000. Fourteen percent (14.3%) of the town's population is over 65, an 83% increase since 1990. Almost nine percent (8.9%) of the town is under 5, which is only slightly higher than in 1990. Over 55% of the population is between 20 and 64 indicating a strong working age population. The under 5 population is generally in line with the county, however, the town's 65 and over population is higher than the county. The following table provides the change in age composition for Holly Ridge and Onslow County between 1990 and 2000.

Table I-2: Town of Holly Ridge and Onslow County  
Age Composition, 1990 -2000

Age Groups	Holly Ridge				Onslow County			
	1990	% of Total	2000	% of Total	1990	% of Total	2000	% of Total
Under 5	58	8.0%	74	8.9%	13,588	9.1%	13,288	8.8%
5 to 9	62	8.5%	54	6.5%	10,367	6.9%	10,594	7.0%
10 to 14	80	11.0%	66	7.9%	8,141	5.4%	9,854	6.6%
15 to 19	56	7.7%	54	6.5%	13,360	8.9%	13,686	9.1%
20 to 24	47	6.5%	65	7.8%	31,897	21.3%	27,775	18.5%
25 to 34	116	15.9%	125	15.0%	33,348	22.3%	23,762	15.8%
35 to 44	91	12.5%	103	12.4%	16,936	11.3%	20,206	13.4%
45 to 54	84	11.5%	95	11.4%	8,728	5.8%	12,971	8.6%
55 to 64	69	9.5%	76	9.1%	6,802	4.5%	8,720	5.8%
65 to 74	47	6.5%	61	7.3%	4,367	2.9%	6,010	4.0%
75 to 84	15	2.1%	44	5.3%	1,831	1.2%	2,760	1.8%
85 and over	3	0.4%	14	1.7%	473	0.3%	729	0.5%
Total Population	728	100.0%	831	100.0%	149,838	100.0%	150,355	100.0%

Source: North Carolina State Data Center.

## 3. Educational Attainment

The educational attainment of Holly Ridge citizens is slightly lower than that of the county as a whole. Seventy-three percent (73.4%) of Holly Ridge citizens that are 25 and older have graduated from high school compared to 84.3% of county residents. In addition, the percentage of persons with a Bachelor's Degree or Graduate/Professional Degree is lower than the county. Seven percent (7.1%) of Holly Ridge citizens have a Bachelor's Degree or Graduate/Professional Degree compared to 14.8% of Onslow County residents. The following table indicates the educational attainment for residents of Holly Ridge and Onslow County.

Table I-3: Town of Holly Ridge and Onslow County  
Educational Attainment, 1990-2000

Educational Attainment	Holly Ridge		Onslow County	
	Total	% of total	Total	% of total
Less than 9th grade	38	7.5%	3,643	4.8%
Ninth to twelfth grade	96	19.0%	8,161	10.8%
High school graduate	184	36.4%	24,711	32.8%
Some college, no degree	115	22.8%	21,553	28.6%
Associate's degree	36	7.1%	6,097	8.1%
Bachelor's degree	29	5.7%	7,770	10.3%
Graduate/Professional degree	7	1.4%	3,351	4.5%
Total population 25 years and over	505	100.0%	75,286	100.0%

Source: North Carolina State Data Center.

## B. HOUSING

### 1. **Housing Occupancy and Tenure**

The 2000 US Census reported that the Town of Holly Ridge had 498 housing units, a 33.9% increase in dwelling units from 1990. Sixty-four and half percent (64.5%) of the units are occupied. Of the 321 occupied units, 190, or 59.2% are owner-occupied. This percentage is slightly higher than the county's number of 58.1%. The percentage of vacant dwelling is much higher for Holly Ridge and for the county. The following table provides information regarding occupancy and tenure for Holly Ridge (1990 and 2000) and Onslow County (2000).

Table I-4: Town of Holly Ridge and Onslow County  
Housing Occupancy and Tenure, 1990 and 2000

	Holly Ridge				Onslow County	
	1990		2000		2000	
	Total	% of Total	Total	% of Total	Total	% of Total
Total Housing Units	372	100.0%	498	100.0%	55,726	100.0%
Vacant:	100	26.9%	177	35.5%	7,604	13.6%
For rent	13	13.0%	17	9.6%	2,323	30.5%
For sale only	6	6.0%	5	2.8%	840	11.0%
Rented or sold, not occupied	42	42.0%	2	1.1%	326	4.3%
For seasonal, recreational, or occasional use	31	31.0%	144	81.4%	2,906	38.2%
For migrant workers	0	0.0%	0	0.0%	11	0.1%
Other vacant	8	8.0%	9	5.1%	1,198	15.8%
Occupied:	272	73.1%	321	64.5%	48,122	86.4%
Owner-occupied	163	59.9%	190	59.2%	27,973	58.1%
Renter-occupied	109	40.1%	131	40.8%	20,149	41.9%

Source: North Carolina State Data Center.

## 2. Units in Structure

Holly Ridge's housing stock consists of 29.7% single-family, 5.2% multi-family, 53.3% mobile homes, and 11.0% boat, RV, van, etc. The percentage of single-family homes is considerably lower than the percentage for the county (54.4%). The breakdown of units in structure is provided below.

Table I-5: Town of Holly Ridge and Onslow County  
Units in Structure, 2000

Units in Structure	Holly Ridge		Onslow County	
	Total	% of Total	Total	% of Total
1-unit, detached	118	24.0%	30,328	54.4%
1-unit, attached	28	5.7%	4,659	8.4%
2 units	2	0.4%	1,530	2.7%
3 or 4 units	15	3.0%	2,206	4.0%
5 to 9 units	9	1.8%	1,303	2.3%
10 to 19 units	0	0.0%	576	1.0%
20 units or more	0	0.0%	1,332	2.4%
Mobile homes	262	53.3%	13,585	24.4%
Boat, RV, van, etc.	58	11.8%	207	0.4%
Total	492	100.0%	55,726	100.0%

Source: North Carolina State Data Center.

## 3. Age of Structure

US Census 2000 data reports that 7.3% of dwellings were built before 1960. Almost twenty-four percent (23.8%) of structures were built between 1990 and 2000. Over half of structures have been built since 1980. The median year built for Holly Ridge's housing units is 1983 compared to 1980 in Onslow County.

Table I-6: Town of Holly Ridge  
Age of Structure, 2000

Year Structure Built	Number of Structures	% of Total
1999 to March 2000	4	0.8%
1995 to 1998	49	10.0%
1990 to 1994	64	13.0%
1980 to 1989	187	38.0%
1970 to 1979	99	20.1%
1960 to 1969	53	10.8%
1940 to 1959	34	6.9%
1939 or earlier	2	0.4%
Total	492	100.0%

Source: North Carolina State Data Center.

#### 4. Housing Value

The value of owner-occupied housing has increased significantly since 1990. The percentage of houses with values less than \$50,000 decreased from 48.1% in 1990 to 12.1% in 2000. The decrease was also significant for Onslow County which saw a decrease from 27.8% in 1990 to 7.0% in 2000. The percentage of homes valued at or over \$100,000 or more increased from 6.2% in 1990 to 28.6% in 2000. The county's percentage also increased with 12% being valued at or over \$100,000 in 1990 to 33.5% in 2000. The median value of homes are quite similar. For Holly Ridge, the median value for owner occupied housing units is \$85,400 compared to \$85,900 for the county. The following table indicates the housing value percentages for Holly Ridge and Onslow County between 1990 and 2000.

Table I-7: Town of Holly Ridge and Onslow County  
Age of Structure, 2000

Housing Value	Holly Ridge		Onslow County	
	1990	2000	1990	2000
Less than \$50,000	48.1%	12.1%	27.8%	7.0%
\$50,000 - \$99,999	45.7%	59.3%	60.3%	59.4%
\$100,000 - \$149,999	6.2%	25.3%	8.3%	20.4%
\$150,000 - \$199,999	0.0%	1.1%	2.1%	7.3%
\$200,000 - \$299,999	0.0%	0.0%	1.2%	4.1%
\$300,000 - \$499,999	0.0%	0.0%	0.3%	1.2%
\$500,000 or more	0.0%	2.2%	0.1%	0.5%
Total	100.0%	100.0%	100.0%	100.0%

Source: US Census Bureau.

#### C. ECONOMY

##### 1. Household Income

The percentage of households with incomes that are less than \$25,000 is higher in the Town of Holly Ridge than Onslow County. Forty-eight percent (48.3%) of Holly Ridge citizens have household incomes that are less than \$25,000 compared to 33.6% in the county. The percentage of households making \$75,000 or more is 3.5 percentage points higher in the county than the town. The median household income in the county is 31.9% higher than the median household income in Holly Ridge. Table I-8 provides a breakdown of household income information for Holly Ridge and Onslow County.

Table I-8: Town of Holly Ridge and Onslow County Household Income, 1990-2000

Household Income	Holly Ridge		Onslow County	
	Total	% of Total	Total	% of Total
Less than \$10,000	47	14.1%	4,153	8.6%
\$10,000 to \$14,999	38	11.4%	3,425	7.1%
\$15,000 to \$24,999	76	22.8%	8,598	17.9%
\$25,000 to \$34,999	65	19.5%	8,768	18.2%
\$35,000 to \$49,999	41	12.3%	9,847	20.5%
\$50,000 to \$74,999	44	13.2%	8,453	17.6%
\$75,000 to \$99,999	22	6.6%	2,873	6.0%
\$100,000 to \$149,999	0	0.0%	1,413	2.9%
\$150,000 or more	0	0.0%	577	1.2%
Total	333	100.0%	48,107	100.0%

Source: North Carolina State Data Center.

## 2. Employment By Industry

According to the 2000 US Census, 17.1% of the town's civilian labor force is unemployed. The majority of the employed civilian population 16 and older are employed in the manufacturing (17.7%), educational, health and social services industries (15.5%), construction (14.2%), and retail trade (14.2%) industries. The following table provides a summary of employment by industry in Holly Ridge for those persons 16 years and older.

Table I-9: Town of Holly Ridge Employment by Industry, 2000

Industry	2000	% of Total
Agriculture, forestry, fishing and hunting, and mining	6	1.9%
Construction	45	14.2%
Manufacturing	56	17.7%
Wholesale trade	5	1.6%
Retail trade	45	14.2%
Transportation and warehousing, and utilities	12	3.8%
Information	3	0.9%
Finance, insurance, real estate, and rental and leasing	8	2.5%
Professional, scientific, management, administrative, and waste management services	24	7.6%
Educational, health, and social services	49	15.5%
Arts, entertainment, recreation, accommodation and food services	28	8.9%
Other services (except public administration)	24	7.6%
Public administration	11	3.5%
Total Persons Employed 16 years and older	316	100.0%

Source: North Carolina State Data Center.

## D. NATURAL SYSTEMS ANALYSIS

### 1. Flood Zones

The following table provides a breakdown of flood zones that occur in Holly Ridge and its ETJ. For an explanation of these Special Flood Hazard Areas, please see pages 33 and 34 of the Onslow County Land Use Plan.

Table I-10: Town of Holly Ridge  
Flood Hazard Areas

	Town Limits		ETJ		Planning Area	
	Acres	% from Total	Acres	% from Total	Acres	% from Total
AE	6.20	0.6%	85.69	3.2%	91.88	2.5%
AEFW	2.31	0.2%	11.88	0.4%	14.20	0.4%
Shaded X	2.53	0.2%	14.44	0.5%	16.97	0.5%
Total	11.04	1.0%	112.01	4.2%	123.05	3.3%

Source: Federal Emergency Management Agency.

### 2. Hurricane Storm Surge Inundation

Following is a breakdown of hurricane storm surge inundation by category for areas within Holly Ridge and its ETJ. For an explanation of the SLOSH model and definitions of each hurricane category, please see pages 35 and 36 of the Onslow County Land Use Plan.

Table I-11: Town of Holly Ridge  
Storm Surge Inundation Areas

	Town Limits		ETJ		Planning Area	
	Acres	% from Total	Acres	% from Total	Acres	% from Total
Category 1&2	0.00	0.0%	0.00	0.0%	0.00	0.0%
Category 3	0.00	0.0%	69.42	2.6%	69.42	1.9%
Category 4&5	18.48	1.8%	441.90	16.4%	460.37	12.3%
Total	18.48	1.8%	441.90	16.4%	460.37	12.3%

Source: National Oceanic and Atmospheric Administration.

### 3. Soil Types

Below is information regarding the distribution of soil types for the Holly Ridge corporate limits. For information regarding the soil types, please see pages 39 and 40 of the Onslow County Land Use Plan.

Table I-12: Town of Holly Ridge  
Soil Classifications

Soils	Planning Area	
	Acres	% from Total
AnB	102.80	2.8%
BaB	446.52	12.0%
FoA	0.50	0.0%
KuB	204.18	5.5%
Ln	1,897.01	51.1%
Mk	206.64	5.6%
Mu	440.89	11.9%
On	35.13	0.9%
Pa	33.12	0.9%
Pt	144.76	3.9%
St	76.85	2.1%
To	18.07	0.5%
Ur	53.62	1.4%
WaB	43.75	1.2%
Wo	11.83	0.3%
TOTAL	3,715.69	100.0%

Source: US Department of Agriculture.

#### 4. Fragile Areas and Areas of Environmental Concern (AEC)

The following table provides a breakdown of Fragile Areas and AECs in Holly Ridge and its ETJ. Pages 44 through 57 of the Onslow County Land Use Plan provide details regarding estuarine waters and shorelines, public trust areas, coastal wetlands, and outstanding resource waters.

Table I-13: Town of Holly Ridge  
Wetlands

	Planning Area		Town Limits		ETJ	
	Acres	% from Total	Acres	% from total	Acres	% from total
Cleared Hardwood Flat	0.29	0.01%	0.00	0.0%	0.29	0.01%
Cleared Headwater Swamp	0.11	0.00%	0.00	0.0%	0.11	0.00%
Cleared Pine Flat	29.03	0.78%	4.22	0.4%	24.81	0.92%
Cleared Pocosin	8.75	0.23%	8.29	0.8%	0.46	0.02%
Cleared Riverine Swamp Forest	0.51	0.01%	0.43	0.04%	0.08	0.003%
Cutover Hardwood Flat	1.08	0.03%	0.02	0.002%	1.06	0.04%
Cutover Headwater Swamp	2.66	0.07%	2.66	0.3%	0.00	0.00%
Cutover Pine Flat	29.91	0.80%	2.23	0.2%	27.67	1.03%
Cutover Pocosin	4.39	0.12%	3.52	0.3%	0.87	0.03%

Table I-13 (continued)

	Planning Area		Town Limits		ETJ	
	Acres	% from Total	Acres	% from total	Acres	% from total
Cutover Riverine Swamp Forest	0.22	0.01%	0.04	0.004%	0.17	0.01%
Depressional Swamp Forest	0.04	0.00%	0.00	0.0%	0.04	0.001%
Drained Bottomland Hardwood	3.55	0.09%	0.00	0.0%	3.55	0.13%
Drained Pine Flat	16.93	0.45%	0.00	0.0%	16.93	0.63%
Hardwood Flat	49.26	1.32%	1.21	0.1%	48.05	1.79%
Headwater Swamp	24.79	0.66%	4.39	0.4%	20.41	0.76%
Human Impacted	12.55	0.34%	0.00	0.0%	12.55	0.47%
Managed Pineland	843.81	22.54%	176.91	16.8%	666.91	24.80%
Pine Flat	409.18	10.93%	32.63	3.1%	376.56	14.00%
Pocosin	131.26	3.51%	13.90	1.3%	117.36	4.36%
Riverine Swamp Forest	147.60	3.94%	29.76	2.8%	117.84	4.38%
<b>TOTAL</b>	<b>1,715.92</b>	<b>45.84%</b>	<b>280.20</b>	<b>26.6%</b>	<b>1,435.72</b>	<b>53.40%</b>

Source: North Carolina Department of Environment and Natural Resources.

## 5. Environmental Composite Map

The following table describes the environmental composite acreages by class for Holly Ridge. Clarification regarding the purpose of the composite and an explanation of the classes can be found on pages 67 and 68 of the Onslow County Land Use Plan.

Table I-14: Town of Holly Ridge Environmental Composite

	Acres	% from Total
Class I	2,002.45	53.5%
Class II	163.13	4.4%
Class III	1,578.08	42.2%
Total	3,743.66	100.0%

Source: Holland Consulting Planners, Inc., and NC Center for Geographic Analysis.

E. COMMUNITY FACILITIES

**1. Transportation**

The Town of Holly Ridge is located approximately 21 miles south of Jacksonville on NC Highway 17. Holly Ridge is located immediately north of the Onslow/Pender County line. The main east/west thoroughfare traversing through Holly Ridge is Highway 50, which provides access to Surf City along the coast and Duplin County to the north.

**2. Health Care**

The citizens of Holly Ridge rely on Onslow County health care facilities. These facilities are discussed in detail within the community facilities section of the plan (page 85 of the Onslow County Land Use Plan).

**3. Law Enforcement**

The Town of Holly Ridge Police Department is located at 212 North Dyson Street. The police department consists of six full-time and four part-time officers. The town maintains six patrol cars that are utilized by the department's 10 officers.

**4. Fire/EMS**

The Town of Holly Ridge is served by the Holly Ridge Volunteer Fire and Rescue Department. This department currently has 22 volunteers, and houses first responders Monday through Friday from 8-5 PM. All calls for fire protections are routed through the Onslow County E-911 system. EMS service is provided through Onslow County Emergency Management. Holly Ridge is served by station 6 located at 728 NC Highway 210, Sneads Ferry. For more information related to fire and EMS services, refer to pages 87 & 88 of the Onslow County Land Use Plan.

**5. Recreation**

The Town of Holly Ridge maintains a municipal park located at the corner of Hines and Craft Street. Facilities at this park include: baseball field (lighted), bathrooms, concession facilities, picnic pavilion, playground, and soccer fields. The town also operates Morris Landing in conjunction with the Coastal Federation. Morris Landing is a 52-acre facility within the corporate limits of Holly Ridge that provides opportunities for fishing and outdoor recreation.

**6. Administration**

The Town of Holly Ridge operates under a council-manager form of government.

## 7. Water/Sewer System

Water and sewer service is provided throughout the corporate limits of Holly Ridge by the Onslow Water and Sewer Authority (ONWASA).

## 8. Schools

The following schools serve the school age children of the Town of Holly Ridge:

Table I-15: Town of Holly Ridge  
School Enrollment

Facility	Enrollment	Licensed Staffing	Student Capacity	Capacity Utilized
Dixon Elementary	773	53	644	120.0%
Dixon Middle	488	34	634	77.0%
Dixon High School	560	44	555	100.9%

Source: Onslow County Public Schools.

## F. EXISTING LAND USE

There are approximately 5,525 acres in Holly Ridge's planning jurisdiction. The most significant land use is vacant land (86.6%). Single-family residential is also a significant land use within the planning jurisdiction (6.8%). Industrial land use makes up slightly over three percent. Of the total developed acreage (739.0), the major land uses are single-family residential (51%), industrial (24%), and commercial (12.5%). There is no core or central commercial center. Most commercial development is linear along US Highway 17. The following table provides approximate land use acreages for Holly Ridge's entire planning jurisdiction.

Table I-16: Town of Holly Ridge  
Existing Land Use Acreages

Land Use	Town Limits		ETJ		Total	
	Acres	% of Total	Acres	% of Total	Acres	% of Total
Commercial	71.4	3.8%	21.2	0.6%	92.6	1.7%
Industrial	170.2	8.9%	7.0	0.2%	177.2	3.2%
Multi-family	32.6	1.7%	0.4	0.0%	33.0	0.6%
Office & Institutional	25.3	1.3%	36.5	1.0%	61.8	1.1%
Single-Family Residential	185.4	9.7%	189.0	5.2%	374.4	6.8%
Vacant	1,418.3	74.5%	3,368.0	93.0%	4,786.3	86.6%
Total	1,903.1	100.0%	3,622.1	100.0%	5,525.3	100.0%

Source: Holland Consulting Planners, Inc.

## II. TOWN OF RICHLANDS

### A. POPULATION

#### 1. Population and Race

The Town of Richlands is located off US Highway 258 in northern Onslow County. Richlands citizens comprise 0.6% of the Onslow County population. The Town experienced a 20.7% population increase between 1980 and 1990 and a 6.8% decrease between 1990 and 2000. Females comprise 56.1% of the population. Over the last twenty years there has been a slight shift in the racial composition of the Town. The overall percentage of the white population decreased 7.0 percentage points between 1980 and 1990 and decreased 5.7 percentage points between 1990 and 2000 for a total decrease of 12.7 percentage points, considerable higher than the 3.4 percentage point decrease for the county. The black population percentage increased 7.0 percentage points between 1980 and 1990 and increased 2.7 percentage points between 1990 and 2000 for a total increase of 9.7 percentage points, whereas the county's black population decreased 1.9 percentage points. The other races saw no increase between 1990 and 2000 and a 3.5% increase between 1990 and 2000 in Richlands. Persons with Hispanic origin were reported for the first time in the 2000 census. In Richlands, 2.2% of residents were reported to be of Hispanic or Latino origin compared to 7.2% in the county. Following is a breakdown of the change in population by race for the Town of Richlands and Onslow County from 1980 to 2000.

Table II-1: Town of Richlands and Onslow County  
Racial Composition, 1980-2000

	Richlands		Onslow County	
	Total	Percentage	Total	Percentage
<b>1980 Population</b>	<b>825</b>	<b>100.0%</b>	<b>112,784</b>	<b>100.0%</b>
White	694	84.1%	85,123	75.5%
Black	127	15.4%	23,006	20.4%
Other	4	0.5%	4,655	4.1%
<b>1990 Population</b>	<b>996</b>	<b>100.0%</b>	<b>149,838</b>	<b>100.0%</b>
White	768	77.1%	111,939	74.7%
Black	223	22.4%	29,808	19.9%
American Indian, Eskimo, Aleut	1	0.1%	939	0.6%
Asian or other Pacific Islander	1	0.1%	2,994	2.0%
Other	3	0.3%	4,158	2.8%
<b>2000 Population</b>	<b>928</b>	<b>100.0%</b>	<b>150,355</b>	<b>100.0%</b>
White	663	71.4%	108,351	72.1%
Black	233	25.1%	27,790	18.5%
American Indian and Alaska Native	4	0.4%	1,108	0.7%
Asian	7	0.8%	2,526	1.7%
Native Hawaiian and Other Pac. Is.	0	0.0%	283	0.2%
Other race	7	0.8%	5,449	3.6%
Two or more races	14	1.5%	4,848	3.2%
Hispanic or Latino (of any race)	20	2.2%	10,896	7.2%

Source: North Carolina State Data Center.

## 2. Age Composition

Between 1990 and 2000, the Town experienced increases in the following five age groups: 15 to 19, 35 to 44, 45 to 54, 55 to 64, and 85 and over age groups. The largest age group during both censuses was the 35 to 44 age group which represented 13.9% of the town's population in 1990 and 16.2% in 2000. Comparatively, the 25 to 34 age group was the largest in the county in 1990 but that age group slipped to the second largest behind the 20 to 24 age group in 2000. Almost nineteen percent (18.7%) of the population is over 65, an 12.9% increase since 1990. Five percent (5.3%) of the town is under 5, which is slightly lower than in 1990. Over 55% of the population is between 20 and 64 indicating a strong working age population. The under 5 population is lower than the county, however, the town's 65 and over population is considerably higher than the county. The following table provides the change in age composition for Richlands and Onslow County between 1990 and 2000.

Table II-2: Town of Richlands and Onslow County  
Age Composition, 1990 -2000

Age Groups	Richlands				Onslow County			
	1990	% of Total	2000	% of Total	1990	% of Total	2000	% of Total
Under 5	72	7.2%	49	5.3%	13,588	9.1%	13,288	8.8%
5 to 9	67	6.7%	48	5.2%	10,367	6.9%	10,594	7.0%
10 to 14	78	7.8%	64	6.9%	8,141	5.4%	9,854	6.6%
15 to 19	78	7.8%	80	8.6%	13,360	8.9%	13,686	9.1%
20 to 24	70	7.0%	50	5.4%	31,897	21.3%	27,775	18.5%
25 to 34	134	13.5%	91	9.8%	33,348	22.3%	23,762	15.8%
35 to 44	138	13.9%	150	16.2%	16,936	11.3%	20,206	13.4%
45 to 54	101	10.1%	126	13.6%	8,728	5.8%	12,971	8.6%
55 to 64	104	10.4%	96	10.3%	6,802	4.5%	8,720	5.8%
65 to 74	84	8.4%	92	9.9%	4,367	2.9%	6,010	4.0%
75 to 84	58	5.8%	56	6.0%	1,831	1.2%	2,760	1.8%
85 and over	12	1.2%	26	2.8%	473	0.3%	729	0.5%
Total Population	996	100.0%	928	100.0%	149,838	100.0%	150,355	100.0%

Source: North Carolina State Data Center

## 3. Educational Attainment

The educational attainment of Richlands citizens is slightly lower than that of the county as a whole. Sixty-nine and one half percent (69.5%) of Richlands citizens 25 years and older have graduated from high school compared to 84.3% of county residents. The percentage of persons with a Bachelor's Degree or Graduate/Professional Degree is only slightly lower than the county. Thirteen percent (13.0%) of Richlands citizens have a Bachelor's Degree or Graduate/Professional Degree compared to 14.8% of Onslow County residents. The following table indicates the educational attainment for residents of Richlands and Onslow County.

Table II-3: Town of Richlands and Onslow County  
Educational Attainment, 1990-2000

Educational Attainment	Richlands		Onslow County	
	Total	% of Total	Total	% of Total
Less than 9th grade	92	14.6%	3,643	4.8%
Ninth to twelfth grade	101	16.0%	8,161	10.8%
High school graduate	177	28.0%	24,711	32.8%
Some college, no degree	144	22.8%	21,553	28.6%
Associate's degree	36	5.7%	6,097	8.1%
Bachelor's degree	57	9.0%	7,770	10.3%
Graduate/Professional degree	25	4.0%	3,351	4.5%
Total population 25 years and over	632	100.0%	75,286	100.0%

Source: North Carolina State Data Center.

## B. HOUSING

### 1. **Housing Occupancy and Tenure**

The 2000 US Census reported that the Town of Richlands had 424 housing units, a 1.6% decrease in dwelling units from 1990. Ninety-four percent (94.1%) of the units are occupied. Of the 399 occupied units, 252, or 63.2% are owner-occupied. This percentage is higher than the county's number of 58.1%. The percentage of vacant dwelling is lower for Richlands than for the county. The following table provides information regarding occupancy and tenure for Richlands (1990 and 2000) and Onslow County (2000).

Table II-4: Town of Richlands and Onslow County  
Housing Occupancy and Tenure, 1990 and 2000

	Richlands				Onslow County	
	1990		2000		2000	
	Total	% of Total	Total	% of Total	Total	% of Total
Total Housing Units	431	100.0%	424	100.0%	55,726	100.0%
Vacant:	45	10.4%	25	5.9%	7,604	13.6%
For rent	16	35.6%	8	32.0%	2,323	30.5%
For sale only	12	26.7%	1	4.0%	840	11.0%
Rented or sold, not occupied	1	2.2%	4	16.0%	326	4.3%
For seasonal, recreational, or occasional use	0	0.0%	2	8.0%	2,906	38.2%
For migrant workers	0	0.0%	0	0.0%	11	0.1%
Other vacant	16	35.6%	10	40.0%	1,198	15.8%
Occupied:	386	89.6%	399	94.1%	48,122	86.4%
Owner-occupied	257	66.6%	252	63.2%	27,973	58.1%
Renter-occupied	129	33.4%	147	36.8%	20,149	41.9%

Source: North Carolina State Data Center.

## 2. Units in Structure

Richlands' housing stock consists of 69.9% single-family, 15.0% multi-family, and 15.2% mobile homes. The percentage of single-family homes is higher than the percentage for the county (54.4%). The breakdown of units in structure is provided in Table II-5.

Table II-5: Town of Richlands and Onslow County  
Units in Structure, 2000

Units in Structure	Richlands		Onslow County	
	Total	% of Total	Total	% of Total
1-unit, detached	286	67.8%	30,328	54.4%
1-unit, attached	9	2.1%	4,659	8.4%
2 units	10	2.4%	1,530	2.7%
3 or 4 units	25	5.9%	2,206	4.0%
5 to 9 units	19	4.5%	1,303	2.3%
10 to 19 units	7	1.7%	576	1.0%
20 units or more	2	0.5%	1,332	2.4%
Mobile homes	64	15.2%	13,585	24.4%
Boat, RV, van, etc.	0	0.0%	207	0.4%
Total	422	100.0%	55,726	100.0%

Source: North Carolina State Data Center

## 3. Age of Structure

US Census 2000 data reports that 46.9% of dwellings were built before 1960. Twelve percent (12.4%) of structures were built between 1990 and 2000. Over half of structures have been built since 1970. The median year built for Richlands' housing units is 1963 compared to 1980 in Onslow County.

Table II-6: Town of Richlands  
Age of Structure, 2000

Year Structure Built	Number of Structures	% of Total
1999 to March 2000	7	1.7%
1995 to 1998	21	5.0%
1990 to 1994	24	5.7%
1980 to 1989	72	17.1%
1970 to 1979	55	13.0%
1960 to 1969	45	10.7%
1940 to 1959	122	28.9%
1939 or earlier	76	18.0%
Total	422	100.0%

Source: North Carolina State Data Center.

#### 4. Housing Value

The value of owner-occupied housing has increased significantly since 1990. The percentage of houses with values less than \$50,000 decreased from 54.0% in 1990 to 23.8% in 2000. The decrease was also significant for Onslow County which saw a decrease from 27.8% in 1990 to 7.0% in 2000. The percentage of homes valued at or over \$100,000 or more increased from 8.5% in 1990 to 32.7% in 2000. The county's percentage also increased with 12% being valued at or over \$100,000 in 1990 to 33.5% in 2000. The median value of homes is slightly lower in Richlands than the county. For Richlands, the median value for owner-occupied housing units is \$79,100 compared to \$85,900 for the county. The following table indicates the housing value percentages for Richlands and Onslow County between 1990 and 2000.

Table II-7: Town of Richlands and Onslow County  
Age of Structure, 2000

Housing Value	Richlands		Onslow County	
	1990	2000	1990	2000
Less than \$50,000	54.0%	23.8%	27.8%	7.0%
\$50,000 - \$99,999	37.4%	43.6%	60.3%	59.4%
\$100,000 - \$149,999	4.5%	16.8%	8.3%	20.4%
\$150,000 - \$199,999	2.0%	11.9%	2.1%	7.3%
\$200,000 - \$299,999	2.0%	3.0%	1.2%	4.1%
\$300,000 - \$499,999	0.0%	1.0%	0.3%	1.2%
\$500,000 or more	0.0%	0.0%	0.1%	0.5%
Total	100.0%	100.0%	100.0%	100.0%

Source: US Census Bureau.

### C. ECONOMY

#### 1. Household Income

The percentage of households with incomes that are less than \$25,000 is higher in the Town of Richlands than Onslow County. Almost fifty-eight percent (57.8%) of Richlands' citizens have household incomes that are less than \$25,000 compared to 33.6% in the county. However, the percentage of households making \$75,000 or more is 3.1 percentage points higher in the town than the county. The median household income in the county is 66.6% higher than the median household income in Richlands. Table II-8 provides a breakdown of household income information for Richlands and Onslow County.

Table II-8: Town of Richlands and Onslow County  
Household Income, 1990-2000

Household Income	Richlands		Onslow County	
	Total	% of Total	Total	% of Total
Less than \$10,000	113	28.5%	4,153	8.6%
\$10,000 to \$14,999	43	10.9%	3,425	7.1%
\$15,000 to \$24,999	73	18.4%	8,598	17.9%
\$25,000 to \$34,999	37	9.3%	8,768	18.2%
\$35,000 to \$49,999	43	10.9%	9,847	20.5%
\$50,000 to \$74,999	35	8.8%	8,453	17.6%
\$75,000 to \$99,999	22	5.6%	2,873	6.0%
\$100,000 to \$149,999	9	2.3%	1,413	2.9%
\$150,000 or more	21	5.3%	577	1.2%
Total	396	100.0%	48,107	100.0%

Source: North Carolina State Data Center.

## 2. Employment By Industry

According to the 2000 US Census, 8.0% of the town's civilian labor force is unemployed. The majority of the employed civilian population 16 and older are employed in the educational, health and social services industries (23.9%) and retail trade (17.4%) industries. The following table provides a summary of employment by industry in Richlands for those persons 16 years and older.

Table II-9: Town of Richlands  
Employment by Industry, 2000

Industry	2000	% of Total
Agriculture, forestry, fishing and hunting, and mining	8	2.2%
Construction	32	8.7%
Manufacturing	16	4.3%
Wholesale trade	12	3.3%
Retail trade	64	17.4%
Transportation and warehousing, and utilities	19	5.2%
Information	6	1.6%
Finance, insurance, real estate, and rental and leasing	21	5.7%
Professional, scientific, management, administrative, and waste management services	26	7.1%
Educational, health, and social services	88	23.9%
Arts, entertainment, recreation, accommodation and food services	31	8.4%
Other services (except public administration)	27	7.3%
Public administration	18	4.9%
Total Persons Employed 16 years and older	368	100.0%

Source: North Carolina State Data Center.

D. NATURAL SYSTEMS ANALYSIS

**1. Flood Zones**

The following table provides a breakdown of flood zones that occur in Richlands and its ETJ. For an explanation of Special Flood Hazard Areas that fall within Richlands, please see pages 33 and 34 of the Onslow County Land Use Plan.

Table II-10: Town of Richlands  
Flood Hazard Areas

	Town Limits		ETJ		Planning Area	
	Acres	% from Total	Acres	% from Total	Acres	% from Total
AE	84.41	8.7%	429.51	50.8%	513.92	14.0%
AEFW	31.25	3.2%	279.62	33.1%	310.87	8.5%
Shaded X	14.07	1.5%	136.55	16.1%	150.62	4.1%
Total	129.73	13.4%	845.68	100.0%	975.41	26.5%

Source: Federal Emergency Management Agency.

**2. Soil Types**

Below is information regarding the distribution of soil types for the Richlands corporate limits. For information regarding the soil types found within Richlands, please see pages 39 and 40 of the Onslow County Land Use Plan.

Table II-11: Town of Richlands  
Soil Classifications

Soils	Planning Area	
	Acres	% from Total
AnB	45.572	1.2%
AuB	269.691	7.3%
CrB	116.455	3.2%
CrC	90.772	2.5%
GoA	272.233	7.4%
GpB	268.383	7.3%
Gt	17.146	0.5%
Le	10.301	0.3%
Ly	208.553	5.7%
MaC	54.047	1.5%
Mk	685.171	18.6%
NoA	112.605	3.1%
NoB	1,197.431	32.6%
On	158.443	4.3%
Pa	70.022	1.9%
Ra	86.450	2.4%

Table II-11 (continued)

Soils	Planning Area	
	Acres	% from Total
Ur	3.907	0.1%
Water	7.964	0.2%
TOTAL	3,675.146	100.0%

Source: US Department of Agriculture.

### 3. Fragile Areas and Areas of Environmental Concern

The following tables provide a breakdown of Fragile Areas and AECs in Richlands and its ETJ. Pages 44 through 57 of the Onslow County Land Use Plan provide details regarding estuarine waters and shorelines, public trust areas, coastal wetlands, and outstanding resource waters.

Table II-12: Town of Richlands Wetlands

	Town Limits		ETJ		Planning Area	
	Acres	% from Total	Acres	% from Total	Acres	% from Total
Bottomland Hardwood	0.0	0.00%	131.800	4.86%	131.800	3.6%
Cleared Bottomland Hardwood	0.0	0.00%	3.500	0.13%	3.500	0.1%
Cleared Hardwood Flat	1.8	0.18%	0.100	0.01%	1.900	0.1%
Cutover Bottomland Hardwood	0.0	0.00%	6.100	0.22%	6.100	0.2%
Cutover Hardwood Flat	1.0	0.11%	0.002	0.0001%	1.000	0.03%
Cutover Pine Flat	0.0	0.00%	0.001	0.00004%	0.001	0.00003%
Drained Pine Flat	0.0	0.00%	6.400	0.23%	6.400	0.2%
Freshwater Marsh	0.0	0.00%	0.700	0.03%	0.700	0.02%
Managed Pineland	9.0	0.93%	16.400	0.60%	25.300	0.7%
Riverine Swamp Forest	31.6	3.27%	155.600	5.74%	187.200	5.1%

Source: North Carolina Department of Environment and Natural Resources.

### 4. Environmental Composite Map

The following table describes the environmental composite acreages by class for Richlands. Clarification regarding the purpose of the composite and an explanation of the classes can be found on pages 67 and 68 of the Onslow County Land Use Plan.

Table II-13: Town of Richlands Environmental Composite

	Acres	% from Total
Class I	2,486.89	67.7%
Class II	1,188.02	32.3%
Class III	0.24	0.01%
Total	3,675.15	100.0%

Source: Holland Consulting Planners, Inc., and NC Center for Geographic Analysis.

E. COMMUNITY FACILITIES

**1. Transportation**

The Town of Richlands is located approximately 14 miles north of the City of Jacksonville along NC Highway 258. Gum Branch Road also leads to Richlands from the City of Jacksonville. There are two thoroughfares that head north out of Richlands: NC Highway 24 and Comfort Road.

**2. Health Care**

The citizens of Richlands rely on Onslow County health care facilities. These facilities are discussed in detail within the community facilities section of the plan (page 85 of the Onslow County Land Use Plan).

**3. Law Enforcement**

The Town of Richlands Police Department is located at 302 South Wilmington Street within the same facility as the town hall. The police department consists of six sworn officers. This includes 5 patrolman and one police chief. All officers have their own patrol car. Two of the policemen for the town are funded through the Governors Highway Safety Program. The police department also maintains a remote response trailer that may be utilized at the scene of an accident.

**4. Fire/EMS**

The Town of Richlands is served by the Richlands Volunteer Fire department located at 113 North Wilmington Street. This department currently has 32 volunteers. All calls for fire protection are routed through the Onslow County E-911 system. EMS service is provided through Onslow County Emergency Management. Richlands is served by station 4 located at 264 Albert Ellis Road. For more information related to fire and EMS services, refer to pages 87 & 88 of the Onslow County Land Use Plan.

**5. Recreation**

The Town of Richlands has one public park. Richlands-Venters Park is centrally located within town and has a playground, gazebo, and picnic area. Richlands-Steed Park, which is part of the Onslow County Parks and Recreation System, is located immediately adjacent to town. This is a 195-acre park, of which only 37 acres is developed. For more information related to county park facilities, refer to page 135 of the Onslow County Land Use Plan.

## 6. Administration

The Town of Richlands operates under a mayor-council form of government. The town employs a total of twelve full-time personnel. This includes three administrative personnel and three full-time public works employees.

## 7. Water/Sewer System

Water and sewer service is provided throughout the corporate limits of Richlands by the Onslow Water and Sewer Authority (ONWASA). Prior to joining ONWASA, the Richlands water system had been independent of the county water system. Richlands was the first jurisdiction to formally transfer assets over to ONWASA and become a full member. In 2007, ONWASA made two interconnects between the old County water system to the Richlands water system, and the water wells and distribution lines have been under ONWASA control since Richlands joined the authority. The Northwest Sewer Service Area is currently comprised of the 0.25 MGD Richlands WWTP, which serves only the Town of Richlands. Plans for the Northwest Sewer Service Area include the construction of a new 1.0 MGD or 1.5 MGD WWTP at a new site, which will allow use of a spray irrigation system, aquifer recharge, or infiltration ponds for discharge of treated wastewater. The existing WWTP may continue to be of use for an unknown period of time.

## 8. Schools

The following schools serve the school age children of the Town of Richlands:

Table II-14: Town of Richlands  
School Enrollment

Facility	Enrollment	Licensed Staffing	Student Capacity	Capacity Utilized
Richlands Primary	724	48	500	144.8%
Richlands Elementary	641	50	646	99.2%
Richlands High	829	57	640	129.5%
Trexler Middle	628	42	598	105.0%

Source: Onslow County Public Schools.

## F. EXISTING LAND USE

There are approximately 3,508 acres in Richland's planning jurisdiction. The most significant land use is vacant land (83.8%). Single-family residential is also a significant land use within the planning jurisdiction (9.8%). The Office and Institutional land use makes up slightly over three percent. Of the total developed acreage (569.6), the major land uses are single-family residential (60.6%), office and institutional (23.0%), and commercial (12.8%). Most commercial development is scattered along US Highway 258. The following table provides approximate land use acreages for Richland's entire planning jurisdiction.

Table II-15. Town of Richlands  
Existing Land Use Acreages

Land Use	Town Limits		ETJ		Total	
	Acres	% of Total	Acres	% of Total	Acres	% of Total
Commercial	55.5	6.3%	17.2	0.7%	72.8	2.1%
Multi-family	16.3	1.9%	3.6	0.1%	19.9	0.6%
Office & Institutional	126.0	14.4%	5.4	0.2%	131.4	3.7%
Single-Family Residential	199.7	22.8%	145.8	5.5%	345.5	9.8%
Vacant	478.9	54.6%	2,460.0	93.5%	2,938.9	83.8%
Total	876.4	100.0%	2,632.1	100.0%	3,508.5	100.0%

Source: Holland Consulting Planners, Inc.

Additionally, approximately 50 acres of downtown Richlands is designated as a National Register Historic District. The Richlands Historic District contains approximately 94 contributing buildings/structures and was added to the National Register of Historic Places in February 1990. The historic district is also delineated on the future land use map.