



**Town of Topsail Beach**  
**CAMA Core Land Use Plan**  
**2015**

**Town of Topsail Beach**

820 South Anderson Boulevard  
Topsail Beach, North Carolina 28445-6948  
910-328-5841 • 910-328-1560 (Fax)

**Town Board**

Howard M. Braxton, Jr., Mayor  
Edwin "Larry" L. Combs, Jr., Mayor Pro-Tem  
Julian C. Bone  
Thomas "Tom" B. Eggleston  
Morton Blanchard  
Linda B. Stipe

**Planning Board**

Frank Braxton, Chairman  
Keith Myers, Vice-Chair  
Rodney Dillman  
Horace Thompson  
Randy Leeseberg

**Town Manager**

Michael Moore

**Town Attorney**

Steve Coggins

**Town Clerk**

Christina Watkins

**Technical Assistance Provided By**

Cape Fear Council of Governments  
1480 Harbour Drive  
Wilmington, North Carolina 28401-7776





# Contents

<b>TOWN OF TOPSAIL BEACH LAND USE PLAN</b> .....	<b>1</b>
<b>INTRODUCTION</b> .....	<b>1</b>
<b>HOW TO USE THE LAND USE PLAN</b> .....	<b>3</b>
<b>SECTION 1: COMMUNITY CONCERNS AND ASPIRATIONS</b> .....	<b>3</b>
A. SIGNIFICANT EXISTING & EMERGING CONDITIONS .....	4
B. KEY ISSUES .....	5
C. COMMUNITY VISION.....	5
<b>SECTION 2: ANALYSIS OF EXISTING AND EMERGING CONDITIONS</b> .....	<b>8</b>
A. POPULATION .....	8
(1) Current Permanent Population Estimates .....	8
(2) Current Seasonal Population Estimates .....	10
(3) Permanent Population Growth Trends .....	12
(4) Key Population Characteristics .....	12
(5) Age of Population .....	14
(6) Income.....	15
B. HOUSING STOCK .....	16
(1) Current Housing Stock .....	16
(2) Building Permits Issued .....	17
C. LOCAL ECONOMY .....	18
(1) Employment by Major Sectors.....	19
(2) Unemployment.....	21
(3) Description of Community Economic Activity .....	22
D. POPULATION PROJECTIONS .....	22
(1) Short-term — five and ten year projections on permanent and seasonal population.....	22
(2) Long-term — twenty year projections on permanent and seasonal population .....	23
<b>SECTION 3: NATURAL SYSTEMS ANALYSIS</b> .....	<b>24</b>
A. DESCRIPTION AND ANALYSIS OF NATURAL FEATURES AND ENVIRONMENTAL CONDITIONS OF TOPSAIL BEACH’S PLANNING JURISDICTION .....	24
(1) Areas of Environmental Concern .....	24
a. The Estuarine System.....	25
b. Ocean Hazard Areas, .....	26
c. Public Water Supplies.....	27
d. Natural and Cultural Resource Areas .....	27
(2) Soil Characteristics .....	27
(3) Water Quality Classifications.....	30
(4) Shellfish Growing Areas & Primary Nursery Areas.....	33
a. Primary Nursery Areas.....	33
b. Secondary Nursery Areas .....	33
c. Special Secondary Nursery Areas .....	34
(5) Flood Hazard Areas .....	34
(a) Flooding – Rain Events .....	35
(6) Storm Surge Areas .....	36
(7) Non-coastal Wetlands (Probable 404 Wetlands) .....	37
(8) Water Supply Watersheds & Wellhead Protection Areas .....	38
(9) Environmentally Fragile Areas.....	38
(a) Wetlands.....	38
(b) Natural Heritage Areas .....	39



(c)	Areas Containing Endangered Species .....	39
(d)	Prime Wildlife Habitats .....	40
(e)	Maritime Forests.....	40
(10)	Additional Natural Features Identified by Topsail Beach .....	40
<b>SECTION 4: COMPOSITE MAP OF ENVIRONMENTAL CONDITIONS .....</b>		<b>41</b>
<b>SECTION 5: ENVIRONMENTAL CONDITIONS .....</b>		<b>42</b>
A.	WATER QUALITY .....	42
(1)	Status and changes of surface water quality .....	44
(2)	Current situation and trends on permanent and temporary closures of shell fishing waters .....	44
(3)	Areas experiencing chronic wastewater treatment system malfunctions .....	44
(4)	Areas with water quality or public health problems related to non-point source pollution .....	45
B.	NATURAL HAZARDS .....	45
(1)	Areas subject to storm hazards such as recurrent flooding, storm surges, and high winds.....	45
(2)	Areas experiencing significant shoreline erosion as evidenced by the presence of threatened structures or public facilities.....	46
(3)	Estimates of public and private damage resulting from floods and wind since the last plan update .....	46
C.	NATURAL RESOURCES.....	48
(1)	Environmentally fragile areas — where resource functions may be impacted as a result of development.....	48
(2)	Areas containing potentially valuable natural resources .....	48
<b>SECTION 6: ANALYSIS OF LAND USE &amp; DEVELOPMENT .....</b>		<b>49</b>
A.	EXISTING LAND USE MAP .....	49
B.	LAND USE ANALYSIS .....	49
(1)	Types of Land Use in Topsail Beach .....	49
(2)	Description of any land use conflicts .....	50
(3)	Description of any land use — water quality conflicts.....	50
(4)	Description of Development Trends .....	51
(5)	Location of areas expected to receive development during the five year period following plan certification and potential conflicts with Class II or Class III land .....	51
C.	HISTORIC, CULTURAL, & SCENIC AREAS.....	51
D.	PROJECTIONS OF FUTURE LAND NEEDS .....	52
<b>SECTION 7: ANALYSIS OF COMMUNITY FACILITIES .....</b>		<b>54</b>
A.	PUBLIC & PRIVATE WATER SUPPLY SYSTEMS .....	54
(1)	Water Use Projections.....	56
B.	PUBLIC WASTEWATER SYSTEMS .....	58
C.	PRIVATE WASTEWATER SYSTEMS.....	59
D.	TRANSPORTATION SYSTEMS .....	59
E.	STORMWATER SYSTEMS.....	60
<b>SECTION 8: LAND SUITABILITY ANALYSIS.....</b>		<b>60</b>
A.	WATER QUALITY .....	61
B.	LAND CLASSES I, II, AND III — SUMMARY ANALYSIS.....	62
C.	PROXIMITY TO EXISTING DEVELOPED AREAS & COMPATIBILITY WITH EXISTING USES .....	62
D.	POTENTIAL IMPACT OF DEVELOPMENT ON CULTURAL RESOURCE AREAS .....	62
E.	LAND USE REQUIREMENTS OF LOCAL DEVELOPMENT REGULATIONS, CAMA USE STANDARDS, & OTHER APPLICABLE STATE & FEDERAL REGULATIONS .....	62
F.	AVAILABILITY OF COMMUNITY FACILITIES — WATER, SEWER, STORMWATER, TRANSPORTATION.....	62
<b>SECTION 9: REVIEW OF PREVIOUS (1992) TOWN OF TOPSAIL BEACH LAND USE PLAN.....</b>		<b>63</b>
A.	EFFECTIVENESS OF POLICIES FROM 1992 LAND USE PLAN .....	63
B.	CONFLICTS BETWEEN 1992 LAND USE PLAN POLICY & LOCAL ORDINANCES.....	63
C.	LIST OF 1992 LAND USE PLAN POLICIES .....	63



**1992 LAND USE PLAN POLICY .....63**

**PART 2 – PLAN FOR THE FUTURE..... 70**

**SECTION 1: TOPSAIL BEACH COMMUNITY GOALS.....71**

(A) A COMPREHENSIVE LIST OF COMMUNITY GOALS<sup>1</sup> ..... 71

**SECTION 2: POLICIES FOR GROWTH & DEVELOPMENT.....72**

(A)PUBLIC ACCESS GOAL & POLICIES..... 73

(1) Providing Public Access & Meeting Federal Standards.....74

(2) Providing Public Access to Topsail Sound & the Atlantic Ocean.....74

(3) Support for the Coastal Resource Commission’s Access Program .....75

(4) Cooperation with Pender County to Provide Access.....75

(5) Funding & Planning for Public Access .....75

(6) Legally Identify Access Areas & Keep Them Free of Encroachment.....75

(7) Public Access Nuisance .....76

(8) Public Access Maintenance.....76

(9) Access Requirements for Development .....76

(10) Dredging of Inlets and Waterways .....76

(B)LAND USE COMPATIBILITY GOAL & POLICIES..... 77

(1) Development Must Be Consistent with Existing Regulations .....77

(2) Sustainable Growth.....78

(3) Compatibility with Future Land Use Map.....78

(4) Retain Natural Buffers .....78

(5) Maintain Small Town Atmosphere.....78

(6) Protection of Coastal Wetlands.....79

(7) Preserve, Protect, and Enhance Natural Resources .....79

(8) Intergovernmental Cooperation.....80

(9) Protection of Artifacts & Endangered Species .....80

(10) Development Project Consistency with Long-Term Goals .....80

(11) Support for the Protection of Wildlife Habitat.....81

(12) Developers Must Build Infrastructure for Their Projects.....81

(13) Development in the Estuarine Shoreline AEC .....82

(14) Protection of Water & Groundwater Resources.....82

(15) Industrial Development in Topsail Beach.....82

(16) Canoes & Kayaks in Topsail Sound.....83

(17) Floating Homes .....83

(C)INFRASTRUCTURE CARRYING CAPACITY GOAL & POLICIES ..... 83

(1) Municipal Water System.....83

(2) Wastewater Service & the Treatment of Effluent.....84

(3) Transportation.....85

(4) Stormwater Policy.....85

(5) Fire Protection.....86

(6) Intergovernmental Cooperation.....86

(7) General Policy on Infrastructure .....86

(8) Groundwater Resources .....86

(9) Beach Nourishment & Re-nourishment — Dune Protection.....86

(D)NATURAL HAZARDS AREAS GOAL & POLICIES ..... 87

(1) Protection of the Beach.....88

(2) Redevelopment Following a Natural Disaster .....88

(3) Participation in the National Flood Insurance Program .....88

(4) Intensity of Development within Areas Subject to Hazards.....88

(5) Emergency Management and-Hazard Mitigation .....89



(6) Protection of the Dunes .....	89
(7) Soil Suitability.....	89
(9) Acquisition of Parcels of Land in Hazardous Locations .....	89
(10) Policy of the Location of Growth Inducing Public Facilities .....	89
(E)WATER QUALITY GOAL & POLICIES .....	89
(1) Topsail Beach Is Planning for Clean Water .....	90
(2) Prevent the Spillage & Runoff from Septic Tanks & Septic Systems .....	90
(3) Support for the Protection of Outstanding Resource Waters.....	91
(4) Topsail Sound & the Atlantic Ocean.....	91
(5) Protect Public Trust Uses .....	91
(6) Acquisition of Buffers.....	91
(7) Clean-up of Unightly and Unsafe Structures .....	91
(8) Cooperative Efforts to Improve Water Quality .....	91
(F)LOCAL AREAS OF CONCERN GOALS & POLICIES.....	91
(1) Development Consistency with Local Ordinance.....	92
(2) Protection of Public Assets .....	92
(3) Maintain Town’s Status as a Family Oriented Tourist Community .....	92
(4) Community Appearance.....	93
(5) Public Health & Safety.....	93
(6) High Intensity Uses & Large Structures Are Discouraged .....	93
(7) Protection of Maritime Forest .....	93
(9) The Abatement of Nuisances .....	94
(10) Retention of Natural Buffers .....	94
(11) Preservation of Cultural & Historic Rights & Resources .....	94
(12) Marina Development.....	94
(13) Topsail Beach Encourages Business Development.....	94
(14) Development of Sound & Estuarine System Islands .....	94
(15) Citizen Participation in Community Planning Decisions .....	94
(16) Density of Development – Redevelopment.....	95
(17) Bulkhead Installation & Maintenance – Effect on Coastal Wetlands.....	95
(18) Industrial Sites on the Island .....	95
(19) Use of Off Road Vehicles – Dune & Beach Protection .....	95
(20) Protection of Indigenous Species .....	96
(21) Compact Growth Pattern.....	96
(22) Repair Upgrade & Improve Housing Conditions .....	96
(23) Involve NC Department of Transportation in Stormwater Planning .....	96
<b>SECTION 3: FUTURE LAND USE MAP &amp; MAP CLASSIFICATION CATEGORIES .....</b>	<b>96</b>
(A)THE FUTURE LAND USE SYSTEM .....	96
(1) Conservation Areas .....	97
(2) Residential Areas .....	98
(3) Business-Commercial / Institutional .....	98
(B) THE FUTURE LAND USE MAP.....	99
(C)DISCUSSION OF DENSITY POLICIES BY FUTURE LAND USE.....	99
(D) DENSITY OF CURRENT & FUTURE LAND USE .....	100
(E) TOOLS FOR MANAGING DEVELOPMENT .....	101
(F) LAND USE PLAN AMENDMENTS.....	102
<b>PART 3 – MANAGEMENT TOOLS .....</b>	<b>102</b>
<b>SECTION 1: INTRODUCTION .....</b>	<b>102</b>
<b>SECTION 2: CONSISTENCY OF LAND USE PLAN POLICY WITH COMMUNITY GOALS.....</b>	<b>102</b>



A. PUBLIC ACCESS .....	103
B. LAND USE COMPATIBILITY .....	103
C. INFRASTRUCTURE CARRYING CAPACITY.....	104
D. NATURAL HAZARDS AREA.....	105
E. WATER QUALITY.....	105
F. LOCAL AREAS OF CONCERN .....	105
<b>SECTION 3: CONSISTENCY BETWEEN LAND USE PLAN POLICY &amp; FUTURE LAND USE MAP.....</b>	<b>106</b>
A. RESIDENTIAL & COMMERCIAL DENSITY .....	106
B. .... COMPARING THE ENVIRONMENTAL COMPOSITE & LAND SUITABILITY MAPS WITH THE FUTURE LAND USE MAP .....	109
C. AVAILABILITY OF WATER AND SEWERS TO FUTURE DEVELOPMENT.....	109
D. NATURAL HAZARDS.....	109
E. PROTECTING SHELLFISH WATERS .....	109
F. POLICY IMPACT ANALYSIS & IMPLEMENTATION SCHEDULE.....	110
<b>APPENDIX .....</b>	<b>115</b>
<b>ATTACHMENT A - PUBLIC ENGAGEMENT PLAN .....</b>	<b>115</b>
<b>ATTACHMENT B - CONTACT INFORMATION .....</b>	<b>119</b>
<b>ATTACHMENT C - TOWN MISSION STATEMENT .....</b>	<b>120</b>
<b>ATTACHMENT D - ROLE OF THE TOPSAIL BEACH PLANNING BOARD IN LAND USE PLAN CREATION<sup>1</sup> .....</b>	<b>122</b>
<b>ATTACHMENT E - QUESTIONNAIRE AND RESULTS .....</b>	<b>123</b>
<b>ATTACHMENT F - PUBLIC OUTREACH DOCUMENTATION .....</b>	<b>130</b>



## List of Tables

Management Topics.....	4
NC Selected Barrier Island Municipal Beaches -- Population Growth 2001-2010.....	8
Pender & Neighboring County Population Growth, 1980-1990.....	9
Pender & Neighboring County Population Growth, 1990-2010.....	9
Percentage Living in a Municipality (Pender-Onslow-New Hanover), 2001.....	10
Percentage Living in a Municipality (Pender-Onslow-New Hanover), 2010.....	10
Topsail Beach Motels & Number of Rooms, 2012.....	11
Permanent Population Growth Trends.....	12
NC Selected Barrier Island Municipal Beaches - Labor Force and Income.....	13
Income by Topsail Beach Households - 216 = 100%.....	15
Income by Topsail Beach Families - 107 = 100%.....	15
Topsail Beach Income 1989 1999 2010 % Growth.....	16
Topsail Beach Housing.....	16
Topsail Beach Housing - Year Structure Built.....	17
Town of Topsail Beach Permits, 2001 - 2012.....	18
Top 10 Employers in Pender County.....	19
Employment by Major Sectors.....	19
Topsail Beach Employment Status Number Percentage.....	20
Topsail Beach Occupation Number Percentage.....	20
Topsail Beach Employment by Industry Number Percentage.....	20
Topsail Beach Class of Worker Number Percentage.....	21
Unemployment 2000 & 2012.....	21
Tourism Industry - 2011.....	22
Number of Overnight Rental Units - Topsail Beach.....	22
Topsail Beach/Pender County Permanent Population Projections, 5 & 10 Year.....	23
Topsail Beach Seasonal Population Projections, 5 & 10 Year.....	23
Topsail Beach/Pender County Permanent Population Projections for 2030 (based on 2010).....	23
Topsail Beach Seasonal Population Projection for 2030 (based on 2010).....	23
Topsail Beach - Acres in Flood Hazard Areas.....	34
Topsail Beach Storm Surge/Acres of Inundation (fast moving hurricane).....	36
Topsail Beach - Non-Coastal Wetlands.....	37
Topsail Beach Wetlands - Coastal & Exceptional.....	38
Environmental Composite - Categorization of Features - Topsail Beach, 2004.....	41
Damage/Loss Estimation for Topsail Beach, NC.....	47
FEMA Flood Insurance Policies in Force (as of August 31, 2012).....	47
Loss Statistics (1978-2012) - Topsail Beach- Pender County - North Carolina.....	47
Topsail Beach Existing Land Use.....	49
Additional Acreage Requirements, 2005/2010/2020.....	53
Topsail Beach -- Water Use Information.....	54
Topsail Beach - Average Day & Maximum Day Water Use by Month, 2011.....	55
Topsail Beach - Locally Owned Roads Mileage, 2012.....	59
Current Population Density in Lands Classified Residential, 2001.....	100
Population Density in Lands Classified Residential, 2005.....	100
Population Density in Lands Classified Residential, 2010.....	100
Population Density in lands Classified Residential, 2020.....	100
Population Density in Persons per Acre, 2001/2005/2010/2020.....	101
Future Land Use Compatibility Matrix.....	108
Management Topics.....	111



### **List of Maps**

- ~ Fish Nursery Areas Map
- ~Storm Surge (Slow) Map
- ~Storm Surge (Fast) Map
- ~Exceptional & Coastal Wetlands Map
- ~ Shellfish Harvesting Areas Map
- ~Flood Zones Map
- ~Significant Natural Heritage Areas & Element Occurrences Map
- ~Wetlands Map
- ~Water Classification Map
- ~Community Facilities Map
- ~Transportation System Map
- ~Existing Land Use Map
- ~Land Suitability Analysis Map
- ~Environmental Composite Map
- ~Future Land Use Map

**All of the Land Use Plan maps are located at the back of this document.**



## **Town of Topsail Beach Land Use Plan**

### Foreword

In June 2012, the Town of Topsail Beach Planning Board began a series of workshops to review and update the 2005 CAMA Land Use Plan. The resulting plan includes updates to the demographics sections based on 2010 Census data, revisions to future projections based on economic conditions over the past several years and revised Policies and priorities based on current conditions as well as information gleaned through the Town's 2011-2012 Strategic Planning process. Overall, the core Goals and Policies for the Town remain consistent with the 1992 and 2005 versions of the CAMA Land Use Plan.

Topsail Beach is a wonderful family beach town with healthy beaches, clean water, limited commercial development and a small island atmosphere. We do not have many of the typical growth concerns that face other towns due to our physical configuration. We are an island with very little land that has not been platted into individual lots or developed.

The physical configuration of the Town is its most important feature. We are on the end of a barrier island. We are bound on 3 sides by water and bordered on the remaining side by the city limits of Surf City. As a result, we have no concerns about extra-territorial zoning or annexation.

Our primary concerns are protection of our environment, preserving our family beach character and maintaining our existing resources.

The Town recognizes the importance of the island's environmental resources and the balance required to promote both enjoyment and protection. The Town's Goals and Policies address the protection of our lands, beaches and sound and are reflected in the existing Codes and Ordinances. We regulate the built environment and protect the island's natural environment through Land Use Zoning. There are specific regulations related to the lot size, allowed impervious surface coverage, maximum building height, Maritime Forest protection and the designation of Conservation Areas. The Goals and Policies presented in this document represent a "carry-over" from the previous Land Use Plans and are consistent with Town's desire to protect the natural systems of Topsail Beach for enjoyment today and for the future.

The core of Topsail Beach is the family beach atmosphere. How to preserve the small town character and promote continued growth is an issue that the Goals and Policies address. While we promote the continued economic growth of the Business

District, we prohibit industrial land uses and regulate high density residential developments. In the recent past, the Town has added public amenities that enhance and improve the Town's Character. Bush Marina provides water based recreation for boating and the newly constructed Town Center provides land based recreation as well as comfort amenities for visitors to our beach and businesses. Our Codes and Ordinances are tailored to our island life and address Dune Protection, beach use/equipment, excessive noise, light pollution and sea turtle protection.

The Town has taken pro-active steps in order to maintain our infrastructure and resources. In 2013, the Town completed a renovation of the Public Water System, including the construction of a new and larger elevated water tank. In 2015, the Town completed a major beach nourishment project needed to solidify our main asset, the ocean beach. In doing so, the same project provided channel improvement related to the inlet and sound, both of which are major elements related to the island's lifestyle. The Town has begun a review and assessment of the existing and future needs of the infrastructure and Town Departments. The initial studies have identified personnel needs in Administration, Fire Protection and Police Protection. Additionally, street maintenance/repair and beach/sound access needs have been identified and scheduled for yearly maintenance.

The CAMA Land Use Plan is comprehensive and sets the frame work for the specific Town Codes and Ordinances. When viewed as a guide, the document is intended to present the basic description of the Town of Topsail Beach now and into the next decade.

Respectfully submitted,

Topsail Beach Planning Board

***Frank Braxton***  
Chairman

## **Introduction**

The Town of Topsail Beach is blessed with abundant natural resources and a beautiful environmental setting. The beach at Topsail Island greets summer visitors like a beacon glistening and gleaming in the sun. The gentle summer breezes caress and welcome visitors. The beach haunts the memory of those fortunate enough to visit Topsail Beach during the warm months and the memory of the summer visit sustains all who come through the cold of winter. Statewide the beaches and waters of North Carolina are a tremendous resource and they may be found alongside a shoreline which is rich in history. The Town of Topsail Beach, on Topsail Island, between New Topsail Inlet and New River Inlet, in Pender County, shares in the history and in the rich heritage of the North Carolina coast.

In recognition of both the value and the fragile nature of our coastal area's natural and cultural resources, the United States Congress passed, in 1972, the Coastal Zone Management Act. The State of North Carolina, which at the very early stages of the national coastal program established itself as a leader amongst all coastal states (a position which it has continued to hold), enacted in 1974 the Coastal Area Management Act, which has come to be known in North Carolina by its acronym "CAMA." The CAMA did several things. It defined North Carolina's coastal area. Twenty coastal counties were defined as that land area over which the developing coastal program would hold some jurisdiction. The Act created the Coastal Resources Commission (CRC), which is a 13 member body, appointed by the Governor, who create policy and who pass rules governing development activity in the coastal area. The Act also created the Coastal Resources Advisory Council (CRAC), which is a 20 member body charged with advising the CRC and working as a liaison between the Commission and local governments in the coastal area. As staff for the CRC the Division of Coastal Management was created to carry out the policies of the program. The basic purpose of the Coastal Area Management Act is "to insure the orderly balance of use and preservation of our resources on behalf of the people of North Carolina and the nation." Preservation, protection, enhancement, and balance through planning and the development of rules designed through a rational planning process..... this is what the CAMA is about.

It is widely recognized that the most important aspect of the early development of the NC coastal program was the planning requirement contained in the CAMA. The Coastal Area Management Act required each coastal county to have a Land Use Plan, and furthermore, these plans were required to be updated every five years. The work we are doing here, creating the Town of Topsail Beach Land Use Plan, is a direct result of that requirement in the enabling legislation. As coastal counties began to plan, coastal Towns and Cities began to recognize the benefit of planning for themselves. The growth of the coastal area coupled with the planning requirement contained in the statute, fostered an understanding, of the necessity of planning for the preservation of natural resources and a way of life for local governments.

The Town of Topsail Beach was incorporated by the North Carolina General Assembly on March 19<sup>th</sup>, 1963. The Town of Topsail Beach may be characterized as a small Town with a group of thoughtful leaders who understand the impacts of growth and development. They have seen the

impacts of growth on this region, and they wish to preserve the natural and aesthetic qualities and attributes of their community. Both the elected and appointed Boards in Topsail Beach act cautiously and carefully on those significant matters which will affect the future of the Town. For Topsail Beach, the Land Use Plan herein rendered will be a valuable source of community information and a guide for local leaders on policy matters.

The term "Land Use Plan" may be used interchangeably with other terms. The "Land Use Plan" is also sometimes referred to as the "Comprehensive Plan" or the "General Plan" or the "Master Plan." The essential characteristics of the plan, which we will refer to here as the Land Use Plan, is that the plan encompasses all geographic parts of the community and all functional and environmental elements which bear on land use development. The plan is general in the sense that it will summarize policies and proposals and will not indicate (in great detail) specific locations or detailed regulations. The plan will be long-range in the sense that it will look beyond the foreground of current and everyday development pressures and will look to the perspective of problems and possibilities for 10-20 years in the future.

For planning purposes the preparation, adoption, and use of the Land Use Plan is considered to be the primary objective of a planning program. Most other plans and planning actions by a local government are designed, at least theoretically, to be based upon the Land Use Plan.

Local government has a great deal of influence on how a community develops. The buildings, facilities, and improvements provided by local government affect the daily lives of citizens. These same features give a form and a life to the community and can be a stimulus or an impediment to the development of privately owned land in the area. The local government is inescapably involved in questions on the physical development of land within the area of its jurisdiction. Both the Town Board and the Planning Board will regularly make decisions and recommendations concerning zoning, streets, sites for public buildings, or the allocation of funds for public projects of one type or another. Also, the Town has created a Parks and Recreation Advisory Board which is an expanded membership of the Planning Board and volunteers to advise on the Town Center, Beach and Sound accesses and other recreational efforts of the town. And for making these kinds of decisions the lay Boards of local government need technical guidance. If the quickest and most expedient decision is taken, without forethought, the local government leaders may find that they will make a decision one month only to negate the premise of that decision next month because they are faced with another decision and a stop gap measure. If these types of decisions are made over an extended period of time the local government may end up on a path that is not consistent with the desired future of the Town. This type of circumstance may be avoided by planning. Leaders are advised through this process to take a proactive rather than a reactionary approach to community development.

To do this the local government needs an instrument, a plan, which will establish long-range general policies for the physical development of the community. With a plan decisions, can be made in a coordinated and unified manner. The Land Use Plan will provide the Town with this sort of an instrument. The Plan can be referred to as an important source for decisions on those development issues which arise on a regular basis. Zoning classification amendment requests,

subdivision approval, and the location of roads or highways, extension of public services..... all of these decisions are made in a manner which best serves the public interest if some systematic planned approach to the decision process is made. The Land Use Plan will help with these decisions.

### **How to Use the Land Use Plan**

This Land Use Plan has been prepared through detailed work with the Town of Topsail Beach Planning Board, Town staff, and the Town Board, and according to planning guidelines created by the State of North Carolina<sup>1</sup>. The planning guidelines are important because they give a framework for creation of the Land Use Plan. The first work on this document was the preparation of an outline. This outline was taken directly from the requirements of 15A NCAC 7B and became the Land Use Plan Table of Contents. Your best source for finding specific information in this Land Use Plan is the Table of Contents.

The Land Use Plan was created in two parts. Part One gives a summary of community concerns and aspirations, an analysis of existing and emerging conditions, and an analysis of natural systems and environmental conditions. Part Two gives a summary of community goals, a detailed list of Town policies for land use development, and a future land use map and description of each future land use category.

The Land Use Plan is designed to be used by the local government, in each case, when they make decisions concerning land use. Policy statements in this document are created such that when the Planning Board or Town Board is faced with a decision they may receive some advice or counsel on the matter before them by a careful review of this policy document. For other plan users, the document will also provide guidance on what you may expect on decisions by Town appointed or elected Boards. Developers, as well as those residents already well established, may have reason to consult the document for “how to” policy guidance or for development proposals they wish to implement or comment upon.

The creators of this document have gone to extreme lengths to insure that all necessary policy guidance for the Town of Topsail Beach is included here. All decisions on policy were based upon the best information available in **2012**. If this Land Use Plan is found to need adjustment, the Land Use Plan amendment process, outlined in 15A NCAC 7B, is the means by which to amend this document.

For questions concerning this Land Use Plan call Town Hall at 910-328-5841.

### **Section 1: Community Concerns and Aspirations**

The purpose of this Land Use Plan section is to provide guidance and direction for plan

---

<sup>1</sup> The planning guidelines work was done, at staff level, by the NC Division of Coastal Management. Approval of the planning guidelines was by the NC Coastal Resources Commission in 2002. For interested persons who may wish to seek further information, these guidelines are codified in the North Carolina Administrative Code (NCAC) at subchapter 7B of Chapter 15A.

development on the sensitive matter of community concerns and aspirations.

### A. Significant Existing & Emerging Conditions

The table below shows key management topics for the Town of Topsail Beach. The management topics are key areas of focus for the Town of Topsail Beach.

**Table 1 Management Topics**

<b>Management Topics</b>	<b>Planning Problems</b>	<b>Planning Assets</b>
<b>Public Access</b> – Maximize access to beach and public trust waters	Local accesses lead to areas with little beachfront. Erosion is an issue with long-term use and maintenance. More facilities may be needed for increased use by residents and visitors	Plentiful access points along town beach front and sound front. Town continued commitment to access projects construction and maintenance. Facilities available including parking and restrooms at several accesses.
<b>Land Use Compatibility</b> – Ensure that development and use of land resources is consistent with capability of the land	Must be careful to ensure zoning regulations are not overly restrictive; but overall land use compatibility is a valuable tool.	Strong development codes promote compatible use of land with existing property. Property subdivided throughout town under proper development codes adds to the continuity of the Town. Re-Use of existing properties encouraged through policies.
<b>Infrastructure Carrying Capacity</b> - Ensure that public infrastructure systems (size, location and management) protect or restore quality of AECs and other fragile areas	Water Supply, Saltwater intrusion, finding the right solutions to the sewage/septic issues.	Buffers, open space and protection regulations enforced for Areas of Environmental Concerns (AECS) and other fragile areas. Town employs a variety of programs and codes to protect natural environment.
<b>Natural Hazard Areas</b> – Conserve protective functions of barrier dunes, beaches, flood plains and other coastal features	Conservation of dune structure and beach front a strong concern. Topsail Beach has several areas for potential over wash, flooding and inlet hazards.	Town is committed to ongoing beach re-nourishment program and employs use of dune protection regulations, is a National Flood Insurance Program (NFIP) participant and has a Flood Damage Protection Ordinance
<b>Water Quality</b> – Maintain, protect and restore quality of coastal waters	Water quality problems seen from stormwater runoff and isolated septic concerns. Long term solutions may include stormwater collection and alternative treatment methods.	Stormwater Ordinance adopted and comprehensive stormwater management program in place.
<b>Shoreline Protection</b> -- Programs to restore and preserve a wide sandy beach.	Beach Re-nourishment program needed to be in place.	Town is working on this program with the State and the US Army Corps of Engineers.

<b>Maintaining a Family Beach Environment</b>	Safety, traffic, development all affect quality of life in the town	The town enforces many codes to protect health safety and welfare of the community.
<b>Economic Development and Fiscally Responsible Government</b>	Development of Central business area, expanding different types of businesses in the town. Maintaining economic health of town.	Town has a manager-council form of government to provide professional management of Town's assets.
<b>Public Safety</b>	Additional seasonal visitors and increased permanent population can result in increased crimes.	Town has a Police department and incorporates newest techniques and programs to ensure public safety and to respond to all crimes.

### **B. Key Issues**

The issues listed below have been identified by Topsail Beach Town officials, through a facilitated process, as those issues which will be of concern within the planning period for this Land Use Plan. These will be areas of emphasis and priority consideration throughout this document.

1. Shoreline Protection - Implementing programs to maintain the quality and quantity of sand on the beachfront.
2. Water Supply - Protecting and providing an adequate quantity of quality water in the municipal water system.
3. Stormwater Runoff – Managing stormwater runoff to reduce non-point source pollution of adjacent water bodies.
4. Sewage Disposal – Recognizing future issues and developing programs to best meet the needs of Topsail Beach.
5. Maintaining a Family Beach Environment – Keeping our high quality of life as our population grows.
6. Encouraging a Sound Economy and Fiscally Responsible Government – Ensuring that our land use policies support our financial viability as a town.
7. Preservation of Recreational Use of Waters - Maintaining the quality, access, and navigability of area waters.
8. Public Access and Parking – Determining needed access and implementing programs to provide adequate and safe access to the ocean and sound.
9. Public Safety- Providing for public health, safety and welfare with a growing population.
10. Vegetation/Protection of Maritime Forest – Protecting or enhancing natural areas within the town limits.

### **C. Community Vision**

*For the 2005 Land Use Plan*, the Town of Topsail Beach's vision statement was prepared through a facilitated process with the Town's Planning Board acting as the principal responsible board. The Planning Board approved the "vision" for submittal to the Town Board on February

19, 2003. The Town Commissioners subsequently endorsed the mission statement on March 12, 2003.

The vision is to ensure that Topsail Beach remains a peaceful, family-friendly community to live, work and play while maintaining its natural island beauty.

The mission statement is important feature of the Land Use Plan because it gives a clear description on how the area will look in the future. In preparing the “mission” participants were directed to consider the community’s driving forces, priority issues, and citizen values and aspirations. The “mission” depicts in words and images what the local government is seeking to become. The results are shown below.

### **Topsail Beach is a Family Beach**

Topsail Beach will be home to approximately 536 people, and will have a peak seasonal population of approximately 9,351 by 2020. These figures come from and are determined in table 27 and table 28 in the population projections section. Many residents will be retired, and have come to Topsail Beach to enjoy a high quality of life and a relaxed atmosphere. Our largest segment of population growth will be retirees. For both the permanent population and the seasonal visitors, we will have a variety of amenities to please everyone. We continue to have an extensive beach and shoreline access program that provides easy access to the beach and the sound at many places throughout our town. We will have adequate facilities to meet the needs of even the busiest summer day. We have sidewalks and safe streets that allow for walking to all parts of the community. Our residents and visitors have easy access to the shoreline and navigable waters. Boating, fishing, and other water activities are popular within our community.

Topsail Beach will continue to be a safe community. We are relatively crime-free, and have fire protection from a first-class fire and rescue department. Our citizens and visitors are secure with a well-staffed and well-trained Police Department. The department is committed to responsive, community-based policing, and participates in local and regional initiatives to remain proactive in identifying issues that could threaten public safety.

We will have an expanding economic base. Our retail and service sector will consist of a variety of businesses that have a customer base of residents, visitors and clients from other parts of the area. Topsail Beach will be known across the region as a business-friendly town with a customer base who appreciates good service and good community relations. Our businesses support the community, and the community supports our businesses.

### **Topsail Beach is a Leader in Environmental Stewardship**

Topsail Beach will be known for its commitment to environmental protection and stewardship. The town will have effective policies to regulate development to ensure that land uses are consistent with the capability of the land. We will employ a variety of innovative policies, programs, and regulations such as our comprehensive zoning ordinance, stormwater management



program, vegetation protection ordinance, and subdivision regulations to provide a solid regulatory framework that protects our natural systems.

We have a comprehensive water supply system that can provide outstanding water quality to our residents and citizens. Water will be plentiful and maintain good pressure. We will have a stormwater management program that captures run-off to protect our lands and waters from non-point source pollution. We have an environmentally safe system of sewage disposal at present, but will continue planning for a future sanitary sewer system.

Topsail Beach will have infrastructure system that is responsive to the needs of our community because we have designed our entire infrastructure to work in harmony with the natural environment. We will use an infrastructure carrying capacity analysis to ensure that public systems protect or restore the quality of our environmentally fragile areas. The town government will participate in numerous state and federal programs to provide the citizens with infrastructure planning and maintenance programs and to secure the funding to pay for them while keeping the tax and utility rates fair and equitable.

Topsail Beach is proud of its wide, sandy beaches that have benefited from an ongoing beach re-nourishment program. All areas of our beach can be accessed and used, even at the highest tides. A dune protection program has resulted in high dunes, anchored by a thick cover of vegetation that protects our town and our beach. An added benefit of this beach re-nourishment program is the expansion of our public beach access program that our residents and visitors enjoy. Protecting our Areas of Environmental Concern is our top priority for our environmental stewardship. Topsail Beach has areas of natural maritime forests canopies, estuaries, and coastal vegetation that we will protect and restore. A healthy natural environment is essential to the health of our town and to our continued high quality of life.

### **Topsail Beach has a Strong Community Voice**

Topsail Beach has a fiscally responsible government that is responsive to the needs of the citizens. We have active community involvement on a variety of issues including planning, stormwater management, beach re-nourishment, recreation, and town policies with our advisory boards and ongoing public meetings. Our town government has a staff of qualified professionals who find new and innovative ways to meet the needs of the public. The Town uses a variety of public information methods including, Facebook, a newsletter and a comprehensive internet website to inform the public and to receive feedback.

Topsail Beach is a beautiful, family beach that will be relatively crime free, economically sound, and a leader of coastal communities in environmental protection and beach preservation. We maintain a high quality of life and relaxed atmosphere that other towns try to duplicate. We know that the reason for our success is simple: it is our people, our community, who share the vision of the Town's bright future, and who are committed to making great things happen for all our residents and visitors.

**Section 2: Analysis of Existing and Emerging Conditions**

**A. Population**

Of the 21 municipal beaches communities in North Carolina, Topsail Beach is the 19th largest by population. It is the smallest municipality, by population, of the three municipalities on Topsail Island.

**Table 2 NC Selected Barrier Island Municipal Beaches -- Population Growth 2001-2010**

Municipality	2001 Population	2010 Population	Percentage Growth, 2001-2010	Percentage Growth (Ave Yearly), 2001-2010
Topsail Beach	481	368	(24%)	(2.7%)
Surf City	1,423	1,853	30%	3.3%
North Topsail Beach	833	743	(11%)	(1.2%)
Emerald Isle	3,538	3,655	3%	.04%
Atlantic Beach	1,777	1,495	(16%)	(1.8%)
Wrightsville Beach	2,604	2,477	(5%)	(.05%)
Carolina Beach	5,225	5,706	9%	1%
Kure Beach	1,573	2,012	28%	3%
Pender County	42,051	52,217	24%	2.7%
North Carolina	8,188,008	9,535,483	16%	2%

The total number of people in NC living in the 21 beach municipalities, year-round, is 47,222. This total represents .5% of the total NC population of 9,535,483.

**(1) Current Permanent Population Estimates**

The permanent population of Topsail Beach in 1990 was 346 persons. The 10 year growth rate percentage (1990-2000) was 36.1%. The growth rate for the 11 years between 1990 and 2001 was 39%. The annualized growth rate for this 11 year period was 3.5%. This community *was* experiencing fast growth. Comparatively, between 2001 and 2010 the Town experienced a decrease in population from 481 to 368 persons, a 24% loss. Several other neighboring beach towns, namely North Topsail Beach, Atlantic Beach and Wrightsville Beach also experienced loss

in population. These drops are at least in part attributable to the general economic downturn and fluctuations in the housing market. At the same time Surf City grew by 30%, largely due to annexation, and Kure Beach increased by 28%. Pender County as a whole with a 24% growth rate surpassed North Carolina overall with 16%.<sup>2</sup>

The population of Topsail Beach has continued to grow along with Pender County. Because of the small number of persons in the total population of Topsail Beach, it is important to consider population growth in the county as a whole, which, because of the numbers involved, is a more statistically significant number.

Area county population growth between 1980 and 1990 shows Pender County, the smallest in population of the 9 county sample selected, is growing at a rate which is the 2<sup>nd</sup> fastest at 29.6%. The only county which exceeds the growth of Pender County is Brunswick County which grew at a rate of 42.5% from 1980-1990.

**Table 3 Pender & Neighboring County Population Growth, 1980-1990**

<b>County Government</b>	<b>1980 Population</b>	<b>1990 Population</b>	<b>Difference/Number</b>	<b>% Growth</b>
Bladen Co	30,491	28,663	-1,828	-6.0%
Brunswick Co	35,777	50,985	15,208	42.5%
Carteret Co	41,092	52,553	11,461	27.9%
Columbus Co	51,037	49,587	-1,450	-2.8%
Duplin Co	40,952	39,995	-957	-2.3%
New Hanover Co	103,471	120,284	16,813	16.2%
Onslow Co	112,784	149,838	37,054	32.9%
<b>Pender Co</b>	<b>22,262</b>	<b>28,855</b>	<b>6,593</b>	<b>29.6%</b>
Sampson Co	49,687	47,297	-2,390	-4.8%

Area county population between 1990 and 2010 shows Pender County as the 2<sup>nd</sup> smallest of the 9 counties in population, yet remaining as the 2<sup>nd</sup> fastest in growth with an 81% growth rate. Brunswick County remained as the fastest growing county with a 110% growth rate for this period.

**Table 4 Pender & Neighboring County Population Growth, 1990-2010**

<b>County Government</b>	<b>1990 Population</b>	<b>2010 Population</b>	<b>Number of Persons</b>	<b>% Growth</b>
Bladen Co	28,663	<i>35,190</i>	<i>6227</i>	<i>22.8%</i>
Brunswick Co	50,985	<i>107,431</i>	<i>56,446</i>	<i>110.8%</i>
Carteret Co	52,553	<i>66,469</i>	<i>13,916</i>	<i>26.5%</i>
Columbus Co	49,587	<i>58,098</i>	<i>8511</i>	<i>17.2%</i>
Duplin Co	39,995	<i>58,505</i>	<i>18,510</i>	<i>46.3%</i>

<sup>2</sup> Bureau of the Census – 2000, 2010

New Hanover Co	120,284	<b>202,667</b>	<b>82,383</b>	<b>68.5%</b>
Onslow Co	149,838	<b>177,772</b>	<b>27,934</b>	<b>18.7%</b>
<b>Pender Co</b>	<b>28,855</b>	<b>52,217</b>	<b>23,362</b>	<b>81.0%</b>
Sampson Co	47,297	<b>63,431</b>	<b>16,134</b>	<b>34.2%</b>

Compared to its neighboring counties (north and south) Pender County is a rural type county<sup>3</sup>; with the vast majority of the population living outside of municipal boundaries. As a beach municipality, Topsail Beach does not fit with this county-wide situation, however, it is notable that the area is now, and has been, rural not urban. This is a situation which is changing most rapidly in eastern Pender County.

**Table 5 Percentage Living in a Municipality (Pender-Onslow-New Hanover), 2001**

County Gov't	2001 Population	Non-municipal	Municipal	%
<b>Pender Co</b>	<b>42,051</b>	<b>36,251</b>	<b>5,800</b>	<b>13.79%</b>
Onslow Co	148,454	78,001	70,453	47.46%
New Hanover Co	163,828	63,445	100,383	61.27%

**Table 6 Percentage Living in a Municipality (Pender-Onslow-New Hanover), 2010**

County Gov't	2010 Population	Non-municipal	Municipal	%
<b>Pender Co</b>	<b>52,504</b>	<b>45,784</b>	<b>6,720</b>	<b>12.80%</b>
Onslow Co	185,304	101,469	83,835	45.30%
New Hanover Co	203,439	86,321	117,118	57.60%

## (2) Current Seasonal Population Estimates

The seasonal population of a resort area municipality such as Topsail Beach is composed of two components. These components are: (1) *permanent population* — these are the people who usually reside in the planning area, and those people who are also frequently referred to as the year 'round residents; (2) *seasonal population* — these are the people who are temporary residents of the planning area (including tourists and vacationers), but who usually reside in another location. Another term to understand, which is related to seasonal population, is *peak population*, which is the permanent population plus the seasonal population on a peak vacation week during the summer season. To give an estimate on seasonal population and peak population we must make some assumptions and assign some numbers, based on experience with the habits of beach visitors, and, especially, with the habits of those visitors to Topsail Beach.

It has been determined by the NC State Data Center, based on the 2000 Census that there were 481 permanent residents of Topsail Beach in 2001. According to the 2000 U.S. Census and the number of permits issued for residential construction during 2001, as determined by the Topsail Beach Department of Administration, there were 1,154 housing units in Topsail Beach in 2001. If

<sup>3</sup> Pender County *had* approximately 50.11 persons per square mile *in 2001*.

we assume the same percentage occupancy rate for 2001 as the U.S. Bureau of the Census found in 2000, which was 21.9%, we have 253 housing units occupied by permanent residents in 2001. This gives 901 housing units occupied seasonally.

The 2010 Census reported 368 permanent residents and 1,298 housing units with 187 occupied and 1,111 units vacant, equating to a 14.4% occupancy rate.

The number of persons per housing unit in Topsail Beach, in 2001, based on permanent population (481 divided by 253), is 1.90. For purposes of figuring seasonal peak population, and to account for summer visitors, we will add one additional person per residence, so ... we have 2.90 persons per housing unit for the calculation of the seasonal peak. A standard number, frequently used, for the number of occupants in a vacation cottage is 6.5 persons per unit. A low figure for the seasonal population based solely on housing units would be equal to the permanent population (481) plus the additional 1 person per unit (253), plus vacation cottage rental (6.5 multiplied by 901 = 5,857) gives a total of 6,591 persons.

For 2010, there were 368 persons living in 187 units equating to 1.97 persons per unit. For the seasonal population, there were 368 permanent residents plus 1 additional per unit (187), plus vacation cottage rental (6.5 multiplied by 1,111 = 7,222) gives a total population of 7,764 persons.

The table below lists the number of motels in Topsail Beach and the number of rooms at each motel

**Table 7 Topsail Beach Motels & Number of Rooms, 2012**

<b>Name of Motel</b>	<b># of Units</b>
Breezeway Motel	47
Jolly Roger	65
Sea Vista Motel	34
<b>TOTAL</b>	<b>146</b>

A standard number, frequently used, for the number of beach visitors occupying a motel unit is 3.5 persons. When all units are occupied, the additional number of people straining the municipal infrastructure and support systems is 511. When added to the 7,764 figure, this brings the total seasonal population number to 8,275.

This figure does not include day trippers. This is a particularly difficult population element upon which to get a count.

### **(3) Permanent Population Growth Trends<sup>4</sup>**

#### **Table 8 Permanent Population Growth Trends**

Topsail Beach population 1990 = 346

Topsail Beach population 2001 = 481

Topsail Beach population 2010 = 368

Topsail Beach had a 39% population growth rate between 1990 and 2001. The annualized growth rate is 3.5%. The 2010 population of 368 equated to a 24% loss annualized at 2.7%.

Pender Co population 1990 = 28,855

Pender Co population 2001 = 42,051

Pender Co population 2010 = 52,504

Pender Co had a 45.7% growth rate between 1990 and 2001. That's 4.1% annualized rate. For 2001 to 2010, the county had a 25% growth rate annualized at 2.8%.

Region O (Brunswick, Columbus, New Hanover, Pender) population 1990 = 249,711

Region O (Brunswick, Columbus, New Hanover, Pender) population 2001 = 337,611

Region O (Brunswick, Columbus, New Hanover, Pender) population 2010 = 421,472

Region O had a 35% population growth rate between 1990 and 2001. For 2001 to 2010, the Region had a 25% growth rate annualized at 2.8%.

NC population 1990 = 6,632,448

NC population 2001 = 8,188,008

NC population 2010 = 9,535,483

NC had a 23% population growth rate between 1990 and 2001. For 2001 to 2010, the State had a 16% growth rate annualized at 1.9%.

Topsail Beach's 39% population growth rate between 1990 and 2001 was the 13<sup>th</sup> fastest of the 21 barrier island beach municipalities in North Carolina. Topsail Beach accomplished this rate of growth without annexation. The 24% drop in population between 2001 and 2010 is largely due to the overall economic downturn and stalling of the housing market during that period.

### **(4) Key Population Characteristics<sup>5</sup>**

Many of the facts reported in the U.S. Census may serve to characterize a community. It is important, for purposes of characterizing a community, that the community be compared to other similar areas. For purposes of this characterization we have used the barrier island municipalities of North Carolina.

The median age of residents of the Town of Topsail Beach is 57.4 years. Among neighboring beach communities including Surf City, North Topsail, Emerald Isle, Atlantic Beach, Wrightsville

---

<sup>4</sup> NC State Data Center, 2001, & U.S. Department of Commerce, Bureau of the Census, 2000 *and* 2010.

<sup>5</sup> Please refer to the Table entitled "Key Characteristics of NC Municipal Beaches, 2000," in the appendix.

Beach, Carolina Beach and Kure Beach places Topsail as the highest in median age. Kure Beach was next highest at 53.6 years, while the youngest median was found at Wrightsville Beach at 35.6. The median age for Pender County was 41.1. In NC the median age reported in was 37.4. This statistic characterizes the Town of Topsail Beach as an older, retirement oriented community.

In Topsail Beach only 14.7% of the total housing units were occupied all year. This put Topsail Beach at the lowest among the beach municipalities noted in the previous paragraph. North Topsail Beach was the next lowest with 15.7% year round occupancy, while Carolina Beach had the highest with 47.8%. In NC the percentage of housing units occupied all year is 85.8%. In Pender County this figure is 76.1%. This statistic characterizes Topsail Beach as a resort community with a large portion of the houses standing empty during the winter months.

The percentage of persons in the labor force (16 and over) at Topsail Beach was 58%. Topsail Beach was 7<sup>th</sup> of the 8 beach municipalities compared in the table below. Pender County Comparatively, Pender County was 58% and North Carolina was 66% in this category.

The median household<sup>6</sup> income in the Town of Topsail Beach (\$45,119) is the lowest among the beach communities compared slightly higher than Pender County as a whole (\$43,538), while the median for North Carolina was \$45,570. The highest median household income among the municipalities is found at Wrightsville Beach (\$70,375)

The median family income<sup>7</sup> in the Town of Topsail Beach (\$67,083) is the 4<sup>th</sup> highest the beach municipalities compared. This is a higher median family income than Pender County as a whole (\$52,672) and is higher than the NC median (\$56,153). The highest median family income was found at Wrightsville Beach (\$138,750). The lowest is found at Atlantic Beach (\$55,720).

The per capita income<sup>8</sup> in the Town of Topsail Beach (\$35,126) is 3<sup>rd</sup> highest among the beach communities compared. This is a higher per capita income than in Pender County as a whole (\$22,666) and is higher than the NC per capita income (\$24,745). The highest per capita income is found at Wrightsville Beach (\$80,427), while the lowest is found at (Atlantic Beach (\$31,196).

When considered as a whole, the income figures from the U.S. Census give us a picture of the Town of Topsail Beach as being in the middle to upper middle range among coastal communities.

**Table 9 NC Selected Barrier Island Municipal Beaches - Labor Force and Income**

<i>Municipality</i>	<i>% in Labor Force 16 &amp; over</i>	<i>Median Household Income</i>	<i>Median Family Income</i>	<i>Per Capita Income</i>
Topsail Beach	58%	\$45,119	\$67,083	\$35,126

<sup>6</sup> Members of a household are not related by blood or marriage or legal agreement.

<sup>7</sup> Members of a family are related by blood or marriage or legal agreement.

<sup>8</sup> Per capita refers to each person.

Surf City	53%	\$58,750	\$62,042	\$33,120
North Topsail Beach	63%	\$57,778	\$57,941	\$32,174
Emerald Isle	60%	\$50,380	\$74,850	\$34,279
Atlantic Beach	60%	\$48,112	\$55,720	\$31,196
Wrightsville Beach	65%	\$70,375	\$138,750	\$80,427
Carolina Beach	79%	\$50,213	\$62,292	\$31,878
Kure Beach	58%	\$59,674	\$70,729	\$45,364
Pender County	60%	\$43,538	\$52,672	\$22,666
North Carolina	66%	\$45,570	\$56,153	\$24,745

Within the Town of Topsail Beach a large percentage (82%).of the total housing is in single unit detached housing<sup>9</sup>. There are relatively few manufactured or mobile homes within the Town of Topsail Beach.

The median value of all housing units in the town of Topsail Beach in 2012 is \$369,000<sup>10</sup>.

The section on key characteristics tells us the following about the Town of Topsail Beach: this is a community which has a higher median age than most other beaches and most of NC; this town has a relatively low percentage of its housing occupied year ‘round (giving credence to the fact that the community is believed to be a resort area attracting large number of tourists during the warm weather months); when compared to other barrier island beach municipalities this Town has a higher percentage in the labor force. The income figures for the community are slightly higher than most other beach municipalities, Pender County and NC overall.–Most of the housing stock is single family residential.

### **(5) Age of Population**

An important general trend in planning documents nationwide is to integrate health issues into decision making guidance documents. The aging population is one of the fastest growing demographic and Town’s need to plan to prepare to meet the needs of this rising population. Nearly a third, 27.9% of the total population within Topsail Beach is over the age of 65. The median age in the Town is 58.2 years. A multigenerational planning approach ensures that the needs of all residents are met and the older members of the community are not at risk of social

<sup>9</sup> Also known as, and commonly referred to as, single family housing.

<sup>10</sup> Source: Pender County Tax Assessor. The median value for owner-occupied housing in Topsail Beach reported in the 2010 Census was over \$1,000,000. The Pender County Tax Assessor confirmed this was an erroneously high value. Census housing values are only provided for owner-occupied housing, while the county values are for all housing units. Therefore no attempt was made to compare Topsail with other towns, the county or state.



isolation, declining health, and poor well-being. Aging with a high quality of life in your community can be challenging to deliver. Locating services and transportation options for older adults can enhance the safety and general welfare of those in need of special care. Because mobility limitations may increase with age, it is important to promote well-connected neighborhoods with access to critical facilities. Incorporating opportunities and services for older adults in all aspects of economic, land-use, transportation, and zoning will allow for older adults to engage more fully in community and economic activities and also reduce the individual and societal cost of institutionalization.

### (6) Income

The following income data was obtained from the U.S. Census Bureau “Selected Economic Characteristics – 2006-2010 American Community Survey 5- Year Estimates.

**Table 10 Income by Topsail Beach Households - 216 = 100%**

Less than \$10,000	12 – 5.6%
\$10,000 to \$14,999	2 – 0.9%
\$15,000 to \$24,999	42 – 19.4%
\$25,000 to \$34,999	31 – 14.4%
\$35,000 to \$49,999	41 – 19.0%
\$50,000 to \$74,999	45 - 20.8%
\$75,000 to \$99,999	14 – 6.5%
\$100,000 to \$149,999	8 – 3.7%
\$150,000 to \$199,999	10 – 4.6%
\$200,000 or more	11 – 5.1%

Family income in Topsail Beach for - 2010 is shown below.

**Table 11 Income by Topsail Beach Families - 107 = 100%**

Less than \$10,000	<b>0 – 0.0%</b>
\$10,000 to \$14,999	<b>2 – 1.9%</b>
\$15,000 to \$24,999	<b>3 – 2.8%</b>
\$25,000 to \$34,999	<b>18 – 16.8%</b>
\$35,000 to \$49,999	<b>20 – 18.7%</b>
\$50,000 to \$74,999	<b>21 – 19.6%</b>
\$75,000 to \$99,999	<b>14 – 13.1%</b>
\$100,000 to \$149,999	<b>8 – 7.5%</b>
\$150,000 to \$199,999	<b>10 – 9.3%</b>
\$200,000 or more	<b>11 – 10.3%</b>

<b>Table 12 Topsail Beach Income<sup>11</sup></b>	<u>1989</u>	<u>1999</u>	<u>2010</u>	<u>% Growth</u>
Median Income by Households	\$30,625	\$55,750	\$45,119	32%
Median Income by Families	\$50,609	\$64,167	\$67,083	24%
Per capita Income	\$24,646	\$35,838	\$35,126	30%

The table above, Topsail Beach Income, shows incomes are growing in Topsail Beach. The Town of Topsail Beach is becoming more affluent.

For the year 2010, the Town of Topsail Beach ranks above Pender County and the State in per capita income and median family income.

There is very little of what the U.S. government refers to as “poverty” in the Town of Topsail Beach.

The number of families in poverty and the number of families with a female head of householder, with no husband present, in poverty, in the Town of Topsail Beach, is so low as to be statistically insignificant.

## **B. Housing Stock**

A review and analysis of a town’s housing stock gives us additional information on local land use patterns.

### **(1) Current Housing Stock**

The largest type of dwelling unit in use at the Town of Topsail Beach is the 1-unit, detached, or single family dwelling unit. An attached home means that a home shares a common party wall usually on both sides of the property. A detached home means that a home is free of any shared walls and stands alone. The 20 or more units category in the below table most likely represents Queens Grant and Serenity Point. A total of **211** units, or **16.2%** of the housing stock at Topsail Beach **are** multiple family dwelling units. There were only **4** mobile, also known as manufactured, homes in Topsail Beach at the time of the last inventory **2010**. The number column represents the total number of structures in Topsail Beach that match the housing type (i.e. units in structure) in the following table.

**Table 13 Topsail Beach Housing**

<u>Units in the Structure<sup>12</sup></u>	<u>Number</u>	<u>Percent</u>
1-unit, detached	1071	82.1%
1-unit, attached	19	1.4%
2 units	90	6.9%

<sup>11</sup> Information gathered from the U.S. Department of Commerce, Bureau of the Census, 1990, 2000, 2010.

<sup>12</sup> U.S. Department of Commerce, Bureau of the Census, 2010.

3 or 4 units	42	3.2%
5 to 9 units	53	4.1%
10 to 19 units	0	0.0%
20 or more units	26	2.0%
Mobile home	4	0.3%
Boat, RV, van, etc.	0	0.0%
<b><u>TOTAL</u></b>	<b><i>1305</i></b>	<b><i>100%</i></b>

According to the 2010 Census, 73% of the housing in Topsail Beach was built since 1970. A total of 45% had been built since 1980, 27% since 1990, and 9% since 2000. The above figures do not include motels and their rooms. The age of the houses in Topsail Beach are shown in the table below. Though the census data lists a small number of mobile homes we believe these are manufactured housing units that are permanent structures.

**Table 14 Topsail Beach Housing - Year Structure Built**

<u>Year Structure Built</u>	<u>Number</u>	<u>Percent</u>
2005 or later	12	0.9%
2000 to 2004	109	8.4%
1990 to 1999	230	17.6%
1980 to 1989	241	18.5%
1970 to 1979	351	26.9%
1960 to 1969	173	13.3%
1950 to 1959	154	11.8%
1940 to 1949	25	1.9%
1939 or earlier	10	0.8%
Total Housing Units	1305	100

The median value for owner-occupied housing in Topsail Beach reported in the 2010 Census was over \$1,000,000. The Pender County Tax Assessor confirmed this was an erroneously high value. According to data received from the Assessor's office, the median value of all housing units in the town of Topsail Beach in 2012 is \$369,000. Census housing values are only provided for owner-occupied housing, while the county values are for all housing units. Therefore the Census housing value table was not included herein, and no attempt was made to compare Topsail with other towns, the county or state.

## **(2) Building Permits Issued**

According to the Bureau of the Census the town had 1,005 total housing units in 1990, 1,135 units in 2000, and 1305 units in 2010. This equates to an increase of 13%, or 300 units. If we annualized the figure, we get a 0.6% yearly increase over the last 20 years in the total housing stock at Topsail Beach. Records have been lost regarding specific types and quantities of permits issued in each category prior to the year 2001. The Table below was provided by the Town of Topsail Beach Department of Administration.

**Table 15 Town of Topsail Beach Permits, 2001 - 2012**

<b>Year</b>	<b>Single Family</b>	<b>Manufactured Home</b>	<b>Commercial</b>	<b>Multi-Family</b>	<b>Total</b>
2000	UNK	0	0	0	UNK
2001	19	0	0	0	19
2002	25	0	0	0	25
2003	32	0	0	0	32
2004	36	0	0	1	37
2005	53	0	0	0	53
2006	16	0	0	0	16
2007	3	0	0	2	5
2008	2	0	0	0	2
2009	3	0	0	0	3
2010	4	0	0	0	4
2011	8	0	0	0	8
<b>Total</b>	201	0	0	3	204

### **C. Local Economy**

The economy of a small town is extremely important to its continuing growth and development. The reason economy is a part of a town's Land Use Plan is that the effectiveness of any physical plans for development are almost totally dependent on economic development.

As we have already seen in the LUP section on key population characteristics this is a town with a high median age. There are a lot of retirees living in Topsail Beach. The Town of Topsail Beach is known as a beach resort and a vacation area. A large percentage of the houses in Topsail Beach are vacant for a large portion of the year. The local economy is tourism based. Visitors flood the island during warm weather months.

Much information is available on economy at the county level. However, it should be noted, Topsail Beach is quite different from the rest of Pender County. Certain facts and information are instructive and they tell us a lot about the economy of the area. The area's economy is important to people who will choose to move to the Town of Topsail Beach and to those who may develop

property.

The types of employment within the Town of Topsail Beach have not changed significantly since the 1990 U.S. Census was conducted. Topsail Beach is still a tourist oriented, quiet, retirement community. There are only a few commercial establishments existing in Town.

According to facts received from the NC Employment Security Commission, the 10 largest employers in Pender County are shown in the Table following.

**Table 16 Top 10 Employers in Pender County**

Company Name	Industry	Employment Range
Pender County Board of Education	Education & Health Services	1,000+
Pender County NC	Public Administration	250-499
Coty LLC	Manufacturing	250-499
State of NC Dept. of Correction	Public Administration	250-499
Pender Memorial Hospital Inc	Education & Health Services	250-499
L L Building Products (A Corp)	Manufacturing	250-499
Food Lion LLC	Trade, Transportation & Utilities	100-249
Kohl's Department Stores	Trade, Transportation & Utilities	100-249
Pender Adult Services	Education & Health Services	100-249
Woodbury Wellness Center, Inc.	Education & Health Services	100-249

Note: Following section on retail sales not considered relevant for Land Use Plan

### **(1) Employment by Major Sectors**

Of those persons employed in Pender County, the five largest types of jobs are indicated below<sup>13</sup>:

**Table 17 Employment by Major Sectors**

1. Education and Health Services
2. Retail Trade
3. Construction
4. Manufacturing

<sup>13</sup> U.S. Department of Commerce, Bureau of the Census, 2010.

5. Professional, scientific, management, administrative, waste management services

In, 2010 in the Town of Topsail Beach, of the 356 persons 16 years of age and older, 206 persons, or 57.9%, were in the labor force.

<b>Table 18 Topsail Beach Employment Status</b>	Number	Percentage
Population 16 years and over . . . . .	356	100.0
In labor force . . . . .	206	57.9%
Civilian labor force. . . . .	206	57.9%
Employed . . . . .	190	53.4%
Unemployed . . . . .	16	4.5%
Armed Forces. . . . .	0	0.0

In 2010, the largest occupation category (26.0%) for persons residing in Topsail Beach is management, business, science, and arts occupations. The second largest occupation category was sales and office occupations. The smallest percentage (13.3%) of those working were reported in the production, transportation, and material moving occupations.

<b>Table 19 Topsail Beach Occupation</b>	Number	Percentage
Management, business, science and art occupations	<b>75</b>	<b>39.5%</b>
Service occupations . . . . .	<b>44</b>	<b>23.2%</b>
Sales and office occupations . . . . .	<b>51</b>	<b>26.8%</b>
Construction, extraction, and maintenance occupations		
<i>Natural resources, construction and maintenance occupations . . .</i>	7	3.7%
Production, transportation, and material Moving occupations . . . . .	13	6.8%

In 2010, employment by industry category, the largest number of persons (18.4%) reported they worked in retail trade educational services, health care and social assistance. The next largest category (17.9%) was in the professional, scientific, management, administrative and waste management services area.

The Census, Bureau of Labor Statistics, and Department of Commerce have different methods and ways of displaying this type of data. The occupational classification reflects the type of job or work that the person does, while the industry classification reflects the business activity of their employer or company. The occupational and industry classifications are based on a person's sole or primary job, unless otherwise specified.

<b>Table 20 Topsail Beach Employment by Industry</b>	Number	Percentage
Agriculture, forestry, fishing & hunting, and mining . . . . .	7	3.7%
Construction . . . . .	10	5.3%

Manufacturing . . . . .	10	5.3%
Wholesale Trade . . . . .	21	11.1%
Retail trade . . . . .	26	13.7%
Transportation and warehousing, and utilities .	13	6.8%
Information . . . . .	0	0%
Finance, insurance, real estate, and rental & leasing . . . . .	4	2.1%
Professional, scientific, management, Administrative, & waste management services . . . . .	34	17.9%
Educational, health & social services . . . . .	35	18.4%
Arts, entertainment, recreation, accommodation & food services . . . . .	3	1.6%
Other services (except public administration) . .	20	10.5%
Public administration . . . . .	7	3.7%

Most of the persons working in Topsail Beach were private wage and salary workers.

<b>Table 21 Topsail Beach Class of Worker</b>	Number	Percentage
Private wage and salary workers . . . . .	113	59.5%
Government workers . . . . .	42	22.1%
Self-employed workers in own not incorporated business . . . . .	31	16.3%
Unpaid family workers . . . . .	4	2.1%

## (2) Unemployment<sup>14</sup>

Unemployment rates for area counties for the years 2000 and 2012 are shown below.

**Table 22 Unemployment 2000 & 2012**

<i>Local Government</i>	<i>Total Labor Force 2000</i>	<i>Unemployment 2000</i>	<i>Total Labor Force 2012</i>	<i>Unemployment 2012</i>
New Hanover Cty.	82,940	3.3%	106,460	9.2%
Brunswick Cty.	34,590	4.3%	50,003	10.5%
Pender Cty.	16,480	4.7%	24,056	11.0%

The average unemployment rate for the 3 counties combined rose from 4.1% in 2000 to 10.2% as of August 2012. These increases are indicative of the general nationwide economic downturn over the past several years. It should be noted that on the national level that the U.S. Bureau of Labor Statistics (BLS) September 2012 jobs report the national unemployment rate fell to 7.8 percent, which is the lowest it has been since January 2009.

<sup>14</sup> N.C. Employment Security Commission

Unemployment is a lagging indicator, i.e., it tends to follow the business cycle. In other words a lagging indicator is a financial gauge that becomes measurable only after an economic shift has taken place. That consideration needs to be taken into account when reviewing that particular data.

**(3) Description of Community Economic Activity**

The local economic activity on Topsail Island is based on the tourism industry. If this industry is doing well, the Town of Topsail Beach’s economy will also be doing well. This is true even though the Town’s business sector is relatively small.

**Table 23 Tourism Industry - 2011**

	<u>New Hanover County</u>	<u>Pender County</u>
Travel related Expenses (millions)	\$425.84	\$76.39
Jobs related to tourism	5,100	720
Annual payroll of tourism workers (millions)	\$94.44	\$12.76
Local tax receipts (millions)	\$17.53	\$5.30

According to figures gathered by the Town of Topsail Beach Department of Administration, the number of overnight (rental) units is shown in the following Table.

**Table 24 Number of Overnight Rental Units - Topsail Beach**

Breezeway Motel	47 units
Jolly Roger	65units
Sea Vista Motel	34 units
<b>Total Overnight Rental Units</b>	<b>146 units</b>

**D. Population Projections**

The State of North Carolina grew by over 1.3 million people between the 2000 and 2010 federal censuses. The Topsail Beach population reportedly declined, while Pender County as a whole increased by 24%. However, Topsail Beach has a higher percentage of seasonal home owners who do not permanently reside in Topsail Beach, unlike most other parts of Pender County. Within the planning period for this document it is expected that the Town of Topsail Beach will reach build out. It is possible, and expected, that some redevelopment will occur following build out. The Town of Topsail Beach is located on a barrier island and there are definite physical barriers to long-term unchecked growth. It is uncertain exactly when build out will occur. The projections below have been made in a basic straight line format.

**(1) Short-term — five and ten year projections on permanent and seasonal**



## **population**

Our short-term population projections will be based upon the percentages given by the North Carolina State Data Center for the growth of Pender County and Topsail Beach. It is anticipated that Pender County will grow by steadily between 2010 and 2020, while Topsail Beach will grow at a slow pace since the majority of the island is mostly developed. These estimates were derived from NC State Data Center Estimates for the period of April 2010 through July 2011. This is considered a more accurate approach than using Census data growth figures from 2000 to 2010 that indicated a 24% population increase for Pender County.

### **Table 25 Topsail Beach/Pender County Permanent Population Projections, 5 & 10 Year:**

Topsail Beach 2010 population = 368  
Topsail Beach 2013 population = 433  
Topsail Beach 2020 population projection = 536

Pender County 2010 population = 52,217  
Pender County 2015 population = 56,540  
Pender County 2020 population projection = 61,481

### **Table 26 Topsail Beach Seasonal Population Projections, 5 & 10 Year**

Topsail Beach 2010 seasonal population = 8,288  
Topsail Beach 2020 seasonal population projection = 9,351

## **(2) Long-term — twenty year projections on permanent and seasonal population**

Long-term population projections are based on information given by the North Carolina State Data Center. The same approach for projected long term growth is used here, with anticipated annual population increase for Topsail Beach at 1.3% growth annually, and Pender County at 1.9% growth annually.

### **Table 27 Topsail Beach/Pender County Permanent Population Projections for 2030 (based on 2010)**

Topsail Beach population projection for 2020 = 536  
Topsail Beach population projection for 2030 = 669

Pender County 2020 population projection = 61,481  
Pender County 2030 population projection = 72,698

### **Table 28 Topsail Beach Seasonal Population Projection for 2030 (based on 2010)**

Topsail Beach seasonal population projection for 2020 = 9,351  
Topsail Beach seasonal population projection for 2030 = 10,567

### **Section 3: Natural Systems Analysis**

#### **A. Description and Analysis of Natural Features and Environmental Conditions of Topsail Beach's Planning Jurisdiction**

This Land Use Plan section will describe and analyze the natural features and environmental conditions within the jurisdiction of the Town of Topsail Beach.

##### **(1) Areas of Environmental Concern**

One of the basic purposes of North Carolina's Coastal Area Management Act (CAMA or the Act) is to establish a state management plan which is capable of rational and coordinated management of coastal resources. The Coastal Area Management Act recognizes the key to more effective protection and use of the land and water resources of the coast is the development of a coordinated approach to resources management. The CAMA provides 2 principle mechanisms for accomplishing this purpose: 1) the formulation of local Land Use Plans articulating the objectives of local citizens and translating these objectives, or policies, into future desired growth patterns; and, 2) the designation of Areas of Environmental Concern for the protection of areas of statewide concern within the coastal area.

Both the development of local Land Use Plans and the designation and regulation of critical resource areas contribute to rational management by encouraging local and state governments to exercise their full authorities over coastal resources and to express their management goals in a comprehensible and uniform manner. Local objectives benefit through their incorporation into a state management scheme, and the statewide objectives of resource protection and development benefit through an integrated and comprehensive management approach. State guidelines are prepared to ensure uniformity and consistency in Land Use Plans and in the regulation of critical resource areas, or Areas of Environmental Concern (AEC's).

The state guidelines for areas of environmental concern<sup>15</sup> (Subchapter 7H of Chapter 15A of the NC Administrative Code, or 15A NCAC 7H, or the regulations governing development activity in AEC's) require that local Land Use Plans give special attention to the protection and appropriate development of AEC's. The CAMA charges the Coastal Resources Commission (CRC or the Commission) with the responsibility for identifying types of areas -- water as well as land -- in which uncontrolled or incompatible development might result in irreversible damage. The Act further instructs the Commission to determine what types of development activities are appropriate within such areas, and it calls upon the local government to give special attention to these areas in the process of Land Use Plan development. As a means of controlling any inappropriate or damaging development activities within AEC's, the CAMA calls upon the CRC to implement a permitting program. The intent of this program is not to stop development (if this

---

<sup>15</sup> These regulations are subject to change by the NC Coastal Resources Commission.

were the intent, given the growth in our coastal area, the program would be an abject failure) but rather to ensure the compatibility of development with the continued productivity and value of critical land and water areas (AEC's).

The Act divides responsibility for the permitting program between the CRC and local governments. "Minor" development activities receive permits from a local permit officer, while "major" development activities seek permits from the CRC. (Division of Coastal Management personnel are the staff representatives of the CRC.)

The types of AEC's are separated into 4 broad groupings. Those 4 categories are:

- , **THE ESTUARINE SYSTEM,**
- , **OCEAN HAZARD AREAS,**
- , **PUBLIC WATER SUPPLIES,**
- , **NATURAL AND CULTURAL RESOURCE AREAS,**

**a. The Estuarine System,**

Estuarine system AEC's, which are defined below, are land and water areas of the coast which contribute enormous economic, social, and biological values to North Carolina. It is the objective of the CRC to manage these AEC's as an interrelated group to ensure that development is compatible with natural characteristics and to minimize the likelihood of significant loss of private property and public resources. Included within the estuarine system are the following AEC categories: estuarine waters, coastal wetlands, public trust areas and estuarine shorelines. Each of these AEC's is either geographically within the estuary or, because of its location and nature, may significantly affect the estuary.

**Coastal Wetlands**<sup>16</sup> are areas of salt marsh or other marsh subject to regular or occasional flooding by tides, including wind tides. The management objective of the NC CRC for coastal wetlands is to conserve and manage these areas so as to safeguard and perpetuate their biological, social, economic, and aesthetic values. The highest priority is given to conservation of these areas. The second highest priority of use is for those types of development which require water access and cannot function elsewhere. There are 1,671 acres of coastal wetlands in the Town limits of Topsail Beach.

**Estuarine Waters** are those water areas which are the dominant component and bonding element of the entire estuarine system, integrating the aquatic influences from the land and the sea. Estuaries are among the most productive natural environments of North Carolina. They support the valuable commercial and sports fisheries of the coastal area, which are comprised of estuarine dependent species such as menhaden, flounder, shrimp, crabs, and oysters. Of the 10 leading

---

<sup>16</sup> Coastal wetlands are an Area of Environmental Concern and uses/development in these areas are regulated by the NC Coastal Resources Commission. Coastal wetlands should not be confused with 404 wetlands, which are regulated by the U.S. Army Corps of Engineers.

species in the commercial catch, all but one are dependent on the estuary. There are 350 acres of estuarine waters in the Town of Topsail Beach.

**Public Trust Areas** are all waters of the Atlantic Ocean and the lands there under from the mean high water mark to the seaward limit of state jurisdiction (the state limit of jurisdiction is 3 miles); all navigable natural bodies of water and lands there under to the mean high water level or mean water level as the case may be; all water in artificially created bodies of water containing significant public fishing resources or other public resources which are accessible to the public by navigation from bodies of water in which the public has rights of navigation; and all waters in artificially created bodies of water in which the public has acquired rights by prescription, custom, usage, dedication, or any other means. The management objective is to protect public rights for navigation and recreation and to conserve and manage public trust areas so as to safeguard their biological, economic, and aesthetic values.

**Estuarine Shorelines** are areas of dry land (which may contain 404 wetlands) which are considered a component of the estuarine system because of the close association these land areas have with adjacent estuarine waters. Estuarine shorelines are non-ocean shorelines which are especially vulnerable to erosion, flooding, or other adverse effects of wind and water and which are intimately connected to the estuary. This area extends from the mean high water level (or normal water level along estuaries, sounds, bays, and brackish waters) for a distance of 75 feet landward. Within the estuarine shoreline AEC, impervious surfaces are required to not exceed 30%.

**b. Ocean Hazard Areas,**

Ocean hazard AEC's are so named because these areas are considered by the North Carolina Coastal Resources Commission to be natural hazard areas along the Atlantic Ocean shoreline where, because of their special vulnerability to erosion or other adverse effects of sand, wind, and water, uncontrolled or incompatible development could unreasonably endanger life or property. Ocean hazard areas include: the ocean erodible area, the high hazard flood area, the inlet hazard area, and the un-vegetated beach area.

**Ocean Erodible Areas** are areas where there is a substantial possibility of excessive erosion and significant shoreline fluctuation. The seaward boundary of this area is the mean low water line. The landward extent of this line is established by multiplying the long-term average annual erosion rate, as approved by the CRC, times 30, provided that, where there has been no long term erosion rate or the rate is less than 2 feet per year, the minimum distance shall be set at 60 feet from the first line of stable vegetation.

**High Hazard Flood Areas** are those areas subject to velocity waters in a storm having a 1 percent chance of being equaled or exceeded in any given year and as identified on the National Flood Insurance Program's Flood Insurance Rate Maps. The maps are produced by the Federal Emergency Management Agency.

**Inlet Hazard Areas** are natural hazard areas which are especially vulnerable to erosion, flooding and other adverse effects of sand, wind, and water because of their proximity to dynamic ocean inlets. This area extends landward from the mean low water line a distance sufficient to encompass that area within which the inlet will, based on statistical analysis, migrate, and shall consider such factors as previous inlet territory, structurally weak areas near the inlet, and external influences such as jetties and channelization.

**Un-Vegetated Beach Areas** are self-explanatory to the extent that they consist of un-vegetated ocean beach. These areas are subject to rapid and unpredictable land form change from wind and wave action.

**c. Public Water Supplies**

The third broad grouping of AEC's includes valuable small surface supply watersheds and public water supply well fields. These vulnerable, critical water supplies, if degraded, could adversely affect public health or require substantial monetary outlays by affected communities for alternative water source development. Most of the public water supply in coastal NC is served by groundwater, as is the case with Topsail Beach. For more details on this type of AEC, interested parties are advised to call the North Carolina Division of Coastal Management, in Raleigh, at (919) 733-2293.

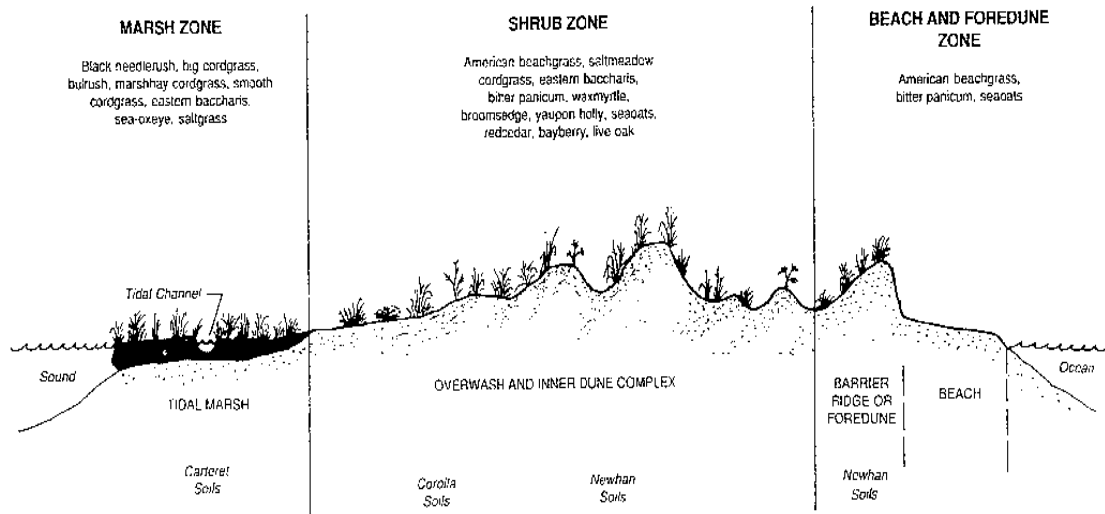
**d. Natural and Cultural Resource Areas**

Natural and cultural resource areas include natural or cultural resources of more than local significance in which uncontrolled or incompatible development could result in major or irreversible damage to natural systems or cultural resources, scientific, educational, or associative values, or aesthetic qualities. These areas would include coastal areas containing remnant species, coastal complex natural areas, unique coastal geologic formations, significant coastal archaeological resources, and significant coastal historic/architectural resources. For more details, interested parties are advised to call the North Carolina Division of Coastal Management, in Raleigh, at (919) 733-2293. This category of AEC is by nomination only.

The Areas of Environmental Concern pertinent to the Town of Topsail Beach are the estuarine system and ocean hazard areas AEC's. No nomination category AEC's are expected during the planning period.

**(2) Soil Characteristics**

In April, 1990, the U. S. Department of Agriculture, Soil Conservation Service, in cooperation with the NC Agricultural Experiment Station and the Pender County Board of Commissioners,



published a Soil Survey of Pender County, North Carolina<sup>17</sup>.

The GENERAL SOIL MAP<sup>18</sup> contained in this document shows the Topsail Beach planning area as within the Carteret-Newhan-Corolla soil association. These soils compose about 2% of Pender County. Of this 2% about 65% are Carteret soils, 15% Newhan soils, and 7% Corolla soils. 13% of this soil association is said to be composed of other soils or “soils of minor extent.”

Carteret soils are nearly level and very poorly drained. They are on tidal flats bordering the sound. These soils are flooded by high tides daily. They are dominantly fine sand or sand throughout. The Newhan soils are gently sloping to moderately steep and are excessively drained. They are on coastal ridges or barrier dunes. These soils are fine sand or sand throughout. The Corolla soils are nearly level and are moderately well drained or somewhat poorly drained. They are in depressions. These soils are also fine sand or sand throughout.

The parent material of Pender County soils is the rock from which the soils are formed. This is the most important factor causing the soils differences in the county. The parent material of the Pender County soils are of 2 types. The first, and the most important for the Town of Topsail Beach, is the unconsolidated rock material, sand, silt, and clay that make up the marine and fluvial sediments of the coastal plain. The other type, pertinent to the Pender County mainland, is known as aeolian sand deposits.

The reason that soil types are important for planning purposes is that some soils are not well suited for a particular type of development. Soils may present hazards for building foundations. They may be poorly drained and have limited ability, if any, to support septic systems. If this type of information is considered when the Town produces a set of regulations, such as a Zoning

<sup>17</sup> The author of this document does not claim special expertise on soils. Much of the information reported here regarding soil types is taken from the text of the Soil Survey of Pender County North Carolina (1990).

<sup>18</sup> The General Soil Map reference here is to the map contained in the Soil Survey of Pender County, North Carolina document.

Ordinance, development activity may be steered toward those areas where it is more suitable<sup>19</sup>.

A more specific analysis of the soils within the Town of Topsail Beach may be taken from aerial photography, which is overlaid with soil types, which is included in the Soil Survey of Pender County, North Carolina, shows that within the general soil series already mentioned the following soils are found:

□ Carteret fine sand (Ca) □ this soil is very poorly drained. It is on tidal flats at elevations of 0 to 3 feet above sea level. The flats are generally dissected by narrow areas of water. Infiltration is very slow, or no water penetrates the surface. Permeability is rapid. The water table fluctuates with the daily tides which inundate the soil. This soil is not used for building site development or sanitary facilities. Recreational use is limited to hunting and fishing. The native vegetation is adapted to extreme wetness and salinity. The edges of the tidal marsh area provide good habitat for wildlife.

□ Newhan-Corolla complex (NkE) □ These soils are found on the barrier islands of North Carolina. They are subject to wave over wash during hurricanes. The Newhan soil is excessively drained. It is found on ridges and slopes. It is subject to soil blowing. Infiltration is very rapid, and surface water runoff is slow. Permeability is very rapid. The available water capacity is very low. The native vegetation is mainly sea oats, seacoast bluestem, American beach grass, American red cedar, bitter panicum, greenbrier, and live oak. Flooding is a hazard. Maintaining vegetation on this soil decreases soil blowing and will therefore potentially decrease damage to the frontal dunes which serve as a barrier to wave action during hurricane events.

□ Newhan-Corolla-Urban land complex (NmE) □ This soil type is similar in its basic properties to the NkE soils mentioned above. These soils are found in the oldest developed portions of Topsail Beach. Urban land is where soils have been cut, filled, graded, or paved so that most soil properties have been altered to the extent that a soil series is not recognized. These areas are used for developed type uses, which might include closely spaced housing, parking lots, and commercial development of a variety of types. This soil classification is found in the developed areas of Topsail Beach. This type of soil is not specifically mentioned in the soil survey but it does, in fact, exist in the Town of Topsail Beach.

□ Newhan fine sand (NhC) □ This is excessively drained, sandy soil in areas of dredge spoil. It is found in Pender County on both sides of the Intracoastal Waterway and in a few areas along the Cape Fear River. These areas are surrounded by water or marsh. Infiltration is rapid, and surface runoff is slow. This soil is generally not used for building site development.

These soils types are consistent with the types of soils found on every barrier island beach in North Carolina. All of the soils limitations mentioned above may be overcome through engineering. Extreme assistance may be necessary in some cases. For further information on

---

<sup>19</sup> Soil disposal areas for projects may create a mosquito breeding problem. For information concerning appropriate mosquito control measures contact the Public Health Pest Management Section at 919-733-6407.

soils, interested parties are invited to consult the Pender County Soil Survey (1990) document, or to call the Pender County Agricultural Extension Office. Appropriate considerations for the Topsail Beach Planning Board and Town Board, where decisions related to the types of soils will become significant, are: zoning density, height of structures, setback requirements, lot size, new streets and roads, and utilities extension plans and policies. Since there is no public sewerage available at the Town of Topsail Beach, all development must have a septic system approved by the Pender County Health Department<sup>20</sup>.

### **(3) Water Quality Classifications**

The evolution of water quality regulations is an interesting study in the balance, dynamics, and interactions of several factors including population growth, standards of living, technological developments, food demands, urbanization, transportation changes, and industrialization over the last century.

The first transition in the regulatory emphasis from protecting water quality for navigation and commerce in the federal waterway regulations enacted in the late 1800's, to mandating water quality protection for the purpose of sustaining life supporting conditions occurred in the late 1900's. The second transition involves a shift in society's perspective, from the historical view of waterways as ceaseless resources, to recognizing that the abilities of waters to renew their qualities are limited, and become stressed under the magnitude and complex demands of a changing and growing society. The third transition is the shift in management responsibilities for water quality, which has come nearly full circle over the past 100 years. The federal government has delegated much of its enforcement authority for water quality protection, which it began assuming from local authorities in the late 1800's, to the states, who have in turn placed considerable responsibilities back on local governments for the administration of water control programs<sup>21</sup>.

From a historic perspective, flowing waters have received waste from time immemorial. With the rise of population centers in the late 1800's, floating wastes threatened to obstruct the transportation of goods. The federal government began addressing the practice with the passage of the Rivers and Harbors Act of 1899, which regulated the depositing of solid wastes into waterways and regulated construction projects in navigation channels. The Oil Pollution Act of 1924, prohibiting vessels from discharging oil into coastal waters, marked a beginning in the policy shift towards protection of water quality and aquatic life. This Act also assigned enforcement responsibilities to the federal government when local pollution control efforts were

---

<sup>20</sup> Contact with the Pender County Health Department is required for septic tank installation (per 15A NCAC 18A 1900). For information concerning septic tank and other on-site waste disposal methods, contact the On-Site Wastewater Section at 919-733-2895.

<sup>21</sup> A Guide to North Carolina's Tidal Salt Water Classifications, November 1994, prepared for the U.S. EPA and the NC Division of Environmental Management by Cape Fear Council of Governments.



inadequate, and made available modest amounts of grant funds for the construction of wastewater treatment facilities.

The rise of public attention on water quality issues in the 1960's resulted in the passage of the Water Quality Act of 1965, which specified standards for interstate quality water. A flurry of legislation and policy directives soon followed in the 1970's. The National Environmental Policy Act of 1970 set in motion a broad set of changes in environmental protection policies, including the type of issues to be addressed Environmental Impact Statements (EIS), Environmental Assessments (EA), and Findings of No Significant Impact (FONSI), and led to the rise of the U.S. Environmental Protection Agency.

The Water Pollution Control Act Amendments (Clean Water Act) of 1972, and the revised Act of 1977, marked an important step in regulating water pollution. First, it increased the funding levels available through the construction grants program for assisting in building treatment plants. Second, it instituted technology based effluent standards as opposed to stream base standards. Third, it established a national permit system for regulating point source discharges. Most importantly, the Act established a national policy and specific goals for restoring and maintaining the chemical, physical, and biological properties of the nation's fishable and swimmable waters.

Several sections instituted programs under the Clean Water Act that significantly affect development projects today, including Section 401, which requires water quality certification for activities that may cause a discharge into navigable waters or wetlands; Section 402, which established the National Pollution Discharge Elimination System (NPDES) for wastewater discharge permits; and Section 404, which regulates the discharge of dredge and fill material into navigable waters or wetlands. The evolution of the implementation of the Clean Water Act was the shift in the enforcement and day-to-day administration of the programs from the U.S. Environmental Protection Agency to the states, and in the case of the NPDES program, to the local governments.

Water quality protection at the state level began taking shape after WW II. By 1950, most communities in North Carolina with populations greater than 2,500 were discharging either raw or minimally treated sewage directly into the state's waterways. At the instruction of the 1951 General Assembly, the State Stream Sanitation Committee (now known as the Division of Water Quality) began the formal development of North Carolina's water pollution control regulations. The initial steps of the Committee were to survey the extent of water pollution and to prepare a comprehensive water pollution program

The Committee also formulated a classification system for the state's surface waters based on best usage criteria, which became the basis for the system used today. By 1963, water quality standards and classifications were in place, and most surface waters were classified. The classifications and standards have been modified over time. Today the surface saltwater classifications system helps to protect the quality and usage of over 2 million acres (3,200 square miles) of tidal saltwater estuaries, bays, and sounds. These large figures have included in the count all of Topsail Island waters and the accompanying coastal wetlands.

Additional legislation followed over the years. This included the North Carolina Environmental Policy Act in 1971 and the Coastal Area Management Act of 1974. The mandate for state and local government management of natural resources was significantly strengthened in the general election of 1972, which overwhelmingly approved an amendment to the state constitution, which reads, in part, as follows:

*“It shall be the policy of this State to conserve and protect its land and waters for the benefit of all its citizenry, and to this end it shall be a proper function of the State of North Carolina and its political subdivisions to acquire and preserve park, recreation, and scenic areas, to control and limit the pollution of our air and water, to control excessive noise, and in every other appropriate way to preserve as a part of the common heritage of this State its forests, wetlands, estuaries, beaches, historical sites, open land, and places of beauty.”*

As a strategy for the management of North Carolina’s waters, the NC Division of Water Quality (NC DWQ) assigns classifications to water bodies. The primary classifications are **SC**, **SB**, and **SA**. This is a graduated type scale whereby the NC DWQ assigns a classification based on the measured qualities of the water in each area. Supplemental classifications (**HQW** – High Quality Waters, **ORW** — Outstanding Resource Waters, **Sw** — Swamp Waters, and **NSW** — Nutrient Sensitive Waters) designation is also done, as appropriate, as a means of specifying the properties of a water body which make it special. This is done so that these special properties, once recognized, may be preserved through planning.

According to the NC Division of Water Quality<sup>22</sup>, the waters of Topsail Sound and the waters of Banks Channel are all **SA** waters. These waters have also been classified as **HQW**. The **HQW** (High Quality Waters) designation areas are areas which have “excellent biological, physical, and chemical characteristics.” Areas designated **SA** are suitable for shellfish harvesting<sup>23</sup>.

According to the NC Division of Water Quality there is an area classified **ORW** in the vicinity of the Town of Topsail Beach. This designation is given to the most pristine and productive waters in North Carolina. The **ORW** area is located south of New Topsail Inlet and west of Hutaff Island, which is the barrier island fronting on the Atlantic Ocean, and is the area of high ground

---

<sup>22</sup> The NC Environmental Management Commission classifies waters for the NC Division of Water Quality (NC DWQ). Telephone conversation with Mr. Dean Hunkele, NC DWQ/DENR, March 6, 2003.

<sup>23</sup> The NC DWQ classifies waters for purposes of issuing discharge permits. The NC Division of Marine Fisheries establishes, administers and enforces rules governing commercial and recreational fishing in coastal waters, cultivation and harvesting of shellfish, and submerged land claims. The NC Shellfish Sanitation Branch classifies coastal waters relative to their quality and safety for harvesting shellfish, such as oysters and clams. The primary objective of the Branch is the protection of public health. The Branch works with the Division of Marine Fisheries to monitor and enforce water quality and use standards. The LUPUP reader should recognize that when the NC DWQ says that waters classified **SA** may be used for shellfishing, they also may **not** be used for shellfishing. Whether those waters are open to the taking of shellfish or not is a decision which is left to another agency.

between the Atlantic Ocean and the ORW. The ORW is outside of the planning jurisdiction for the Town of Topsail Beach.

The waters of the Atlantic Ocean are classified **SB**. Areas designated SB are saltwater areas protected for primary recreation which includes swimming.

Water quality designations for the waters adjacent and within the Town of Topsail Beach's planning jurisdiction were originally made in August of 1981.

#### **(4) Shellfish Growing Areas & Primary Nursery Areas**

Salt marshes and estuaries along our coast serve as nursery grounds for 90 percent of our fisheries. North Carolina was the first state to designate nursery areas to protect these fragile ecosystems. The nursery system in North Carolina serves as a model for other states. According to this system there are three categories of nursery areas in our coastal waters:

- Primary Nursery Areas
- Secondary Nursery Areas
- Special Secondary Nursery Areas

##### **a. Primary Nursery Areas**

Statewide the primary nursery areas, generally, are located in the upper portions of creeks and bays. These areas are usually shallow with soft muddy bottoms and are surrounded by marshes and wetlands. The low salinity levels and the abundance of food in these areas make them ideal for young fish and shellfish. All of the primary nursery areas in Topsail Beach are located in the areas of salt marsh.

To protect juveniles, many commercial fishing activities are prohibited in primary nursery areas; including the use of trawl nets, seine nets, dredges or any mechanical methods used for taking clams or oysters. If a violator is caught in a primary nursery area, he is faced with a very substantial penalty.

In the planning jurisdiction of Town of Topsail Beach there are 2,447 acres of primary nursery area. In all of North Carolina there are 80,144 acres which are designated as primary nursery areas. This means approximately 3% of the total primary nursery area in North Carolina is within the planning jurisdiction of the Town of Topsail Beach.

##### **b. Secondary Nursery Areas**

These areas are located in the lower portions of creeks and bays. As they develop and grow, young fish and shellfish (primarily blue crabs and shrimp), move into these waters. Trawling is not allowed in the secondary nursery areas.

There are 35,502 acres in North Carolina which are designated as secondary nursery areas. There are no secondary nursery areas in the Town of Topsail Beach’s planning jurisdiction.

**c. Special Secondary Nursery Areas**

These areas are located adjacent to secondary nursery areas but closer to the open waters of our sounds and the ocean. For the majority of the year, when juvenile species are abundant, these waters are closed to trawling.

There are 31,362 acres in North Carolina which are designated as special secondary nursery areas. There are no special secondary nursery areas in the Town of Topsail Beach’s planning jurisdiction.

**(5) Flood Hazard Areas**

The Town of Topsail Beach is a participant in the National Flood Insurance Program (NFIP). The Flood Insurance Rate Maps (FIRMs) for the Town of Topsail Beach were last revised October, 2011. The map shows most of the Town is located within a VE or Coastal/Storm Wave Flood Zone: which has a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. This is a hazardous situation but not an unusual circumstance in coastal barrier island municipalities.

The total area within the Topsail Beach municipal limit is 3,770 acres. Of these acres 2,573 are in the VE flood hazard area designation. 1,194 are in the AE zone and 1.73 acres are within the 0.2% annual chance flood hazard zone.

**Table 29 Topsail Beach - Acres in Flood Hazard Areas**

<b>Total Acreage</b>	<b>AE Zone -- %</b>	<b>VE Zone -- %</b>	<b>0.2 % annual chance flood hazard</b>	<b>X Zone-- %</b>
3,770	1,194.04 – 31.67%	2,573.88 – 68.28%	1.73 - 0.045%	0.35 -- 0.009%

The NFIP is a federal program which enables property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the federal government. The agreement is that if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas, the federal government will make flood insurance available within the community as a financial protection against flood losses.

The U.S. Congress established the NFIP on August 1, 1968, with the passage of the National Flood Insurance Act of 1968. The NFIP was broadened and modified with the passage of the

Flood Disaster Protection Act of 1973 and other legislative measures. It was further modified by the National Flood Insurance Reform Act of 1994, signed into law on September 23, 1994. The NFIP is administered by the Federal Insurance and Mitigation Administration (FIMA) and the Mitigation Directorate (MT), components of the Federal Emergency Management Agency (FEMA), an independent Federal agency.

In support of the NFIP, FEMA has undertaken a nationwide effort of flood hazard identification and mapping to produce Flood Hazard Boundary Maps (FHBM)s, Flood Insurance Rate Maps (FIRMs), and Flood Boundary and Floodway Maps (FBFMs). Several areas of flood hazards are commonly identified on these maps. One of these areas is the Special Flood Hazard Area (SFHA), which is defined as an area of land that would be inundated by a flood having a 1-percent chance of occurring in any given year (also referred to as the base flood or 100-year flood). The 1-percent-annual chance standard was chosen after considering various alternatives. The standard, in the opinion of the agency, constitutes a reasonable compromise between the need for building restrictions to minimize potential loss of life and property and the economic benefits to be derived from floodplain development. Development may take place within the SFHA, provided that development complies with local floodplain management ordinances, which must meet the minimum federal requirements. Flood insurance is required for insurable structures within the SFHA to protect federal financial investments and assistance used for acquisition and/or construction purposes within communities participating in the NFIP.

Community participation in the NFIP is voluntary (although some states require NFIP participation as part of their floodplain management program). Each identified flood-prone community must assess its flood hazard and determine whether flood insurance and floodplain management would benefit the community's residents and economy. It should be understood that a community's participation status can significantly affect current and future owners of property located in Special Flood Hazard Areas (SFHAs). The decision should be made with full awareness of the consequence of each action.

If a community chooses not to participate, flood insurance under the NFIP is not available within that community. Federal officers or agencies may not approve any form of financial assistance for acquisition or construction purposes in a Special Flood Hazard Area (SFHA). This would prohibit, for example, loans guaranteed by the Department of Veterans Affairs, insured by the Federal Housing Administration, or secured by the Rural Housing Services. If a Presidentially declared disaster occurs as a result of flooding in a non-participating community, no federal financial assistance can be provided for the permanent repair or reconstruction of insurable buildings in SFHAs. Eligible applicants may receive those forms of disaster assistance that are not related to permanent repair and reconstruction of buildings.

Flood insurance availability has proven to be a desirable investment for the Town of Topsail Beach.

**(a) Flooding – Rain Events**

The Town of Topsail Beach is subject to some flooding after hard or long rain events. Those areas which are most prone to flooding are as follows:

- 1) Anderson Blvd in several areas from the Town line to Florida Avenue (Anderson intersections with Fields Ave, Edgewater Ave, Gaye Ave, Barwick Ave, Empie Ave, Haywood Ave, Davis Ave, Florida Ave).
- 2) Carolina Blvd intersections with: Florida Avenue; Ward Ave; Davis Ave.
- 3) Channel Blvd and Crocker Avenue.
- 4) Bridgers Avenue between Haywood Avenue and Empie Avenue.

As the Town continues to develop, more areas may emerge as problematic.

### (6) Storm Surge Areas

Storm surge is water pushed toward the shore by the force of the winds swirling around a hurricane or low pressure meteorological system. This advancing surge combines with the normal tides to create the hurricane storm tide (a.k.a., storm surge), which can increase the mean water level 15 feet or more. Wind waves are superimposed on the storm tide. This rise in water level can cause severe flooding in coastal areas, particularly when the storm tide coincides with the normal high tides.

Wind is the major determinant in the classification of a hurricane. Any tropical storm with sustained wind in excess of 74 mph is classified as a hurricane. Hurricanes are judged by their power according to a model known as the **Saffir-Simpson** scale. This measure of the power of a hurricane classes hurricanes according to a sliding scale from 1 to 5 (with category 5 storms as the most severe). Category 5 storms are rare.

Topsail Beach would not be protected from the full brute force of a hurricane as a result of its location as more inland communities would be. The friction or impact of the storm hitting land from the water causes dissipation of the full force of the storm though there is still tremendous energy left to down power lines and other public utilities, and fell trees. As Topsail Beach is a municipality on the edge of the ocean, the Town would feel the full effect of a storm. Town officials take this quite seriously as they plan. The Town has survived many such storms in the past and continues to flourish.

The speed and strength<sup>24</sup> of the storm is important. The Table below shows the amount of acres which may be flooded by storm surge in Topsail Beach by a fast moving hurricane.

**Table 30 Topsail Beach Storm Surge/Acres of Inundation (fast moving hurricane)**

Hurricane Rating	Acres Inundated	Total Acres	Percentage
Category 1 & 2	2,681	3,770	71%

<sup>24</sup> Hurricane strength is shown here according to the Saffir-Simpson scale (1 = lowest strength and 5 = highest strength).

Category 3	2,763	3,770	73%
Category 4 & 5	2,792	3,770	74%

Wave and current action associated with the storm surge may cause extensive damage. Water weighs approximately 1,700 pounds per cubic yard; extended pounding by frequent waves can demolish any structure not specifically designed to withstand such forces.

**(7) Non-coastal Wetlands (Probable 404 Wetlands)**

Within the planning jurisdiction of the Town of Topsail Beach there are areas of freshwater wetlands<sup>25</sup>.

**Table 31 Topsail Beach - Non-Costal Wetlands**

<b>Acres Wetlands</b>	<b>Acres Total</b>	<b>Percent Wetlands</b>
1,699	3,770	45%

Development activity in these areas is regulated. The State has authority through the Clean Water Act to review federally permitted wetland disturbances (including dredge and fill activities) to be sure the activities do not damage wetlands to the point they no longer support their designated use. The NC Division of Water Quality (DWQ) performs this review, which is called a 401 Water Quality Certification.

The types of non-coastal wetlands found in Topsail Beach are freshwater wetlands (or marshes) and seasonal wetlands. Freshwater wetlands are perhaps the most familiar type of wetland. They are found alongside or within the roadside ditch and at the edges of ponds and rivers. Freshwater wetlands, in whatever form they may take, are an extremely important part of the natural areas of any community. They are habitat areas for a variety of diverse plant and animal species and are often an important component part of sensitive groundwater recharge areas. Seasonal wetlands fill with winter rains and will generally dry out during summer and fall. They are as ordinary as a puddle in the backyard and yet are also critical, especially as breeding habitat, for a wide variety of important species of animals. Since these seasonal wetlands are often smaller than one acre, they are not well protected by existing regulations.

Section 404 of the Clean Water Act enables state and federal agencies to regulate development activities occurring in wetlands. The 401 (previously discussed) and 404 programs require permits before disturbing wetland areas. The NC Division of Coastal Management currently reviews U.S. Army Corps of Engineers (404) permits issued, for projects over one-third of an acre in size, for consistency with Coastal Resources Commission regulations and policies contained in local Land Use Plans. The majority of freshwater wetlands permits requested are granted. It is

<sup>25</sup> These areas are to be understood as different from the coastal wetlands identified in this document under the section AEC's. Coastal wetlands are composed of areas of salt marsh.

not the intent of this process to deny people the use of their land. The process is designed to give officials the opportunity to work with people, and in some cases to modify projects, to lessen impacts on wetlands.

**(8) Water Supply Watersheds & Wellhead Protection Areas**

There are no surface water supply waters or watersheds in the vicinity of the Town of Topsail Beach. Water is supplied to the Town of Topsail Beach through a system of three municipally owned wells. The Town of Surf City’s municipal water system is connected to the Town of Topsail Beach system and this connection may be used to buy some water from Surf City if it is available, necessary, and affordable. The agreement between the municipalities also allows for sharing in case of emergency need. The Town will continue to explore the possibility of connecting to the Pender County water system or another private utility.

The Town of Topsail Beach complies with the regulations published by the state of NC regarding protection of well heads and the grounds in their immediate vicinity.

**(9) Environmentally Fragile Areas**

Fragile areas are areas which could easily be destroyed or damaged by inappropriate or poorly planned development. Some of these areas, as noted below, are located within the Town of Topsail Beach. Policies to protect these areas are discussed in the Land Use Plan section on policy.

**(a) Wetlands**

There are 3,770 total acres within the Topsail Beach Town limits<sup>26</sup>. Of these, 1,772 acres are coastal wetlands (or salt water marsh). Coastal wetlands therefore describe 47% of the acreage within the town boundary of Topsail Beach. These areas are mapped as a part of this Land Use Plan. (The Wetlands Map is located in the back of this document.) The majority of this wetland area is northwest of the Town island in the marshy area outside the island up to the middle of the Intracoastal Waterway where the town boundary ends.

Exceptional wetlands<sup>27</sup> comprise 0.78 acres, or 0.02%, of the total acreage in the city limit. The reference here to wetlands categorized as “exceptional” refers to all wetlands in a category of that deserves special protection due to multiple criteria. Coastal wetlands are areas of salt marsh.

**Table 32 Topsail Beach Wetlands - Coastal & Exceptional**

Total Acres	Coastal Wetlands– %	Exceptional Wetlands– %
-------------	---------------------	-------------------------

<sup>26</sup> This total includes wetlands and water.

<sup>27</sup> This includes the following types: estuarine shrub/scrub, managed pineland, swamp forest, pocosin, pine flat, hardwood flat, and various other cleared or cut over wetland types. Data is from NC Geographic Information & Analysis, 1999.



3,770	1,772 acres – 47%	0.78 acres – 0.02%
-------	-------------------	--------------------

**(b) Natural Heritage Areas**

The North Carolina Natural Heritage Program inventories, catalogues, and facilitates protection of the rarest and most outstanding elements of the natural diversity of our state. These elements of natural diversity include those plants and animals which are so rare, or the natural communities which are so significant, they merit special consideration as land use decisions are made.

By consolidating information about hundreds of rare species and natural communities, the NC Natural Heritage Program is able to ensure the public is able to get the information needed, to weigh the ecological significance of various sites, and to evaluate the likelihood and nature of ecological impacts. This information supports informed evaluations of the trade-offs associated with biological diversity and development projects before plans have been finalized. The information gathered facilitates the establishment of priorities for the protection of North Carolina's most significant natural areas.

In the Town of Topsail Beach the NC Natural Heritage Program has identified two areas of maritime forest as a significant natural heritage area. These 2 areas consist of 2,178 acres of the 3,770 total acres within the Topsail Beach Town limit. Accordingly, the maritime forested area is 58% of the total area of the municipality. The areas are known as NHA #1 Primary Topsail Beach maritime forest (1,527 acres) and NHA #2 Secondary Topsail Beach maritime forest (651 acres). This does not prohibit removal of areas for residential development. And the Planning Board will consider how to monitor tree removal more effectively in the future.

The Natural Heritage Program has identified the following 10 “natural heritage element occurrences<sup>28</sup>” within the Town of Topsail Beach; the occurrences are: moundlily yucca (vascular plant); Wilson’s plover (bird); common ground dove (bird); seabeach amaranth (vascular plant – 2 locations); black skimmer (bird); American alligator (reptile); piping plover (bird); loggerhead turtle (reptile. These are points where threatened or plants or animals have been sighted. These are areas where one of the following has occurred: either the element has not been found in recent surveys; or it has not been surveyed recently enough to be confident they are still present; or the occurrence is thought to have been destroyed.). There were 3 element occurrences noted within the colonial water birds nesting site at the south end of Topsail Island.

**(c) Areas Containing Endangered Species**

The term “endangered species” is used describe an animal or plant in danger of extinction within the foreseeable future throughout all or a significant portion of its range. The term “threatened species” is a classification provided to a plant or animal likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

---

<sup>28</sup> Also worthy of note is a colonial shorebirds nesting site at the south end of Topsail Island.

Areas which contain, or are likely to contain, endangered species in the Town of Topsail Beach include the dry sand areas of the ocean front beach and dunes, the marshes along the estuarine shoreline, and the maritime forested areas.

It is important to keep in close touch with agencies and with the officials employed by these agencies charged with the protection of endangered species. Sightings of rare and endangered plants and animals should be reported.

**(d) Prime Wildlife Habitats**

The term habitat describes the environment in which a plant or animal lives. This term is all inclusive and may describe vegetation, soil, water, or other characteristics, or a combination of characteristics. Prime habitat is an area in which a plant or animal lives and which exhibits the highest quality or has excellent, or all necessary or desired features in abundance, which describe the habitat. There is an extremely limited amount of barrier island beach similar to Topsail Beach anywhere in the world. The entire area of Topsail Beach is special and prime habitat for various species of flora and fauna. The attached maps showing primary nursery areas, water quality classifications, wetlands, and significant natural areas will give the Land Use Plan user an idea of the very special characteristics of this barrier island.

**(e) Maritime Forests<sup>29</sup>**

A “maritime forest” is a forested area or eco-community characterized by its stunted growth due to the stresses imposed by its proximity to salt spray from the ocean. Typical vegetation in these areas in North Carolina includes live oak, red maple, and swamp tupelo.

There are only remnant stands of maritime forest existing within the Town of Topsail Beach. The NC Natural Heritage Program<sup>30</sup> has identified 2 areas which they have designated as “NHA #1 Primary Topsail Beach maritime forest” and “NHA #2 Secondary Topsail Beach maritime forest.” These areas are both located to the west of the front beach within the planning jurisdiction of the municipality. The maritime forest in the Town of Topsail Beach consists of 2,178 acres. Maritime forest may be removed for residential development.

**(10) Additional Natural Features Identified by Topsail Beach**

A review of available data and discussions with Topsail Beach officials have not led to the identification of any additional natural features which need to be added to this planning document.

---

<sup>29</sup> The NC League of Municipalities will support legislation granting statewide authority to local governments for tree protection ordinances within their land use jurisdictions. League Letter, September 2003/Volume 24/Number 9.

<sup>30</sup> This information was received from the NC Natural Heritage Program by the NC Center for Geographic Information & Analysis, and forwarded to Topsail Beach by the NC Division of Coastal Management, DENR.

**Section 4: Composite Map of Environmental Conditions**

The Composite Map of Environmental Conditions is attached to the back of this document (in the Appendix). The plan user is referred there for further information. The map shows environmental conditions at Topsail Beach which are very similar in nature to all barrier island beach communities in North Carolina.

The Table below gives the categorization of environmental composite features.

**Table 33 Environmental Composite - Categorization of Features - Topsail Beach, 2004**

<b>Environmental Class</b>	<b>Mapping Symbol (Color)</b>	<b>Natural Features &amp; Constraints</b>
Class I – Land containing only minimal hazards and having only slight limitations that may be addressed by sound land planning and development practices	Areas shown as purple (0% within Town planning area)	-Non-wetland area or wetland rated beneficial and not high potential risk (NC-CREWS) -Land located outside 100 year flood hazard area -Land located outside storm surge area
Class II – Land containing development hazards and limitations that may be addressed by methods such as restrictions on types of land uses, special site planning, or provision of public services	Areas shown as green (47% within Town planning area)	-Estuarine shoreline -Ocean erodible area -High hazard flood area -Land located outside designated historic districts or more than 500' from a historic or archaeological site -Soils with moderate to severe septic limitations -Soils with moderate to severe erosion hazards - Non-coastal wetland area rated beneficial and high potential risk or substantial significance (NC-CREWS) -Land located within a 100 year flood hazard area -Land located within storm surge area
Class III – Land containing serious hazards for development or lands where the impacts of development would cause serious damage to the values of natural systems	Areas shown as brown (53% within Town planning area)	-Coastal Wetland -Estuarine Waters -Public Trust/Protected lands -Un-vegetated beach area -Non-coastal wetlands rated as substantial significance with high potential risk or exceptional significance with or without high potential risk (NC-CREWS) -Significant Natural Heritage Area -Inlet Hazard area

The total amount of undeveloped land within the Town of Topsail Beach is a figure which can only be determined by a site analysis of each undeveloped area within the Town. The Environmental Composite map in the back of this document illustrates the information in the above table. It is not within the scope of this planning document to perform such an analysis. However, with the assistance of computerized mapping capabilities, and based upon information received from the NC Division of Coastal Management, we have determined there are approximately 219 undeveloped acres within the Town of Topsail Beach. Much of this land, which was counted from high altitude, cannot be developed because of setbacks, commons areas, undevelopable parcels, etc. It is estimated that there may be as many as 110 acres undeveloped with development potential. The actual number of acres is probably closer to the vicinity of 55 acres.

The best location for future development, or for re-development, is within those areas classified as Class II on the Environmental Composite Map (in the Appendix to this document).

**A. Class I — land containing only minimal hazards and limitations that may be addressed by common land planning and development practices**

There are no (0%) Class I rated lands within the planning jurisdiction of the Town of Topsail Beach. These lands are described by the North Carolina Department of Environment & Natural Resources as: non-wetland areas or wetlands rated beneficial and not high potential risk; land located outside the 100 flood hazard area; and, land located outside storm surge areas.

**B. Class II — land containing development hazards and limitations that may be addressed by methods such as restrictions on types of land uses, special site planning, or the provision of public services**

The majority of the developable land (13% of the total land area) within the planning jurisdiction of the Town of Topsail Beach is categorized and Class II lands. These lands are described by the North Carolina Department of Environment & Natural Resources as: estuarine shoreline; ocean erodible area; high hazard flood area; land located outside designated historic districts or more than 500 feet from a historic or archaeological site; soils with moderate to severe septic limitations; soils with moderate to severe erosion hazards; non-coastal wetlands areas rated beneficial and high potential risk or of substantial significance; land located within the 100 year flood hazard area; and, land located within storm surge areas.

**C. Class III — land containing serious hazards for development or lands where the impact of development may cause serious damage to the functions of natural systems**

There are extensive areas of Class III lands within the planning jurisdiction of the Town of Topsail Beach. These lands account for 87% of the Town of Topsail Beach's planning area and provide for extremely limited development opportunity. These lands are described by the North Carolina Department of Environment & Natural Resources as: coastal wetlands; estuarine waters; public trust areas; un-vegetated beach areas; non-coastal wetlands rated as of substantial significance with high potential risk or exceptional significance with or without high potential risk; significant natural heritage areas; and, inlet hazard areas.

**Section 5: Environmental Conditions**

In this section the Land Use Plan provides an assessment of the following environmental conditions and features and discusses their limitations or opportunities for development.

**A. Water Quality**

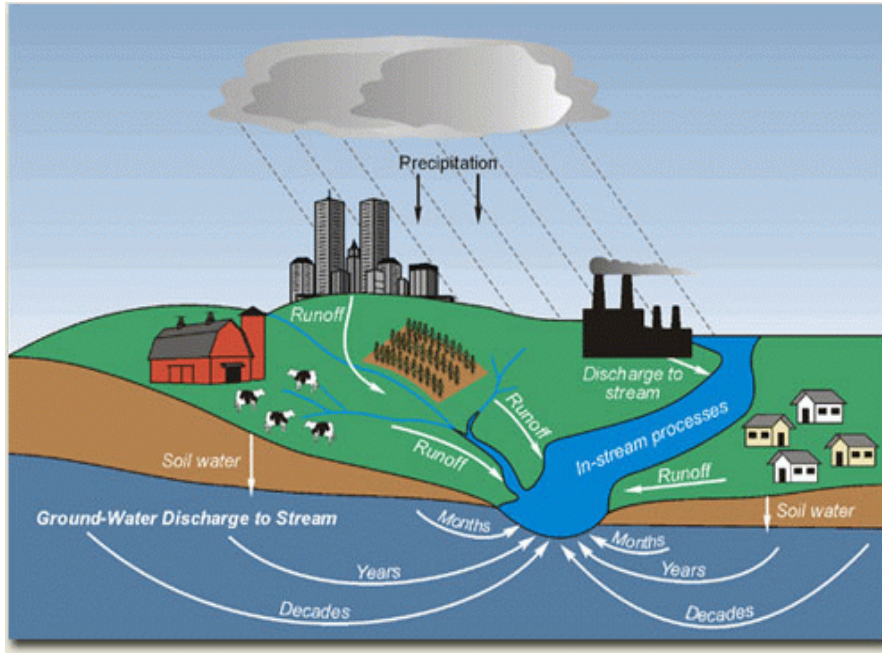
Healthy water contains a balanced amount of nutrients and will show normal fluctuations in salinity and temperature. Healthy water also has plenty of oxygen and little sediment so that underwater living resources can breathe or receive enough sunlight to grow. Monitoring changes to North Carolina's water quality is important<sup>31</sup>, and the data collected can help scientists make

---

<sup>31</sup> In NC water quality monitoring and the classification of coastal waters is done by the NC Division of Water

determinations about water quality.

Factors effecting water quality include: nutrients ... which are essential for plants and animals, but too much can cause harmful effects; sediments ... which can cloud the water and which can



hamper the growth of or kill aquatic plants; water temperature ... which affects when animals and plants feed, reproduce, and migrate; salinity ... which greatly determines where plants and animals live within the estuarine waters; dissolved oxygen ... which is essential for animals living within the estuary; and chemical contaminants ... which can affect the growth, survival and reproduction of benthic organisms.

The water quality in the vicinity of Topsail Beach is good. The quality of these waters is furthermore believed to be attractive to prospective residents, current residents, tourism oriented businesses, and to the development community. It is to the credit of the Town of Topsail Beach that good water quality has been maintained so well over years of increasing population and development activity.

As this barrier island municipality is nearing build out, it is not anticipated that continuing development within the Town of Topsail Beach will affect water quality. If redevelopment of the beach should happen, or become necessary, care should be taken to maintain standards which will allow the continuation of the excellent water quality conditions which are currently extant. It is possible that development in Surf City or on the mainland in Pender County could negatively affect the water quality in Topsail Sound. Additional marina development or expansion of existing facilities would likely have a negative impact on the water quality in Topsail Sound. The Town of Topsail Beach will work to mitigate any activities which could degrade water quality and will work cooperatively with other local governments in the area to avoid this deplorable scenario.

As water quality impacts are cumulative, there is almost never just one source for the degradation of our area waters. The Town of Topsail Beach recognizes clean water as a treasured asset and will strive to maintain a comprehensive planning program which will take best management practices for water quality maintenance into consideration when considering development

---

Quality, DENR.

proposals.

### **(1) Status and changes of surface water quality**

The water quality within the planning jurisdiction of the Town of Topsail Beach is excellent. The entire area, known as Banks Channel, which lies behind the barrier island beach is classified as SA waters. These waters were classified SA in 1981 and the classification of these waters has not changed since that time.

### **(2) Current situation and trends on permanent and temporary closures of shell fishing waters**

For coastal North Carolina, rainfall resulting in significant runoff is the element having the most detrimental effect on water quality. Following a significant rainfall or storm event the entire area of Topsail Sound may be closed to shell fishing. The area may be recommended as closed by the Shellfish Sanitation Section after 0.5 inches (or greater) of rain within a 24 hour period or 0.75 inches (or greater) within a 48 hour period. Closure is recommended by Shellfish Sanitation Section to the NC Division of Marine Fisheries who implements and enforces the closures. Patrol of shellfish harvesting areas is the sole responsibility of the Division of Marine Fisheries Law Enforcement Section. The excellent tidal flush that occurs in Topsail Sound mitigates normal storm run-off in most cases. In recent years Topsail Sound has never been closed to shell fishing unless a hurricane flooded the area with over wash.

Once an area of conditional or temporary opening has been closed, the area will not be recommended to be opened again until sampling of both water and shellfish meats meet approved area criteria.

Within the Town of Topsail Beach there are two small areas which are permanently closed to shell fishing<sup>32</sup>. These areas are described in the literature as Queens Grant and the South Beach Yacht Club (Bush Marina). There are no areas described as conditionally closed<sup>33</sup>.

This barrier island municipality maintains, and has maintained, a high level of water quality.

### **(3) Areas experiencing chronic wastewater treatment system malfunctions**

Nearly all of Topsail Beach's residential and commercial structures are served by private, individually owned, septic systems. These systems are approved by the Pender County Department of Environmental Health. There are 2 private wastewater systems within the

---

<sup>32</sup> These areas are shown on exhibit 1, page 7, of the Sanitary Survey, Topsail Sound Area (B-8).

<sup>33</sup> Areas known to be conditionally closed are normally closed areas which are only opened to shellfishing on a temporary basis. Temporary openings only occur in these areas when weather conditions are favorable and make nonpoint source contamination unlikely. Sampling and testing is required prior to a temporary opening.

municipality. These systems serve the Queen's Grant<sup>34</sup> and Serenity Point<sup>35</sup> subdivisions<sup>36</sup>. The private systems are not known to have chronic system malfunctions.

According to the NC Division of Environmental Health there are no wastewater treatment plants in the Town Topsail Beach planning area (Area B-8) which have direct discharge to surface water. There are no systems known to be affecting the quality of the water within the estuary in the planning jurisdiction or in the vicinity of the Town of Topsail Beach.

#### **(4) Areas with water quality or public health problems related to non-point source pollution**

There are no areas within the planning jurisdiction of the Town of Topsail Beach which have significant water quality or public health problems associated with, or as a result of, non-point source pollution. (As noted in Section 5, A., (2), above, there are only 2 small areas of Topsail Sound which are within the Town's planning jurisdiction and are permanently closed to the taking of shellfish. These areas are shown on the Water Quality Map in the Land Use Plan Appendix.)

### **B. Natural Hazards**

#### **(1) Areas subject to storm hazards such as recurrent flooding, storm surges, and high winds**

Topsail Beach is subject to flooding caused by extreme rain events, high wind and the wind driven tides which occasionally affect the North Carolina coast. Storm surge, which is generally associated with low pressure systems with winds in excess of 74 mph, also known as hurricanes, have also been the cause of flooding at Topsail Beach. Periods of high water are generally caused by a sustained wind velocity of 20-25 miles per hour out of the east, especially the northeast, and the resulting erosion effect causes a threat to homes and businesses built along the ocean beach. In the event of a serious storm over wash of the island is possible in places. The areas subject to flooding associated with a hurricane or other storm event are shown on the Storm Surge Map located in the Appendix to this Land Use Plan.

The entire municipality is subject to hurricane force winds.

The Town of Topsail Beach's Flood Damage Prevention Ordinance is designed to mitigate damages caused by extreme weather conditions. The North Carolina Building Code requires basic building standards far in excess of the past minimum standards. These requirements make

---

<sup>34</sup> The Queen's Grant subdivision system is permitted for 15,240 GPD.

<sup>35</sup> The Serenity Point subdivision system is permitted for 25,000 GPD.

<sup>36</sup> According to the "Report of Sanitary Survey, Topsail Sound Area," by the Shellfish Sanitation Section, NC Division of Environmental Health, DENR, in October 2002, both of these wastewater treatment plants appear to be "well maintained" and "no surface effluent was noted" on the drain fields on the days of inspection.

construction at Topsail Beach more resistant than it has ever been to the ravages of stormy weather. Particular attention is paid by Town authorities to the location of infrastructure (any public facilities or infrastructure) such that these services, be they roads or water lines, are located out of harm's way. The minimum lot size at Topsail Beach is 5,000 square feet.

All barrier island beach communities in North Carolina are subject to these same natural forces.

## **(2) Areas experiencing significant shoreline erosion as evidenced by the presence of threatened structures or public facilities**

According to a study conducted by the NC Division of Coastal Management, the long-term average annual erosion rate within the Town of Topsail Beach is 2 feet per year<sup>37</sup>. This figure is consistent for the entire ocean shoreline within the Town. The 2 foot average annual erosion rate figure is used consistently throughout coastal North Carolina for the ocean shoreline areas where the average annual erosion rate is 2 feet per year or less.

Areas experiencing erosion in Topsail Beach include the AEC's designated as ocean hazard areas and the estuarine shoreline.

The Town of Topsail Beach is concerned about the long-term impacts of continuing erosion. The Town has no particular area within its jurisdiction subject to ocean shoreline erosion which is believed to be at more risk than any other area. All areas bordered by the Atlantic Ocean are subject to the same shoreline erosion risk. The inlet hazard AEC, on the southernmost tip of the municipality is at extreme risk to erosion during storm events. It should be noted, however, that the inlet hazard AEC at Topsail Beach has been significantly enlarged through the accretion of sand from the north and from off shore for the last 20 years. The Town believes that beach nourishment, followed by regular re-nourishment, is the best method of dealing with the problem of erosion. In 2011, the Town adopted its first 30 year Beach Management Plan.

## **(3) Estimates of public and private damage resulting from floods and wind since the last plan update**

Southeastern North Carolina was hit by seven hurricanes between 1996 and 2011. This was an unusually large number of storms to hit in such a short period of time. The frequency of hurricane strikes along the North Carolina coast has historically come in cycles. Experts have suggested the NC coast is entering a period of higher hurricane frequency. Of the recent storms, Hurricane Irene had the biggest economic impact on the Town of Topsail Beach. The numbers in the below table represent the reimbursements that were distributed to homeowners and the data came from the NC Department of Public Safety Emergency Management/Recovery center.

---

<sup>37</sup> Average annual erosion rate data is published periodically by the NC Division of Coastal Management. This information was received via email from James Rosich on March 6, 2003.



**Table 34 Damage/Loss Estimation for Topsail Beach, NC**

Event	Payments
Hurricane Bertha -- 1996	\$63,116.00
Hurricane Fran – 1996	\$542,744.00
Hurricane Bonnie – 1998	\$1,256,620.00
Hurricane Floyd – 1999	\$3,006,327.00
Hurricane Isabel - 2003	\$5,253.00
Hurricane Ophelia – 2005	\$800,317.00
Hurricane Irene - 2011	\$6,365,037.00
<b>TOTAL</b>	<b>\$12,039,414 .00</b>

In the United States, according to the Federal Emergency Management Agency (FEMA), in 2012 there are 5,583,461 flood insurance policies in force<sup>38</sup>. Flood insurance is available in 21,705 participating communities nationwide<sup>39</sup>. There are 1,211 communities participating in the community rating system, which accounts for 5.57% of the policies in force<sup>40</sup>.

**Table 35 FEMA Flood Insurance Policies in Force (as of August 31, 2012)**

	<i>Number of Policies</i>	<i>Insurance in Force</i>
Topsail Beach	1,179	\$286,371,100
Pender County (unincorporated)	1,548	\$ 384,081,100
Pender County (& all municipalities)	4,919	\$ 1,177,179,900
North Carolina	144,969	\$ 33,805,804,600

**Table 36 Loss Statistics (1978-2012) - Topsail Beach- Pender County - North Carolina**

	<i>Total Losses</i>	<i>Total Payment</i>
Topsail Beach	2,146	\$21,121,176.55
Pender County (unincorporated)	662	\$ 12,216,583.00
Pender County (& all municipalities)	4,590	\$ 49,276,188
North Carolina	76,932	\$ 1,026,521,675

<sup>38</sup> This information received from FEMA. The top five states are Florida, Texas, Louisiana, California, and New Jersey. <<http://www.fema.gov/>>

<sup>39</sup> The regular program has 19, 176 participating and the emergency program has 683 participating. <<http://www.fema.gov/>>

<sup>40</sup> Federal Emergency Management Agency <<http://www.fema.gov/>>.

## **C. Natural Resources**

### **(1) Environmentally fragile areas — where resource functions may be impacted as a result of development**

The Town of Topsail Beach has observed and experienced development pressure in recent years. Town leaders see the results of ongoing development activity every day. The Town Board and the Planning Board realize the need to develop a consensus and direction about the future growth of Topsail Beach. Natural resources protection is recognized as a crucial element for the enhancement and preservation of the local environment and for the quality of life of local residents. Topsail Beach residents have expressed, through the creation of this Land Use Plan, a strengthening desire to preserve and protect the natural environment.

Topsail Beach expects residential development to increase over the planning period for this document. This growth is expected and desired.

Topsail Beach is committed to preserving the beautiful and abundant natural resources of the Town. Any residential, commercial, or other development activities permitted by the Town of Topsail Beach will be compatible with current regulations, development patterns, AEC requirements, wetlands requirements, soil suitability, and must take measures to mitigate any potential environmental degradation. New residential construction and new retail/commercial development activities that are consistent with the Town's land use policies and the zoning ordinance, will be welcomed.

### **(2) Areas containing potentially valuable natural resources**

The Town of Topsail Beach has no known valuable natural resources within the municipal boundary. As a barrier island beach municipality the area is generally unsuitable for mining or natural resources extraction operations. It is conceivable that sand could be mined from the area, as it is available in large quantities. Though it is also true that local elected and appointed officials and residents wish more would be piled upon the beach through a re-nourishment program.

As natural resources mining and extraction operations are generally unpleasant to the persons living in an area near where these activities occur, and as there are currently no active extraction mining operations within the Town of Topsail Beach, and since the Town relies heavily on natural resources and the attractiveness of the area as a means of drawing tourists and visitors, Topsail Beach is generally opposed to the location of any large or small scale natural resources extraction type operations requesting to locate within the municipal boundary.

Since the area outlined by the current municipal boundary is of limited size, and as this area and the resources therein are well known to area residents, it is believed to be unlikely the area will be discovered as a potential source for commercially marketable natural resources.

## **Section 6: Analysis of Land Use & Development**

### **A. Existing Land Use Map**

The existing land use map which shows the municipal limits, residential areas, commercial areas, public/government areas, institutional/church locations, dedicated open space, and undeveloped land is attached at the rear of this document. There is no extraterritorial planning jurisdiction (ETJ) within the Town of Topsail Beach's planning authority. There are no plans for this island community to create an ETJ.

### **B. Land Use Analysis**

#### **(1) Types of Land Use in Topsail Beach**

The total area within the Town of Topsail Beach municipal boundary is 3,770 acres. Within the Topsail Beach Town limits there are 1,926 separate parcels of land. The number of these parcels in use, any use, is 1330. The number of acres in the parcels being used is 263.

Existing land uses in the Town of Topsail Beach have been carefully analyzed and categorized as a part of the preparation of this document. Both the Environmental Composite Map and the Land Suitability Analysis Map (both are in the Appendix to this document) show the best land areas for development. Because of the GIS (Geographic Information Systems) technology involved with the collection and creation of this data<sup>41</sup>, there needs to be careful site analysis made by experts on the development potential of individual parcels. The table below shows various categories of existing land use within the Town of Topsail Beach and gives an estimate on the number of acres of each type of use.

**Table 37 Topsail Beach Existing Land Use**

	<b>Acres</b>	<b>% of Total<sup>42</sup></b>	<b>Acres Per Person<sup>43</sup></b>
Residential	235	45%	.54
Business/Commercial	24.55	5	.05
Open Space	0	0%	0
Public/Government	2.61	0.49%	.006
Institutional	.5	0.1%	.001

<sup>41</sup> All GIS data for this document was prepared by the NC Center for Geographic Information & Analysis (NCGIA) and was received from the Division of Coastal Management, NC DENR.

<sup>42</sup> The total dry land area within the municipal limits is 940 acres. Of these 940 acres, 569 acres are on the barrier island.

<sup>43</sup> The population of Topsail Beach in 2013 = 433; ACS

Undeveloped	263	50.03%	.6
<b>TOTAL</b>	525.66	100%	

**(2) Description of any land use conflicts**

As a small, tourist oriented, vacation community the Town of Topsail Beach has limited land use compatibility problems when compared with larger urban municipal areas. The amount of commercial activity in Town is limited. There are no large manufacturing, industrial or mining type operations in Town. No airports or other area establishments or entities are affecting unbearable noise levels on the community.

Local officials believe the Topsail Beach municipal area to be full rather than crowded during the warm weather months. The increased number of people, and the desire of these people to return, is an important factor in the economy of this Town.

The Town of Topsail Beach has developed in what has become the traditional type development for North Carolina beach communities of its size. There is an accessible commercial area in the center of Town and the remainder of the community is stretched out to the north and south in a linear grid pattern on relatively small lots.

There is no significant problem of land use conflicts within this community that will not be handled for the planning period by the traditional planning tools.

**(3) Description of any land use — water quality conflicts**

Within the last 30 years concern has risen about development effects on water quality. Nationwide considerable resources have been committed to reducing water pollution from agriculture (the single largest contributor to the nation’s surface water quality problem), sediments and nutrients in runoff, and from the leaching of chemical residuals from a variety of sources. It is important that policies to improve water quality be designed to account for all costs and benefits of such policies in order to make the most effective use of scarce resources.

In the Town of Topsail Beach those areas of permanent shellfish closure are recognized as areas where there seems to be some land use--water quality type conflict. Each of these areas is listed below.

- 1) South Beach (or Bush Marina) — This is a small area of water to the west of the island which is near the boat launch.
- 2) Queens Grant – This area contains a small private marina on a canal.

The development of or expansion of marinas in Topsail Sound would likely lead to water quality degradation.

#### **(4) Description of Development Trends**

According to data obtained from Topsail Beach Department of Administration and the U.S. Department of Commerce, Bureau of the Census records concerning development activity, 201 of the total 204 building permits(97%) issued for the period of 2001 through 2012 were for single family residential projects. This trend is expected to continue for the foreseeable future.

#### **(5) Location of areas expected to receive development during the five year period following plan certification and potential conflicts with Class II or Class III land**

All lands within the Town of Topsail Beach are classified as Class I, II, or III, and these areas are shown on the Environmental Composite Map attached to this document and located in the Appendix.

Areas which are expected to receive development within the next few years exist in all areas, north to south, of Topsail Beach. Most of the development will consist of in-fill on existing lots which have not yet received development attention. There will also likely be redevelopment activity within this time frame. The redevelopment will include older, smaller, homes being torn down and replaced by new, larger, structures and single family units in some cases becoming multi-family properties. Older properties will be bought and rebuilt to the requirements of the current ownership. The general trend on the barrier island will be to go from less dense to more intense type development. Development will occur on small lots by necessity.

All development expected to receive the anticipated growth is shown on the Environmental Composite Map as Class II or Class III areas. Care will need to be taken with development projects in these areas so that the public health, safety, and welfare are protected. It is also important that irreparable damage to the natural systems is not caused as a result of development.

#### **C. Historic, Cultural, & Scenic Areas**

In 1996-97 a comprehensive survey of historic sites was conducted for all of Pender County with grant funds and technical assistance provided by the State Historic Preservation Office, Division of Archives & History, and NC Department of Cultural Resources.

The survey allowed historic sites in Pender County to be cataloged and as a result the North Carolina State Historic Preservation office statewide inventory now contains information on over 300 prehistoric and historic archaeological sites in Pender County.

Of the 300 sites in the county eleven are on the national register of historic places. One of these eleven is within the Town of Topsail Beach. It is the U.S. Naval Ordnance Testing Facility. This facility has 3 components: 1) U.S. Naval Ordnance Testing Facility Assembly Building<sup>44</sup> (located at the junction of Channel Boulevard and Flake Avenue); 2) U.S. Naval Ordnance Testing Facility

---

<sup>44</sup> The period of historic significance was 1924-1949. The owner of record is the Topsail Island Historical & Cultural Arts Council. The historic function of this structure was defense. The current function is social/meeting hall.

Observation/Control Tower<sup>45</sup> (located at SW corner of S. Anderson Boulevard and Flake Avenue); and, **3**) U.S. Naval Ordnance Testing Facility Observation/Control Tower<sup>46</sup> (located in the 1000 block of North Anderson Boulevard). These facilities were admitted to the national register on September 14, 1993. The state historic preservation office provided technical assistance on the restoration of the Assembly Building in Topsail Beach.

#### **D. Projections of Future Land Needs**

The projection of future land needs in Topsail Beach is based upon the permanent population projections. As follows:

##### Topsail Beach Permanent Population Projections

Topsail Beach 2010 population = 368

Topsail Beach 2013 population = 433

Topsail Beach population projection for 2020 = 536

Topsail Beach population projection for 2030 = 728

The permanent population of Topsail Beach in 2010 was 368 persons, with a projected 2020 population of 536. The average number of persons per residence in Topsail Beach is 2.0.

The minimum residential lot size established by the zoning ordinance in Topsail Beach is 5,000 square feet. The least amount of land necessary to accommodate a growth of 24 persons in the permanent population with the average number of persons per residence would be 1.4 acres<sup>47</sup>. Figuring the other projected minimum population land needs in the same way, we get:

-2010 additional acreage necessary to accommodate population growth projections = 1.4 acres

-2020 additional acreage necessary to accommodate population growth projections = 2.8 acres

-2030 additional acreage necessary to accommodate population growth projections = 5.6 acres

Although it may be instinctual that the Town will need to expand in order to handle future growth; existing households within Topsail Beach can be used as rentals and there is room for infill development, development of empty parcels, and redevelopment; so we recommend that the additional acreage necessary to accommodate growth not be used fully to plan for population growth.

Residential development within the Town will be accompanied by necessary open space, public/government, institutional, and commercial growth. If we follow the acres per person

---

<sup>45</sup> The period of historic significance was 1924-1949. The structure is now privately owned. The historic function of this structure was defense. The current function is domestic/single family dwelling.

<sup>46</sup> This structure is also known as the Queen's Grant Tower. The period of historic significance was 1925-1949. The historic function was defense. The structure is now privately owned. The current function is vacant/not in use.

<sup>47</sup> This was figured as follows: 24 = increase in population ... 24 divided by 2.0 = 12, which is the number of lots of minimum size necessary to accommodate the growth. If these lots are of minimum size 12 X 5,000 = 60,000 square feet. There are 43,560 square feet in an acre. Divide 60,000 by 43,560 = 1.4 acres.

calculations presented in our Table on Existing Land Use<sup>48</sup>, we see:

**Additional Commercial Acreage Projections:**

- 2005 = 58 additional residents X .025 acres per person (based on 2001) = **1.5 acres**
- 2010 = 126 additional residents X .025 acres per person (based on 2001) = **3.2 acres**
- 2020 = 262 additional residents X .025 acres per person (based on 2001) = **6.6 acres**

**Additional Open Space Acreage Projections<sup>49</sup>:**

- 2005 = 58 additional residents X .00 acres per person (based on 2001) = **0 acres**
- 2010 = 126 additional residents X .00 acres per person (based on 2001) = **0 acres**
- 2020 = 262 additional residents X .00 acres per person (based on 2001) = **0 acres**

**Additional Public/Government Acreage Projections:**

- 2005 = 58 additional residents X .006 acres per person (based on 2001) = **.34 acres**
- 2010 = 126 additional residents X .006 acres per person (based on 2001) = **.75 acres**
- 2020 = 262 additional residents X .006 acres per person (based on 2001) = **1.57 acres**

**Additional Institutional Acreage Projections:**

- 2005 = 58 additional residents X .001 acres per person (based on 2001) = **.05 acres**
- 2010 = 126 additional residents X .001 acres per person (based on 2001) = **.12 acres**
- 2020 = 262 additional residents X .001 acres per person (based on 2001) = **.26 acres**

**Table 38 Additional Acreage Requirements, 2005/2010/2020**

	<b>2005</b>	<b>2010</b>	<b>2020</b>
<b>Residential</b>	minimum = 3.5 acres maximum = 29 acres	minimum = 7.5 acres maximum = 62 acres	minimum = 15.8 acres maximum = 129 acres
<b>Commercial</b>	1.5 acres	3.2 acres	6.6 acres
<b>Open Space<sup>50</sup></b>	0 acres	0 acres	0 acres
<b>Public/Gov't</b>	.34 acres	.75 acres	1.57 acres
<b>Institutional</b>	.05 acres	.12 acres	.26 acres

<sup>48</sup> Current ratios are not to be taken as correct but are presented as a basis for our calculations. We may already know, for example, that additional open space is necessary. If we know this we should adjust our needs and plans accordingly.

<sup>49</sup> There is no land now given over to “open space” as described by NC CGIA. We believe this paints a false picture of this island community. The public trust areas, given over to beach front recreation, are some of the most beautiful and recreationally attractive open spaces in the world.

<sup>50</sup> There is no land now given over to “open space” as described by NC CGIA. We believe this paints a false picture of this island community. The public trust areas, given over to beach front recreation, are some of the most beautiful and recreationally attractive open spaces in the world.

<b>TOTAL</b>	30.89 acres	66.07 acres	137.43 acres
--------------	-------------	-------------	--------------

The maximum additional acreage, according to the current ratios, necessary for growth anticipated is as follows:

- 2005 = 30.89 acres
- 2010 = 66.07 acres
- 2020 = 137.43 acres

As shown previously with the Table of Existing Land Uses, there are 219 acres of undeveloped land within the Town of Topsail Beach. Though not all the currently undeveloped land will prove to be buildable, a large percentage of the total will be available and will accommodate anticipated growth.

It is not expected Topsail Beach will expand by annexation during the planning period.

## **Section 7: Analysis of Community Facilities**

### **A. Public & Private Water Supply Systems (Update)**

Units of local government that provide public water service, either individually or together with other units of local government, are required to prepare a local water supply plan and to submit the plan to the NC Department of Environment & Natural Resources, Division of Water Resources. These water supply plans are useful in the analysis of water use and in the projection of future water need.

The last local water supply plan prepared for the Town of Topsail Beach<sup>51</sup> was a report on the municipal water services for 2011. The plan reports all water available via the system is from groundwater sources. There is no surface water supply available for regular use.

The total water use reported for 2011 was 86.337 MG (million gallons). The average daily water use in 2011 was 0.160 MGD (million gallons per day). The number of metered connections reported was: residential = 1,242; and commercial = 21. The average use for each category was as follows: residential = 0.147 MGD; and commercial = 0.013 MGD. Water used for system processes (backwash, line cleaning, flushing, etc.) was 0.017 MGD, bring the total use to 0.177 MGD.

### **Table 39 Topsail Beach -- Water Use Information<sup>52</sup>**

<sup>51</sup> A copy of this plan may be reviewed on the NC Division of Water Resources web site. This information was used for the preparation of this section of the Land Use Plan.

<sup>52</sup> Topsail Beach local water supply plan, 2011.



	<u>Number of Connections</u>	<u>Average Use</u>
Residential	1,242	0.147 MGD
Commercial	21	0.013 MGD
System processes	0	0.017 MGD
Total	1,151	0.177 MGD

The largest average daily system use (figured monthly) in Topsail Beach is in July (0.359 MGD). The largest maximum day water use (figured monthly) was in the month of July (0.435 MGD).

**Table 40 Topsail Beach - Average Day & Maximum Day Water Use by Month, 2011<sup>53</sup>**

<u>Month</u>	<u>Average Daily Use</u>	<u>Maximum Daily Use</u>
<b>January</b>	0.070 MGD	0.125 MGD
<b>February</b>	0.056 MGD	0.105 MGD
<b>March</b>	0.072 MGD	0.136 MGD
<b>April</b>	0.141 MGD	0.311 MGD
<b>May</b>	0.209 MGD	0.384 MGD
<b>June</b>	0.296 MGD	0.420 MGD
<b>July</b>	0.359 MGD	0.435 MGD
<b>August</b>	0.265 MGD	0.374 MGD
<b>September</b>	0.168 MGD	0.310 MGD
<b>October</b>	0.135 MGD	0.245 MGD
<b>November</b>	0.093 MGD	0.145 MGD
<b>December</b>	0.070 MGD	0.124 MGD

The average annual daily use for all customers is 0.162 MGD.

In an emergency situation, the Town of Topsail Beach has an access agreement with the Town of Surf City for additional water supply. According to the 2011 water supply system report there are no sales contracts in effect for regular water use.

The Town of Topsail Beach has 3 wells for regular use. These wells are all located on the barrier island and are within the Town of Topsail Beach.

**Well #1** is 300 feet deep with a casing depth of 300 feet. The well is 8 inches in diameter. The average daily withdrawal for the days used was 0.042 MGD. In the most recent year reported,

<sup>53</sup> Topsail Beach local water supply plan, 2011.

well #1 was used for 352 days. The maximum daily withdrawal for well #1 is 0.054 MGD. The 12 hour supply is 0.151 MGD.

**Well #2** is 325 feet deep with a casing depth of 260 feet. The well is 8 inches in diameter. The average daily withdrawal for the days used was 0.026 MGD. In the most recent year, well #2 was used for 325 days. The maximum daily withdrawal for well #2 is 0.081 MGD. The 12 hour supply is 0.090 MGD.

**Well #4** is 280 feet deep with a casing depth of 230 feet. The well is 8 inches in diameter. The average daily withdrawal for the days used was 0.046 MGD. In the most recent year reported, well #4 was used for 336 days. The maximum daily withdrawal for well #3 is 0.044 MGD. The 12 hour supply is 0.151 MGD.

**Well #5** is 285 feet deep with a casing depth of 250 feet. The well is 8 inches in diameter. Though five wells are listed only four are in use.

The total available supply of all wells for regular use is 610,000 gallons per day (601 MGD). Groundwater levels at the well sites are monitored on a monthly basis and a wellhead protection program is in place locally. The Town of Topsail Beach's water treatment plant has a permitted capacity of 601 MGD. The systems finished water storage capacity is 0.40 MG.

The Town of Topsail Beach's peak seasonal population and the water system requirements necessary to serve this population strain the capacity of the water supply system at Topsail Beach. Heavy use of barrier island well systems has caused salt water intrusion of the groundwater system in other locations. The Town of Topsail Beach will work to avoid these problems through planning, water system enhancements<sup>54</sup>, and cooperation with other area local government entities.

There are no private water supply systems operating within the Town of Topsail Beach's planning jurisdiction.

### **(1) Water Use Projections**

The following table was prepared by the Town of Topsail Beach. This Table shows estimated water capacity and demand.

#### **Table 41 Town of Topsail Beach Water Capacity and Demand Analysis**

---

<sup>54</sup> Plans and specifications for all water system improvements must be approved by the NC Division of Environmental Health prior to the award of a contract or the initiation of constructions (as required by 15A NCAC 18C .0300). If existing water lines will be relocated during construction, plans for the water line relocation must be submitted to the Technical Services Branch of the Division of Environmental Health. For information, contact the Public Water Supply Section at 919-733-2321.

## Projections

	2011	2020	2030	2040	2050	2060
Residential	0.147	0.900	0.900	0.900	0.900	0.900
Commercial	0.013	0.150	0.150	0.150	0.150	0.150
Industrial	0.000	0.000	0.000	0.000	0.000	0.000
Institutional	0.000	0.000	0.000	0.000	0.000	0.000
System Process	0.017	0.000	0.000	0.000	0.000	0.000
Unaccounted-for	-0.019	-0.113	-0.113	-0.113	-0.113	-0.113

The reason the 0.147 and 0.900 number jumps so drastically between 2011 and 2020 in the residential row is because the original author felt the island would be close to full build-out by 2020. Considering the past build-out trends this is a fair assumption. When the demand increases the supply has to also increase to meet demand. There is an approximate 8% growth rate between 2011 and 2020 and if that assumed growth rate becomes a reality then the supply will have to increase in order to have the capacity to fill that growth rate. Currently, supply is the limiting factor; and in order to keep up with potential population and growth increases water production will have to rise. The “Total Available Supply” figure below has been increased to 1.2 to assume an increase in well productivity. Currently the demand is reaching closer to the supply capability. Mitigation actions to solve the water supply issues and to offset seasonal demand such as increasing water storage and adding line sizes for peak demand have already been taken. Increasing well production capacity is the best and one of the remaining approaches to resolve the supply increase that will be required to accommodate future population growth.

## Demand v/s Percent of Supply

	2011	2020	2030	2040	2050	2060
Surface Water Supply	0.000	0.000	0.000	0.000	0.000	0.000
Ground Water Supply	0.601	0.601	0.601	0.601	0.601	0.601
Purchases	0.000	0.000	0.000	0.000	0.000	0.000
Future Supplies		0.000	0.000	0.000	0.000	0.000
Total Available Supply (MGD)	0.601	0.601	0.601	0.601	0.601	0.601
Service Area Demand	0.158	0.937	0.937	0.937	0.937	0.937
Sales	0.000	0.000	0.000	0.000	0.000	0.000
Future Sales		0.000	0.000	0.000	0.000	0.000
Total Demand (MGD)	0.158	0.937	0.937	0.937	0.937	0.937
<b>Demand as Percent of Supply</b>	<b>26%</b>	<b>78%</b>	<b>78%</b>	<b>78%</b>	<b>78%</b>	<b>78%</b>

The “Demand as Percent of Supply” figure comes from dividing the service area demand row by the ground water supply figure in the above table. Public water service is available in Topsail

Beach and no shortage of supply is expected. The availability of water will not be a factor which will limit development in the Town of Topsail Beach. The Town is cognizant of the latent danger of salt water intrusion of the Topsail Island groundwater system and will carefully monitor this situation so as to continue to avoid problems. The projected population numbers and the seasonal peak populations that the utility demand estimates assume are annual averages. The highest times of demand is throughout the summer with a special emphasis on the fourth of July and Labor Day.

**Town of Topsail Beach Water Capacity Demand Analysis**

**Demand Analysis Spring 2015**

Actual Usage Per Day	Peak (07/05/2014)	Peak week in July 04
	561,800	424,220
Daily Usage Per Household	421	318
# of households		1335
10 yr Growth Rate: New Houses	9	per year
Remodels	14	per year
Remodel Impact	50%	

**Capacity Analysis**

Well Number	GPM	Normal Pumping Hours/day	Peak Pumping Hours per Day
		12	16
1	210	151,000	201,300
2	125	90,000	120,000
4	210	151,000	201,300
5	290	209,000	278,700
Total Wells/Max output	4	601,000	801,300
Average Output/well		150,250	200,300

**Growth Projections**

	New Houses	Remodel equivalent	Potential New Subdivision?	Potential Queens' grant	Total House holds	Est Demand Peak July Week	Peak Week Storage Capacity (Days)	Estimated Peak Day Demand	Peak Day Storage Capacity (Days)
2014	35	6			1355	424220	1.4	561766	0.4
2015	20	14			1389	610205	1.4	596838	0.4
2016	15	16		20	1440	615987	1.3	634100	0.4
2017	10	16	25	20	1511	621769	1.2	673688	0.4
2018	8	16	25	13	1573	627552	1.2	715747	0.4
2019	8	16	25		1622	633334	1.1	760432	0.4
2020	6	14			1642	639116	1.1	807907	0.4
2021	6	13			1661	644898	1	858346	0.4
2022	6	13			1680	650680	1	911934	0.4
2023	6	13			1699	656462	1	968868	0.4
2024	6	13			1718	662244	0.9	1029356	0.4
Total	126	150							

**B. Public Wastewater Systems**

The Town of Topsail Beach has no public wastewater system. Individual lots are served by septic tanks. There are 1,341 water system customers with septic systems<sup>55</sup>. The permitting of these lots for septic systems is done by Pender County. The creation of a public wastewater system is under consideration at this time.<sup>56</sup> The absence of a public system has been an important means by which growth has been limited at Topsail Beach.

### **C. Private Wastewater Systems**

The Town of Topsail Beach has 2 private treatment systems which serve 2 subdivisions within the municipality. The Queen's Grant system has a permitted capacity of 35,400 gallons per day (GPD) and was permitted in October 31, 2007. The system serves a maximum total of 109 units<sup>57</sup>. The Serenity Point system has a permitted capacity of 12,960 GPD and was permitted in June 2013. The system serves a maximum total of 54 units<sup>58</sup>. These systems are new as of the permitted dates.

The Town of Topsail Beach water supply plan reported 0 private sewer system connections as of 2014<sup>59</sup>.

### **D. Transportation Systems**

The transportation system for the Town of Topsail Beach consists of a state and local network of roads and streets. The street system is shown on the community facilities map included with this document.

The Town of Topsail Beach's Powell Bill report for the fiscal year ending June 30, 2015, shows \$16,563.47 was received during the fiscal year from the NC Department of Transportation Powell Bill allocation. This amount, when added to the Powell Bill balance from the previous year and including interest from the previous year, gives total Powell Bill revenues, for FY 2011-12, as \$27,981.18. Expenditures for the same period amounted to \$29,593.24 with the largest category of expense being paving and resurfacing.

### **Table 41 Topsail Beach - Locally Owned Roads Mileage, 2012<sup>60</sup>**

---

<sup>55</sup> 2014 Town of Topsail Beach Water System Supply Report.

<sup>56</sup> While the Town of Topsail Beach is "considering" a public wastewater system, it should be noted that in the opinion of Town policy makers that a public wastewater system is not necessarily desirable. The absence of this system is the de facto means by which the explosive growth affecting other beach communities has been throttled at Topsail Beach. Growth and density are limited by the use of septic systems.

<sup>57</sup> 109 units, data came from the Town of Topsail Beach Utilities Department.

<sup>58</sup> 54 units, data came from the Town of Topsail Beach Utilities Department.

<sup>59</sup> The new Water Supply Plan reports 0 private sewer service connections. The number of connections is now being counted partially by system rather than per connection.

<sup>60</sup> Town of Topsail Beach Powell Bill Report, July 10, 2015.

<u>Dirt/Unsurfaced</u>	<u>Soil, Stone, Gravel Surface</u>	<u>Hard Surface</u>	<u>Total Miles</u>
0.42	.22	4.60	5.24

The Town of Topsail Beach continues to collaborate with the NC Department of Transportation to maintain and repair Topsail Beach’s state roads while the Town continues work on the municipal roads.

### **E. Stormwater Systems**

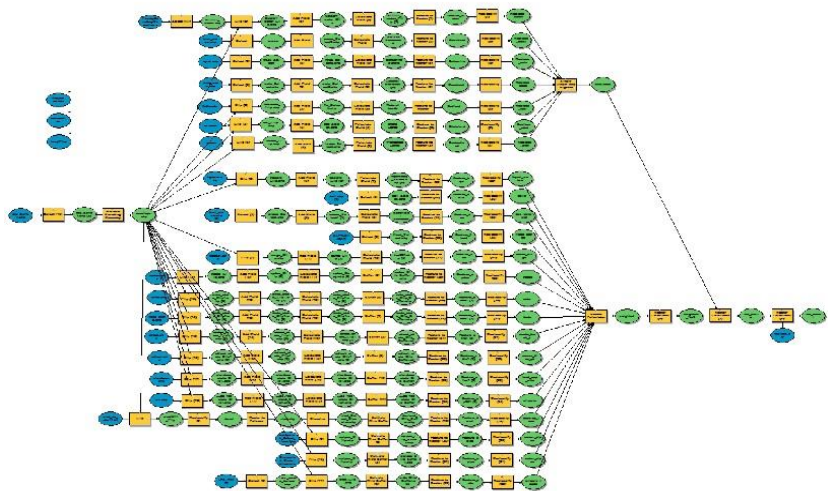
Heavy rainfall and the relatively flat terrain in Topsail Beach cause minor flooding problems during and after intense rain events. Damages from flooding include inconvenience, and may also include physical and environmental impacts. The cost for handling stormwater problems through the building of a stormwater system is high. To date, the Town of Topsail Beach has not chosen to build public infrastructure to deal with stormwater. There are local stormwater requirements for new construction.

### **Section 8: Land Suitability Analysis**

Coastal ecosystems are complex, sensitive, and subject to the influences of both nature and man. Certain lands within coastal ecosystems are more suitable for development because of their attributes. This suitability for development was pointed out earlier in this document in the recognition and classification of all lands within the Town of Topsail Beach. The presentation of this analysis was done with the Environmental Composite Map<sup>61</sup>. The environmental classification of land, shown on the Environmental Composite Map, which was done with the suggested state ratings model, gives us a clear picture of land suitability. The Land Suitability Map<sup>62</sup> shows those land areas most suitable for development with the Town of Topsail Beach. The suitable areas for development in Topsail Beach coincide with the developed lands shown on the Existing Land Use Map, and the density projections in use standards as pictured according to the Zoning Map. The Future Land Use Map is also consistent with the analysis of land suitability.

No shortage of land suited for development within the planning period in the Town of Topsail Beach is expected based on the following considerations.

A Land Suitability Analysis is a



<sup>61</sup> The Environmental Composite Map prepared as a part of the natural systems analysis readily lends itself to the land suitability ratings standards.

<sup>62</sup> The Land Suitability Map is located in the Appendix of this document.

mandatory component of all local CAMA Land Use Plans. The analysis is a Geographic Information Systems (GIS) based process that determines the area's land that is suitable for development. Geospatial data layers are referenced to each other in an effort to determine what portions of a land mass appear to be the most favorable sites for a specific land use. The analysis provides the local planning team with information on the apparent best and least suited areas for development in order to guide the formulation of policies. Several factors are considered during the analysis, including the natural system constraints, compatibility with existing land uses and development patterns, existing land use policies, and the availability of community facilities. The primary output of the analysis is the Land Suitability Map. The map shows the relative suitability of land in a planning area for urban-type development. The supply of land and its suitability rating is depicted in the Land Suitability Map. The adjacent image shows the model used to create the Land Suitability Analysis. The supply of land in the analysis primarily refers to actual undeveloped land which may experience future development, but all land in the planning jurisdiction was evaluated whether developed or undeveloped. As a result of the overall analysis process, the undeveloped land was rated based on the degree to which it was suitable for future development.

A thorough analysis of all impediments to development, as well as existing community facilities, was completed in the preceding sections of this plan. All of these variables are factored into the suitability for development for properties in Topsail Beach. The rating system for the analysis is based on the Division of Coastal Management's recommended weights for each factor. The suitability ratings for undeveloped fall into one of four categories ranging from Least Suitable for Development, Low Suitability, Medium Suitability, and Highly Suited for Development. The suitability rating is based on several 'factors' that may exist on or near the undeveloped land which would affect its overall suitability. For example, consider an acre of undeveloped land which has access to water and sewer infrastructure (a positive 'factor' for development suitability), but also has a wetland area present (a negative 'factor' for development suitability), therefore the overall rating of this land would probably be medium suitability. This example was a simplification however, and each acre of undeveloped land was evaluated based on a number of 'factors' in addition to the 'factors' of access to water and sewer, or presence of a wetland. In order to better understand the Land Suitability Analysis GIS model, see adjacent image; the adjacent image is available so one can see its complexity and size. The process utilized ArcView GIS software with the Spatial Analyst extension along with a variety of data layers listed above. Several layers were provided by the North Carolina Center for Geographic Information and Analysis (NCCGIA), water and sewer data and existing land use data were obtained from Pender County.

### **A. Water Quality**

The water quality of the waters adjacent to Topsail Beach is excellent. The continued development of municipal lands according to the development policies described in this Land Use Plan and in the zoning ordinance should present no problems for the development of these lands.

## **B. Land Classes I, II, and III — Summary Analysis**

The environmental composite map is located within the Appendix of this document. As previously noted, all lands within the Town of Topsail Beach are Class II or Class III lands. This is not unusual for North Carolina barrier island beach communities. Special care needs to be taken on the sighting and construction of structures to be located on barrier islands. Flood hazard considerations, wind resistance requirements detailed in the building code, and soils suitability, are all factors which should be considered when building anywhere. Because of the proximity of the beautiful and sometimes unpredictable Atlantic Ocean, persons locating at the beach should give additional attention to these items.

## **C. Proximity to Existing Developed Areas & Compatibility with Existing Uses**

The development activity which will occur in the Town of Topsail Beach in the future will be In-fill of existing vacant lots and redevelopment of previously developed tracts/areas. Residential development on small lots has always been the primary type of development activity in Topsail Beach and this trend will continue. Limited commercial development will also occur.

No compatibility problems are anticipated which will not be resolved through available planning tools currently in use<sup>63</sup> – especially the zoning ordinance and the subdivision regulations.

## **D. Potential Impact of Development on Cultural Resource Areas**

The continuing development of land within the Town of Topsail Beach should have no detrimental effects to existing cultural resource areas.

## **E. Land Use Requirements of Local Development Regulations, CAMA Use Standards, & Other Applicable State & Federal Regulations**

Land development regulations have been reviewed as a part of the preparation of this document. Local ordinances have been found to be consistent with state and federal regulations.

## **F. Availability of Community Facilities — Water, Sewer, Stormwater, Transportation**

Public water service is available in Topsail Beach. If the Town increases its well capacity then no shortage of supply is expected. The availability of water will not be a factor which will limit development in the Town of Topsail Beach. The Town is cognizant of the latent danger of salt water intrusion of the Topsail Island groundwater system and will carefully monitor this situation so as to continue to avoid problems.

A public wastewater treatment and collection system is not available at Topsail Beach. The development of a public system would encourage additional development activity. A public

---

<sup>63</sup> This statement includes the mega residential phenomenon and the high-rise development pressures becoming fairly common now at other NC municipal beach communities.



wastewater system has been considered, but is not being actively pursued at this time.

Local transportation service consists of the ownership and maintenance of streets and roads. Bicycle paths, which have proven to be an asset to the community, are located in Town.

These community facilities will remain available through the planning period. There will be no limitations to the development of land due to the unavailability of these public services.

### **Section 9: Review of Previous (1992) Town of Topsail Beach Land Use Plan**

The purpose of the review of the previous Land Use Plan is for the local governing body to review its successes in implementing the policies and programs adopted in the plan and to evaluate the effectiveness of the policies in achieving the goals of the plan.

#### **A. Effectiveness of Policies from 1992 Land Use Plan**

The 1992 Topsail Beach Land Use Plan was not a plan which called for dramatic changes or which charged leaders with the responsibility for charting a completely new course of action. The people of Topsail Beach wanted then what they want now. The Town of Topsail Beach still, in 2005, wishes to remain what it is and has basically been throughout its history ... a quiet residential community. The policies in the 1992 Land Use Plan reflected this opinion. The use of existing local, state, and federal rules and regulations was seen as the means by which this overriding goal could be achieved. This is what that document presented in 1992 and it is what was approved.

Topsail Beach is a relatively small sized beach town, both in population and land area. The Land Use Plan policies from 1992 have been successful for more than 10 years in maintaining the desired small Town look, feel, and atmosphere. It can therefore be said that the generalized policies from the previous Land Use Plan were effective and were successfully implemented by Town officials.

#### **B. Conflicts between 1992 Land Use Plan Policy & Local Ordinances**

There are no existing conflicts between 1992 Land Use Plan policies and current (2005) local land use ordinances.

#### **C. List of 1992 Land Use Plan Policies**

The policies from the 1992 Land Use Plan (listed following) were gone over in detail and discussed prior to the creation of new policy for this Land Use Plan. Discussion of each policy centered on the policy implementation status, implementation constraints, the application of the policy, and the policy effect on the town.

#### **1992 Land Use Plan Policy**

##### **STATEMENT OF RESERVATION**

The Town of Topsail Beach abides by and enforces all policies and regulations of the State of North Carolina including those policies, regulations and rules promulgated through the Coastal

Area Management Act (CAMA).

However, the town is not in agreement with the CAMA policy of a total prohibition of hardened erosion control structures along the ocean shoreline. The town is actively pursuing, and will continue to pursue a Corps of Engineers project that involves beach re-nourishment and Town Engineers have stated that a groin would not benefit the Town. Navigational jetties will be pursued as a long term inlet maintenance strategy. The town will actively seek to obtain approval and implementation of this project through an amendment to the CAMA regulations, the granting of a variance, rule change, or by other means available to the town.

Estuarine System AEC's – in general, permitted land uses in coastal wetlands, estuarine waters, and public trust areas shall be those which are water dependent. Examples of such uses may include: utility easements, docks, wharfs, boat ramps, dredging, bridges and bridge approaches, revetments, bulkheads, culverts, groins, navigational aids, mooring pilings, navigational channels, simple access channels, and drainage ditches.

Land uses that are not water dependent shall not be permitted in coastal wetlands and public trust areas. Examples of uses that are not water dependent may include: restaurants, residences, apartments, motels, hotels, trailer parks, private roads, factories, signs and structures, parking lots, and advertising signs and structures.

Specific policies regarding acceptable and unacceptable uses within the individual AEC's of the estuarine system are stated below. In all cases the particular location, use, and design characteristics shall be in accord with the general use standards for coastal wetlands, estuarine waters, and public trust areas as stated in 15A NCAC 7H.

Coastal wetlands – acceptable land uses may include utility easements, fishing piers, and docks. Unacceptable uses may include, but would not be limited to ... restaurants, businesses, residences, apartments, motels, hotels, floating homes, parking lots, private roads, highways, and signs.

Estuarine waters – appropriate uses may include simple access channels, structures which prevent erosion, navigational channels, boat docks, marinas, piers, and mooring pilings.

Public trust areas – in the absence of overriding public benefit, any use which significantly interferes with the public right of navigation or other public trust rights which apply in the area shall not be allowed. Projects which would directly or indirectly block or impair existing navigational channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters shall, in general, not be allowed. Uses that may be allowed in public trust areas shall not be detrimental to the public trust rights and the biological and physiological functions of the estuary. Examples such uses include the development of navigational channels or drainage ditches, the use of bulkheads and groins to prevent erosion, the building of piers, docks or marinas.

Estuarine shoreline – suitable land uses within the estuarine shoreline AEC's are those compatible with both the dynamic nature of estuarine shorelines and the values of the estuarine system. Residential, recreational, and commercial land uses are all appropriate types of uses along the estuarine shoreline provided that all standards of 15A NCAC 7H are met.

Ocean Hazard Areas AEC's – in recognition of the critical nature of ocean hazard areas due to their special vulnerability to erosion and dynamic processes and their possible danger to life and property because of natural forces, Topsail Beach supports the state rules for Ocean Hazard Areas in Subchapters 7H & 7M of 15A NCAC. The ocean hazard areas designation for Topsail Beach includes the AEC's of ocean erodible areas, high hazard flood areas, and inlet hazard areas. Suitable uses in the ocean hazard areas generally are those which eliminate unreasonable danger to life and property and which achieve a balance between the financial, safety, and social factors involved in hazard area development. Ocean erosion control activities and dune establishment/stabilization are acceptable types of land uses. Residential, commercial and recreational land uses and parking lots for beach access are also acceptable types of use in ocean hazard areas provided that:

- 1- The setback measurements established by 15A NCAC 7H are met.
- 2- Mobile homes are not located within high hazard flood areas.
- 3- Development does not involve the significant removal or relocation of frontal sand or vegetation thereon.
- 4- Development is consistent with minimum lot size, setback requirements, or other relevant requirements established by local regulations.
- 5- Development utilizes means and methods to mitigate or minimize adverse impacts of the project as required by 15A NCAC 7H.
- 6- development of growth-inducing public facilities such as sewers, water lines, roads, bridges, and erosion control measures occurs only in cases where: a) national, state, or local interest, and public benefits are overriding factors; b) facilities would not exacerbate existing hazards or damage natural buffers; c) facilities would be reasonably safe from flood and erosion control related damage; and d) facilities do not promote uncontrolled growth and development in ocean hazard areas.

Constraints to development – 2 areas which constitute physical constraints to development have been identified by Topsail Beach as follows:

-Soils and septic tank suitability – it is town policy to require that all single and two-family dwellings and non-residential structures be connected to properly installed and functioning septic tanks that are placed in suitable soil.

-Flood prone areas – the development of residential and commercial uses will be allowed in flood prone areas if they meet the Town's flood plain management regulations and other applicable state and federal regulations.

Development issues related to development density in proximity to ORW's – the Town's planning jurisdiction does not abut a body of water designated ORW (outstanding resource water).

However, since the town is in close proximity to water so designated, it supports the state regulations accompanying this designation, and will encourage any development within the town

that may affect the ORW area to be consistent with state regulations.

Maritime forests – it shall be the policy of the town to encourage the maintenance of existing maritime forests. Development designed to cause the least practicable disruption to the maritime forest cover shall be permitted if done in accordance with provisions of applicable ordinances. All uses currently permitted under the Town’s zoning ordinance will be allowed in areas with maritime forests but only if consistent with the policy of causing the least practicable disruption.

Outstanding resource water (ORW) – The Topsail/Middle Sound ORW lies southwest of New Topsail Inlet, but does not adjoin the town of Topsail Beach. However, the Town is committed to the protection of estuarine waters.

Shellfish waters – Banks Channel has a tidal saltwater classification of SA (water suitable for commercial shell fishing and all other tidal saltwater uses). Habitats for shellfish in all stages of their life cycle must be preserved as a viable economic and recreational activity. Provided that all standards of 15A NCAC 7H relevant to estuarine shoreline AEC’s are met, residential, recreational, and commercial land uses are considered appropriate for land adjoining shellfish waters.

Water supply protection – the Town’s water system draws from a deep aquifer which is recharged on the mainland. Therefore, little or no danger of pollution of the water supply from island development exists. However, it is town policy to protect its well heads and, to the extent possible, recharge areas.

Cultural and historical resources – the town highly encourages the preservation of these resources, including adaptive re-use when appropriate.

Manmade hazards – should proposals for potentially hazardous uses be made, the town will consider each development on a case-by-case basis. Land use activities having the potential to adversely affect the health, safety, and welfare of town inhabitants will not be permitted. Examples of such uses or activities include: landfills, commercial incinerators, storage of toxic or flammable materials (other than small scale retailing of gasoline sales, hardware store items, etc.).

Means of protection of potable water supply – it is the policy of the town to protect its potable (drinking) water supply. Pender County is the permitting agency for septic tank systems. Any central wastewater treatment system is regulated by the state of North Carolina. Groundwater quantity is protected by limiting well depths (by individuals) through a permitting process. Individual wells are typically shallow and the water used for irrigation.

Package treatment plants – Topsail Beach may permit the use of private wastewater collection and treatment systems via a special use permit if associated development is consistent with the Town’s development plans and policies; the system meets state and federal permitting, operational and maintenance requirements; the project will have no adverse impacts beyond its boundaries; and, the developer can guarantee to the town that a system of perpetual monitoring and maintenance

will be in place upon project completion.

Stormwater runoff – development, often well outside designated AEC’s, can pose a serious threat to the health and productivity of the estuarine system through the rapid discharge of pollutants washed off impervious surfaces such as streets, roofs, and parking lots by rain. Topsail Beach’s existing residential density for developed land is fairly low, about 6 units per acre. However, only about one-half of all platted lots are developed, and there is a substantial amount of unplatted land. As Topsail Beach continues to develop, impacts from stormwater runoff can be expected to increase. The following policy is adopted in recognition of potential impacts from stormwater runoff. Topsail Beach will implement various methods it considers appropriate to reduce stormwater runoff. Examples of methods which could be used in single family construction to minimize runoff include using pervious or semi-pervious materials, such as pebbles, “turf stone” or other non-compacting stone for driveways and walks, and retaining natural vegetation along marsh and waterfront areas to take advantage of their natural filtering properties. Zoning and subdivision regulations will also be used to implement these policies. Development must also respect all regulations associated with the designation of “SA” that applies to Topsail Sound.

Marina development – the town will review any proposed marina development in light of the goals and policies of its Land Use Plan and land development ordinances. Marinas, including dry stack facilities are permitted, if allowed by local, state, and federal regulations.

Floating home development – the town discourages floating houses within its jurisdiction.

Industrial impacts on fragile areas – industrial development, such as manufacturing, is not a permitted use of land in Topsail Beach.

Development of sound and estuarine islands – these areas within the town are currently zoned conservation under the terms of the Town’s zoning ordinance. Water dependent uses such as docks, water access, boat ramps, fishing piers and agricultural uses are the only uses permitted on such islands.

Restriction of development within areas up to five feet above mean high water that might be susceptible to sea level rise and wetland loss – the town already has in effect policies and ordinances recognizing the 100 year floodplain. It is town policy to respect the concept of sea level rise as a possible threat to future development. The town has in effect policies and ordinances based upon FEMA and flood insurance regulations recognizing the 100-year flood plain, which exceeds expected sea level rise considerations.

Upland excavation for marina development – the town will allow upland excavation for marina basins provided all applicable local, state and federal regulations are met.

Damaging of existing marshes by bulkhead installation – the town opposes the damaging of existing marshes by bulkhead installation or any other construction operation. Bulkhead installation is allowed only if permitted by local, state, or federal regulations.

Productive agricultural lands, commercial forest lands, existing and potential mineral production areas – these resources do not exist within the town.

Commercial and recreational fisheries – protection of coastal and estuarine waters is a prime prerequisite to the protection of area fisheries. Habitats for shellfish and fin fish in all stages of their life cycle must be preserved in order to maintain fishing as a viable economic and recreational activity. Topsail Beach also recognizes that recreational fisheries are extremely important to its tourism industry. Therefore, any development which will profoundly and adversely affect coastal and estuarine waters will be discouraged by applicable regulations. In the design, construction and operation of water dependent developments, efforts must be made to mitigate negative effects on water quality and fish habitat. These efforts will be at the development owner's or operator's expense. Trawling in estuarine waters within the Town's jurisdiction shall be allowed, if such activity is consistent with the North Carolina Division of Marine Fisheries regulations.

Off-road vehicles – no vehicular traffic will be allowed over the ocean front dunes within the town limits at any time; and, no vehicular traffic will be allowed on the beach between the dates established annually by the town board from the northern town limits to the end of Topsail Inlet. Vehicles may be operated at other times on certain parts of the beach below mean high water after registration and issuance of a permit from the town. The maximum speed limit is 10 miles per hour.

Residential, commercial and industrial land development impacts on any resources – development within the town is limited to residential and certain commercial uses. Commercial development is typically small-scale retailing and services for the local and tourist market areas. All proposed developments within the town are reviewed with an objective of minimizing or eliminating any negative impact upon the Town's natural resources. This policy is implemented through the zoning and subdivision ordinances, applicable CAMA regulations and other local and state regulations.

Community attitude toward growth – Topsail Beach supports the development of residential, commercial and recreational uses within the town that are consistent with other relevant policies and local land use regulations. The land use controls of Topsail Beach are and will continue to be written and enforced to ensure that proper and adequate measures are incorporated into the design, construction and operation of such developments. This is done so that any substantial negative impacts to neighboring land uses and the environment are minimized. It is the policy of the town to permit those land uses which will enhance the town as a family-oriented tourist community for living and recreation. Examples of land uses consistent with this policy include single and multi-family residential uses, tourist oriented businesses, and supporting services or commercial uses. The recent addition of Well No. 5 has provided the town with adequate water supply for the several years. The Town will continue to evaluate future water sources including the Pender County public water system. The installation of a wastewater collection, treatment and disposal

system would most likely increase the rate of development.

Density and scale of development – densities for new development shall be consistent with the density of existing land uses as enforced through the Town’s zoning ordinance. Building scales shall be consistent with existing construction in Topsail Beach, which is characterized by “low-rise” one, two and three story structures. The maximum building height allowed is currently 38 feet. (Note: In 1992 this was the case, but in 2015 the maximum building height allowed was 41ft.)

Industrial development – not considered an appropriate use for Topsail Beach and is not permitted under the terms of the Town’s zoning ordinance.

Provision of services to development – it is town policy to provide all development (residential and non-residential) with water, solid waste collection and disposal, rescue squad, police and fire protection, and administrative services.

Desired urban growth patterns – Topsail Beach is a contained community at the southern end of Topsail Island. Therefore, all growth within the town occurs in a relatively compact manner. The town will continue to control specific development locations through enforcement of resource protection policies and the town zoning ordinance. The zoning map and land classification map graphically display these policies. It is the policy of the town to control specific development locations as indicated via the policies of this document. Enforcement of desired growth patterns will be governed by the zoning ordinance. New development is encouraged for portions of the island less threatened by erosion and potential storm damage.

Redevelopment of developed areas – it is the policy of the town to allow redevelopment of developed areas, including relocation of endangered structures as long as other town policies and ordinances are met.

Commitment to state and federal programs – it is a policy of the town to support state and federal programs such as erosion control, public access, highway improvements, dredging, etc., provided the town finds these programs to be appropriate and consistent with town policies.

Assistance to channel maintenance and beach nourishment projects – the town supports beach nourishment and channel maintenance projects. The use of appropriate dredged materials for beach nourishment is encouraged. The Town’s current policy is to use its accommodations tax receipts for erosion control projects.

Erosion control – the following conditions and policies are hereby incorporated into the Land Use Plan:

- 1) While the causes of erosion - the ocean’s wind and waves - cannot be stopped, the effects of these processes can be mitigated or corrected.
- 2) The most effective corrective measures and mitigation methods are those which are ecologically sound, and economically feasible.

- 3) The best method of correcting erosion damage (consistent with the policy stated immediately above) is through re-nourishment of the berm and dune system.
- 4) The best methods of mitigating and preventing damage from erosion are land use controls and dune protection and maintenance.
- 5) The beach is a resource of statewide significance and the value of a healthy productive dune system extends to users throughout the region and state.
- 6) Because of the uncertain and conflicting policies at the state and federal levels for assistance to local governments in protecting the dune and berm system, every effort must be made at the local level to generate funds for corrective and mitigating measures.
- 7) The average long-term erosion rate in Topsail Beach is less than two feet per year.

Energy facility sighting – energy facility sighting is not an appropriate use of land in Topsail Beach.

Tourism – it is the policy of the town to promote family-oriented tourism.

Coastal and estuarine water access – Topsail Beach considers beach access as a major priority. It is Town policy to: 1) provide reasonable means and opportunities for all members of the public to have access to the beach and other public trust lands and waters at designated access points, provided such means do not conflict with the rights of residents to the use and enjoyment of their property; 2) to encourage the use of non-auto oriented transportation methods such as bicycling and walking on the Town’s beach and waterfront areas; 3) to prohibit all traffic on dunes and berms except at designated access points and upon ramps or walkover structures; 4) to consider future beach and water access improvements based upon the availability of land and funds for such projects, and a demonstrated need for further improvements. Each access project will be considered on a case-by-case basis.

Anticipated residential development - types, densities, locations and supporting services – it is town policy to support single family dwellings as the predominate type. The anticipated residential development consists primarily of single family residences “infilling” on scattered individual lots throughout town and in small subdivisions (5-10 acres). The maximum density for single family residences is 8.7 residences per acre; the maximum density for multi-family developments is 12 dwellings per acre. No major increases in municipal services will be required to serve these new residences. Landfill services are provided out of town, by Pender County.

Continuing public participation – it is the policy of the town to assure that all segments of the community have a full and adequate opportunity to be informed and to participate in the planning decision-making process.

## Town of Topsail Beach Land Use Plan, Part II

### Part 2 – Plan for the Future



**Section 1: Topsail Beach Community Goals**

This Land Use Plan section lists the Town of Topsail Beach’s future land use goals. These goals represent the desired end towards which the Land Use Plan and its policies are directed. The summary statement of goals also describes values and gives those general principles which guide and describe the Town’s development and redevelopment.

**(A) A Comprehensive List of Community Goals<sup>1</sup>**

The goals herein listed are a result of detailed analysis and discussion of key issues confronting the Town of Topsail Beach. The goal statements were originally reviewed and approved by the Town of Topsail Beach Planning Board and were subsequently approved by the Town Council. These goals encompass the planning vision created early in the planning process and also the technical analysis of existing and emerging trends discussed in Part 1 of this document. The goals listed here will provide the Town with a framework for the development of policies and programs.

-  
**PUBLIC ACCESS GOAL**

**“To increase and enhance public access opportunity to the ocean and sound waters of Topsail Beach”**

**-LAND USE COMPATIBILITY GOAL**

**“To ensure that development and use of resources or preservation of land minimizes direct and secondary environmental impact, avoids risks to public health, safety and welfare and is consistent with the capability of the land based on considerations of interactions of natural and man-made features.”**

**-INFRASTRUCTURE CARRYING CAPACITY GOAL**

**“To ensure that public infrastructure systems are properly sized, located and managed, to guarantee the quality of service required by a growing Town and to protect designated areas of environmental concern and other fragile areas.”**

**-NATURAL HAZARDS AREAS GOAL**

**“To conserve and maintain barrier dunes, beaches, flood plains, and other coastal features for their natural storm protection functions and their natural resources giving recognition to public health, safety, and welfare.”**

**-WATER QUALITY GOAL**

**“To maintain, protect and where possible enhance water quality in Topsail Sound, coastal wetlands, creeks, streams, and estuaries.”**

---

1 These goals are consistent with the requirements of the state’s planning guidelines for the coastal area.

## **-LOCAL AREAS OF CONCERN**

**“Topsail Beach will seek to integrate local concerns with the overall goals of the North Carolina coastal program in the context of Land Use Planning.”**

### **Section 2: Policies for Growth & Development**

Land Use Plans are policy documents. The Town of Topsail Beach recognizes that the basic information on the Town (which is contained in Part 1 of this document) is for the purpose of helping the plan user, who may be a Town official, a developer, or a local citizen, to understand the existing situation in Topsail Beach so that appropriate public and private sector decisions can be made concerning the future growth and development of the Town. The policies in this document are reflective of the desires of the Town of Topsail Beach for future growth and development. These policies are designed to guide future decisions on ordinance changes and revisions.

It is important for Land Use Plan users to realize the vision of local leaders for this community for the planning period. The plan section on policy, which follows, gives plan users an extensive view of this picture. The Town of Topsail Beach is sensitive to the need to preserve and protect the natural environment and to preserve the natural amenities and conditions which may be impacted by the activities of man. Topsail Beach seeks to allow development activity which will be consistent with the policies listed in this section and which will fit in and will allow minimal environmental degradation. The Town expects continuing growth, which will be primarily residential, through the planning period. Topsail Beach will strive to maintain the small Town character which it currently exhibits and will seek to accommodate and to welcome new businesses, residents, and visitors within the community.

For each of the policies listed in this section the Town of Topsail Beach has considered a planning period of twenty years. A great deal of time was spent in the writing, reviewing and editing of these policies. In each instance, alternative policies have also been considered and these alternatives have been analyzed. Those policy choices made by Topsail Beach officials are what herein follows.

As a part of the review of this document by NC Division of Coastal Management staff the Town was requested to highlight those policies which exceed state requirements. It was also requested that those policies of significant and overriding importance be listed prominently at the front of the policy section in the Land Use Plan. More details are available on each of these policies in the body of the document. Other policies from the same policy section in which these policies are located will assist in fleshing out the full picture. The policies are as follows:

►<sup>64</sup> — Topsail Beach considers beach access as a major priority. It is town policy to: 1) provide reasonable means and opportunities for all members of the public to have access to the beach and

---

<sup>64</sup> The Land Use Plan has a system for numbering and locating policy. This particular reference refers to Part 2, Section 2, subsection (A) (8)a. The Table of Contents will be of assistance in familiarizing the Land Use Plan user with the reference system.

other public trust lands and waters at designated access points, provided such means do not conflict with the rights of residents to the use and enjoyment of their property;

2) to prohibit all traffic on dunes except at designated access points and upon ramps or walkover structures; 3) to consider future beach and water access improvements based upon the availability of land and funds for such projects, and a demonstrated need for further improvements.

►— The Town of Topsail Beach is expected to grow within the planning period. The Town of Topsail Beach desires to manage this growth. The Town’s policy toward growth is expressed in the following comments: Topsail Beach believes in managing and directing the Town’s growth and development. It is Town policy that development should be based on: **1)** the suitability of land to accommodate the use; **2)** the capacity of the environment; **3)** compatibility with Town goals and ordinances; **4)** densities allowable in sensitive areas; and **5)** the availability of support facilities and services.

► — It is the policy of the Town to plan for the adequate provision of public services including water, sewer, and other municipal amenities. The Town of Topsail Beach will seek to provide these services in a cost effective manner. Creative solutions will be considered by Town leaders and professionals before final decisions are made on services provision.

► — The dollar value of the threat of loss from storms by beach communities in North Carolina is large. Topsail Beach, along with the other municipal beaches in North Carolina, believes an economically important public purpose is served by shoreline protection measures. As with public support granted to earthquake and fire victims in the American west, flood victims in the Midwest, and winter storm victims to the north, the protection of our citizen’s homes and investment in these homes is of paramount value. The Town of Topsail Beach assesses .12 cents per \$100 value of property of the Ad Valorem tax to fund a Beach, Inlet and Sound Maintenance Department whose primary focus is to re-nourish the beach sand at regular intervals. In addition to this source of funding, the Town utilizes 65% of all Occupancy Tax receipts to help with nourishment projects as well. The remaining 35% of the Topsail Beach occupancy tax receipts fund Beach Management and Tourism expenditures.

►— It is the policy of Topsail Beach to maintain the highest quality use rating as possible for area waters.

► — It is the policy of the Town of Topsail Beach to maintain the low density, small Town, feel which has always characterized this beautiful community.

The locally adopted policies of this Land Use Plan follow:

**(A) Public Access Goal & Policies**

“To increase and enhance public access opportunity to the ocean and sound waters of Topsail Beach”

Residents and visitors to Topsail Beach have historically enjoyed excellent access to the Atlantic Ocean and to the waters of Topsail Sound. With the passage of time, and with the increase of population, the Town has seen the need to plan for and provide additional access sites, to protect

existing sites from encroachment, and to ensure that the access facilities, once built, are properly maintained.

All policies related to public access are directed towards municipal participation in inlet stabilization and beach nourishment and restoration projects.

### **(1) Providing Public Access & Meeting Federal Standards**

— It is the policy of Topsail Beach to continue to provide access to public trust waters through the acquisition, development, and redevelopment of beach and sound access areas, parks, and boat launching areas. This development and redevelopment activity shall be consistent with the need to protect the areas natural resources. Topsail Beach will, in the future, seek financial assistance from state and federal sources to support the development, and/or expansion, of parks and recreational facilities in appropriately sited locations.

–The Town seeks to provide one neighborhood public access area every ½ mile along the beach. Parking spaces will be provided for the neighborhood public access ways within 1/4 mile radius.

–The Town seeks to provide public or private local access areas every ½ mile to give neighborhood residents, pedestrians, and bicyclists access to the beach.

-The Town of Topsail Beach seeks to provide public access opportunities for all area residents and visitors including the handicapped.

– The Town of Topsail Beach will support the study, exploration, assessment and development of estuarine access opportunities for the public to enjoy. The Town wishes to acquire and develop more recreation opportunities for local citizens.

— It is the policy of the Town of Topsail Beach to support the protection of public and private property through participation in a Corps of Engineers sponsored beach nourishment project within the municipality.

— The Town of Topsail Beach will provide public recreational facilities and open space to service the resident population and seasonal visitors in accordance with the adopted Topsail Beach Parks and Recreation Master Plan.

### **(2) Providing Public Access to Topsail Sound & the Atlantic Ocean**

--- It is the policy of the Town of Topsail Beach to maintain the continuing availability of public boat ramps within the Town. The Town will seek to provide for, or will allow for the provision of, boat ramp access opportunity in appropriate locations should existing ramps close, silt up, or become unusable.

— It is the policy of the Town to support managed recreational use of Lea Island including the Audubon property.

— It is the policy of the Town of Topsail beach to give equal attention to the provision of shorefront access to both the ocean and sound and to thereby offer a complete island experience to residents and visitors.

### **(3) Support for the Coastal Resource Commission's Access Program**

--- As an island community, Topsail Beach recognizes both the need for the provision of parks and open space and adequate public access to the water. Topsail Beach supports the Coastal Resources Commission's public access program and recognizes the need to plan for all types of recreational facilities in appropriately sited locations.

### **(4) Cooperation with Pender County to Provide Access**

— It is the policy of Town officials to support beach and estuarine water access projects within Pender County and throughout coastal North Carolina.

— Topsail Beach will seek financial support from Pender County for the funding of public beach access areas.

— Topsail Beach policy on recreation is to work with the Pender County Parks and Recreation Department to help meet municipal and area need.

### **(5) Funding & Planning for Public Access**

— It is the policy of the Town of Topsail beach to consider all alternative measures of funding beach access opportunities for visitors and residents.

— The Town will seek county, state, federal and private funding assistance sources to expand both passive and active park and recreational lands and public water access.

— The Town of Topsail Beach will pursue outside (public and private) funding sources for recreational facility development.

— The Town policy is to pursue NC DCM access grants for public access facility projects.

— Topsail Beach Town policy is to pursue NC DCM planning grants for access and recreational program projects and studies.

— The Town of Topsail Beach will consider the creation of a long-range Beach & Sound Access Plan and a Master Plan for Recreation.

### **(6) Legally Identify Access Areas & Keep Them Free of Encroachment**

— It is the policy of the Town of Topsail Beach to clearly and legally identify the location and extent of all public access areas. These access areas are to be maintained free of

encroachment by neighboring property owners and signs shall be installed at all public access areas designating these properties as public beach access.

#### **(7) Public Access Nuisance**

— It is Topsail Beach Town policy to enforce public nuisance or disturbances at public access areas through the police powers of the municipality. Vandalism, littering, or careless, aggressive, wanton behaviors, will not be tolerated by the municipality at public access sites.

— Topsail Beach policy will be to educate citizens and neighboring property owners regarding the rights and privileges and responsibilities of visitors to public access areas. Cooperative arrangements for property maintenance and “neighborhood watch” will be established between the municipality and property owners adjacent to public access ways.

— It is Town policy to prohibit all traffic on dunes except at designated access points and upon ramps or walkover structures.

#### **(8) Public Access Maintenance**

— It is Topsail Beach policy to enhance and maintain the existing bicycle path, to increase pedestrian sidewalks, and to strictly enforce traffic and other laws which will enhance the safe, and healthful use of public access facilities.

#### **(9) Access Requirements for Development**

— The Town Topsail Beach will require new development projects, and redevelopment projects, to make provisions for a comprehensive network of public water (ocean and sound side) access facilities in neighborhoods and on collector streets and arterials.

— The Town of Topsail Beach supports the development of public access areas and of parks and recreational facilities for the benefit of its residents and visitors.

#### **(10) Dredging of Inlets and Waterways**

The Town of Topsail Beach and Pender County recognize the importance of navigable inlets and waterways to ensure a healthy coastal economy and protect vibrant ecosystems. The Town of Topsail Beach Town Board has adopted a 30 year Beach, Inlet and Sound Maintenance program to re-nourish the beach on regular cycles by utilizing sand build up in the sound and inlet. The town is working with the state, county and other local municipalities to regularly maintain the New Topsail Inlet. The Town is also working with the Army Corps of Engineers during this transition period where the federal government no longer budgets for shallow draft inlet maintenance.

**(B) Land Use Compatibility Goal & Policies**

“To ensure that development and use of resources or preservation of land minimizes direct and secondary environmental impact, avoids risks to public health, safety and welfare and is consistent with the capability of the land based on considerations of interactions of natural and man-made features.”

The Town of Topsail Beach is a beautiful place for residents and visitors to enjoy. The natural barrier island setting has always had exceptional natural and aesthetic qualities. The place has remained as beautiful as it is, in part, because the barrier island beach always had a big jump, as a place to live, on the pine forests and pocosins frequently found in the more inland locations of coastal North Carolina. The most important reason a community will remain vibrant and naturally beautiful is because it has community leaders who care about their Town. Topsail Beach has, and has had, community leaders who have placed a high value on the protection and conservation of natural resources and their concomitant beauty.

Historically, the water quality in Topsail Sound has always been exceptionally good. This is particularly true when compared to other North Carolina sounds and estuaries. As the island reaches build out there are, in 2004, some residents who are expressing concerns over natural resources issues. Water quality, loss of maritime forest, stormwater runoff and stormwater ponding (in the roads and on lots around Town), the provision of potable water, and public access to the ocean and sound beaches are amongst the issue areas where thoughtful residents have recently expressed concern.

The policies listed below are the Town’s policy guidelines which will help to preserve the quality of life enjoyed in the Town of Topsail Beach and to protect resources in a manner which is compatible with the continuing occupation and development of the island.

**(1) Development Must Be Consistent with Existing Regulations**

— As a means of controlling any inappropriate or damaging development activities within AEC's, the Coastal Area Management Act calls upon the CRC, in cooperation with coastal local governments, to implement a permitting program. The intent of this program is not to stop development but rather to ensure the compatibility of development with the continued productivity and value of critical coastal land and water areas. These areas are defined as Areas of Environmental Concern (AEC's). The Town of Topsail Beach endorses this permitting system as a means of managing and protecting the coastal resources of North Carolina.

— The Town of Topsail Beach will cooperate with state and federal agency regulatory requirements.

— Topsail Beach policy is to protect and to conserve resources through site evaluations, enforcement of building codes, subdivision and zoning ordinance development and enforcement,

and through the consistency provision of the Coastal Area Management Act (consistency with policies in this Land Use Plan).

### **(2) Sustainable Growth**

— The Town of Topsail Beach is expected to grow within the planning period. The Town of Topsail Beach desires to manage this growth. The Town's policy toward growth is expressed in the following comments: Topsail Beach believes in managing and directing the Town's growth and development. It is Town policy that development should be based on: **1)** the suitability of land to accommodate the use; **2)** the capacity of the environment; **3)** compatibility with Town goals and ordinances; **4)** densities allowable in sensitive areas; and **5)** the availability of support facilities and services.

### **(3) Compatibility with Future Land Use Map**

— It is Topsail Beach policy that development activity which would be harmful to property values or the quality of life of those residents already established is discouraged.

— Compatibility of proposed development with the Future Land Use Map (located in the back of this document) is desired.

### **(4) Retain Natural Buffers**

— Topsail Beach policy is to work, whenever possible, to require the retention and management of natural vegetation in buffer areas along creeks, sounds, and islands.

— It is the policy of Topsail Beach to conserve existing maritime forests. Though only small isolated areas meeting the traditional description of maritime forest remain, development designed to cause the least practicable disruption to the maritime forest cover shall be permitted if such development is done in accordance with the appropriate provisions of all applicable state, federal, and local regulations, laws, and ordinances. Uses currently permitted under the Town's subdivision regulations and zoning ordinance will be allowed in areas with maritime forests only if such development is deemed to be consistent with the policy of causing the least practicable disruption.

### **(5) Maintain Small Town Atmosphere**

— It is the policy of the Town of Topsail Beach to maintain the low density, small Town feel which has always characterized this beautiful community.

— There are older developed areas within Topsail Beach's planning jurisdiction. The Town encourages and supports redevelopment of these areas for the purpose of land use compatibility and aesthetics. Restoration and fix up of any historic structures is encouraged<sup>65</sup>. It

---

<sup>65</sup> Prior to the removal or demolition of dilapidated structures an extensive rodent control program may be necessary in order to prevent the migration of rodents to adjacent areas. For information concerning rodent control, contact the Pender County Health Department or the Public Health Pest Management Section at 919-733-6407.



is the Town's policy that redevelopment, like new development, must be conducted according to existing development guidelines as is reflected (or as may be reflected) in future zoning, Subdivision, Flood Damage Prevention Ordinances and others.

— Topsail Beach policy is to protect the Town's small town atmosphere through approval of primarily single family dwellings or low density type development projects and small businesses consistent with the Town's zoning ordinance and subdivision regulations. Natural resources protection, through the enforcement of adopted ordinances, which will be consistent with Land Use Plan policy, is also a priority for the Town of Topsail Beach.

— Topsail Beach Town policy is that any commercial development in Topsail Beach should be of a type which is compatible with residential development which may occur in relatively close proximity.

— Topsail Beach Town policy is that additional commercial development is welcomed by Town officials. Commercial activity which would add to the economic base of the Town would be welcomed by Town officials provided that the activity is environmentally safe, clean, and consistent with current state, federal, and local regulatory requirements.

#### **(6) Protection of Coastal Wetlands**

— Coastal wetlands are areas of salt marsh or other marsh subject to regular or occasional flooding by tides, including wind tides. The management objective of the NC CRC for coastal wetlands is to conserve and manage these areas so as to safeguard and perpetuate their biological, social, economic, and aesthetic values. The highest priority is given to conservation of these areas. The second highest priority of use is for those types of development which require water access and cannot function elsewhere. The Town of Topsail Beach is supportive of the state's position on the protection of coastal wetlands.

#### **(7) Preserve, Protect, and Enhance Natural Resources**

— Topsail Beach's policy is to preserve, protect, and enhance the area's natural resources. Topsail Beach recognizes the quality of our environment is an important ingredient in our overall quality of life.

— Topsail Beach policy is that the protection of our resources shall be pursued in a regional context, with our neighboring jurisdictions, and with area-wide planning through a process which favors long-term goals over short term interests and which provides accountability for the implementation of the goals and policies stated herein.

— Topsail Beach policy is to support resource protection efforts and to encourage the acquisition of land parcels with a high resource value by the State of North Carolina or area conservation organizations or land trusts.

— Topsail Beach policy is to not permit short-sighted or premature commitments of the area's natural resources and to work in a cooperative manner with development interests to implement this policy.

— Topsail Beach policy will support any efforts by other governmental and private agencies to wisely manage the natural resources of the region.

— Topsail Beach policy is to protect the Town's natural resources through the enforcement of adopted ordinances, which will be consistent with Land Use Plan policy. Topsail Beach policy is to protect and to conserve resources through site evaluations, enforcement of building codes, subdivision and zoning ordinance development and enforcement, and through the consistency provision of the Coastal Area Management Act.

— The Town of Topsail Beach policy is to support NC DCM and their enforcement of the State Guidelines for Areas of Environmental Concern (Subchapter 7H of Chapter 15A of the NC Administrative Code, or 15A NCAC 7H, or the regulations governing development activity in AEC's), and to give special attention to the protection and appropriate development of AEC's.

#### **(8) Intergovernmental Cooperation**

— The Town policy is to continue to seek to work with Surf City, North Topsail Beach and Pender County in order to provide all area residents the best quality of life possible.

— Topsail Beach Town policy is to cooperate with permitting agencies, such as the NC Division of Coastal Management, U.S. Army Corps of Engineers, and the Pender County Health Department, and others, to restrict and regulate development in coastal wetlands, estuarine waters, and public trust areas. Development projects proposed for these areas which are not consistent with the local ordinances and/or State and federal environmental protection regulations, will not be permitted in Topsail Beach.

— Building Permits are to be issued within the Town of Topsail Beach only after septic tank permits are issued by the Pender County Health Department.

#### **(9) Protection of Artifacts & Endangered Species**

— It is Topsail Beach Town policy that cultural and environmental artifacts or species which are irreplaceable or limited in number should be protected.

#### **(10) Development Project Consistency with Long-Term Goals**

— It is the policy of Topsail Beach that any proposed projects which may be considered should be consistent with the existing long-term goals of the Town. Town development projects policy is that projects must be in keeping with best practices for environmental stewardship.

— Town policy is to encourage future growth according to the land use policy contained in this document and to revise, as necessary, those regulations currently in place to provide consistency with the Town of Topsail Beach’s long-range plan. It is the intention of Town officials that a new development’s impacts on the natural and built (pre-existing) environment should be negligible and that the impacts of all development should take into consideration those factors which will enhance the quiet, small Town character and quality of life enjoyed by the residents of Topsail Beach.

— The Topsail Beach Land Use Plan and the Topsail Beach policies stated therein shall be consulted for zoning ordinance decisions and land development patterns within the Town.

— Town policy is that residential development will be encouraged, as much as possible, to occur in a manner which will not overload traffic conditions. It is Town policy that the Land Use Plan, zoning ordinance and subdivision regulations will be revised as necessary as a means of implementing this policy.

#### **(11) Support for the Protection of Wildlife Habitat**

— It is the policy of Topsail Beach to support wildlife and wildlife habitat. Any areas in Topsail Beach which may become designated as public wildlife sanctuaries, and which are suitable for wildlife species, will be supported by Topsail Beach. Privately owned areas designated as wildlife sanctuaries are consistent with Topsail Beach policy.

— Topsail Beach supports the NC Division of Marine Fisheries and the classification of area waters as worthy of protection.

#### **(12) Developers Must Build Infrastructure for Their Projects**

— It is Topsail Beach policy that developers shall design and build appropriate infrastructure, including transportation facilities (to accommodate any increases in traffic). These facilities must include, but not be limited to, the following types of roads: arterial, collector and local roads. These transportation facilities may not infringe on current or future public access areas or on residential development type areas.

— It is Topsail Beach policy that NC Department of Transportation and NC Division of Water Quality officials will be consulted on all future public road projects. The Town wishes to work with knowledgeable public officials so that successful solutions may be shared. It is Town policy that stormwater ponding on roadways is unacceptable. It is further understood that the best means of dealing with stormwater is not simply to get it out of sight. The practical and environmental consequences of this problem will require environmentally sound engineered solutions.

— It is Topsail Beach policy that the development of new streets and roads as a part of the residential growth process will be carefully studied before any new subdivisions are approved. All new roads will be built to all applicable local and state standards.

— Topsail Beach policy is that developers will be responsible for the costs of stormwater management associated with private development projects.

### **(13) Development in the Estuarine Shoreline AEC**

— Topsail Beach policy is that residential and commercial development may be permitted in estuarine shoreline areas, provided such activity is consistent with state and local regulations and requirements on the development activity proposed therein.

### **(14) Protection of Water & Groundwater Resources**

— Topsail Beach policy is to work to ensure that all land use and development decisions will provide for the protection of our groundwater aquifers.

— The Town of Topsail Beach policy is to work with other area local governments and agencies to conserve and protect the best sources of area groundwater supply.

— The Town of Topsail Beach supports the NC Division of Water Quality (NC DWQ) (Groundwater Section) efforts to enforce violations and to offer assistance to those persons or entities interested in construction and development type activity which has a potential to effect groundwater resources. The Town fully supports the NC DWQ rules regarding development activity near groundwater source areas. Town policy is to enhance the protection of groundwater re-charge areas and to provide for groundwater recharge areas consistent with NC DWQ's rules.

— The Town of Topsail Beach policy is to support water conservation efforts.

— The Town of Topsail Beach supports NC Division of Water Quality regulations regarding stormwater runoff resulting from development activity. It is Town policy that intensive growth and development will not be allowed where poor drainage exists unless appropriate corrective improvements are to be completed as part of the project. Any revisions to the Town's zoning ordinance or subdivision regulations will take this concern into consideration.

— The Town of Topsail Beach policy is to prevent the spillage and runoff of sewage from malfunctioning septic tanks or systems into the waters of Topsail sound.

— Topsail Beach policy is to support all efforts to minimize surface and groundwater pollution from wastewater sources.

### **(15) Industrial Development in Topsail Beach**

— Industrial development is not a permitted use in the Topsail Beach Zoning Ordinance due to environmental constraints.

### **(16) Canoes & Kayaks in Topsail Sound**

— Topsail Beach Town policy is that the safe use of canoes and kayaks in Topsail Sound is encouraged. The Town began working with UNC Wilmington and the National Park Service to implement a trail plan in the future.

### **(17) Floating Homes**

— The Town of Topsail Beach policy is that floating homes are an inappropriate use of the Town's water bodies.

### **(C) Infrastructure Carrying Capacity Goal & Policies**

“To ensure that public infrastructure systems are properly sized, located and managed, to guarantee the quality of service required by a growing Town and to protect designated areas of environmental concern and other fragile areas.”

This Land Use Plan, and the policies on infrastructure which follow in this section, gives direction to citizens, employees, and community leaders, on how to deal with specific infrastructure issues which have been identified as important through our planning process.

A continuing infrastructure need for the Town of Topsail Beach is to increase the supply and storage capacity of potable water. The recent addition of Well No. 5 has provided the town with adequate water supply for the next 5 to 10 years. During this time frame the Town will continue to evaluate future water sources including the Pender County public water system.

Topsail Beach is also considering the installation of a public wastewater collection and treatment system. Cooperation with other area local governments on these and other issues continues.

Transportation, stormwater, and beach stabilization or nourishment, are all seen as important issues. These are not the only important infrastructure issues for the Town of Topsail Beach. The infrastructure policies shown below give direction to municipal leaders and other interested parties and are important statements of the municipal policy position on the issues identified as significant through the planning process.

### **(1) Municipal Water System**

— It is the policy of the Town of Topsail Beach to maintain and improve the municipal water system so as to provide sufficient capacity for the sustained and continued growth of the community and adequate fire flow.

— It is the policy of the Town of Topsail Beach to carefully monitor water supply wells and to consider all public and private options for future water supply.

— It is the policy of the Town to plan for the adequate provision of public services including water, sewer, and other municipal amenities. The Town of Topsail Beach will

seek to provide these services in a cost effective manner. Creative solutions will be considered by Town leaders and professionals before final decisions are made on services provision.

— It is the policy of the Town of Topsail Beach to conserve water. In cases where residents and visitors to the Town will be advised on water conservation procedures or actions, distinctions will be clearly made between mandatory (or required) conservation measures and voluntary conservation measures.

— The Town of Topsail Beach will maintain emergency service agreements (especially the water service agreement) with the Town of Surf City and other entities where such agreements are found to be cost effective.

— It is Town policy that all new development must be connected to the public water system.

— It is the policy of the Town to improve the taste of the municipal water supply

— It is Town policy to continue to use on island wells as the source for the municipal water supply as it aggressively seeks new water sources. It is Town policy to protect the municipal water supply through the protection of the well heads. The municipal wells are monitored for salt water intrusion. Re-charge areas for the wells are located off-island. The Town of Topsail Beach will work with Pender County officials to protect groundwater recharge areas off-island.

## **(2) Wastewater Service & the Treatment of Effluent**

— It is Town policy to require all single and two family dwellings and non-residential structures be connected to properly installed and functioning septic tanks that are placed in suitable soil.

— It is Topsail Beach Town policy to permit private wastewater collection and treatment systems via a special use permit. For this type of facility to be permitted, the proposed development must be consistent with the Town's development plans and policies. The system must: 1) meet state and federal permitting operational and maintenance requirements; 2) have no adverse impacts beyond its boundaries; 3) be guaranteed by the developer to have a system of perpetual monitoring and maintenance upon project completion.

— It is the policy of the Town of Topsail Beach to work with the Pender County Health Department, and other agencies, on the education of citizens concerning the operation and long-term maintenance of septic systems. Septic system failure is a problem which is recognized as having wider negative effect than just to the owner of the failed system.

— The Town of Topsail Beach will continue to consider alternatives to septic systems, including connection to the public sewer system on the mainland. The Town policy is to evaluate carefully all factors involved in wastewater treatment and collection system installation.

— The Town of Topsail Beach policy is to prevent the spillage and runoff of sewage from malfunctioning septic tanks or systems into the waters of Topsail sound.

### **(3) Transportation**

— Topsail Beach policy is to give priority to safety when considering the construction and maintenance of road way systems.

— It is Town of Topsail Beach policy to seek to work with NC DOT and the Cape Fear Council of Government Rural Transportation Planning Organization to have an active voice in area transportation issues concerning both the Pender County mainland and adjacent municipalities. Topsail Beach believes in planning to guide the well-planned development of new streets, roads, and commerce.

— It is Topsail Beach policy to improve the state and municipal transportation system in Topsail Beach, and to ease the traffic flow for the convenience of residents and visitors and for improved commercial opportunity.

— It is Town policy to explore opportunities for road widening for alternative transportation improvements including bike paths and greenways.

### **(4) Stormwater Policy**

— It is the policy of the Town of Topsail Beach to create and to implement a systematic and comprehensive construction and maintenance plan for municipal stormwater runoff. NC Department of Transportation system drains located within the Town of Topsail Beach will be monitored by the municipality for service as necessary and recommendations on service needs and requirements will be shared with NC DOT.

— The Town of Topsail Beach will allow municipal public right-of-ways and easements to be used for the purpose of correcting stormwater runoff problems. The North Carolina Department of Transportation will also be allowed to use these right-of-ways for the correction of stormwater runoff problems.

— It is the continuing policy of the Town of Topsail Beach to seek drainage improvements to state system roads in Topsail Beach, and to construct drainage improvements to municipal streets in Topsail Beach.

— It is the policy of Topsail Beach that new construction will minimize stormwater impact for established residents, and the Town will support all efforts to minimize surface water pollution from wastewater sources.

— It is the policy of Topsail Beach to implement stormwater control systems and mechanisms to reduce the threat of stormwater runoff to Topsail Sound.

### **(5) Fire Protection**

— It is the policy of Topsail Beach to maintain adequate fire protection for persons and property. The Town of Topsail Beach Volunteer Fire Department has an ISO rating of 5 and works to maintain and improve the rating through volunteer training and system maintenance. All fire hydrants in the Town meet or exceed NFPA flow rate standards.

— The Town of Topsail Beach Town Board is consistently looking for methods to pursue additional personnel and equipment through grants and other efficient cost measures.

### **(6) Intergovernmental Cooperation**

— The Town of Topsail Beach will work with neighboring jurisdictions regarding stormwater problems. The Town will seek to establish a cooperative environment within which successful solutions to mutually recognized problems may be explored and implemented.

### **(7) General Policy on Infrastructure**

— The Town of Topsail Beach supports long-term planning for public infrastructure. The Town of Topsail Beach policy is to support proactive measures to provide excellent public services to residents and visitors to Topsail Beach.

— It is Topsail Beach Town policy to practice communication on issues with professional service providers, neighboring island municipalities, Pender County, the Cape Fear COG, and state and federal agencies, for successful solutions to mutual problems.

— It is the policy of the Town of Topsail beach to consider all alternative measures of funding beach access opportunities for visitors and residents.

— It is the policy of the Town of Topsail Beach that all new construction will be consistent with state, local, and federal regulations, including relatively recently adopted regulations such as those local regulations pertaining to stormwater.

### **(8) Groundwater Resources**

—The Town supports and enacts ordinances to protect drinking water for its residents and visitors.

### **(9) Beach Nourishment & Re-nourishment — Dune Protection**

— It is the policy of the Town to support state and federal programs such as erosion control (including beach nourishment and re-nourishment), public access, highway improvements, and dredging or maintenance of existing and future channels.

— The Town of Topsail Beach policy is to approve and support dredging work in Topsail Sound and Topsail Inlet to improve navigation, fish and shellfish habitat, water quality, and to support beach nourishment efforts.



— It is the policy of the Town to support efforts to construct, renourish or re-build, the ocean beach within the municipality of Topsail Beach.

— The Town of Topsail Beach works with all levels of Government and the private sector to ensure regular Beach Maintenance and Inlet dredging.

—The Town of Topsail Beach implemented a tax on all property to fund a portion of the Beach, Inlet and Sound Maintenance Program.

— The Town of Topsail Beach practices preservation of existing dunes through educational, sand fencing and recycling of organic materials to build up dunes. The Town has a 30 year plan to lessen beach erosion through periodic nourishments and is also pursuing a 50 year federal project that will add hurricane protective measures increase storm damage reduction factors.

— It is the Town policy to promote the creation of new dunes by private property owners.

#### **(D) Natural Hazards Areas Goal & Policies**

“To conserve and maintain barrier dunes, beaches, flood plains, and other coastal features for their natural storm protection functions and their natural resources giving recognition to public health, safety, and welfare.”

The Town of Topsail Beach, along with every other barrier island beach community in North Carolina, faces the threat of coastal storms.

The most significant and noticeable of all coastal hazards is the possible inundation of the island by flood tides associated with a storm event and the threat of erosion<sup>2</sup>. The Town of Topsail Beach is active in the mitigation of each of these threats. The threat of flood damage is mitigated through community participation in the Federal Emergency Management Agency (FEMA) flood damage prevention program. The local flood damage prevention ordinance contains regulations which construction projects must follow to receive federal flood insurance. These regulations, when properly adhered to, will lessen the damage of coastal storms. The adoption and administration of the flood damage prevention ordinance is a service the Town of Topsail Beach provides to property owners. Without the ordinance federal flood insurance would not be available. The Town of Topsail Beach has also shown a very proactive and aggressive approach in seeking state and federal participation in a shoreline protection or beach nourishment program.

Policies related to natural hazards have been given careful consideration. These policies are included in the following section.

---

<sup>2</sup> The historical average annual erosion rate for the Town of Topsail Beach is 2 feet per year. This information is provided to the Town by the NC Division of Coastal Management. The average annual erosion rate statistic for coastal communities is prepared every 5 years.

### **(1) Protection of the Beach**

— The Town of Topsail Beach strenuously supports the funding of beach nourishment and re-nourishment projects as a means of mitigating storm damage.

— The dollar value of the threat of loss from storms by beach communities in North Carolina is large. Topsail Beach, along with the other municipal beaches in North Carolina, believes an economically important public purpose is served by shoreline protection measures. As with public support granted to earthquake and fire victims in the American west, flood victims in the midwest, and winter storm victims to the north, the protection of our citizen's homes and investment in these homes is of paramount value. Topsail Beach policy is to seek protection for citizens through beach nourishment. It is Topsail Beach policy to support the 65% federal and 35% state-local funding ratio for continued funding of such projects. (*Update – 30 year plan, etc.*)

— It is Topsail Beach policy to support long-term approval of a continuing re-nourishment cycle for the Atlantic Ocean beach within the Town of Topsail Beach.

— The Town of Topsail Beach fervently believes federal approval of the Topsail Beach Corps of Engineers shoreline protection project is both economically feasible and environmentally justified. The shoreline protection program has been federally authorized but is not funded. The Town continues to believe that it should be implemented. Furthermore, a federal plan or another plan/initiative to increase beach protection is and should be pursued.

— The Town of Topsail Beach by policy supports the following statement: "...beach preservation and restoration are in the public interest and where economically feasible and environmentally justified beach preservation and restoration constitute a public purpose."

### **(2) Redevelopment Following a Natural Disaster**

— Town policy on redevelopment following a natural disaster is that such development must be consistent with the local, state, and federal regulations, current at the time of the requested redevelopment action, and to allow redevelopment of developed areas, including the relocation of endangered structures, if all state, federal, and local policies are met.

### **(3) Participation in the National Flood Insurance Program**

— It is the policy of the Town of Topsail Beach to support continuing participation in the National Flood Insurance Program. Redevelopment of developed areas within the 100 year floodplain will be subject to special requirements according to the flood damage prevention ordinance.

### **(4) Intensity of Development within Areas Subject to Hazards**

— It is the policy of the Town of Topsail Beach to minimize development and to encourage low or moderate intensity land uses. This policy is implemented by the zoning ordinance.

### **(5) Emergency Management and-Hazard Mitigation**

— The Topsail Beach Town Board supports the adopted Pender County Hazard Mitigation Plan.

— Topsail Beach requires development utilize the means and methods to mitigate or minimize adverse impacts of the project as required by state regulations.

— It is Topsail Beach Town policy to work to protect the property of municipal residents threatened by storm or natural erosion through multiple methods of storm hazard mitigation including administration and enforcement of the building code, zoning regulations, and intergovernmental cooperation and beach nourishment.

### **(6) Protection of the Dunes**

— It is the policy of Topsail Beach that development minimize impacts to existing sand dunes and the vegetation thereon.

### **(7) Soil Suitability**

— It is the policy of Topsail Beach to limit or prohibit development activity in areas where the soil suitability is incompatible with the development proposed.

### **(9) Acquisition of Parcels of Land in Hazardous Locations**

— It is the policy of the Town of Topsail Beach to consider acquisition of parcels located within hazard areas or rendered unbuildable by storms or other events for the purpose of recreation or public access. Developers may also be required to provide such properties as open space under circumstances related to the issuance of a conditional use permit or as a part of the subdivision approval process.

### **(10) Policy of the Location of Growth Inducing Public Facilities**

— It is Topsail Beach Town policy that the development of growth-inducing public facilities such as sewers, water lines, roads, bridges, and erosion control measures occurs in cases where: a) national, state, or local interest, and public benefits are overriding factors; b) facilities would not exacerbate existing hazards or damage natural buffers; and c) facilities would be reasonably safe from flood and erosion control related damage.

### **(E) Water Quality Goal & Policies**

“To maintain, protect and where possible enhance water quality in Topsail Sound, coastal wetlands, creeks, streams, and estuaries.”

The water quality in Topsail Sound within the Town limits of Topsail Beach, is excellent. The main focus of long-range planning at Topsail Beach is therefore to maintain and protect the current water quality. Most of that part of Topsail Sound which is located within the Town limits of Topsail Beach, is classified by the NC Division of Water Quality as SA. Water quality classifications provided by the Division of Water Quality are as follows:

**Class SA:** Tidal salt waters that are used for commercial shell fishing or marketing purposes and are also protected for all Class SC and Class SB uses. All SA waters are also HQW by supplemental classification.

**Class SB:** Tidal salt waters protected for all SC uses in addition to primary recreation. Primary recreational activities include swimming, skin diving, water skiing, and similar uses involving human body contact with water where such activities take place in an organized manner or on a frequent basis.

**Class SC:** All tidal salt waters protected for secondary recreation such as fishing, boating, and other activities involving minimal skin contact; fish and noncommercial shellfish consumption; aquatic life propagation and survival; and wildlife.

In addition, the waters of Topsail Sound and the adjacent marsh areas are a productive resource, as all the marsh areas between Topsail Sound and the Intracoastal Waterway have been classified by the NC Division of Marine Fisheries as primary nursery areas. Throughout the planning process it was repeatedly emphasized that community leaders are very aware of the value of the nearly pristine resource the waters of Topsail Sound represent. Protection of the resource is consequently a high priority for the Town of Topsail Beach.

Policies pertaining to the protection of water quality are what herein follows.

### **(1) Topsail Beach Is Planning for Clean Water**

— The Town policy is to pursue NC Division of Coastal Management planning projects which will allow the Town to take action to improve area water quality.

— Topsail Beach Town policy is to work with Pender County and other area or regional agencies for resources protection and to provide all area residents the best quality of life possible.

— Topsail Beach policy is to control development activities to help prevent the degradation of water quality in the sound, and in local creeks, and to ensure the protection of these vital natural resources.

— Topsail Beach policy is to support all efforts to minimize surface and groundwater pollution from wastewater sources.

### **(2) Prevent the Spillage & Runoff from Septic Tanks & Septic Systems**

— The Town of Topsail Beach policy is to prevent the spillage and runoff of sewage from malfunctioning septic tanks or septic systems into the waters of Topsail sound. The Town supports and encourages proper management and monitoring by the Pender County Inspections Department.

**(3) Support for the Protection of Outstanding Resource Waters**

— The Town of Topsail Beach supports the designation, recognition and protection of those areas defined by the NC Division of Water Quality as “outstanding resource waters.(ORW)” According to the Division of Water Quality, Outstanding Resource Waters are unique and special waters having excellent water quality and being of exceptional state or national ecological significance.

**(4) Topsail Sound & the Atlantic Ocean**

— It is the policy of Topsail Beach to maintain the highest quality use rating as possible for area waters.

**(5) Protect Public Trust Uses**

— It is the policy of Topsail Beach to mitigate degradation of area water quality and to prevent the loss of public trust uses on the oceanfront and on the sound side beaches and in the waters of Topsail Sound.

**(6) Acquisition of Buffers**

— The Town policy is to pursue Clean Water Management Trust Fund grants and other available funding sources for the acquisition of land bordering the ocean or sound/inlet beaches so as to protect water quality and to provide for public recreational access.

**(7) Clean-up of Unsightly and Unsafe Structures**

— It is the policy of the Town of Topsail Beach to require the clean-up of structures which have become dilapidated and which are unsightly or unsafe.

**(8) Cooperative Efforts to Improve Water Quality**

— It is the policy of the Town of Topsail Beach to work with local, state and federal agencies and participate in public-private partnerships to maintain or improve the quality of water and the abundance of the fisheries resource available to area residents and visitors.

**(F) Local Areas of Concern, Goals & Policies**

“Topsail Beach will seek to integrate local concerns with the overall goals of the North Carolina coastal program in the context of Land Use Planning.”

The extensive community involvement effort which accompanied the preparation of this plan, which was supported by Town Board, Planning Board and Town staff, has given a clear view of

local concerns related to land use development. Several things stand out as extremely important to the Topsail Beach public conscience.

Preserving the small town atmosphere ranks highest on the list of local concerns. The Town of Topsail Beach desires to preserve a small town family oriented tourist community type atmosphere. Community features which seem to embody this communal desire for a small Town flavor include: (1) low density development, primarily single family; (2) low-rise development and keeping height restrictions in place; (3) protection, maintenance, and enhancement of green space.

Other local concerns of significant importance include the encouragement of existing businesses and business development, protection of the maritime forest, retention of natural buffers, and continuing citizen participation in community planning decisions.

### **(1) Development Consistency with Local Ordinance**

— Topsail Beach supports the development of residential, commercial, and recreational uses within the Town which are consistent with local development policy and local ordinances.

### **(2) Protection of Public Assets**

— It is the policy of the Town of Topsail Beach to protect its assets through public education and to defend public and municipal rights by whatever means may be necessary, including legal action.

### **(3) Maintain Town's Status as a Family Oriented Tourist Community**

— It is Town policy to permit those land uses which will enhance the Town's real and perceived attributes as a family oriented tourist community for both year 'round residents and visitors.

— It is the policy of the Town of Topsail Beach to maintain the existing low density, small family beach Town, atmosphere which has always characterized this beautiful community.

— Topsail Beach Town policy is to encourage new development activity which will be consistent with the small Town and family beach image of the community.

— It is the policy of the Town of Topsail Beach to promote family oriented tourism.

— It is the policy of the Town of Topsail Beach to encourage the long-term operation of organizations which reflect and characterize the friendly small Town family beach atmosphere residents and visitors love and enjoy.

— In keeping with the village or family type environment enjoyed at Topsail Beach, it is the Town of Topsail Beach policy to support a local post office facility which will serve as a regular meeting spot or informal gathering place where flyers may be posted concerning municipal and other local matters.

#### **(4) Community Appearance**

— It is the policy of the Town to support the creation of a program of public recognition for homes and businesses that contribute to an improved community appearance.

— It is Topsail Beach policy to beautify the entrance to the community and public streets with appropriate signage, landscaping and other amenities

— It is Topsail Beach policy to support the development of attractive public space in the downtown.

— It is Topsail Beach policy to improve community appearance in all seasons of the year.

— It is the policy of the Town of Topsail Beach to: (a) ~target the clean-up of junk and nuisance conditions throughout the town, through courteous requests and through, where necessary code enforcement actions; and (b) ~beautify the entrances to the community with welcome signs and appropriate landscaping.

#### **(5) Public Health & Safety**

— It is Topsail Beach policy to immediately target, when such conditions become apparent, the clean-up of junk and nuisance conditions through courteous requests and when necessary, code enforcement actions.

— It is the policy of Topsail Beach to maintain a high level of public safety protection for residents and visitors.

#### **(6) High Intensity Uses & Large Structures Are Discouraged**

— It is the policy of Topsail Beach to discourage high intensity uses and large structures from being constructed. Topsail Beach Town policy is to encourage single family dwellings and to discourage high rise structures through administering of local zoning regulations.

#### **(7) Protection of Maritime Forest**

— It is the policy of Topsail Beach to encourage the maintenance of existing maritime forests. Development designed to cause the least practicable disruption to the maritime forest cover shall be permitted if done in accordance with the provisions of all applicable ordinances. It is the intention of the Town of Topsail Beach to strengthen Town ordinances on the protection of maritime forests and to increase the fines for violators.

### **(9) The Abatement of Nuisances**

— The Town has the authority, and will continue to exercise its authority, through its police powers, to abate nuisance noises and the destruction of any vegetation which may be or which may help to protect residential or commercial properties and which may contain threatened or endangered species.

### **(10) Retention of Natural Buffers**

— Topsail Beach policy is to work, whenever possible, to require the retention and management of natural vegetation in buffer areas along creeks, sounds, and islands.

### **(11) Preservation of Cultural & Historic Rights & Resources**

— The Town of Topsail Beach highly encourages the preservation of local cultural and historical resources, including adaptive re-use when appropriate.

### **(12) Marina Development**

— It is Topsail Beach Town policy to permit marina development if the proposed marina is consistent with current local, state, and federal regulations.

— Town policy is to allow upland excavation for marinas provided all pertinent state, local, and federal regulations are met.

### **(13) Topsail Beach Encourages Business Development**

— It is the policy of Topsail Beach to provide guidance to business owners on land use decisions regarding small business start-up and continuing operations consistent with adopted local policies and regulations. Topsail Beach will be supportive of businesses which serve to meet the needs of permanent residents and visitors.

— It is the policy of the Town of Topsail Beach to encourage small locally owned neighborhood type businesses.

— It is the policy of the Town of Topsail Beach to support and promote a thriving commercial district as a benefit to visitors, residents, the local economy and the revenue stream.

### **(14) Development of Sound & Estuarine System Islands**

— It is the policy of the Town of Topsail Beach to prohibit development and uncontrolled use of sound and estuarine system islands located within the municipal boundary.

### **(15) Citizen Participation in Community Planning Decisions**

— It is the policy of the Town of Topsail Beach to assure that all segments of the community have a full and adequate opportunity to be informed and to participate in the planning and decision making processes of the Town.



— It is the policy of Topsail Beach to involve citizens in community efforts and to seek citizen input on issues of importance to the Town.

— Topsail Beach policy is that it's Planning Board, which has regularly scheduled meetings, all of which are open to the public, provides opportunities for citizens to air their views and concerns about planning matters. Public concerns regarding land use matters may be addressed through this forum. The Planning Board will continue to be the primary vehicle for citizens' input on land use.

#### **(16) Density of Development – Redevelopment**

— The type of development allowed in Topsail Beach will be consistent with the Town's Future Land Use Map and the Town's zoning ordinance.

— It is the policy of Topsail Beach to allow redevelopment of developed areas, including the relocation of endangered structures, if all state, federal, and local policies are met. Environmentally friendly tourism type activities are especially desired.

— There are older developed areas within Topsail Beach's planning jurisdiction. The Town encourages and supports redevelopment of these areas for the purpose of land use compatibility and aesthetics. Restoration/fix up of any structures is encouraged. It is the Town's policy that redevelopment, like new development, must be conducted according to existing development guidelines as reflected in the zoning, Subdivision, Flood Damage Prevention Ordinances and others.

#### **(17) Bulkhead Installation & Maintenance – Effect on Coastal Wetlands**

— It is Town policy to support State and federal policies on damage to coastal wetlands (salt water marshes) by bulkhead installation or by other construction operation.

#### **(18) Industrial Sites on the Island**

— Industrial development, including manufacturing and assembly facilities, is not considered an appropriate land use for Topsail Beach.

#### **(19) Use of Off Road Vehicles – Dune & Beach Protection**

— It is the Town policy that vehicular traffic will not be allowed over the ocean front dunes within the Town limits at any time. Additionally, no vehicular traffic will be allowed on the beach except as established annually by the Topsail Beach Board of Commissioners. Access points to the beach are established and access is required to occur only at specified locations.

— Topsail Beach policy is to support efforts to control the public use of off-road vehicles in the community's public trust areas. It is Topsail Beach policy to restrict vehicles from government owned or managed lands in ecologically sensitive areas. (This policy is pertinent to dunes and wildlife habitat and nesting areas.) This policy on off-road vehicles is not pertinent to public works projects or emergency vehicles.

### **(20) Protection of Indigenous Species**

— It is the policy of the Town of Topsail Beach to protect indigenous wildlife species, particularly endangered or threatened species from the negative, or possible life threatening effects of development (for example: the effect of improperly installed lighting on baby turtles, or the 4-wheel drive vehicle effect on the nesting areas of the piping plover).

### **(21) Compact Growth Pattern**

— As the Town is a contained community at the southern end on Topsail Island, all growth within Town necessarily occurs in a relatively compact manner. It is the policy of the Town to control all development locations as indicated by the policies within this Land Use Plan.

### **(22) Repair Upgrade & Improve Housing Conditions**

— It is the policy of the Town of Topsail Beach to work with residents and agency personnel and programs to repair, upgrade, and improve housing conditions through the administering of the Minimum Housing Code, Building Code and Zoning Ordinance.

### **(23) Involve NC Department of Transportation in Stormwater Planning**

— It shall be the policy of the Town of Topsail Beach to work with NC Department of Transportation officials to plan in advance for appropriate stormwater collection systems along and in concert with roadways construction and maintenance and to retrofit known problem areas such that ponding on roads and the drainage of stormwater from state and municipal streets is mitigated.

## **Section 3: Future Land Use Map & Map Classification Categories**

### **(A) The Future Land Use System**

The future land use system herein described provides a framework which will guide the Town of Topsail Beach in identifying the future use of all lands within the Town's planning jurisdiction.

The following parameters apply to the use and interpretation of the Future Land Use Map:

- The Future Land Use Map is a generalized depiction of intended uses. It is not an “existing land use map,” although in many cases future uses in an area may be the same as those that exist today.
- The rezoning of any given area should be guided by the Future Land Use Map, interpreted in conjunction with the policies of the Land Use Plan. However, the Future Land Use Map is not a zoning map.
- While the Future Land Use Map will influence future zoning, it does not alter current zoning or affect the right of property owners to use the land for its purpose as zoned at the time of this Plan’s adoption. The Future Land use MPa will not be referenced as part of the site plan review.
- Whereas zoning maps establish detailed requirements for setbacks, height, use, parking, and other attributes, the land use categories of the Future Land Use Map recommend a range of potentially appropriate land use and intensities.

The description of the future land use classes will allow Topsail Beach officials to illustrate graphically their policy statements on where and at what intensity they wish future growth to occur. This Land Use Plan section, and the accompanying Future Land Use Map illustrates where and how the Town wants to guide growth.

As means of assisting local governments in coastal North Carolina with this responsibility, the Coastal Resources Commission has suggested a system<sup>3</sup> which will allow the community to illustrate its desired future patterns of land development, with consideration given to the natural systems within the planning area.

The Town of Topsail Beach will use preset future land use categories<sup>4</sup> to describe future development patterns. These primary categories are: Conservation, Residential, and Business-Commercial, Institutional and is described below.

### **(1) Conservation Areas**

The Town of Topsail Beach has 3 designations of land use referred to by the Town as Conservation Areas. They are: C-1 Ocean Front, C-2 Sound Side, and C-4 Inlet Area. The lands encompassed in these areas, and their planned uses are as follows:

#### **C-1 Ocean Front:**

The C-1 area is defined as that area between the mean low water line and the mean high water line along the Atlantic Ocean beachfront from a point at the oceanfront intersection of the Topsail Beach/Surf City Town lines and southwesterly to a point at the centerline of Topsail Inlet at its intersection with the Atlantic Ocean. It is the intent of the Town that this area shall remain open to public use, accessed via public accesses provided and maintained by the Town, and/or by private property owners whose property abuts the Atlantic Ocean. Development in this AEC will be regulated in accordance with the Zoning Ordinance.

#### **C-2 Sound Side:**

The C-2 area is defined as that area that lies on the northwest side of Topsail Island, stretching from the mean low water mark of the southeast side Topsail Sound to the center of the Intra Coastal Waterway. This area encompasses Topsail Sound and Banks Channel and the creeks, sloughs, salt marshes, maritime forests, and dredge spoil islands that lie between Topsail Sound and the Intra-coastal waterway.

On the southeast side of Topsail Sound, abutting Topsail Island, it is the policy of the Town to allow piers, docks, and boat ramps that project from Topsail Island into this zone. In the area within this zone on the northwest side of Topsail Sound, which encompasses the salt

---

<sup>3</sup> The Coastal Resources Commission's suggested future land use system for local governments in the coastal area is described in the NC Administrative Code at Subchapter 7B of Chapter 15A (15A NCAC 7B).

<sup>4</sup> Please review the Future Land Use Map (which is folded into the back of this document) for a graphic depiction of where each of the areas described is located.

marsh, maritime forests, and dredge spoil islands, it is the intent of the Town to limit all building in this area to essential public facilities.

**C-4 Inlet Area:**

The C-4 area is an undeveloped parcel of land that abuts New Topsail Inlet, and lies between Topsail Sound, the Atlantic Ocean, and the area locally known as Serenity Point. The area includes land that is designated as an inlet hazard area, and it includes public trust beaches on both the ocean side and the sound side that are important public trust recreation areas.

If any portion of the area is ever developed, the Town will seek to ensure that development is of a low density and is subject to conditions that will safeguard the unique qualities of this area.

**(2) Residential Areas**

The Town is primarily residential in nature and it is anticipated that it will remain primarily residential in use for the 20 year planning horizon considered in the preparation of this document. Topsail Beach is a compact island community. The residential areas in Town are approaching full development. The major trend for development activity in Topsail Beach for the next 20 years will be in-fill on lots currently subdivided, redevelopment of existing homes and the re-subdividing of existing lots.

The Town has ordinances in place, which will limit local density.

The overriding concern of the Town of Topsail Beach is that all development activity be consistent with the local rules and regulations governing land use development. These rules and regulations are found primarily in Topsail Beach's Zoning Ordinance and Subdivision Regulations. Land development activity may also be governed by rules or policies incorporated within other local plans or ordinances (Pender County Health Department regulations, for example) or in development plans which will be produced by the municipality, such as Recreation Plans, Stormwater Management Plans, Transportation/Roads Plans or Thoroughfare Plans, Capital Facilities Plans, and others.

**(3) Business-Commercial / Institutional**

The Town of Topsail Beach has a downtown general business district located in the 600-700-800-900 blocks of South Anderson Boulevard, and several neighborhood business districts.

Like most small Towns Topsail Beach treasures its businesses. The Town realizes the difficulties faced by the entrepreneur in starting and continuing a business in a small community with a definite seasonal influx of people. The commercial services/business areas in Topsail Beach are there to continue to encourage commercial opportunity for residents and visitors. It is possible these areas will become the home of more business activities within the 20 year planning horizon described by this document. Ideally, these areas will provide a wider range of retail and service

uses than currently exists. Services businesses which would add to the convenience of island residents and visitors are encouraged.

Business development activity in the commercial service/business areas must be consistent with local ordinances and the policies contained within this Land Use Plan. New businesses will be guided by the plan policies and Zoning Ordinance to provide safe, attractive and environmentally sound development.

### **(B) The Future Land Use Map**

The Town of Topsail Beach's Future Land Use Map included in this plan is designed to graphically depict the Town's future growth and development and the desired future patterns of land use and land development. The Future Land Use Map provides the geographical framework to guide the City's land use policies and development decisions. The map uses color-coded categories to show the general character, distribution, and intensity of recommended and planned land use for Topsail Beach. This map seeks to provide greater land use predictability and transparency. The Map uses a land classification system to show future desired land use and development patterns. The maps primary categories of land classified that are:

#### **Conservation Areas Residential Areas Business-Commercial / Institutional**

The future land use classification categories are described in the preceding section.

### **(C) Discussion of Density Policies by Future Land Use**

In all land use categories shown in the Land Use Plan, it is the policy of the Town of Topsail Beach to limit dwelling unit density by maintaining a 41 foot height limit, a 35% impervious surface limit, and an underlying minimum lot size of 5,000 square feet.

The area described as "Residential" shall comprise single family, 2 family and multi-family, depending upon the zoning district and the lot size. In single family areas, the 5,000 sf minimum lot size limits density to 8.7 dwelling units per acre. For 2-family development, an additional 3,500 sf per dwelling unit is required, restricting density to 10.2 units per acre. All multi-family developments must be located in a Planned Residential Development (PRD) and require a Conditional Use Permit.

The Town has 2 types of Planned Residential Development (PRD) districts. The PRD1 district allows 15.4 dwelling units per acre for multi-family development, and 8.7 units per acre for single-family. The PRD-2 district allows 2.9 units per acre for either duplexes or single-family.

For all commercial development, the minimum lot size is 5,000 sf.

The category labeled “Conservation” will be limited to essential public facilities, with no commercial or residential structures.

For the category labeled “Conservation w/ Limited Residential”, the Town has not developed specific density polices at the time of the publication of this Land Use Plan. The Town’s strategy is to acquire the land and preserve as much open space as possible.

**(D) Density of Current & Future Land Use**

The official population for the Town of Topsail Beach in 2001 was 481 persons based on US Census figures at the Town. Since that time the population has dropped and risen. There were 238 acres within the 940 dry land acres within the municipal jurisdiction which were in residential use. This calculates to a .49 persons per acre.

**Table 42 Current Population Density in Lands Classified Residential, 2001**

<b>Population</b>	<b>Acres in Residential Use</b>	<b>Acres Per Person/Density</b>
481	238	.49

The growth of the permanent population within the municipality was projected earlier in this Land Use Plan as follows:

- 2005 = 539 persons
- 2010 = 368 persons
- 2020 = 536 persons

It is projected by the Future Land Use Map and the future land use classifications categories that as a result of the fact that the growth pattern of the Town of Topsail Beach has been established that the total area to be developed for residential uses will remain constant at 238 acres. This assumption is embedded in local policy in Part 2 of this document. If we hold the number of acres to be constant and we project according to our population estimates, we see the following:

**Table 43 Population Density in Lands Classified Residential, 2005**

<b>Population</b>	<b>Acres in Residential Use</b>	<b>Acres Per Person/Density</b>
539	238	.44

**Table 44 Population Density in Lands Classified Residential, 2010**

<b>Population</b>	<b>Acres in Residential Use</b>	<b>Acres Per Person/Density</b>
368	238	.65

**Table 45 Population Density in lands Classified Residential, 2020**

<b>Population</b>	<b>Acres in Residential Use</b>	<b>Acres Per Person/Density</b>
536	238	.44

According to our analysis of existing land use, there are currently 315 acres undeveloped within Topsail Beach. Even considering not all of this acreage will be able to be built upon, since some

is dry sand beach (in front of the frontal dunes), some is wetlands, etc., and some is outside of the areas classified residential, the additional land area requirements for the increasing population are interesting.

As previously stated, Topsail Beach (in 2001) has 481 persons on 238 acres. To accommodate the additional 55 persons by the year 2020 at this density, Topsail Beach will require the use of a minimal number of additional acres of currently undeveloped land.

If density is to increase to the number of persons per acre required to support 55 additional permanent residents within the 238 acres shown on the Future Land Use Map as for residential use, there will be, inescapably, a slightly more densely populated area of persons per acre.

**Table 46 Population Density in Persons per Acre, 2001/2005/2010/2020**

<b>Year</b>	<b>Population</b>	<b>Acres--Residential Use</b>	<b>Persons Per Acre</b>
2001	481	238	2.02
2005	539	238	2.26
2010	368	238	1.55
2020	536	238	2.25

By 2020 it is estimated there will be 3.12 persons per acre within the area classified as residential according to the Town of Topsail Beach. The population figures have fluctuated over the year and have has dropped and risen since 2001.

**(E) Tools for Managing Development**

The Town of Topsail Beach has a town manager who also serves as an inspector and plans reviewer and also contracts with the county to provide field inspections, and the Zoning Ordinance and the Subdivision Regulations are the principle mechanisms by which land use is regulated. Other land use related ordinances by which development activity is managed include the Stormwater Regulations and the Flood Damage Prevention Ordinance.

This Land Use Plan will also be used for consistency review by federal and state permitting agencies. If, for example, a builder wishes to construct a house within an area of environmental concern, the builder will be advised by the Inspections Department that before construction activity may commence the owner must apply for and receive a CAMA permit. Smaller projects such as single-family typically require a minor CAMA permit issued by the local government. Larger more complex projects typically require a major CAMA permit. The time requirement for issuance of a CAMA major permit is more extensive. All projects must be consistent with the Land Use Plan as determined by local officials or by state agency staff.

Federal projects proposed for land areas within the Town of Topsail Beach’s planning jurisdiction are reviewed by the NC Division of Coastal Management. Projects impacting federally protected freshwater wetlands areas must be reviewed and permitted by the U.S. Army Corp of Engineers. Consistency review must also take place in any instances where federal dollars will be spent on

proposed projects. The state managed review process for federal facilities or uses is known as the “A-95 review process.” The NC Clearinghouse within the NC Department of Administration collects comments on these projects and manages this review.

It is the intent of this Land Use Plan that all development in Topsail Beach must be consistent with the policies herein described.

#### **(F) Land Use Plan Amendments**

This Land Use Plan may be amended at any time following the procedures outlined in the North Carolina Administrative Code at 15A NCAC 7B.

## **Town of Topsail Beach Land Use Plan** **Part 3 – Management Tools**

### **Section 1: Introduction**

The NC Coastal Resources Commission and their staff, the Division of Coastal Management, have issued guidance on the preparation of Land Use Plans in the coastal area. This guidance, titled *Technical Manual for Land Use Planning*, requires local governments to analyze their Land Use Plan’s policies and recommended actions and the future land use map. The requirements are as follows:

- ▶ Examine the consistency of the plan with the management topics;
- ▶ Examine the consistency between the future land use map and the Land Use Plan’s requirements; and,
- ▶ Analyze the impact of the policies and recommended actions on the management topics specified in the guidance manual.

This analysis is contained in the following sections and in the Appendix to the Land Use Plan.

### **Section 2: Consistency of Land Use Plan Policy with Community Goals**

This analysis is done to ensure the Land Use Plan’s community goals and policies are consistent with the Coastal Resources Commission’s required management topics. The management topics are the categories of local land use and development policies suggested to local governments by the Coastal Resources Commission (CRC). The CRC deems these management goals to be extremely important for the proper use, development, and protection of natural and manmade resources in coastal areas. There are six management topics:



- **Public Access:** The public access policies give municipal guidance on maximizing access opportunities to the shore and on the careful management, and care of these areas;
- **Land Use Compatibility:** Policy considerations here include the preservation of environmental attributes and decisions which will produce the harmonic adaptation of built uses in close proximity to one another. The management of development to minimize impacts on both man-made and natural resources is inherently important in land use compatibility considerations;
- **Infrastructure Carrying Capacity:** The goal of this policy section for Topsail Beach is to ensure that infrastructure is available to support planned development and that if infrastructure is not available or necessary that the land will support development in such a way that human health, safety, and welfare will be protected and so will environmentally fragile areas;
- **Natural Hazard Areas:** Policies here are designed to reduce the vulnerability of the Town of Topsail Beach to natural hazards;
- **Water Quality:** Land Use policies in this section are designed to protect the high quality of local waters; and
- **Local Areas of Concern:** This policy section identifies policies and strategies to address local planning and development goals.

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

The Topsail Beach Land Use Plan's goal for public access is to *increase and enhance public access opportunity to the ocean and sound waters of Topsail Beach*. In order to meet this goal the Land Use Plan describes policies which:

- 1) Ensure adequate and open public access opportunities to residents and visitors;
- 2) Reduce conflicts by access area users (residents and visitors) and fully integrate the facilities into Town neighborhoods in a way such as to not disrupt, interfere, or create problems within any neighborhoods; and
- 3) Provide a high quality recreational experience for all.

To accomplish the stated goal the plan contains a series of policies which, when acted upon individually or when considered as a whole, provide guidance for ensuring that there is access to all segments of the community, these access areas fit in with their surroundings, and provide a wonderful recreational experience for all users.

Each of the policies in the public access policies section of the Land Use Plans has been reviewed and is consistent with both state and local goals.

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

The Town of Topsail Beach's Land Use Plan goal on land use compatibility is *to ensure that development and use of resources or preservation of land minimizes direct and secondary environmental impact, avoids risks to public health, safety and welfare and is consistent with the*

*capability of the land based upon considerations of interactions of natural and man-made features.*

The Land Use Plan contains a body of policy, which, in multiple statements, gives guidance on how the town will proceed to affect their stated desire to “maintain the small town, family friendly atmosphere” which residents and visitors have come to love and enjoy. The concepts embodied in the local policy guidance in the plan mitigate the impacts of land development on neighboring property owners, natural resources, and fragile areas.

The Topsail Beach zoning ordinance and subdivision mitigate impacts for development by setting minimum lot sizes, setbacks, and height restrictions. The Town’s zoning ordinance also contains conservation and shore zones that restrict development and its impact on man-made (inhabited) structures and on natural resources and fragile areas. The Flood Damage Prevention Ordinance also helps to mitigate the negative impact of storms.

The Land Use Plan’s policies have been reviewed and are consistent with this management goal.

### **C. Infrastructure Carrying Capacity**

The Town of Topsail Beach’s Land Use Plan goal for infrastructure carrying capacity is to ensure that public infrastructure systems are properly sized, located and managed, to provide the quality of service required by a growing Town and to protect designated areas of environmental concern and other fragile areas.

The following considerations concerning Topsail Beach infrastructure are of importance.

- 1) The availability of a sufficient supply of potable water;  
This issue is one which must be addressed by Topsail Beach within the planning period. Policy guidance includes the need to monitor water wells, to maintain and improve the system, plan for necessary public services improvements, to conserve water, and to consider creatively all possible sources of supply.
- 2) The installation of a sewerage treatment and disposal system;  
All residents and businesses in the Town of Topsail Beach are on either septic tanks or private septic systems. The Town will continue to consider alternatives to septic systems, including connection to mainland public sewer systems.
- 3) The flooding of roads following a storm event is a situation which must be resolved;  
Policy guidance on this matter has pointed to the need to work locally with the NC Department of Transportation on the resolution to this problem.

All residential and commercial structures are required to connect to the public water system and all are required to have a functioning means of sewerage treatment and disposal. Sewerage treatment and disposal is handled by septic systems which must be approved by the Pender County Department of Health.

The Town of Topsail Beach supports federal and state cooperative assistance on beach nourishment and re-nourishment. The protective buffering features of a fully nourished beach are recognized as an important part of the local infrastructure connected to storm hazard mitigation.

The Land Use Plan's policies have been reviewed and are consistent with this management goal.

#### **D. Natural Hazards Area**

The Town of Topsail Beach's Land Use Plan goal for the natural hazards management is to conserve and maintain barrier dunes, beaches, flood plains, and other coastal features for their natural storm protection functions and their natural resources giving recognition to public health, safety, and welfare.

The Town recognizes the following needs:

- 1) Protection of the beach;
- 2) The need for systematic regular nourishment and re-nourishment of the ocean beach;
- 3) Protection of the dune system; and
- 4) Participation in the National Flood Insurance Program.

Policies within the Land Use Plan address each of these significant items. Other policies deal with hazard mitigation intergovernmental cooperation, acquisition of properties deemed hazardous, and others.

#### **E. Water Quality**

The Town of Topsail Beach's Land Use Plan's goal for water quality is *to maintain, protect, and where possible enhance water quality in Topsail Sound, coastal wetlands, creeks, streams, and estuaries.*

Policies which will guide the Town towards this goal include:

- 1) Intergovernmental cooperation;
- 2) Acquisition of buffers;
- 3) Prevent spillage and runoff from septic tanks and septic systems; and
- 4) The clean-up of unsightly and unsafe structures.

Topsail Sound within the jurisdiction of the Town of Topsail Beach is almost entirely SA waters. The Town strongly desires to continue to have this high quality water adjacent the island. Policies in the Land Use Plan are designed to guide the local government to this effect. The policies in the water quality section of the Land Use Plan have been reviewed and are consistent with the management goal.

#### **F. Local Areas of Concern**

The Town of Topsail Beach's Land Use Plan's goal for local areas of concern is *to integrate local concerns with the overall goals of the North Carolina coastal program in the context of Land Use Planning.*

There are multiple policies which have been placed within this Land Use Plan section as a guide to the local government. Some of these policies deal with issues which are also pertinent to other policy goal plan sections. The Land Use Plan user should review this policy section carefully to be sure important local policy guidance is seen.

The policies in the Land Use Plan under the section for local areas of concern have been reviewed and are consistent with the stated management goal.

### **Section 3: Consistency between Land Use Plan Policy & Future Land Use Map**

The Coastal Resources Commission's guidance, titled *Technical Manual for Land Use Planning*, requires local governments creating a coastal Land Use Plan to analyze their Land Use Plan's policies and to have consistency between Land Use Plan policy guidance for growth and the Future Land Use Map (located in the back of this document).

The specific requirements are as follows.

- ▶ Summarize the residential density and development intensity encouraged by each of the land classifications or designations on the map. This requirement was met within Part 2, Section 3, in the description of the Future Land Use Map classification categories.
- ▶ Identify any material differences between the development patterns shown on the Future Land Use Map and the development constraints shown on the Environmental Composite Map and the Land Suitability Map. There are no material differences.
- ▶ Describe any material differences between the spatial patterns of land classifications that depend on water and sewer and planned development. There are no differences.
- ▶ Describe development planned for natural hazard areas, how uses are consistent with associated risks, and the capacity of the evacuation infrastructure. Development will continue to occur in the pattern established.
- ▶ Describe how land classifications and spatial patterns on the map will protect open shellfish waters and restore closed or conditionally closed shellfish waters. The Town of Topsail Beach has designed specific policy guidance which will serve to protect the waters of Topsail Sound.

This Land Use Plan recommends no zoning changes. The Town of Topsail Beach is an established small Town with spatial patterns of development already established. The Future Land Use Map (in the back of this document) shows development patterns which are not greatly different from the Existing Land Use Map and the current Town of Topsail Beach Zoning Map.

#### **A. Residential & Commercial Density**

Since the Town's growth pattern is effectively established, the Land Use Plan's development densities depicted on the Future Land Use Map are similar to those contained on the Existing Land Use and Zoning Maps. The density requirements within each of the 3 future land use classification categories can be found in Part 2, Section 3, of the Land Use Plan. Minimum lot sizes for residential lots in the Town of Topsail Beach are 5,000 square feet. Minimum lot sizes for commercial properties are 5,000 square feet. The net effect of the lack of a public sewer

system has eased development pressure and allowed for additional development consistent with the requirements of the Pender County Health Department. All septic systems must be consistent with the regulations and the capabilities of the soil to absorb the effluent. The resulting densities are consistent with historical development patterns of the Town. Densities are also consistent with the capabilities of the Town's natural systems since all residential and commercial development requires a soil test for suitability.

The following compares the Future Land Use categories with the existing Town ordinances for consistency:

**Table 47 Future Land Use Compatibility Matrix**

<b>Future Land Use Plan Compatibility Matrix</b>												
Consistency Review of Future Land Use Map Designations and Existing Zoning Districts (Note the following regulations are current as of December 1, 2012. All development must be consistent with regulations in effect at the time the development is proposed)												
<b>Existing Zoning Districts</b>	<b>R1</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>	<b>PRD1</b>	<b>PRD2</b>	<b>B1</b>	<b>B2</b>	<b>C1</b>	<b>C2</b>	<b>C4</b>	
Minimum Lot Size* (single family, sq. ft.):	5,000	5,000	5,000	5,000	NA	NA	5,000	5,000	NA	NA	NA	
Minimum Lot Size* (two family, sq. ft.):	8,500	8,500	8,500	8,500	NA	NA	8,500	8,500	NA	NA	NA	
Maximum Impervious Surface	35%	35%	35%	35%	35%	35%	35%	35%	NA	NA	NA	
Maximum Single Dwelling units/acre	9.7	9.7	9.7	9.7	8.7	2.9	9.7	9.7	NA	NA	NA	
Maximum Duplex units/acre	11.4	11.4	11.4	11.4	15.4	2.9	11.4	11.4	NA	NA	NA	
Maximum Multifamily Units/Acre	NA	NA	NA	NA	15.4	2.9	NA	NA	NA	NA	NA	
Maximum Building Height (ft.):	41	41	41	41	41	41	41	41	NA	NA	38	
<b>Land Use Designations &amp; Compatibility</b>												
<b>Conservation</b>									<b>OK</b>	<b>OK</b>		
<b>Conservation w/ Limited Residential</b>											<b>OK *</b>	
<b>Commercial/Residential</b>							<b>OK</b>	<b>OK</b>				
<b>Residential</b>	<b>OK</b>	<b>OK</b>	<b>OK</b>	<b>OK</b>	<b>OK</b>	<b>OK</b>						

OK "generally consistent"  
 X "inconsistent"  
 NA "not applicable"

**Comment on Inconsistencies:**

**C-4 Conservation district: Current zoning prohibits development;  
 Future land use policy recognizes the possibility of development**

“OK\*” in the above table means that the development is not allowed because it is in a conservation district.

## **B. Comparing the Environmental Composite & Land Suitability Maps with the Future Land Use Map**

A comparison of the Environmental Composite Map (all maps are in the back of this document) and the Land Suitability Map shows no appreciable difference between the two maps. When each of these maps is compared to the Future Land Use Map we can see that future development within the Town of Topsail Beach will occur primarily within areas which are classified by the Environmental Composite Map as Class II. The entire land portion of the Town, with a few minor exceptions is classified in this way. When we compare the Future Land Use Map to the Land Suitability Map, we see development will occur in areas shown to be of medium to high suitability for development. This land suitability category encompasses virtually the entire Town.

Lands which are shown as suitable for development must, in each case, be consistent with current zoning.

The Future Land Use Map shows the Town of Topsail Beach developing in much the same way for the planning period described by this document as it has in the past.

## **C. Availability of Water and Sewers to Future Development**

The entire Town of Topsail Beach is served by public water systems. The availability of a wastewater collection and treatment system for the Town of Topsail Beach is an uncertain eventuality. The town does not foresee recommending land use changes which would significantly increase the Town's density.

There are no Land Use Plan policies to seek or encourage growth inducing infrastructure such that the spatial patterns of development within the Town of Topsail Beach would be significantly altered.

## **D. Natural Hazards**

The Town is located on a barrier island and is therefore subject to development limitations due to natural hazards. Because of the Town's geographic location and linear configuration, nearly the entire community is located in a natural hazard area as indicated graphically by the Flood Zones Map and the Storm Surge Map (both located in the back of this document).

The projected future use of currently vacant properties is consistent with risks faced by current residents and business owners. Current risks are believed to be mitigated by existing ordinances and state and federal building regulations. Natural hazards will not affect development activity in the Town. Development will continue to occur in the established pattern.

## **E. Protecting Shellfish Waters**

Since the Future Land Use Map and the Existing Land Use Map show a continuation of the current, established, development patterns it seems unlikely that future development will have negative impacts on the waters adjacent the Town of Topsail Beach. Land Use Plan policy guidance calls for the following actions to help ensure clean water:

- Careful adherence to state regulations;
- Purchase of buffers;
- Intergovernmental cooperation (state/local/regional); and
- Clean-up and removal of old bulkheads, docks, piers, and other land based structures which may, because of their condition of disrepair, release toxic or unsafe substances into estuarine waters.

#### **F. Policy Impact Analysis & Implementation Schedule**

As previously noted, the Coastal Resources Commission gives guidance on the preparation of Land Use Plans in the coastal area. This guidance, titled *Technical Manual for Land Use Planning*, requires a policy impact analysis and a policy implementation schedule.

The policy impact analysis requirement charges each local government with the responsibility for examining all policies and determining the impact of policies on each local management goal. In this document management topics are listed, followed by the policy statements sections, and each section gives the effect in the table/matrix as either positive, negative, or neutral. The reasons for the rating, in each instance, are self-explanatory.

The implementation schedule follows the policy analysis and categorizes the local policies in this plan, for the vast majority, as current or ongoing. This was by design. The Land Use Plan leaves plenty of room for additional local action in each policy area if it is deemed necessary. In several instances a timeline for implementation action is suggested.



**Table 48 Management Topics**

<i>Management Topics</i>		<i>Policy Impact Analysis &amp; Implementation Schedule: Indicates Whether Policy has a Negative, Neutral, or Positive Impact on the Management Topic Goals</i>				
	<i>Public Access</i>	<i>Land Use Compatibility</i>	<i>Infrastructure (Carrying Capacity Goal)</i>	<i>Natural Hazards Areas</i>	<i>Water Quality</i>	<i>Local Areas of Concern</i>
	<i>To increase and enhance public access opportunity to the ocean and sound waters of Topsail Beach</i>	<i>To ensure that development and use of resources or preservation of land minimizes direct and secondary environmental impact, avoids risks to public health, safety and welfare and is consistent with the capability of the land based on considerations of interactions of natural and man-made features</i>	<i>To ensure that public infrastructure systems are properly sized, located and managed, to guarantee the quality of service required by a growing Town and to protect designated areas of environmental concern and other fragile areas</i>	<i>To conserve and maintain barrier dunes, beaches, flood plains, and other coastal features for their natural storm protection functions and their natural resources giving recognition to public health, safety, and welfare</i>	<i>To maintain, protect and where possible enhance water quality in Topsail Sound, coastal wetlands, creeks, streams, and estuaries</i>	<i>Topsail Beach will seek to integrate local concerns with the overall goals of the North Carolina coastal program in the context of Land Use Planning</i>
<i>LUP Policies: Public Access (status is ongoing)</i>						
<i>(1) Effect of policy on management topics</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>
<i>(2) Providing Public Access to Topsail Sound &amp; the Atlantic Ocean</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>
<i>(3) Support for the Coast Resource Commission's Access Program</i>	<i>Positive</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>
<i>(4) Cooperation with Pender County to Provide Access</i>	<i>Positive</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>
<i>(5) Funding &amp; Planning for Public Access</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>
<i>(6) Legally Identify Access Areas &amp; Keep Them Free of Encroachment</i>	<i>Positive</i>	<i>Positive</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>
<i>(7) Public Access Nuisance</i>	<i>Positive</i>	<i>Positive</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	
<i>(8) Public Access – A Majority Priority</i>	<i>Positive</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>
<i>(9) Purchase of Additional Sites</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Positive</i>
<i>(10) Public Access Maintenance</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Neutral</i>	<i>Positive</i>	<i>Positive</i>
<i>(11) Access Requirements for Development</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Neutral</i>	<i>Positive</i>	<i>Positive</i>
<i>LUP Policies: Land Use Compatibility (status is ongoing)</i>						
<i>(1) Development Must Be Consistent with Existing Regulations</i>	<i>Neutral</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>
<i>(2) Managed Growth</i>	<i>Neutral</i>	<i>Positive</i>	<i>Positive</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>

(3) Compatibility with Future Land Use Map	Neutral	Positive	Positive	Neutral	Neutral	Neutral
(4) Retain Natural Buffers	Positive	Positive	Positive	Positive	Positive	Positive
(5) Maintain Small Town Atmosphere	Neutral	Positive	Positive	Positive	Positive	Positive
(6) Protection of Coastal Wetlands	Neutral	Positive	Neutral	Positive	Positive	Positive
(7) Preserve, Protect, & Enhance Natural Resources	Neutral	Positive	Neutral	Positive	Positive	
(8) Intergovernmental Cooperation	Neutral	Positive	Positive	Neutral	Positive	Positive
(9) Cooperation Amongst Current & Future Residents & Developers	Positive	Positive	Positive	Positive	Positive	Positive
(10) Protection of Artifacts & Endangered Species	Neutral	Positive	Neutral	Neutral	Neutral	Positive
(11) Development Project Consistency with Long-Term Goals	Positive	Positive	Positive	Positive	Positive	Positive
(12) Support for the Protection of Wildlife Habitat	Neutral	Neutral	Neutral	Positive	Positive	Positive
(13) Developers Must Build Infrastructure for Their Projects	Neutral	Positive	Positive	Neutral	Neutral	Positive
(14) Development in the Estuarine Shoreline AEC	Neutral	Positive	Neutral	Neutral	Negative	Positive
(15) Conservation of Public Trust Areas	Positive	Positive	Neutral	Positive	Positive	Positive
(16) Protection of Water & Groundwater Resources	Neutral	Positive	Positive	Neutral	Neutral	Positive
(17) Industrial Development in Topsail Beach	Neutral	Positive	Positive	Neutral	Neutral	Positive
(18) Flooding of Roads	Neutral	Positive	Positive	Positive	Neutral	Positive
(19) Clean Up Nuisances & Beautify	Neutral	Positive	Neutral	Neutral	Neutral	Positive
(20) Canoes & Kayaks in Topsail Sound	Positive	Positive	Neutral	Neutral	Neutral	Positive
(21) Floating homes	Neutral	Positive	Positive	Neutral	Positive	Positive
LUP Policies: Infrastructure (status is ongoing)						
(1) Municipal Water System	Neutral	Positive	Positive	Neutral	Neutral	Positive
(2) Wastewater Service & the Treatment of Effluent	Neutral	Neutral	Positive	Neutral	Positive	Positive
(3) Transportation – Roads in the Municipality	Positive	Positive	Positive	Neutral	Neutral	Positive
(4) Stormwater Policy	Neutral	Neutral	Positive	Positive	Positive	Positive
(5) Fire Protection	Neutral	Neutral	Positive	Neutral	Neutral	Positive
(6) Intergovernmental Cooperation	Positive	Positive	Positive	Positive	Positive	Positive
(7) General Policy on Infrastructure	Positive	Positive	Positive	Positive	Positive	Positive
(8) Groundwater Resources	Neutral	Positive	Positive	Neutral	Neutral	Positive
(9) Beach Nourishment & Re-nourishment – Dune Protection	Positive	Positive	Positive	Positive	Positive	Positive
LUP Policies: Natural Hazards Areas (status is ongoing)						
(1) Protection of the Beach	Positive	Positive	Neutral	Positive	Positive	Positive
(2) Redevelopment Following a Natural Disaster	Neutral	Neutral	Positive	Positive	Neutral	Positive
(3) Participation in the National Flood Insurance Program	Neutral	Positive	Positive	Positive	Neutral	Positive
(4) Intensity of Development within Areas Subject to Hazards	Neutral	Positive	Positive	Positive	Neutral	Positive

(5) Intergovernmental Cooperation on Emergency Management	Neutral	Positive	Positive	Positive	Neutral	Positive
(6) Protection of the Dunes	Positive	Positive	Positive	Positive	Positive	Positive
(7) Soil Suitability		Positive	Positive	Positive	Positive	Positive
(8) Hazard Mitigation	Positive	Positive	Positive	Positive	Positive	Positive
(9) Purchase of Parcels of Land in Hazardous Locations	Positive	Neutral	Neutral		Positive	Positive
(10) Manufactured Homes in Hazardous Areas	Neutral	Positive	Neutral	Positive	Neutral	Neutral
(11) Policy on the Location of Growth Inducing Public Facilities	Neutral	Positive	Positive	Positive	Neutral	Positive
LUP Policies: Water Quality (status is ongoing)						
(1) Topsail Beach is Planning for Clean Water	Neutral	Positive	Positive	Positive	Positive	Positive
(2) Eliminate Spillage & Runoff from Septic Tanks & Septic Systems	Neutral	Positive	Positive	Neutral	Positive	Positive
(3) Support for the Protection of Outstanding Resource Waters	Neutral	Neutral	Neutral	Neutral	Positive	Positive
(4) Topsail Sound & the Atlantic Ocean	Positive	Neutral	Neutral	Neutral	Positive	Positive
(5) Protecting Public Trust Uses	Positive	Positive	Positive	Positive	Positive	Positive
(6) Purchase of Buffers	Positive	Positive	Positive	Positive	Positive	
(7) Clean-up of Unightly & Unsafe Structures	Neutral	Positive	Positive	Neutral	Neutral	Positive
(8) Cooperative Efforts to Improve Water Quality	Positive	Positive	Positive	Neutral	Positive	Positive
LUP Policies: Local Areas of Concern (status is ongoing)						
(1) Development Consistency with Local Ordinances	Neutral	Positive	Positive	Positive	Positive	Positive
(2) Protection of Public Assets	Positive	Positive	Positive	Positive	Positive	Positive
(3) Maintain Town's Status as a Family Oriented Tourist Community	Positive	Positive	Positive	Positive	Positive	Positive
(4) Community Appearance	Positive	Positive	Positive	Positive	Positive	Positive
(5) Public Health & Safety	Neutral	Neutral	Neutral	Neutral	Neutral	Positive
(6) High Intensity Uses & Large Structures are Discouraged	Neutral	Positive	Positive	Positive	Neutral	Positive
(7) Protection of Maritime Forest	Neutral	Positive	Neutral	Positive	Positive	Positive
(8) Public Infrastructure & Controlled Growth in Ocean Hazard Areas	Neutral	Positive	Positive	Positive	Neutral	Neutral
(9) The Abatement of Nuisances	Neutral	Neutral	Neutral	Neutral	Neutral	Positive
(10) Retention of Natural Buffers	Positive	Positive	Positive	Positive	Positive	Positive
(11) Preservation of Cultural & Historic Rights & Resources	Neutral	Positive	Neutral	Neutral	Neutral	Positive
(12) Marina Development	Positive	Positive	Neutral	Neutral	Negative	Positive
(13) Topsail Beach Encourages Business Development	Neutral	Positive	Positive	Neutral	Positive	
(14) Development of Sound & Estuarine System Islands	Neutral	Neutral	Neutral	Neutral	Neutral	Positive
(15) Citizen Participation in Community & Planning Decisions	Neutral	Positive	Neutral	Neutral	Neutral	Positive

(16)	<i>Density of Development – Redevelopment</i>	<i>Neutral</i>	<i>Positive</i>	<i>Positive</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Positive</i>
(17)	<i>Bulkhead Installation &amp; Maintenance -- Effect on Coastal Wetlands</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Neutral</i>	<i>Positive</i>
(18)	<i>Industrial Sites on the Island</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Positive</i>
(19)	<i>Use of Off Road Vehicles – Dune &amp; Beach Protection</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Positive</i>	<i>Neutral</i>	<i>Positive</i>
(20)	<i>Protection of Indigenous Species</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>
(21)	<i>Compact Growth Pattern</i>	<i>Neutral</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>
(22)	<i>Repair, Upgrade &amp; Improve</i>	<i>Neutral</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>
(23)	<i>Involve NC Department of Transportation in Stormwater Planning</i>	<i>Neutral</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>	<i>Positive</i>

*\*The status for all of the codified LUP policies is ongoing.\**

## **Appendix**

### **Attachment A - Public Engagement Plan**

#### **I. Introduction**

The Town of Topsail Beach is in the process of updating its 2005 CAMA Land Use Plan (LUP). The Topsail Beach Board of Commissioners has tasked the Topsail Beach Planning Board to work with Town staff and its' planning consultants (the Cape Fear Council of Governments) to oversee and coordinate the update process. During the past year the Planning Board conducted an exhaustive review of the current plan. A number of recommendations to update the status of the plan in these areas have been forwarded to the staff and the consultant and progress is underway on these fronts. Additionally, staff and the consultants have undertaken the task of updating key economic, demographic, housing, mapping and community facilities data in response to both the 2010 decennial census and localized changes that have occurred since 2005. The overall perspective of the Planning Board, staff and consultants to date has been that, while updating the plan in the areas identified above is a valuable and worthwhile exercise, essentially, the core objectives of the 2005 LUP remain viable both now and into the near term future. The Town of Topsail Beach emphasizes public participation and the CAMA Land Use Plan Update process provides a great opportunity for public involvement. Interested citizens and non-resident property owners have always been and will continue to be encouraged to comment on the policies that will guide land use decisions in the future.

#### **II. Purpose of Public Engagement Plan**

This Public Engagement Plan has been prepared to describe a process by which the public will be encouraged to participate in the planning process leading to the revision and CRC certification of Town of Topsail Beach's LUP update. This Public Engagement Plan has been designed to meet the requirements for public participation as outlined in 15A NCAC 7L.0506, the standard for development of CAMA comprehensive Land Use Planning. It is the intent of the process described herein that the public would have ample opportunity to become a meaningful part of the planning process. This plan addresses the following objectives.

1. To share information about the Topsail Beach LUP Update planning process and its requirements;

2. To increase the community's understanding of the impact that land use and development issues have on quality of life;
3. To provide opportunities for the residents and property owners to participate in the identification of land use and development policies and to assess the impact of the policies on the community; and
4. To provide a forum where all economic, social, ethnic and cultural viewpoints will be considered throughout the land use process.

Views gathered as a part of this process will be informative and instructional for citizens of the Town of Topsail Beach, interested parties, and the Town's elected and appointed boards. Interested citizens shall have an opportunity to participate in the development of the Topsail Beach LUP update through oral and written comments as provided for in the Public Engagement Plan. The LUP is a working document, and may be amended on an as needed basis.

This Plan can certainly be amended and specified to ameliorate any problems found to be unique to Topsail Beach. Parties wishing to familiarize themselves with the 2005 LUP can find it on the Town's website or at Town Hall. Proposed revisions, mapping updates and other potential modifications presently being worked by staff and the consultants will be addressed in upcoming public participation opportunities.

### **III. Benefits**

Community engagement is not just a set of activities and methods confined to a particular project. Rather, it is a valuable communication, decision making, and governance tool that gives community members the opportunity to help shape and engender ownership in the change they seek to effect. Working with staff and officials to tailor any plan to the needs and issues affecting the town can often prove vital to its' overall acceptance. Community engagement gives the residents of Topsail Beach a voice, promotes transparency, gives the plan legitimacy, and connects the Town's leaders with their constituents.

Community involvement can be the difference between a successful Plan and one that falls short of its' potential. Effective engagement improves the relationship between the community and the local government and provides the public and leadership with a deeper understanding of the issues. A conceptual version of what may be expected to work well with the Town of Topsail Beach is outlined below. This approach has proven effective in leading planning discussions in the past, as it allows for effective communication with the public, while providing feedback that is useful to planners and decision makers.

#### IV. Desired Outcomes

- Inform Topsail Beach residents about the elements of the CAMA Land Use Plan
- Identification and prioritization of issues to be addressed in Topsail Beach
- A shared understanding of the next steps in the process and how the public may participate

#### V. Detailed Meeting Design

The detailed meeting design is meant to serve as a potential meeting template only.

<u>What</u>	<u>How</u>	<u>Who</u>
Start up	-- Welcome, introductions -- Review purpose, outcomes -- Questions	Jacob Vares, Trey Burke
Project Background	-- Power point -- Project scope and stages -- Data gathering -- Maps -- Plan Development -- Questions	Jacob Vares, Trey Burke
Key Issues	-- What are the key issues -- Identify common interests -- Record responses	Jacob Vares, Trey Burke
Next Step & Wrap up	-- Timeline -- Action List -- Meeting Summary -- Next Meeting -- Next Steps	Jacob Vares, Trey Burke

#### VI. Outreach Strategy

All future meetings of the Planning Board and Board of Commissioners at which the Plan will be the focus of discussion will be advertised in the local newspaper. In addition, notification will be posted in Town Hall, the visitors' center, and on the Town's website (<http://www.TownofTopsailBeach.com/>).

All meetings will be open to the public. The Town will encourage and consider all economic, social, ethnic and cultural viewpoints. A link to a questionnaire will be posted on the Town's website so residents will have an opportunity to rank the Town's issues and initiatives important to them. The Town recognizes the immense value of its' website in providing new

and innovative avenues to solicit positive interaction and ensure that public outreach efforts are both available and productive.

## **VII. Designation of Lead Planning Group and Points of Contact**

The Town of Topsail Beach Mayor and Board of Commissioners officially designated the Planning Board as the lead planning group responsible for supervision of the planning process. Mr. Jake Vares, representing the Cape Fear Council of Governments will serve as Planner-in-Charge. The names and contact information for the Planning Board and Town Commissioners is listed on Attachment B, attached hereto and made a part of by reference. The role of the Planning Board will be as follows:

1. **Unique Perspective-** The Board will represent a unique local viewpoint from within the community, members know the area well, its people and its resources.
2. **Plan Development** – The Board will seek community perspective and provide insight on information gathered as well as feedback on policies and implementation actions. This will be a critical role in shaping the specific policies and actions that will lead Topsail Beach into the 21<sup>st</sup> Century.
3. **Public Meeting Support** – The Planning Board will coordinate all public information meetings. Specific roles will be discussed and agreed upon before each meeting and may include: greeting/signing people in at meetings, group facilitation, summarizing meetings, etc.
4. **Plan Presentation and Recommendation** – At the conclusion of the planning process, the Planning Board will present the final draft of the CLUP to the Town Commissioners.



## **Attachment B - Contact Information**

### **Town of Topsail Beach Board of Commissioners**

Howard M. Braxton, Mayor  
P.O.B= Box 3032  
Topsail Beach, NC 28445  
[braxtonhm@aol.com](mailto:braxtonhm@aol.com)

Larry L. Combs, Mayor Pro-Tem  
P.O. Box 3674  
Topsail Beach, NC 28445

Julian C. Bone, Commissioner  
P.O. Box 3291  
Topsail Beach, NC 28445  
[juliancbone@aol.com](mailto:juliancbone@aol.com)

Tom B. Eggleston, Commissioner  
P.O. Box 3564  
Topsail Beach, NC 28445  
[famegg2@aol.com](mailto:famegg2@aol.com)

Morton Blanchard, Commissioner  
202 N. Anderson Blvd.  
Topsail Beach, NC 28445  
[Emb5151@earthlink.net](mailto:Emb5151@earthlink.net)

Linda B. Stipe, Commissioner  
P.O. Box 3625  
Topsail Beach, NC 28445  
[tbclstipe@gmail.com](mailto:tbclstipe@gmail.com)

### **Town of Topsail Beach Planning Board**

Frank Braxton, Chairman  
P.O. Box 3681  
Topsail Beach, NC 28445  
(910) 328-0878  
[fbraxton@coastalldesign.net](mailto:fbraxton@coastalldesign.net)

Horace Thompson  
PO Box 741  
Burgaw, NC 28425  
(910) 259-3427  
[HoraceThompson123@yahoo.com](mailto:HoraceThompson123@yahoo.com)

Keith Myers, Vice-Chairman  
711 Channel Blvd  
Topsail Beach, NC 28445  
(910) 599-6214  
[kpmbeach@gmail.com](mailto:kpmbeach@gmail.com)

Rodney Dillman  
PO Box 3154  
Topsail Beach, NC 28445  
(860) 306- 6704  
[rdillman@rodneydillman.com](mailto:rdillman@rodneydillman.com)

Randy Leeseberg  
PO Box 3324  
Topsail Beach, NC 28445  
(910) 328-2301  
[info@topsail-realty.com](mailto:info@topsail-realty.com)

## **Attachment C - Town Mission Statement**

### **Town Mission Statement**

**To ensure that Topsail Beach remains a peaceful, family-friendly community to live, work and play while maintaining its natural island beauty**

**In 2020, we see ...**

#### **Topsail Beach will be a Family Beach**

Topsail Beach will be home to approximately 536 people, and will have a peak seasonal population of approximately 9,351. Many residents will be retired, and have come to Topsail Beach to enjoy a high quality of life and a relaxed atmosphere. Our largest segment of population growth will be families. In fact, Topsail Beach is proud to be a family town. For both the permanent population and the seasonal visitors, we will have a variety of amenities to please everyone. We continue to have an extensive beach and shoreline access program that provides easy access to the beach and the sound at many places throughout our town. We will have adequate facilities to meet the needs of even the busiest summer day. We have sidewalks and safe streets that allow for walking to all parts of the community. Our residents and visitors have easy access to the shoreline and navigable waters. Boating, fishing, and other water activities are popular within our community.

Topsail Beach will be a safe community. We are relatively crime-free, and have fire protection from a first-class fire and rescue department. Our citizens and visitors are secure with a well-staffed and well-trained Police Department. The Town is committed to responsive, community-based policing, and participates in local and regional initiatives to remain proactive in identifying issues that could threaten public safety.

We will have an expanding economic base. Our retail and service sector will consist of a wide variety of businesses that have a customer base of residents, visitors and clients from other parts of the area. Topsail Beach will be known across the region as a business-friendly town with a customer base who appreciates good service, innovative products, and good community relations. Our businesses support the community, and the community supports our businesses.

#### **Topsail Beach is a leader in Environmental Stewardship**

Topsail Beach will be known for its commitment to environmental protection and stewardship. The town will have effective policies to regulate development to ensure that land uses are consistent with the capability of the land. We will employ a variety of innovative policies, programs, and regulations such as our comprehensive zoning ordinance, stormwater management program, vegetation protection ordinance, and subdivision regulations to provide a solid regulatory framework that protects our natural systems.

We will have a comprehensive water supply system that can provide outstanding water quality to our residents and citizens. Water will be plentiful and maintain good pressure. We will have a stormwater management program that captures run-off to protect our lands and waters from non-point source pollution. We have an environmentally safe system of sewage disposal.

Topsail Beach will have infrastructure system that is responsive to the needs of our community because

we have designed our entire infrastructure to work in harmony with the natural environment. We will use an infrastructure carrying capacity analysis to ensure that public systems protect or restore the quality of our environmentally fragile areas. The Town government will participate in numerous state and federal programs to provide the citizens with infrastructure planning and maintenance programs and to secure the funding to pay for them while keeping the tax and utility rates fair and equitable.

Topsail Beach is proud of its wide, sandy beaches that have benefited from an ongoing beach re-nourishment program. All areas of our beach can be accessed and used, even at the highest tides. A dune protection program has resulted in high dunes, anchored by a thick cover of vegetation that protects our town and our beach. An added benefit of this beach re-nourishment program is the expansion of our public beach access program that our residents and visitors enjoy. Protecting our Areas of Environmental Concern is our top priority for our environmental stewardship. Topsail Beach has areas of natural maritime forests canopies, estuaries, and coastal vegetation that we will protect and restore. A healthy natural environment is essential to the health of our town and to our continued high quality of life.

### **Topsail Beach has a Strong Community Voice**

Topsail Beach has a fiscally responsible government that is responsive to the needs of the citizens. We have active community involvement on a variety of issues including planning, stormwater management, beach re-nourishment, recreation, and town policies with our advisory boards and ongoing public meetings. Our town government has a staff of qualified professionals who find new and innovative ways to meet the needs of the public. The Town uses a variety of public information methods including local access television, a newsletter and a comprehensive internet website to inform the public and to receive feedback from the population.

Topsail Beach is a beautiful, family beach that will be relatively crime free, economically sound, and a leader of coastal communities in environmental protection and beach preservation. We will maintain a high quality of life and relaxed atmosphere that other towns try to duplicate. We know that the reason for our success is simple: it is our people, our community, who share the vision of the Town's bright future, and who are committed to making great things happen for all our residents and visitors.

## **Attachment D - Role of the Topsail Beach Planning Board in Land Use Plan Creation<sup>1</sup>**

### ***UNIQUE PERSPECTIVE***

You represent a unique local viewpoint from within the community. Planning Board members know the area well, both its people and its resources. You have a feeling for what may work and what may not.

### ***PLAN DEVELOPMENT***

You should provide community perspective and insight on information gathered as well as feedback on policies and implementation actions as they are developed. In so doing, you will play a critical role in shaping the specific policies and actions that will lead Topsail Beach into the future. At the same time, you are not being asked to be a planner, designer, or writer, you are to be a sounding board for citizens, businesses, and property owners.

### ***NETWORKING, RECRUITMENT, & PUBLIC PARTICIPATION***

You know others in the community who have strong interest in the future of the Town of Topsail Beach. These others may include friends, neighbors, business associates, or others in positions of interest and influence. By inviting these individuals to participate in the planning process, you can help to make sure all viewpoints within the community are embodied within the plan.

### ***PUBLIC MEETING SUPPORT***

During the course of the project, you may be asked to help out during public meetings. Specific roles will be discussed and agreed upon before each meeting and may include: greeting/signing people in, facilitating small group discussions, summarizing meeting results, and so on.

### ***PLAN PRESENTATION & RECOMMENDATION***

At the conclusion of the planning process, you will be asked to participate in the recommendation of the plan to the Town Council for their preliminary approval and final adoption.

---

<sup>1</sup> The material presented here was adapted from the NC Dept of Environment & Natural Resources, Division of Coastal Management, "Technical Manual for Coastal Land Use Planning."

## Attachment E - Questionnaire Results

1. Please best describe your relationship to the Town of Topsail Beach. [circle all that apply]

I live here	I work here	I do most of my shopping here	
I own property here	I own a business here	I visit from out of the area	Other

2. Which statement about regulating new development do you agree with more? [select/circle one]

Local officials should regulate the character and location of new development in order to protect nearby property values and broad community interests.	Local officials should lessen regulation on new development in order to protect individual property rights.
---	---

3. In light of the risk of hurricanes, storms and beach erosion, Topsail Beach should continue with its inlet dredging and beach re-nourishment initiatives.

Agree	No Opinion	Disagree

4. Topsail Beach should pursue opportunities to increase bike/pedestrian access & infrastructure (infrastructure meaning bike lanes, sidewalks, crosswalks, signage, greenways, and locking stations).

Strongly Agree	Somewhat Agree	No Opinion	Somewhat Disagree	Strongly Disagree

5. Topsail Beach should continue to work towards changing the FEMA flood maps in order to keep home flood insurance rates low.

Agree	No Opinion	Disagree

6. With respect to residential construction that would disturb existing sand dunes, Topsail Beach should encourage such residential development.

Agree	No Opinion	Disagree

7. Topsail Beach should continue its' efforts to preserve the character of the town.

Agree	No Opinion	Disagree

8. Would you support any increase in taxes to pay for the mentioned initiatives in this questionnaire?

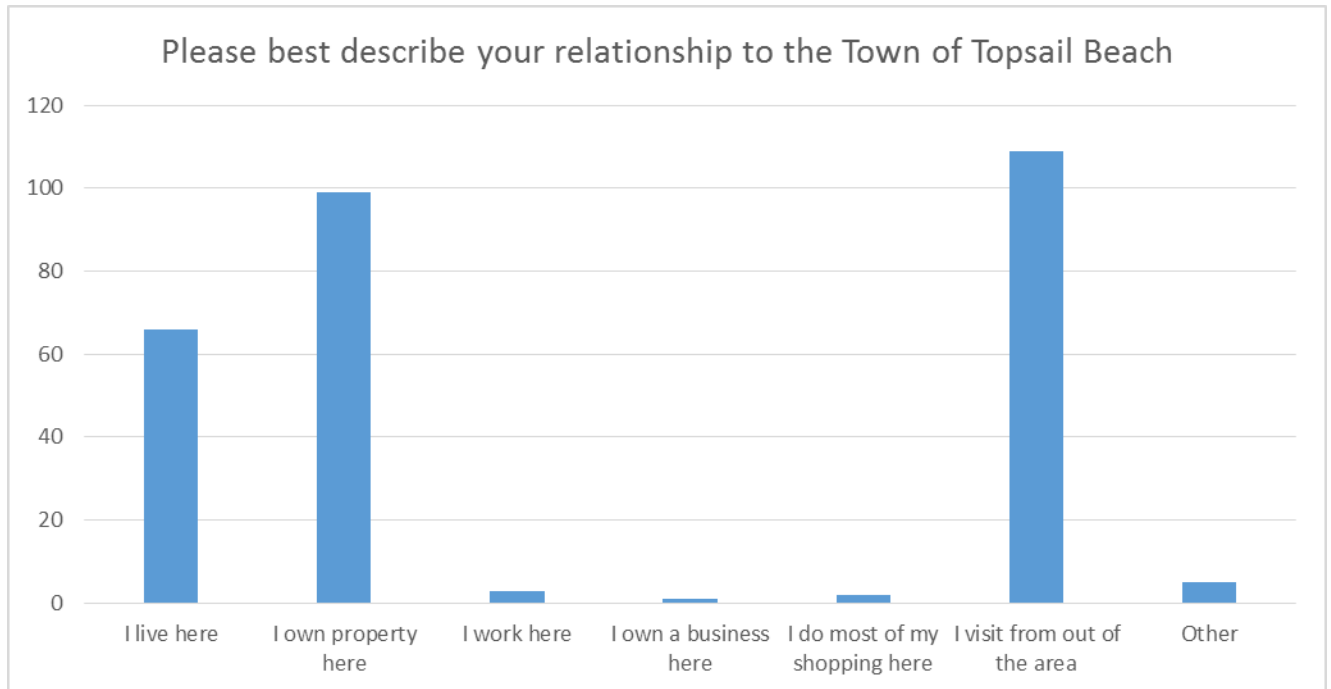
Agree	No Opinion	Disagree

9. Prioritize and rank all options below from 1 to 5 (with 1 being the most important and 5 being the least important) which approach should be used to guide future growth and development.

Improve access to and availability of open spaces and recreational	Protect fishing areas, beach front, sound area, and environmentally sensitive areas	Improve public safety & the sense of security	Attracting Business	Enhance the appearance of existing structures & landscaping

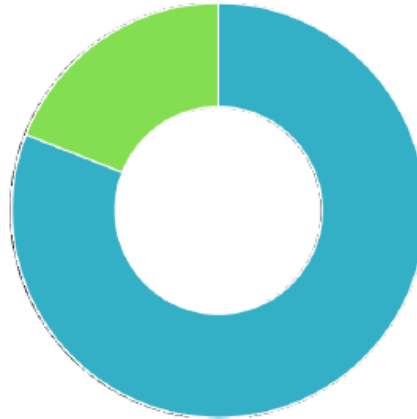
10. Please rank the following natural and environmental issues in order by priority.

Quality & quantity of water resources (streams, rivers, wetlands)	
Air Quality	
Open space	
Protect drinking water quality	
Use of renewable energy sources in municipal buildings and vehicles	
Access to beach, sound, and natural areas	
Other	



Which statement about regulating new development do you agree with more? [select one]

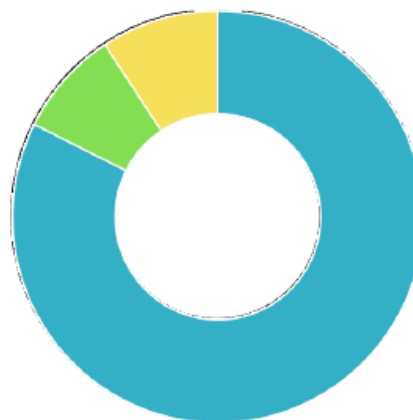
	Local officials should regulate the character and location of new development in order to protect nearby property values and broad community interests.	Local officials should lessen regulation on new development in order to protect individual property rights.	Standard Deviation	Responses
All Data	85 (80.95%)	20 (19.05%)	32.5	105



- Local officials should regulate the character and location of new development in order to protect nearby property values and broad community interests.
- Local officials should lessen regulation on new development in order to protect individual property rights.

In light of the risk of hurricanes, storms and beach erosion, Topsail Beach should continue with its inlet dredging and beach re-nourishment initiatives.

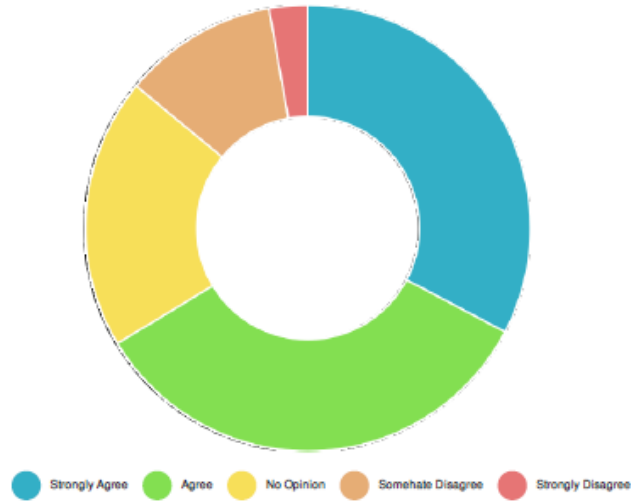
	Agree	No Opinion	Disagree	Standard Deviation	Responses
All Data	89 (82.41%)	9 (8.33%)	10 (9.26%)	37.48	108



- Agree
- No Opinion
- Disagree

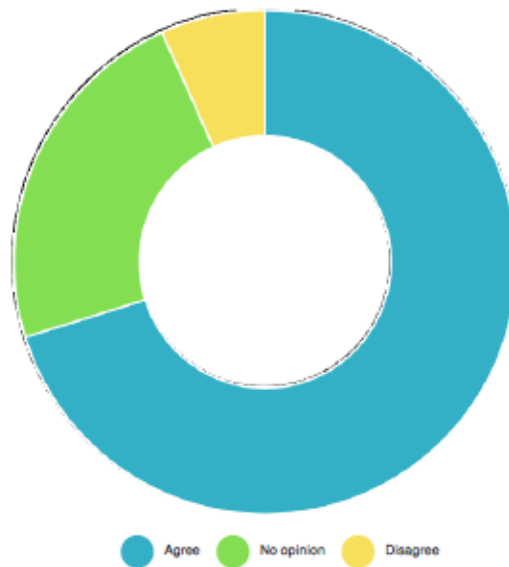
Topsail Beach should pursue opportunities to increase bike/pedestrian access & infrastructure (infrastructure meaning bike lanes, sidewalks, crosswalks, signage, greenways, and locking stations).

	Strongly Agree	Agree	No Opinion	Somehate Disagree	Strongly Disagree	Standard Deviation	Responses
All Data	35 (32.71%)	36 (33.64%)	21 (19.63%)	12 (11.21%)	3 (2.8%)	12.85	107



Topsail Beach should continue to work towards changing the FEMA flood maps in order to keep home flood insurance rates low.

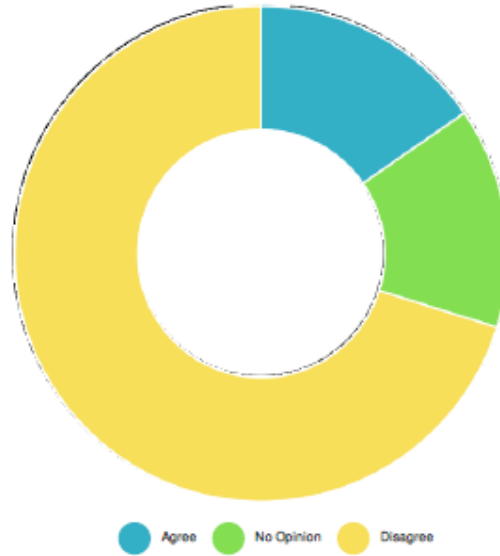
	Agree	No opinion	Disagree	Standard Deviation	Responses
All Data	73 (70.19%)	24 (23.08%)	7 (6.73%)	27.98	104





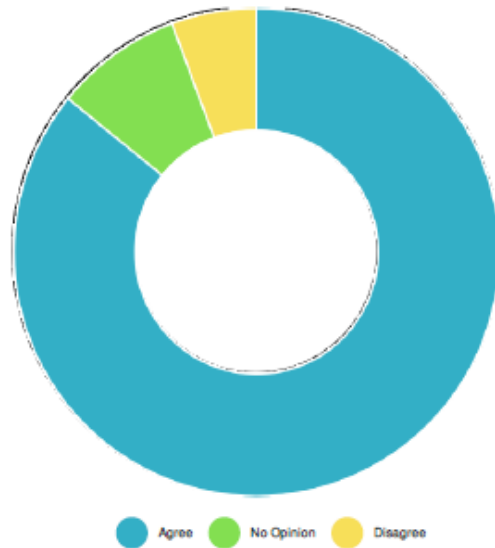
With respect to residential construction that would disturb existing sand dunes, Topsail Beach should encourage such residential development.

	Agree	No Opinion	Disagree	Standard Deviation	Responses
All Data	16 (15.38%)	15 (14.42%)	73 (70.19%)	27.11	104



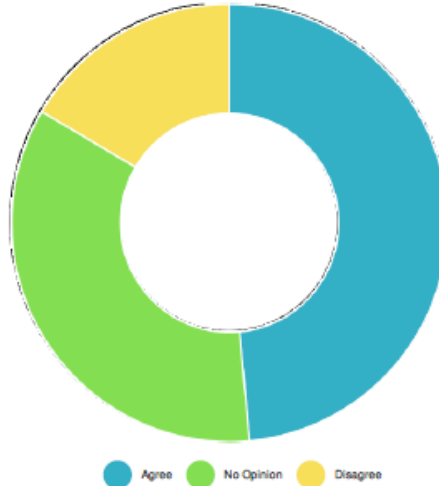
Topsail Beach should continue its' efforts to preserve the character of the town.

	Agree	No Opinion	Disagree	Standard Deviation	Responses
All Data	91 (85.85%)	9 (8.49%)	6 (5.66%)	39.38	106



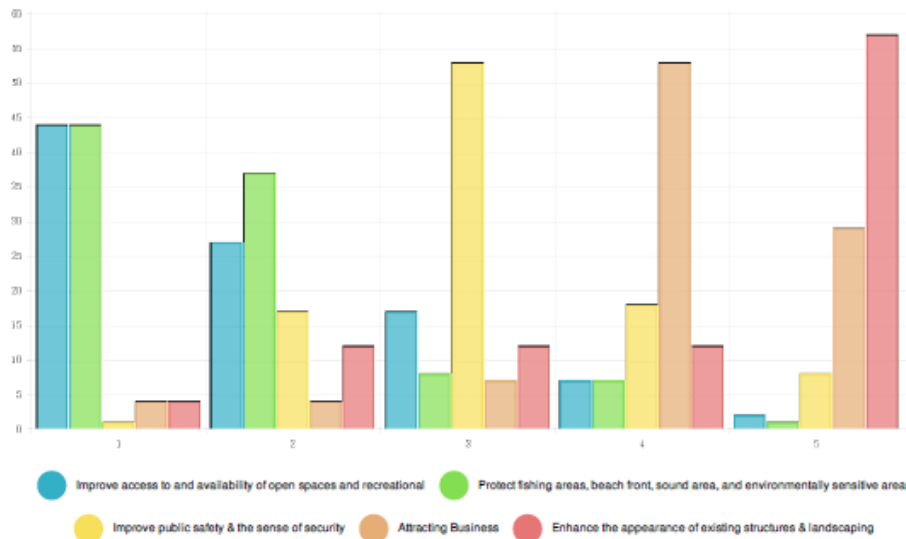
Would you support any increase in taxes to pay for the mentioned initiatives in this questionnaire?

	Agree	No Opinion	Disagree	Standard Deviation	Responses
All Data	50 (48.54%)	36 (34.95%)	17 (16.5%)	13.52	103



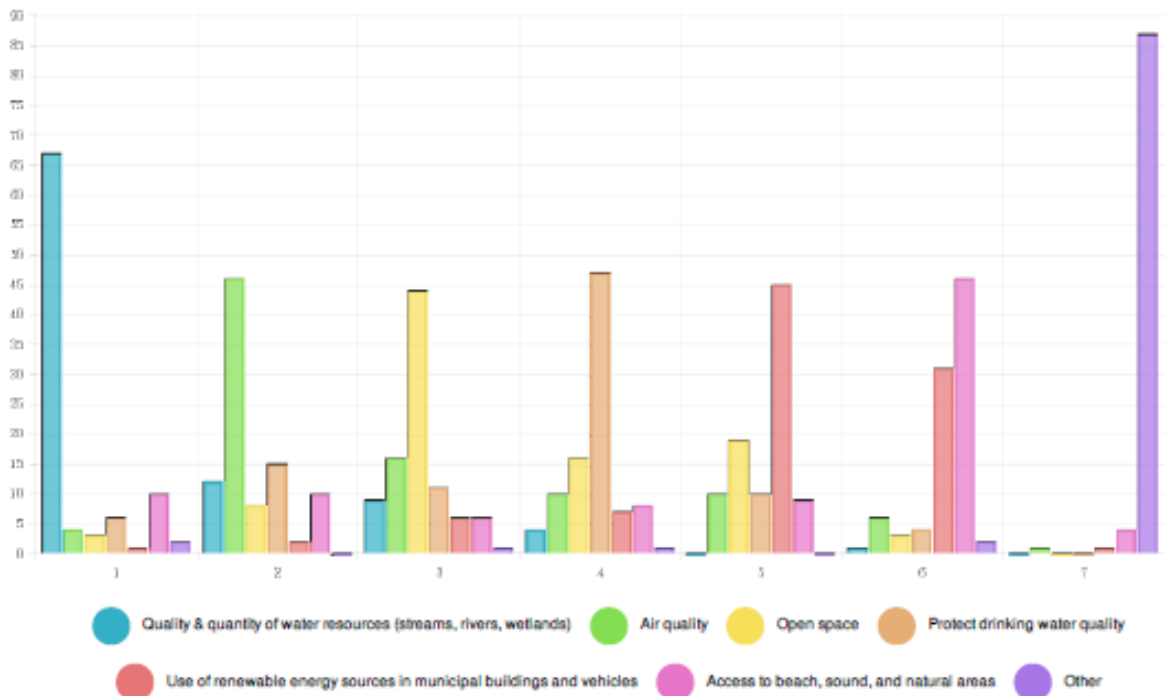
Prioritize and rank all options below from top to bottom (with the top being the most important and the lowest being the least important) which approach should be used to guide future growth and development.

	1	2	3	4	5	Standard Deviation	Responses	Weighted Average
Improve access to and availability of open spaces and recreational	44 (45.36%)	27 (27.84%)	17 (17.53%)	7 (7.22%)	2 (2.06%)	15	97	1.93 / 5
Protect fishing areas, beach front, sound area, and environmentally sensitive areas	44 (45.36%)	37 (38.14%)	8 (8.25%)	7 (7.22%)	1 (1.03%)	17.53	97	1.8 / 5
Improve public safety & the sense of security	1 (1.03%)	17 (17.53%)	53 (54.64%)	18 (18.56%)	8 (8.25%)	17.92	97	3.15 / 5
Attracting Business	4 (4.12%)	4 (4.12%)	7 (7.22%)	53 (54.64%)	29 (29.9%)	19.23	97	4.02 / 5
Enhance the appearance of existing structures & landscaping	4 (4.12%)	12 (12.37%)	12 (12.37%)	12 (12.37%)	57 (58.76%)	19.05	97	4.09 / 5
								3 / 5



Please rank the following natural and environmental issues in order by priority (with the top being the most important and the lowest being the least important).

	1	2	3	4	5	6	7	Standard Deviation	Responses	Weighted Average
Quality & quantity of water resources (streams, rivers, wetlands)	67 (72.04%)	12 (12.9%)	9 (9.68%)	4 (4.3%)	0 (0%)	1 (1.08%)	0 (0%)	22.35	93	1.51 / 7
Air quality	4 (4.3%)	46 (49.46%)	16 (17.2%)	10 (10.75%)	10 (10.75%)	6 (6.45%)	1 (1.08%)	14.09	93	2.98 / 7
Open space	3 (3.23%)	8 (8.6%)	44 (47.31%)	16 (17.2%)	19 (20.43%)	3 (3.23%)	0 (0%)	14.14	93	3.53 / 7
Protect drinking water quality	6 (6.45%)	15 (16.13%)	11 (11.83%)	47 (50.54%)	10 (10.75%)	4 (4.3%)	0 (0%)	14.5	93	3.56 / 7
Use of renewable energy sources in municipal buildings and vehicles	1 (1.08%)	2 (2.15%)	6 (6.45%)	7 (7.53%)	45 (48.39%)	31 (33.33%)	1 (1.08%)	16.22	93	5.04 / 7
Access to beach, sound, and natural areas	10 (10.75%)	10 (10.75%)	6 (6.45%)	8 (8.6%)	9 (9.68%)	46 (49.46%)	4 (4.3%)	13.51	93	4.61 / 7
Other	2 (2.15%)	0 (0%)	1 (1.08%)	1 (1.08%)	0 (0%)	2 (2.15%)	87 (93.55%)	30.1	93	6.77 / 7
										4 / 7



# Attachment F - Public Outreach Documentation

Legal Ad Number 7021

**AFFIDAVIT OF PUBLICATION**  
The Pender-Topsail Post & Voice  
P. O. Box 955 • Burgaw, NC 28425  
(910) 259-9111

Before the undersigned Notary Public of Pender County, North Carolina, personally appeared James A. Pettigrew, who says that he is authorized to make this affidavit for *The Pender-Topsail Post & Voice*, that the notice or other legal advertisement which is attached hereto, was published in *The Pender-Topsail Post & Voice* on the following dates:

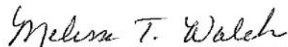
8/27

The newspaper in which notice of legal advertisement was published was, at the time of each and every such publication, a newspaper of general circulation in Pender County meeting all the requirements and qualifications of Chapter 1-597 of the General Statutes of North Carolina.



Signature of Affiant

Sworn to and subscribed before me this date, 8-28-, 2015.



Signature of Notary Public



## Notice of Public Hearing Adoption of the Topsail Beach CAMA Land Use Plan

Notice is hereby given that the Town Commissioners of the Town of Topsail Beach will conduct a public hearing on September 9th at 7 p.m. to review the update of the Town's Coastal Area Management Act (CAMA) Land Use Plan. The meeting will be held at Town Hall, 820 S. Anderson Blvd. All interested citizens are encouraged to attend.

Following the public hearing, the Town Commissioners will consider adoption of the Land Use Plan. Once adopted, the Plan will be submitted to the Coastal Resources Commission for certification.

Written objections, comments, or statements of support shall be submitted to the DCM District Planner, Mike Christenbury: 4127 Cardinal Drive Ext. Wilmington, NC 28405 no less than 15 business days prior to the CRC meeting the land use plan is scheduled. Further information can be obtained by contacting the District Planner at 910-796-7426.

Copies of the Land Use Plan Update are available for review by the public at the Town Hall during normal office hours. The public is encouraged to review the document and to attend the public hearing. For additional information, please contact Topsail Beach at 910-328-6841.

#7021 8/27/2015

**Notice of Public Hearing  
Adoption of the Topsail Beach CAMA Land Use Plan**

Notice is hereby given that the Town Commissioners of the Town of Topsail Beach will conduct a public hearing on September 9<sup>th</sup> at 7 p.m. to review the update of the Town's Coastal Area Management Act (CAMA) Land Use Plan. The meeting will be held at Town Hall, 820 S. Anderson Blvd. All interested citizens are encouraged to attend.

Following the public hearing, the Town Commissioners will consider adoption of the Land Use Plan. Once adopted, the Plan will be submitted to the Coastal Resources Commission for certification.

Written objections, comments, or statements of support shall be submitted to the DCM District Planner, Mike Christenbury: ***4127 Cardinal Drive Ext. Wilmington, NC 28405 no less than 15 business days prior to the CRC meeting the land use plan is scheduled. Further information can be obtained by contacting the District Planner at 910-796-7426.***

Copies of the Land Use Plan Update are available for review by the public at the Town Hall during normal office hours. The public is encouraged to review the document and to attend the public hearing. For additional information, please contact Topsail Beach at 910-328-5841.

---

***Publication Dates: Thursday August 27<sup>th</sup>.***



**TOPSAIL BEACH TOWN COMMISSIONERS ADOPTION OF  
THE CAMA CORE LAND USE PLAN**

**WHEREAS**, the Coastal Area Management Act (CAMA) Core Land Use Plan for the Town of Topsail Beach, North Carolina which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration; and

**WHEREAS**, from 2014 through 2015, the Town drafted a Land Use Plan with the assistance of the Cape Fear Council of Governments, under the leadership of the Town's Planning Board; and

**WHEREAS**, the Town Planning Board has recommended adoption of the draft CAMA Core Land Use Plan; and

**WHEREAS**, at the Regular Meeting on September 9th, 2015 the Topsail Beach Board of Commissioners considered the public comments presented and found the policies and maps in the draft CAMA Core Land Use Plan to be internally consistent with the Town's desired vision for the future, and unanimously approved to adopt the draft CAMA Core Land Use Plan as amended; and

**WHEREAS**, the adopted Plan will be submitted as required by state law to the Wilmington District Planner for the Division of Coastal Management under the North Carolina Dept. of Environmental and Natural Resources and forwarded to the Coastal Resources Commission; and

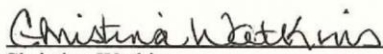
**WHEREAS**, a certified copy of the Town of Topsail Beach CAMA Core Land Use Plan will be forwarded to the Office of Ocean and Coastal Resource Management (OCRM) for federal approval.

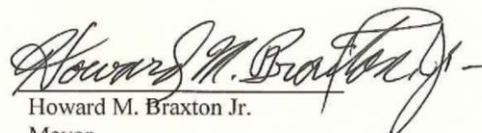
**NOW, THEREFORE, BE IT RESOLVED** that the Board of Commissioners of the Town of Topsail Beach, North Carolina, has approved the draft CAMA Core Land Use Plan; and

**BE IT FURTHER RESOLVED** that the Town Administrator of Topsail Beach, North Carolina is hereby authorized to submit the adopted CAMA Core Land Use Plan to the State for certification as described above.

Adopted this the 9th day of September, 2015.

ATTEST:

  
Christina Watkins  
Town Clerk

  
Howard M. Braxton Jr.  
Mayor