

Town of Southern Shores

DRAFT

CAMA Land Use Plan Update

August 2008

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Acronyms used in the CAMA Land Use Plan

AADT	Average Annual Daily Traffic
AEC	Areas of Environmental Concern
BFE	Base Flood Elevation
BGPA	Bald and Golden Eagle Protection Act
CAMA	Coastal Area Management Act of 1974
CIP	Capital Improvement Plan
CRAC	Coastal Resource Advisory Committee
CRC	Coastal Resource Commission
CRS	Community Rating System
CZMA	Coastal Zone Management Act of 1972
DENR	Department of Environment and Natural Resources
DOT	Department of Transportation
DCM	Division of Coastal Management
DEH	Division of Environmental Health
DWQ	Division of Water Quality
E	Endangered
EFH	Essential Fish Habitat
ETJ	Extraterritorial Jurisdiction
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FSC	Federal Species of Concern
GIS	Geographic Information System
HQW	High Quality Waters
IBA	Important Bird Area
LID	Low Impact Development
LPO	Local Permit Officer
LSA	Land Suitability Analysis
LUP	Land Use Plan
MHWL	Mean High Water Line
N.C.	North Carolina
NCAC	North Carolina Annotated Code
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
ORW	Outstanding Resource Water
PNA	Primary Nursery Area
SAC	Strmwater Advisory Committee
SSCA	Southern Shores Civic Association
T	Threatened
U.S.	United States
USACE	United States Army Corp of Engineers
USGS	United States Geological Survey
VAC	Vegetation Advisory Committee

Vision Statement

Southern Shores is a friendly family oriented residential community that preserves and enhances its unique natural environment from the Ocean to the Sound. The Town values its quiet neighborhoods, large lots and single family homes with expanses of open space, vegetation, wildlife and natural beaches. The Town prides itself on its citizen volunteers and public involvement, responsive government, and small efficient commercial area.

I. Introduction to Plan

The U.S. Congress passed the Coastal Zone Management Act (CZMA) in 1972 in recognition of the need for a federal policy that addresses the conservation of coastal lands, shorelines and beaches. The CZMA established a partnership between the federal government through the National Oceanic and Atmospheric Administration (NOAA) and coastal states to develop a program to ensure the wise use of coastal resources. States developed management programs for their coastal zones, and when approved, NOAA provided financial support to assist states in administering these programs.

The N.C. Coastal Area Management Act (CAMA) of 1974 created the Coastal Resources Commission (CRC) that is responsible for implementing an integrated program of planning, permitting, education and research to protect, conserve and manage the states coastal resources. The Division of Coastal Management (DCM) is staff to the CRC and implements the coastal program in the 20 coastal counties. The Division is part of the Department of Environment and Natural Resources (DENR), which is responsible for managing and protecting the state's environmental resources.

The CRC establishes policies for the N.C. Coastal Management Program and adopts implementing rules for both CAMA and the N.C. Dredge and Fill Act. The Commission designates areas of environmental concern, adopts rules and policies for coastal development within those areas, and certifies local land use plans. The CRC adopted revisions in 2002 to the land use planning guidelines that are intended to improve the quality of the local land use plans by requiring land suitability analysis and creating management topics to guide the development of land use policies.

The CRC certified the Southern Shores Sketch Land Use Plan in September 1998. The Southern Shores Plan was the Town's fourth CAMA plan update. Each previous plan was described as a sketch plan, a plan for municipalities that are completely platted, know the upper limits of growth, and are not experiencing rapid growth or change. The previous plans certified by the CRC include the following:

- Town of Southern Shores 1997 CAMA Sketch Land Use Plan Update
- Town of Southern Shores 1992 Sketch Level Land Use Plan Update
- Southern Shores 1985 Land Use Plan
- Land Use Plan Task Force, 1980

The Southern Shores Land Use Plan (LUP) Update will be the Town's fifth land use plan. The CAMA Land Use Plan establishes policies that help guide local governments in land use and zoning decisions.

The revised CAMA guidelines require more in-depth analysis of natural systems and land suitability through the use of GIS modeling and mapping. The land use plan addresses issues such as the protection of coastal resources (i.e., coastal water quality, wetlands, and fisheries), desired types of economic development, and the reduction of storm hazards, as well as local issues of concern. Land use plans provide guidance for both individual projects and a broad range of policy issues, such as the development of regulatory ordinances and public investment programs. The land use plan can also help a community in obtaining grant funds for priority projects.

Recent amendments to state statutes require that both city and county planning boards comment in writing on any proposed zoning map or text amendment. The comment must address whether the proposed amendment "is consistent with any comprehensive plan that has been adopted and any other officially adopted plan that is applicable." When adopting or rejecting any proposed amendment, the city council must also adopt a statement to address this issue. G.S. 160A-383; 153A-341.

The Division of Coastal Management also uses the land use plan in making CAMA permit decisions and federal consistency determinations. Proposed projects and activities must be consistent with the policies of a local land-use plan, or DCM cannot permit a project.

This plan update addresses a study area that includes the area of the northern portion of Dare County on the Outer Banks bounded on the east by the Atlantic Ocean, the west by Currituck Sound/Ginguite Bay; the south, sharing a common border with the Town of Kitty Hawk; and north with the Town of Duck, see Map 1, Vicinity Map in Appendix A.

The Wright Memorial Bridge (US 158) connects the southern portion of the Town's planning area to Currituck County mainland to the west. NC12 runs north-south through the eastern portion of the Town. The total land area of the Town is 2,597 acres.

The Southern Shores CAMA Land Use Plan was prepared in accordance with a DCM guidance document, entitled "Technical Manual for Land Use Planning." The planning effort involved collecting and analyzing data on the economy, population, land use, land suitability, and natural systems of Southern Shores and other data available for the study area. The Plan addresses issues pertaining to future land use and development and natural resource protection.

The geographic information system (GIS) data from the Town, Dare County and DCM were also used to perform a land suitability analysis and to generate the maps that are contained in this report.

II. Community Aspirations and Concerns

This plan element addresses the key aspirations and concerns of the community. This element was compiled using a process that included a review of emerging issues and conditions, identified through interviews with Town staff, input by the Steering Committee, input from a public workshop entitled “Speak Out for Southern Shores”, input from a 2005 citizens survey and a review of data, reports, GIS data and plans including the following documents:

- 1997 CAMA Sketch Land Use Plan Update – Town of Southern Shores, N.C.
- 1992 Sketch Land Use Plan Update – Town of Southern Shores, N.C.
- 1985 Southern Shores Land Use Plan
- 1980 Land Use Plan Task Force
- 2005 Southern Shores Hazard Mitigation Plan – Town of Southern Shores, N.C.
- 2006 Vegetation Management Plan for the Town of Southern Shores, N.C.
- 2005 Long Range Plan, Town of Southern Shores
- 2005 Southern Shores Long Range Plan Opinion Survey Statistical Results
- Town Drainage Study
- Outer Banks Hydrology Management Committee Report of Findings, 2005
- Outer Banks Coastal Environmental Conditions, Existing Stormwater Management Strategies, and Local and State Regulatory Context to Help Local Communities Effectively Implement Low Impact Development – Outer Banks, NC, 2006
- The Pasquotank River Basinwide Water Quality Plan, 2002
- The Town Zoning Ordinance, Amended 2001, and updated 2006
- Town Building Code data
- Input from the public (facilitated Town Meeting, March 29, 2007)

A Town meeting, “Speak Out for Southern Shores” was held on March 29, 2007 at the Duck Woods Country Club in order to provide an opportunity for citizen involvement

and input into the update of the CAMA Land Use Plan for the Town. The purpose of the workshop was to help develop a vision statement for the plan and gain an understanding of local issues of concern. The workshop utilized a technique of public participation that allowed identified community issues and concerns through a brainstorming process based upon the following principles:

- All ideas and visions are welcome
- No ideas or visions will be criticized
- Participation from all is encouraged
- Visions should generate new and bold ideas for the future

The meeting participants were divided into small groups. With the help of volunteer facilitators (Steering Committee Members) they generated lists of community aspirations and emerging issues which will be used to develop a vision statement for the plan. The six management topics used to help generate lists of issues include the following:

1. **Public Access** - strategies for addressing access to beaches and public trust areas, noting that Southern Shores access to beaches and public trust areas are private.
2. **Land Use Compatibility** – use of land and development, including residential and commercial development, and issues to minimize its primary and secondary impacts on coastal resources.
3. **Infrastructure Carrying Capacity** – strategies to ensure that infrastructure is available to support planned development and protect areas of environmental concern (AEC's) and fragile areas.
4. **Natural Hazard Areas** - policies that reduce community vulnerability to natural hazards.
5. **Water Quality** - land use and development issues that address strategies to protect and restore water quality.
6. **Local Areas of Concern** – Issues of local concern to the community.

After the issues were identified, each of the participants was given a sheet of colored dots and asked to prioritize the issues posted on the walls. The issues and visions were prioritized using a numeric scale of four points for red dots, three points for green, two for yellow and one for blue. Meeting participants were informed that red dots denote the highest priority in descending order to the lowest, the blue dots, when they prioritized issues.

Several overarching themes emerge from the comments. These included maintaining the low-density residential character of the Town, not permitting large oversized homes, concerns over an increase in commercial development, and density increasing through either lot subdivision, or combining lots, maintaining NC 12 as a two-lane highway,

maintaining vegetation and preventing clear-cutting, the need for a Capital Improvement Program (CIP) and road maintenance plans, maintaining the beaches and dunes, and creating a stormwater management program.

Appendix B contains a summary of issues raised during the public meeting.

The 2005 Long Range Planning Committee identified a number of major issues critical to the Town's future. These issues were prioritized as follows:

- Priority 1: the Currituck Bridge, NC 12 issues, Congestion on US 158 and NC 12, canal dredging, and general communication improvement.
- Priority 2 issues include: Seasonal traffic congestion, stormwater runoff/flooding, multi-purpose paths and pedestrian safety, volunteerism, and Town Staff efficiency.
- Priority 3 issues include: speeding and short cuts, a Master Plan for rebuilding roads, continued fair enforcement of Town Codes and rules, and the Home Business Ordinance.
- Priority 4 issues include: cost of living and taxes and available employees to service the community.

III. Existing and Emerging Conditions

Southern Shores is located in northern Dare County on the Outer Banks. The Town contains predominately single-family residential development, with a mix of some commercial and retail, office and institutional development. The Town's beach is over 3.7 miles long. The Town's beach front is characterized by a very high stabilized frontal dune system that extends along the entire length of the Town's ocean front. The beach front has some areas that experience erosion problems. Frontal dunes average 100 feet landward of the mean high water mark.

The Town originally was platted and subdivided into a planned residential community designed for single family detached housing. There are several residential areas that have a higher density than the other areas of the Town. The higher density areas include Pelican Watch with permitted densities of six units per acre, Mallard Cove with densities of ten units per acre, the Cove and Southern Shores Landing with ten units per acre. Most of Southern Shores has a minimum of 20,000 square foot lots with permitted densities of 2 units per acre.

The following section of the report describes the community characteristics and demographic trends that are important when formulating land use policies in the Land Use Plan Update. Most of the data are derived from the 2000 Census, Southern Shores records, and regional data sources, including Dare County.

Population and Growth Trends

The population of Southern Shores includes several categories, including permanent residents, non-residents, part-time residents, property owners, seasonal visitors, day visitors, and business owners.

The permanent population refers to persons who usually reside year-round in the study area. The seasonal population includes persons who temporarily reside in the planning area, such as tourists and vacationers, but who normally reside in another location. The peak population would be the permanent plus the seasonal population that is an approximation of the study area's population on a "typical" day.

The North Carolina State Planning estimate for Southern Shore's permanent population in 2005 was 2,612. The 10 year growth rate from 1990 to 2000 was 52.1 percent. During this period there was a building boom in barrier island communities on the Outer Banks. There was land available for new development. Other factors contributing to the building boom include: redevelopment of smaller single-family homes to larger homes used for seasonal purposes, and building on vacant lots.

Table 1 presents the historic population growth for Southern Shores since 1980.

Table 1. Population Growth in Southern Shores and Dare County

Year	Southern Shores	Dare County
1980	520	13,377
1990	1,447	22,746
2000	2,201	29,746
2005 (estimate)	2,612	34,790

Source: Data was derived from the US Census Bureau.

Over the past two decades, between 1980 and 2000, Southern Shores grew by 323 percent, while Dare County grew at a rate of 124 percent. Southern Shores and Dare County have experienced phenomenal rates of growth over the past two Census decades.

**Table 2. Population Growth in North Carolina Barrier Island Communities
1990-2001**

Municipality	1990 Population	2000 Population	% Growth 1990-2000	% Growth Avg. Yearly 1990-2000
Kitty Hawk	1,937	2,991	54.4%	4.9%
Southern Shores	1,447	2,201	52.1%	4.7%
Nags Head	1,838	2,801	52.3%	4.7%
Kill Devil Hills	4,238	6,122	44.4%	4.0%
Manteo	991	1,052	6.0%	0.02%
Duck	0	459	N/A	N/A

Source: U.S. Census and the North Carolina Office of State Planning

Southern Shores growth rate is similar to other barrier island communities within Dare County, with the exception of Manteo which only grew 6% during the past Census decade. The growth rates over the past decade for barrier island communities in Dare County range from 54 percent in Kitty Hawk to 44 percent for Kill Devil Hills

Among the CAMA counties, the highest rates of population growth from 1990 through 2000 have occurred in oceanfront counties including Brunswick, Currituck, Dare, and New Hanover, with the highest rates of growth occurring on the barrier islands. Neighboring Currituck County was the fourth fastest growing county of the CAMA counties. Currituck County growth was slightly ahead of Dare County, with a growth rate of over 32 percent during the period of 1990 – 2000.

Table 3. Regional Population Growth

Year	Currituck County	Dare County
1980	11,089	13,377
1990	13,736	22,746
2000	18,190	29,967
1990-2000 % Growth	32.4%	31.7%

Source: Southern Regional Development Center.

The seasonal population of Dare County was estimated to be approximately 200,000 in 2002. The traditional peak population period is during the summer months between Memorial Day and Labor Day. However, the non-peak periods have grown, extending the tourist season from Easter weekend in the spring to Thanksgiving weekend in the fall. Also, the property owners of the resort homes offered for short-term rentals often use their property for their personal vacations during spring and fall months. During the winter months, Dare County and the coastal communities revert to their static population base, with reserve capacity for almost every public service. However, even during these winter months, the community is subject to occasional increases in population due to three-day weekend holidays in January and February.

Social characteristics reported in the 2000 Census reveal that the study area residents are predominately white, and somewhat older and wealthier than residents of Dare County and North Carolina as a whole.

The majority of the permanent population of Southern Shores is white, 99.2 percent according to the 2000 Census. Blacks were the next largest group with 0.04 percent of the population. About 65 percent of the households are families, and 27 percent of the households have children under the age of 18.

The median age for Southern Shores is 51.4 years, as compared with 40.4 years for Dare County. In 2000, 74.3 percent of the Town's population is over the age of 18 years, and 24.9 percent are over the age of 65 years. About 40 percent of the residents are between the ages of 35 to 54 years of age, comprising the largest segment of the population.

Residents of Southern Shores are generally better educated than residents in Dare County as a whole. Approximately 96.7 percent of all adults in Southern Shores are high school graduates, compared to about 88.6 percent in Dare County. Nearly half (48.9 percent) of Town residents have a bachelor's degree or additional advanced degrees compared to 27.7 percent in the County as illustrated in Table 4.

Table 4. Educational Attainment for Persons 25 years and older (2000)

Education Completed	Southern Shores (2000)	% Total	Dare County	Persons Total
Less than 9th grade	17	1.0%	619	2.9%
9 – 12 no diploma	40	2.3%	1,861	8.6%
HS Graduate	281	16.2%	5,994	27.6%
College No degree	392	6.4%	5,982	26.8%
Associate degree	111	18.9%	1,401	6.5%
Bachelor's degree	527	30.3%	4,174	19.2%
Graduate or professional degree	323	18.5%	1,834	8.5%
Total	1,739	100.0%	21,713	100.0%

Source: U.S. Census of Population and Housing 2000.

Housing and Neighborhood Trends

Southern Shores has developed as a predominately single-family residential community for families and retirees, as well as a vacation destination for seasonal visitors who rent single family units. There are no hotels within the Town. The Town area of 2,600 acres contains approximately 2,800 single-family lots of which approximately 500 are vacant, according to town staff. The Town Building data identifies 2,310 units in February 2007 on Southern Shores. Seasonal rentals are not identified in the U.S. Census data. Building code officials estimate that approximately one-third of the units in Southern Shores may be seasonal rentals.

Emerging trends include the redevelopment of older smaller single family homes to larger seasonal rental homes. The redevelopment of older homes on the east side and along the NC 12 corridor is due to tear-downs and increasing land values in these areas. Other neighboring beach communities have experienced similar trends. The Town enacted a 7-bedroom (14 person) maximum provision in the Zoning Ordinance several years ago to limit the overall size of single-family units.

The 2000 U.S. Census identified 1,452 housing units in Southern Shores, while there are 2,310 units in 2007 according to the Town's building records. Approximately two-thirds of these units are owner occupied and one-third are seasonal rentals.

Table 5. Housing Unit Comparisons of Beach Communities

	Southern Shores	Nags Head	Kitty Hawk	Kill Devil Hills
Total Units	1,452	1,140	1,259	2,576
Total Single Family (SF) Units	1,440	974	922	2,161
Percent of Total Housing Units that are SF	98 %	85.4 %	73.2 %	83.8 %
Multi Family Units	22	118	272	404
Percent of Manufactured Homes of Total Units	0.0 %	4.8 %	15.3%	4.3 %

Source: U.S. Census 2000 Population and Housing

An analysis of Southern Shores building permits indicates that between 2000 and 2006, 471 building permits were issued for construction of residential development. Single family detached units comprised the majority of these permits.

Table 6. Building Permits 2000 - 2006

Year	Single Family	Multi-Family	Commercial
2000	76	0	0
2001	89	0	0
2002	79	0	0
2003	99	0	0
2004	56	0	1
2005	41	0	5
2006	31	0	1
Total	471	0	8

Source: Town of Southern Shores, 2007

The median value of owner occupied housing in Southern Shores is \$210,707. Over 24 percent of owner occupied housing at Southern Shores is valued at \$250,000 and above.

In comparison, the highest median value for owner occupied beach housing in the State is at Indian Beach (\$625,000). The second highest is at Bald Head Island (\$525,000). The lowest median value of owner occupied housing is in Kill Devil Hills (\$104,500).

Table 7. Median Year, Tenure, Rooms, and Value of Beach Units

Municipality	Median Year Unit Built	Year owner occupied unit	Number of Rooms in unit	Median value of owner occupied housing
Indian Beach	1986	1995	5.3	\$625,000
Sunset Beach	1988	1995	5.3	\$219,000
Southern Shores	1987	1994	5.2	\$210,707
Oak Island	1983	1995	5.1	\$119,000
Kill Devil Hills	1983	1994	4.4	\$104,500
Barrier Island				
Municipal Average	1985	1994	5.2	\$249,145

Source: 2000 US Census

The majority of the Southern Shores beachfront lots are built out, but many are subject to redevelopment. There are ten vacant ocean front properties that are buildable, and approximately 500 unimproved vacant single family lots remaining within the Town. The small amount of the commercial land uses are located within the Extraterritorial Jurisdiction (ETJ).

Economic Trends

Southern Shores median family income was \$68,250, which is substantially higher than Dare County’s median family income of \$44,345. The percent of persons living below the poverty line in Southern Shores is 1.6 percent compared with 7.9 percent in Dare County. Both Dare County and Southern Shores are below the State’s percentage of 13.4.

Tourism is the driving economic force in the Outer Banks. Occupancy tax receipts for Dare and Currituck Counties exceeded 253 million dollars, and four million dollars in those counties respectively. Land transfer tax and gross retail sales tax have been steadily increasing during the last twenty years with the growth in the Outer Banks. Restaurants, accommodations, fishing, retail trade, services, construction, real estate, and finance industries benefit directly from tourism. New residents bring income and wealth, and new demands for housing. The increasing price of land in the Outer Banks, coupled with the dwindling supply of land, and the attractive views demand premium prices for housing.

There are approximately 130 businesses operating within the commercial district of the Town. The occupancy tax revenues for 2006 were estimated to be \$520,000, and the Town's portion of the Land Transfer Fee was estimated to be \$278,000.

The 2000 Census reported 949 employed persons in Southern Shores. Management and professional occupations employ nearly 44 percent of the residents. Sales, retail and office follow closely with 42 percent of the labor force. Construction employs about 10 percent of the workforce. Private wage and salary workers comprise 72 percent of the work force, government workers make-up about 15 percent, and self employed workers comprise about 13 percent of the work force.

The employment in the top eight industries of Dare County and neighboring Currituck County is discussed below. Counties that are in close proximity may be linked in many ways and growth of regional economies often "spill over" across county and state borders. It is instructive therefore to consider neighboring county growth rates and economies.

Table 8 below indicates that Dare County and Currituck County both have high percentages of employment in the retail, accommodation and food services, attributable to the tourism industry, with similar comparisons of arts, entertainment, and real estate.

Table 8. Employment by Top Industries for Dare and Currituck Counties

Industry	Dare	Currituck
Accommodation Food Services	22.9%	10.7%
Retail	19.1%	18.5%
Other	16.6%	8.5%
Real Estate	10.1%	14.4%
Public Administration	7.9%	4.8%
Construction	7.5%	10.0%
Manufacturing	6.4%	-
Arts/Entertainment	5.2%	5.7%
Admin/Waste	4.4%	2.7%
Educational Service	4.2%	-
Health Care	3.6%	-
Suppressed	3.7%	24.8%
Wholesale Trade	-	2.1%

Source: Data derived from the Southern Region Development Center, 2006

A review of historical employment growth by industry between 1998 and 2003 shows a decline in percent growth in manufacturing, educational services, and health care in Currituck County, with increases in real estate, retail, and other services. Dare County employment growth occurred during the period between 1998 and 2003 in accommodations and food services indicating the type of services typically provided in the tourism sector, as well as arts and entertainment. The trend of new jobs added to the

construction sector in high growth counties, and in tourist related sectors is consistent with the growth occurring in the neighboring Outer Banks communities.

Projections

The population projections for the Town of Southern Shores assume an annual average growth rate of 4.7 percent. Population projections are shown in Table 9.

Table 9. Population Projections

Year	Town (permanent)	Seasonal	Total
2000	2,201	2,874	5,075
2008	2,819	5,192	8,011
2013	3,479	10,838	11,185
2018	4,294	11,520	15,814
2023	5,299	11,712	17,011
2028	6,544	11,904	18,448

Source: Town of Southern Shores and 2000 U.S. Census data

The town's present 2008 permanent and summer season peak populations are 2,819 and 5,192, respectively. This represents a summer peak total population of 8,011 persons. The calculation for 2008 permanent population is based on the 2006 U.S. Census estimate of 2,612 persons, plus 244 persons (based on building data and an estimated 2.32 persons per household) for a total of 2,819 persons. The calculation for 2008 summer season peak population is based on a total of 1,923 total dwelling units, multiplied by 0.45 (seasonal units estimated to be approximately forty-five percent of total units), then multiplied by 6 (average occupants) for a total of 8,011.

The projected seasonal population from 2008 onward is based on an assumption that sixty percent of the housing units will be seasonal rental with an average of 8 occupants. At current permitted densities, approximately 2,800 total dwelling units can be expected at build-out in Southern Shores estimated in 2016. This figure could change as a result of increases in densities, zoning changes, and changes in the ratio of seasonal to permanent population. After the Town reaches build out, projections assume that there will be approximately eight teardown and rebuilt seasonal units per year with an average of 8 occupants.

IV. Natural Systems Analysis

Introduction

This section describes the natural features and environmental conditions within the planning study area, and assesses the capability and limitations of these features for development. The planning study area is shown in Map 1. It is comprised of the Town of Southern Shores, and the Extraterritorial Jurisdiction (ETJ) that abuts Martin's Point. The Town of Southern Shores makes maps available to the public at the Town Hall.

The protection, maintenance and enhancement of Southern Shores' natural resources are critical elements of the plan and essential to the quality of life for both residents and visitors. The CRC adopted revisions to the land use planning guidelines that are intended to improve the quality of the local land use plans by requiring natural system analysis and land suitability analysis to help guide the development of land use policies. One of the purposes of developing CAMA Land Use Plans is to develop a system to manage and regulate Areas of Environmental Concern (AEC), and to address policies and actions that will help to protect coastal resources.

The development of land use plans using GIS mapping data to identify natural features provides a basis for the designation and regulation of the important coastal resources. The Study Area is located in one 14-digit watershed, 03020105230020. This watershed is located within sub-basin 03-01-56 of the Pasquotank River Basin and entirely within Dare County. The hydrological unit delineated by the Natural Resources Conservation Service serves as the basic unit of analysis of the natural features (See Map 2 in Appendix A). The mapped resources help form a baseline data base which can help communities in evaluating the effects of the coastal policies and implementing actions over time.

This section provides an inventory of the major natural resources and features within the project study area along with an assessment of how these features may affect potential development. An environmental composite map was developed that shows the extent of environmental features within the study area and the generalized compatibility of development (See Map 3, Appendix A). The natural features components include the following categories:

- Areas of Environmental Concern (AEC's)
- Soils
- Water Quality and Classifications
- Flood, storm surge areas and natural hazard areas
- Non-coastal wetlands

- Water supply watersheds or wellhead protection areas
- Primary nursery areas
- Environmentally fragile areas and Natural Heritage areas

Areas of Environmental Concern (AEC's)

The CRC regulates critical coastal resources through a permitting program that identifies areas in need of special protection because of their resource value and environmental sensitivity. Areas of Environmental Concern are defined in CAMA (NC A.C. 15A, 7H) as critical resources that are regulated under the Act. Development within designated Areas of Environmental Concern is regulated by CAMA minimum use standards and permitting requirements. AEC's cover almost all coastal waters, but less than 3 percent of the land area in the 20 coastal counties. Local governments can establish standards for development that are more stringent than state standards.

The CRC has established four categories of AEC's:

- Estuarine and Ocean System
- Ocean Hazard System
- Public Water Supplies
- Natural and Cultural Resources

The Areas of Environmental Concern contained within the planning study area include the Estuarine and Ocean System and Ocean Hazard System. There are no Public Water System or Natural and Cultural Resource AEC's in the Study Area.

Development over the last two decades has altered the Outer Banks ecosystem, with much of the concern focused on the impacts of stormwater and water quality. Research has demonstrated that even in low density urbanized areas, problems related to stormwater and flooding include: shellfish bed closures, declining water quality of the receiving waters, "posted" beaches, property damage and damage to aquatic ecosystems.

The Estuarine and Ocean System AEC

The **Estuarine and Ocean System AEC's** are comprised of the following AEC categories: estuarine waters, coastal wetlands, public trust areas, and estuarine and public trust shorelines.

Estuarine waters are defined in G.S. 113A-113(b)(2) to include all the waters of the Atlantic Ocean within the boundary of North Carolina and all the waters of the bays, sounds, rivers and tributaries seaward of the dividing line between coastal fishing

waters and inland fishing waters. The boundaries between inland and coastal fishing waters are defined in an agreement adopted by the Wildlife Resources Commission and the Department of Environment and Natural Resources and in the most current version of the North Carolina Marine Fisheries Regulations for Coastal Waters (15A NC AC 3Q .0200).

Inland waters within the study area include Guinguite Creek, while Currituck Sound surrounding the western portion of the study area is designated Joint Waters. The Atlantic Ocean on the eastern side of the study area is designated Coastal Waters under 15A NCAC 03Q.0202. The Wright Memorial Bridge serves as the southern boundary line for the Joint Waters of Currituck Sound.

For regulatory purposes, the inland, or upstream, boundary of estuarine waters is the same line used to separate the jurisdictions of the Division of Marine Fisheries and the Wildlife Resources Commission. However, many of the fish and shellfish that spend parts of their lives in estuaries move between the boundaries.

The CRC defines coastal shorelines to include all lands within 75 feet of the normal high water level of estuarine waters. This definition also includes lands within 30 feet of the normal high water level of public trust waters located inland of the dividing line between coastal fishing waters and inland fishing waters. Along Outstanding Resource Waters, this definition includes lands within 575 feet of the normal high water level. There are no outstanding resource waters within the study area.

Within the study area the *Estuarine and Ocean System AEC's* include the waters and tributaries of the Pasquotank River Basin, the Currituck Sound, and the waters of the Atlantic Ocean, and the sounds and shorelines of these water bodies. Estuarine waters include man-made water bodies, canals and the many tidal creeks within the study area, many of which are not named.

Coastal wetlands AEC's are defined as any salt marsh subject to tidal influence that contain some, but not all of the following marsh plant species:

- Cord Grass (*Spartina alterniflora*)
- Black Needlerush (*Juncus roemerianus*)
- Glasswort (*Salicornia* spp.),
- Salt Grass (*Distichlis spicata*)
- Sea Lavender (*Limonium* spp.)
- Bulrush (*Scirpus* spp.)
- Saw Grass (*Cladium jamaicense*)
- Cat-tail (*Typha* spp.)
- Salt Meadow Grass (*Spartina patens*)
- Salt Reed Grass (*Spartina cynosuroides*)

Coastal wetland AEC's are identified through on-site field surveys and delineations. The majority of the coastal wetlands in the study area are classified as Salt/Brackish Marsh, which are shown in Map 4, Coastal Wetlands in Appendix A. Large expanses of Salt Marsh are found along the southern shorelines of Ginguite Bay and the northern portion of Martin's Point. The CRC rules to protect salt marsh have eliminated most dredge-and-fill activities in coastal wetlands. This is illustrated by the example of the rule requiring anyone wishing to stabilize an estuarine shoreline to site the structure landward of wetland areas.

Other coastal wetlands include the Cypress Swamp, locally referred to as Cypress Pond, and other tidal freshwater marshes that typically have low salinities and are verified as coastal wetlands through field surveys and on-site wetland delineations. The Currituck Sound shoreline and Ginguite Creek contain areas of coastal marsh. Dominant plants within this shallow marsh include black rush *Juncus roemerianus*, and cordgrass *Spartina alterniflora* with occasional patches of reed *Phragmites australis* found occasionally along altered shorelines or disturbed areas.

CAMA defines Public Trust areas as those waters of the Atlantic Ocean and the lands lying under from the mean high water mark to the three-mile seaward limit; all natural bodies of water subject to tides and lands lying under; and all navigable natural bodies of water and lands lying under to the normal high water mark.

Estuarine Shoreline AEC's are non-ocean shorelines extending from the normal high water level along the estuaries, sounds, bays, fresh and brackish waters, and public trust areas to a distance of 75 feet landward. Estuarine shorelines that are immediately contiguous to Outstanding Resource Waters extend to 575 feet landward. Public trust shorelines are shorelines contiguous to public trust areas, located inland of the dividing line between coastal fishing waters and inland fishing waters and extending 30 feet landward.

Examples of the estuarine shoreline within the study area include those lands abutting Currituck Sound, Ginguite Bay, and the shorelines of most rivers and creeks within the study area, and most shorelines, with the exception of the beaches bordering the Atlantic Ocean.

The Ocean Hazard AEC

The Ocean Hazard AEC's are comprised of the following categories: ocean beaches, frontal dunes, inlet lands, and other areas in which geologic, vegetative and soil conditions indicate a substantial possibility of excessive erosion or flood damage from storms and hurricanes (See Map 5, Appendix A). The Oceanfront VE Zone & Sound

front AE zone within the study area are vulnerable to erosion and flood hazards, especially during winter storm events and hurricanes (See Map 6, Appendix A).

The *Ocean Erodible AEC* includes beaches and oceanfront property where excessive erosion and significant shoreline fluctuation is probable. The seaward boundary of this area is the mean low water line. The landward limit is measured from the first line of stable natural vegetation to the recession line that would be established by multiplying the long-term annual erosion rate times 60, provided that, where there has been no long-term erosion or the rate is less than two feet per year, this distance is set at 120 feet landward from the first line of stable natural vegetation.

The *High Hazard Flood Area AEC* is subject to high velocity waters including hurricane wave wash in a storm having a one percent chance of being equaled or exceeded in any given year, as identified as V zones on the Flood Insurance Rate Maps (FIRM) of the Federal Emergency Management Agency. The V zones are determined by engineering analysis of expected flood level during a storm, and the anticipated waves, current and topography (See Map 6, Appendix A).

The *Inlet Hazard AEC* includes land near the ocean inlets. Inlet shorelines are highly fluctuating land forms, and vulnerable to erosion and flooding. Each inlet hazard AEC is determined by a statistical analysis of inlet migration, previous inlet locations, narrow low lands near the inlet and the influence of man-made features, such as jetties and channelization projects. The distance of these AEC's is estimated to encompass those lands that are anticipated to migrate. There are no Inlet Hazard areas within the study area.

The *Unvegetated Beach Area AEC* includes the land area where no stable beach vegetation is present. This area is subject to wind and wave energy and resulting land form change can occur rapidly. There are no unvegetated beach areas within the study area.

The CRC Administrative Rules contain use standards for the AEC's that give priority to the conservation of coastal wetlands, estuarine waters and public trust areas, although some water dependent uses are allowed. Generally, uses that require water access and which cannot function elsewhere, such as simple access channels, structures to prevent erosion, navigational channels, boat docks, marinas, piers, wharfs and mooring pilings are allowed provided construction occurs in compliance with state rules.

Currently, policy reviews and studies are underway that address the development of marinas and urban waterfronts in the state's coastal areas. The redevelopment of fishing piers has also been under discussion and is a current topic of debate. These issues and studies may precipitate or lead to future changes in state policy that may affect the CRC rules governing these types of development.

The CRC guidelines for development within the coastal shoreline AEC are found in 15A NC AC 7H. Key provisions within these rules state that:

- The project should not weaken or eliminate natural barriers to erosion.
- The project should limit impervious surfaces, and not exceed 30 percent of the AEC area of the lot, except along an Outstanding Resource Water (ORW) where the built-upon limit is 25 percent of the AEC area.
- A buffer zone is required to be maintained for a distance of 30 feet inland of the normal water level, except where the Environmental Management Commission has adopted its own buffer standards.

It should be noted that the exact locations of the AEC's are difficult to map at a macro scale, particularly coastal wetlands, shorelines and ocean hazard AEC's. The exact locations of the AECs are identified by N.C. DCM permit staff through on-site delineations.

Public Water Supply AEC

North Carolina has begun to address the regional problem of limited availability of potable water, coupled with high demand. One such area is on the Outer Banks, where the fresh water supply is limited. Water demands have to be managed and matched to available supplies to prevent water from becoming the limiting factor on economic growth.

The CRC has designated two AECs that protect certain coastal public water supplies from the negative effects of development, described below:

- The Small Surface Water Supply Watershed AEC protects coastal drainage basins that contain a public water supply classified as A-II by the N.C. Environmental Management Commission. This classification means that the best use of the water is for public drinking water, and this use must be protected by state regulations. To date, two such watersheds have been designated as AECs: the Fresh Pond at the Nags Head and Kill Devil Hills border; and Toomer's Creek near Wilmington.
- Public Water Supply Wellfields are areas of rapidly draining sands extending from the earth's surface to a shallow groundwater table that supplies public drinking water. Currently, one wellfield on Hatteras Island at Buxton is designated as an AEC.

There are no public water supply AEC's in the study area.

Natural and Cultural AEC's

The Natural and Cultural AECs is a grouping of fragile coastal resource areas containing environmental, natural or cultural resources of more than local significance that may be threatened by development. There are two such AEC's in the state designated by the Coastal Resource Commission.

Jockey's Ridge is a unique coastal geologic formation area of environmental concern. The second Natural and Cultural AEC is Permuda Island, which is a significant coastal archaeological resource area of environmental concern. Permuda Island is a former barrier island located within Stump Sound in southwestern Onslow County.

Vegetation and Soils

The Southern Shores Vegetation Management Plan identifies five vegetative zones or plant communities within the Town. These include:

- Ocean Beach and Foredune
- Maritime Forest
- Flats and Thickets
- Higher Dunes
- Currituck Sound Shoreline and Ginguite Marsh

The foredune beach zone is highly dynamic and is undergoing constant change from sand deposition and ocean waves. The ocean shoreline and foredune form the primary defense against storm tides, waves, and ocean overwash. The foredune zone closely corresponds to the dune grass community described by the Natural Heritage Program's "Classification of Natural Communities", by Schafale and Weakley.

Foredunes are built with wind deposited material and northern beach grass (*Ammophila breviligulata*), sea oats (*Uniola paniculata*), and saltmeadow cordgrass (*Spartina patens*). The roots of these grasses act much like rebar in cement to hold and stabilize the foredune. Activities that breach or weaken the foredune, or reduce sand available to replenish it and its vegetative cover make it susceptible to erosion. Dune height and width may be enhanced with beach grass planting, in combination with sand fencing to reinforce sand dunes. Beach walkovers prevent impacts to the roots of the dune vegetation.

The scrub zone contain grasses and scattered shrubs forming thickets which provide shelter and habitat for small mammals and birds. Live oak (*Quercus virginiana*), persimmon (*Diospyros virginiana*), bayberry, wax myrtle and yaupon increase across the low-lying areas behind the foredune, which may be periodically inundated by storm

surges over, or through breaks in the foredune. The Vegetation Management Plan notes that such events left ocean water standing in much of Seacrest Village and other low lying areas west of Route 12, killing vegetation, leaving barren sandy flats.

The soils in the shrub zone are Newhan, Corolla, and Duckston soils. Newhan are well drained, and found in higher, drier areas; Corolla is moderately well drained and found in intermediate areas; and the poorly drained Duckston soils are in the lower wet areas.

The dominant trees of maritime forest are live oak (*Quercus virginiana*), loblolly pine (*pinus taeda*), yaupon holly, white cedar, and redbay. Many of these forests were selectively logged, and fragmented or destroyed by development. The remaining remnants of these forests have become vulnerable to hurricane events. Buxton Woods, under management by the National Park Service; the Nags Head Woods, under management of the Nature Conservancy; a portion of the Town of Kitty Hawk Coastal Reserve, under conservation easement with the State and in Southern Shores, under private ownership, are the only woodland communities still in the State that are relatively intact. These are among the oldest and more stable portions of the Outer Banks according to the Natural Heritage Program.

Within the Town of Southern Shores, the lower and more protected area in the lee side of the high dunes, and areas adjacent to Ginguite Creek contain small remnants of Maritime Forest. These forested areas provide habitat for wildlife, storage capacity for groundwater, shelter for residences and an important aesthetic resource for the community. The soils in these forested areas have more organic matter on the surface than the soils in the first two zones. Fripp fine sand is found in higher, drier areas, while Osier fine sand is found in level, wet areas; and Ousley fine sand is found in gently sloping areas.

The marsh zone is found on the sound side of the Outer Banks. This area contains Carteret, Currituck, and Hobonny soils. Flooding occurs frequently in this zone. The dominant plants found in this zone are black needle rush, (*Juncus roemerianus*), salt marsh cordgrass, (*Spartina alterniflora*) with occasional patches of the common reed.

The U.S. Department of Agriculture – Natural Resources Conservation Service (USDA NRCS) completed a soil survey of Dare County in 1986 and completed soil descriptions in 1987. The Outer Banks in the eastern portion of Dare County is part of the barrier island chain that extends from Virginia to South Carolina. The relief, drainage and location near the ocean are major factors that affect soils and vegetation on barrier islands. Wind also greatly affects coastal vegetation, abrading plants with both sand and salt spray.

The study area contains soils that are rated as “Very Limited” by the NRCS. This rating indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special

design, or expensive installation procedures. Poor performance and high maintenance can be expected. The unshaded areas of the Soil Map 7 are either not rated by the NRCS or are “Null”. The map representation is limited by the best available data.

Water Resources

Surface Water

The study area lies within Pasquotank River Basin. The Pasquotank River basin encompasses 3,635 square miles of low-lying land and open water, including Albemarle Sound. It includes all of Dare, Camden, Currituck, Tyrell, Pasquotank, and Perquimans Counties and parts of Gates, Hyde, and Washington Counties. It contains numerous small watersheds that drain into Albemarle, Currituck, Croatan, Roanoke and Pamlico Sounds. The Pasquotank River basin is part of the Albemarle-Pamlico Estuarine System, the second largest estuarine system in the United States (DENR 2007).

The study area is located in DWQ Subbasin 03-01-56 of the Pasquotank River Basin. This watershed is located entirely within Dare County. Except for a few small lakes on the outer banks its waterbodies are either estuarine or oceanic. The USGS 14-digit hydrologic unit for the watershed is 03010205230030.

Water Quality Classifications

Water quality was a key planning issue addressed in the previous CAMA Land Use Plan. The restoration of water quality was identified as one of six overarching issues for the ten year planning period identified in the Southern Shores’ 1997 plan.

Surface waters are assigned a primary classification that is appropriate to the best uses of that water. In addition to primary classifications, surface water may be assigned a supplemental classification. Most supplemental classifications have been developed to provide protection to sensitive or highly valued resource waters. These classifications of water that occur in the study area are shown below. These primary classifications are shown in Table 10.

Table 10. DWQ Water Quality Classifications

Classification	Description
SC	All tidal salt waters protected for secondary recreation such as fishing, boating and other activities involving minimal skin contact; aquatic life propagation and survival; and wildlife. Stormwater controls are required under CAMA and there are no categorical restrictions on discharges.
SB	Suitable for shellfish, marine life and wildlife habitat. Not suitable for commercial shellfish harvesting. Suitable for swimming, fishing, recreation and all other legitimate uses including navigation.
SA	Suitable for marine fish, shellfish and wildlife habitat, shellfish harvesting for direct human consumption, recreation and other uses such as navigation.
Supplemental Classifications	
HQW	High Quality Waters are ranked based on biological, chemical or physical characteristics through division monitoring or special studies.
ORW	Outstanding Resource Waters are unique and special surface waters of the state that are of exceptional state or national ecological or recreational significance that require special protection to retain existing uses.
SW	Swamp Waters that are located so as to generally have low velocities.
NSW	Nutrient Sensitive Waters that experience or are subject to excessive bloom of microscopic or macroscopic vegetation.

Source: North Carolina Administrative Code 15A NC AC 02B.0221

Currituck Sound and Jean Guite Creek are two named waterbodies within the study area. Both are designated as class SC. The canals within the Town are also classified as SC (DENR 2008). There are no Class SA waters within the study area.

Shellfish Waters

Within the Pasquotank Basin are 34 miles of Atlantic Ocean which are partially supporting and are monitored for fish consumption. There are 395,235.9 acres of Class SA waters in the Pasquotank River Basin. According to the 2007 Pasquotank River Basinwide Water Quality Management Plan 6,473 (1.6 percent) acres are currently rated as impaired in the shellfish harvesting use support category for the basin and 1,786.9 acres (8.5 percent) as impaired for the sub-basin. Fecal coliform is the primary stressor for shellfishing waters accounting for the majority of Impaired waters in this basin (DENR 2007).

Determining how well the waterbody supports a use is an important method of interpreting water quality data and assessing water quality. Surface waters are classified according to their best-intended uses. Determining how well a waterbody supports its designated uses (Use support rating) is an important method of interpreting water quality data to assess water quality. The terms Impaired and Supporting refer to whether the classified uses (e.g., aquatic life protection, recreation, shellfish harvesting, and fish consumption) of the water are being met (DENR 2007).

The Division of Water Quality identifies the stressors of water quality impact as specifically as possible depending on the amount of information available in a watershed. Most often the source of the stressor is based on predominant land use in the watershed. In the Pasquotank River basin, new development/construction, impervious surfaces, stormwater outfalls, and inadequate human and animal waste management were all identified as possible sources. Unknown stressors may also impact many waterbodies and the accumulation of multiple stressors leads to water quality degradation.

The N.C. Division of Environmental Health (DEH) manages the state's recreational water quality program. The DEH tests 241 swimming sites that includes ocean beaches and estuarine swimming areas for water quality and notifies the public when bacteriological standards for safe bodily contact are exceeded. Stressors to recreational use of a waterbody include pathogenic indicators such as fecal coliform bacteria, *Escherichia coli* (*E. coli*), and enterococci. During 2007, in the Pasquotank Basin, there were 5.1 acres and 0.5 coast miles where the enterococcus bacteria standard was exceeded, causing these waters to be rated as Impaired for recreation. Waters are Impaired for recreation when swimming advisories are posted for more than 61 days during the five-year assessment period. A swimming advisory is posted by the Division when a water sample from a swimming area exceeds a geometric mean of 35 enterococci per 100 milliliter during the swimming season.

Data from DEH indicate that Southern Shores has experienced days during the swimming season when advisories were posted. These advisories include precautionary closures when tropical storms are anticipated to impact coastal waters. Swimming advisories have remained relatively constant over the last three years: 2005 (105 days with advisories), 2006 (111 days with advisories), and 2007 (107 days with advisories) (J.D. Potts, DEH, personal communication, May 2008).

Groundwater

A committee was formed in 2005, at the request of State Senator Marc Basnight, called the Outer Banks Hydrology Committee. It was convened to review issues related to flooding and stormwater problems in Dare and Currituck Counties. Stakeholders representatives were from Dare and Currituck County governments, the towns in northern Dare County, the N.C. Division of Water Quality, NC DOT, N.C. Coastal

Federation, the NC Homebuilders Association, and the Realtors Association. The committee held numerous meetings and addressed topics and issues including coastal hydrogeology, water reuse, drinking water, transportation, low impact development and “green” building.

The Committee developed two reports that address the cause of the problems, solutions and implementing strategies. The reports contain descriptions of existing environmental conditions, existing stormwater management strategies, and make recommendations for implementing Low-Impact Development (LID) on the Outer Banks. LID addresses site development by trying to mimic the site’s pre-development hydrology using techniques that infiltrate, filter, store, evaporate and detain runoff close to its source.

Water resources within the study area include ground water and surface waters. Watershed hydrology, water budget, and hydrologic cycle refer to the processes involved in water cycling through the landscape and atmosphere.

Groundwater in the study area flows through surficial aquifers, which is the saturated portion of the upper layer of sediments. It is estimated that approximately 19 percent of the undeveloped area along the Outer Banks of Dare County has water table depths of 6 feet below the ground surface throughout the year according to a recent Outer Banks Low Impact Development (LID) report. A majority of land in the Outer Banks has a very shallow water table, as illustrated in the table below.

Table 11. Approximate Water Table Depths on Potentially Outer Banks Developable Parcels

Parcel Status	Depth of 6 feet	5 to 6 feet	1.5 to 3.0 feet	1 to 2 feet	Less than 1 foot
Developed	68%	1%	10%	9%	13%
Undeveloped	19%	3%	13%	8%	57%

Source: Assessment of Outer Banks Coastal Environmental Conditions, Low Impact Development, 2006

The thickness of this layer, from the surface down to the first major confining bed, is typically from 20 to 50 feet. The surficial aquifer is unconfined, meaning that its upper surface is the water table rather than a confining bed. (The surficial aquifer is sometimes called the water-table aquifer.) The composition of the surficial aquifer varies across the region, but it is generally 50 percent to 70 percent sand, allowing high infiltration rates.

Many shallow wells tap the surficial aquifer, especially near the coast and on the Outer Banks, where deeper waters are too salty. Because the water in the surficial aquifer tends to be acidic, it is somewhat corrosive. The surficial aquifer is particularly vulnerable to contamination, due to the shallow depth and porosity of the soils.

Precipitation is the main source of recharge for the surficial aquifer in Southern Shores and the Outer Banks, which has an annual average rainfall of approximately 56 inches. The annual average evaporation rate in the region is 42 inches. Land use can affect recharge rates. No recharge rates are currently available, but data from U.S. Geological Survey (USGS) wells indicate that water table depth fluctuates throughout the year. It is estimated by the LID study that most of the soils in the undeveloped areas of the study area have about 40 percent of their volume available for rainfall.

According to the Outer Banks LID study a two-year 24-hour storm produces about 3.8 inches of rain. If this rainfall infiltrates into the ground without runoff, the rainfall would require about 10 inches of ground above the water table in a typical Outer Banks sandy soil. The maximum allowable impervious surface for development along the Outer Banks is 30 percent. If this same rainfall event is to be completely infiltrated with 30 percent impervious surface on a site, at least 14 inches of ground would be required above the water table in a typical sandy soil site.

On-site septic systems are common throughout the Pasquotank River basin, including Southern Shores. Soil conditions in the basin may limit the functionality of the septic system treatment allowing untreated effluent to contaminate surface waters. Precautions should be taken by local septic system permitting authorities to ensure new systems are properly installed, failing systems are repaired and older systems are updated (DENR 2007). Groundwater may also be contaminated by improperly installed or malfunctioning systems. There are no known problems associated with private septic systems within the study area.

Stormwater Management

Stormwater management and drainage has been identified as a serious issue which is being addressed regionally and locally. The volume and intensity of stormwater runoff is directly linked to the impervious surfaces and drainage systems linked to surface waters within the watershed. The stormwater runoff from developed areas, rooftops, compacted areas and paved roads causes water quality degradation through the introduction of oil, gas residuals (PAHs), fertilizers and pesticides from lawns and landscaped areas, particulates, nutrients, bacteria or other sources of contamination.

The N.C. Division of Water Quality and the Division of Coastal Management have recognized that new approaches to stormwater management practices are needed in order to address the increasing surface water degradation and the indicators of cumulative water quality decline, including the closure of shellfish beds and reduction of aquatic nursery habitat.

The LID studies recommend that general stormwater goals be developed that are consistent with LID practices; that stormwater requirements for single family residential

lots with minimum square footage be developed; and compliance standards be established for new and redeveloped lots.

Flood and Natural Hazard Areas

Federal Emergency Management Agency (FEMA) and the N.C. Floodplain Mapping Program, in coordination with other federal, state and local governments have conducted Flood Insurance Studies for Dare County. These studies produce maps of the 100 and 500-year flood boundaries for each stream and coastal area studied. These studies and flood maps guide communities in implementing floodplain management and local flood damage prevention ordinances. Stringent requirements were put in place by the Town for flood prone areas to prevent property damage and loss of life which have resulted in a better rating under CRS. The 100-year floodplain defines the flood hazard areas. The flood hazard areas in Southern Shores are mapped in two classifications:

- AE Zones: areas where there is a 1 percent chance of a 100-year flood event in any given year;
- VE Zones: areas where there is a 1percent annual chance of a 100-year flood event, with wave action of three feet or more.

There are no community facilities located within the AE or VE zones within the study area. There was one repetitive loss property located within the study area. The house has been demolished and rebuilt to flood standards, and is located at 2 Mullet Circle in Southern Shores. The Town continues to be an active participant in the National Flood Insurance Program. With the new 2006 FIRM maps, and high value of oceanfront property, the Town enforces both the minimum FEMA/NFIP standards and has adopted higher regulatory standards under the Insurance Services Office (ISO) Community Rating System (CRS). See Map 6, Flood Hazard Areas in Appendix A.

FEMA provides incentives for communities that exceed minimum NFIP standards. Under the Community Rating System (CRS) flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the program goals. These goals follow below:

- Reduce flood losses;
- Facilitate accurate insurance ratings; and
- Promote the awareness of flood insurance.

The Town participates in the CRS and uses the FEMA program to help mitigate problems that result from flooding and floodplain management. The CRS program is organized into categories of recommended activities for implementation, and the community receives credit in the form of points for implementation of each activity.

All new development is designed to withstand a 100-year storm. The building and development regulations are reevaluated on an ongoing basis to ensure the effectiveness of the codes. Construction requirements were amended to require wind resistant construction from 110 to 130 MPH. The Town has prepared a “Guide to Flood Hazards and Being Prepared” and will utilize this brochure in its annual outreach program.

The U.S. Geological Survey is conducting an ongoing cooperative coastal research program that is delineating the geologic framework of northeastern North Carolina and seeks to understand the physical processes driving the evolution of the coast. The long-term program goal is to acquire a comprehensive knowledge of the coastal system, including the estuaries, barrier islands, and inner continental shelf. This knowledge will be used to understand the linkage of geologic framework and physical processes to coastal evolution and predict the coastal response to oceanographic and climatic forces.

Many of the research tasks of this program are focused on identifying and quantifying, coastal hazards. Shoreline change monitoring provides information on the spatial and temporal response of the ocean shoreline to storm events, and provides insight into erosion hazard areas along the shoreline. Nearshore geophysical surveys have linked erosion hotspots to specific surf zone morphologies that may recur over time due to interactions between physical processes and the shallow geologic framework.

Regional geologic mapping shows that the underlying geologic framework of quaternary sediments determines the availability and distribution of sediment in this coastal system and controls the overall barrier island geomorphology. For example, sediment-rich coastal segments have high, wide, accretionary barriers dominated by beach ridges, while sediment-starved coastal segments have narrow, washover-dominated barriers. Recognizing coastal hazards as a function of geologic setting and physical processes allows for sound planning of hazard mitigation strategies. The research scientists working with this program will publish their findings.

Non-coastal Wetlands

Wetlands in their natural state perform important ecological functions which are vitally important to the environment and are impossible or costly to replace. Wetlands serve as barriers, slowing estuarine shoreline erosion. Wetlands protect the quality of surface waters by retarding the erosive forces of moving water. They provide a natural means of flood control and damage protection by reducing flood peaks, thereby protecting against the loss of life and property. Wetlands improve water quality by intercepting and filtering out waterborne sediments, excess nutrients, heavy metals and other pollutants.

Wetlands are also sources of food, shelter, breeding, spawning, nesting and wintering habitats for fish and wildlife. These include migratory birds, endangered species, and

commercially and recreationally important species. Wetlands are recognized as part of a complex, interrelated, hydrologic system.

Southern Shores Vegetation Management Plan notes that the progressive loss of salt marsh along coastal shorelines has adversely impacted commercial and sports fisheries and accelerated shoreline erosion. The alteration of small individual wetlands may have a small or insignificant individual impact, but the cumulative environmental effects of multiple changes to wetlands, coupled with additions of impervious surfaces within a watershed can result in significant effects, especially over time.

The Cypress Swamp is an example of a rare non-coastal wetland that is designated as a Natural Heritage Site. Another wetland type found in the study area is Freshwater Marsh. They are defined as herbaceous areas that are flooded for extended periods during the growing season within the study area. Fresh water marsh typically occurs in ponds or man-made borrow pits where sand has been removed to below the normal high water table for construction and or drainage. Dense growths of willow (*Salix nigra*), Pennywort (*Hydrocotyle sp.*), rushes (*Scirpus sp*) and Cattails (*Typha sp*) typically colonize these ponds. They gradually accumulate sediment and debris over time until they fill in completely.

Non-coastal wetlands may be regulated by the U.S. Army Corp of Engineers (USACE) under Section 404 of the Clean Water Act, and by the N.C. Division of Water Quality under Section 401 of the Clean Water Act.

The Division of Coastal Management recently completed an extensive inventory and rating system based on the quality of wetlands within the coastal counties. Wetlands are rated as Exceptional Significance, Substantial Significance, or Beneficial Significance. N.C.-CREWS, is a watershed-based wetlands functional assessment model that uses geographic information systems (GIS) software and data to assess the level of water quality, wildlife habitat, and hydrologic functions of individual wetlands. Wetland types found within the study area include coastal marsh and non-coastal wetlands which are illustrated in Map 4 in Appendix A.

Primary Nursery Areas, Shellfishing and Essential Fish Habitat

Estuaries are considered to be valuable nurseries for a variety of species, including shrimp, crabs and fish. Primary Nursery Areas (PNA), designated by the N.C. Marine Fisheries Commission, are generally located in the upper portions of creeks and bays. These areas are usually shallow with soft muddy bottoms and surrounded by marshes and wetlands. Low salinity and the abundance of food in these areas are ideal for young fish and shellfish.

There are no primary or secondary nursery areas within the planning study area.

Essential Fish Habitat (EFH) is defined by the Magnuson-Stevens Fishery Conservation and Management Act as waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity. Federal fishery regulations seek to protect commercial and recreational fish populations through habitat protection. Estuarine marshes are important habitat for larval and juvenile species. Red drum, summer flounder, brown shrimp, pink shrimp and white shrimp species EFH are found within the study area.

The South Atlantic Regional Fisheries Management Council prepares Marine Fish Habitat Plans for the conservation of the species and its habitats. Also, some marine and estuarine areas were designated as “Habitat Areas of Particular Concern” for certain shrimp and fish species. This designation does not afford additional protection, but activities within these areas are more carefully scrutinized during EFH consultations and are subject to stringent conservation recommendations.

Fragile Environmental Areas

Fragile environmental areas are those sensitive resources that may be included or overlap with those managed in the Areas of Environmental Concern (AEC) or may include non-coastal regulated resources such as non-coastal wetlands including the Cypress Swamp, a Natural Heritage Area (See Map 8, Appendix A). The Albemarle/Pamlico estuarine system, barrier islands and their geomorphology are a highly dynamic, complex and rapidly changing coastal system.

Protected and Natural Heritage Areas

Natural Heritage Areas include those lands that support rare plants, animals or other important ecological features identified by the North Carolina Natural Heritage Program. The elements identified on Map 8 represent general locations of those areas considered significant in the context of land use planning (See Map 8 Environmentally Fragile Areas, Appendix A).

The Significant Natural Heritage Areas of Dare County are grouped by ecological features from the coast inland by the N.C. Natural Heritage Program. Coastal edge communities are found at the mouths of rivers and along the Intracoastal Waterway. The county’s interior is predominately comprised of longleaf pine, pocosin, and pond communities.

A Significant Natural Heritage Area, the Cypress Swamp is an outstanding example of a rare ecosystem. In 1987, the NC Natural Heritage Program identified this site as a Significant Natural Area, having statewide significance. It is one of only ten known Maritime Swamp Forest natural communities in the state, according to the Natural Heritage Program. In addition, it is the only known Cypress Pond variant of the

Maritime Swamp Forest, making it an extremely rare habitat type. Within this natural area is a small area of Dune Grass and Maritime Deciduous Forest community. Two rare plants are known from this natural area include sand heather (*Hudsonia tomentosa*), and maritime pinweed, (*Lechia Maritima* var. *virginica*).

The swamp forest is dominated by old-growth cypress, with trees 24-30 inches in diameter. The Maritime Deciduous Forest community is dominated by beech, loblolly pine, sand laurel oak, southern red oak, and water oak. This is a small, but extremely rare community, which makes the site so significant. The dune grass community is closer to the beach, and is characteristic of the interior of the Currituck Banks. The site is approximately 56 acres in size.

Dare County is a “hotspot” of species diversity with several species that are known only to the County or found only in the immediate area. The county has some pine savannas that contain more species per acre than do almost all other areas in temperate North America. There are 11 Federally Endangered or Threatened plant and animal species in the County, some associated with the beaches, and a number of others associated with the longleaf pine forests and savannas.

The U.S. Fish and Wildlife Service has updated a list of **Endangered** and **Threatened** plant and animal species for Dare County on January 31, 2008 as follows:

Common Name - Scientific name - Federal Status

Vertebrate:

- American alligator - *Alligator mississippiensis* - T
- American eel - *Anguilla rostrata* - FSC
- Bald eagle - *Haliaeetus leucocephalus* -BGPA
- Black rail - *Laterallus jamaicensis*- FSC
- Black-throated green warbler - *Dendroica virens waynei*- FSC
- Buxton Woods white-footed mouse - *Peromyscus leucopus ssp.*- FSC
- Green sea turtle - *Chelonia mydas (incl. agassizi)* - T
- Hawksbill (carey) sea turtle - *Eretmochelys imbricata* - E
- Kemp's (Atlantic) ridley sea turtle - *Lepidochelys kempii* - E
- Leatherback sea turtle - *Dermochelys coriacea* - E
- Loggerhead sea turtle - *Caretta caretta* - T
- Northern diamondback terrapin - *Malaclemys terrapin terrapin* - FSC
- Piping plover - *Charadrius melodus* - T
- Rafinesque's big-eared bat - *Corynorhinus rafinesquii* - FSC
- Red wolf - *Canis rufus* - E
- Red-cockaded woodpecker - *Picoides borealis* - E
- Roseate tern - *Sterna dougallii dougallii* - E
- Shortnose sturgeon - *Acipenser brevirostrum* - E
- West Indian manatee - *Trichechus manatus* - E

Vascular Plant:

- Dune blue curls - *Trichostema sp.1* - FSC
- Seabeach amaranth - *Amaranthus pumilus* -T

Definitions of Federal Status Codes:

E = endangered. A taxon "in danger of extinction throughout all or a significant portion of its range."

T = threatened. A taxon "likely to become endangered within the foreseeable future throughout all or a significant portion of its range."

BGPA = Bald and Golden Eagle Protection Act. On July 9, 2007 the bald eagle was declared recovered and was removed from the Federal List of Threatened and Endangered Wildlife on August 8, 2007. After delisting, the Bald and Golden Eagle Protection Act becomes the primary law protecting bald eagles.

FSC = federal species of concern. A species under consideration for listing, for which there is insufficient information to support listing at this time. These species may or may not be listed in the future, and many of these species were formerly recognized as "C2" candidate species.

Critical Habitat Designations:

Piping plover - *Charadrius melodus* - Proposed Designated Critical Habitat Area Units all occur in the Cape Hatteras National Seashore and do not occur within the study area.

Federal Register Reference: July 10, 2001, Federal Register, 66:36038-36136.

The National Audubon Society's North Carolina State Office has named the Outer Banks as a year-round Important Bird Areas (IBAs). These sites represent natural areas of special significance to birds that breed, migrate, winter and feed in North Carolina. Audubon's North Carolina State Office, its ten state chapters and leading ornithologists worked to identify places that are essential to bird populations and bird diversity in the state. The designation carries no legal authority. The Audubon Society states that IBA status is intended to heighten awareness and help to foster voluntary conservation measures.

Environmental Composite Map of Environmental Conditions

The Environmental Composite Map illustrates the extent of natural features that are described in this chapter (See Map 3, Appendix A). The land classes are grouped into three categories and contain natural features and classifications that are intended to provide capabilities and limitations of areas for development potential. The description of each class and the features they contain follow in Table 12.

Table 12. Land Classes

Class	Description	Features
Class I	Class I lands contain minimal hazards and limitations that may be addressed by commonly acceptable land planning and development practices.	<ul style="list-style-type: none"> ▪ Non-wetland areas
Class II	Class II land contains limitations and hazards that can limit or restrict development and may be addressed by land use restrictions, special site planning, or provision of public services such as sewer and water service. Land in this category will generally support less intensive uses such as low density residential without significant investment in services.	<ul style="list-style-type: none"> ▪ Ocean erodible area ▪ High hazard flood area ▪ Public trust shoreline ▪ Non-coastal wetlands rated as “beneficial significance” by N.C. CREWS ▪ Storm surge areas ▪ Significant Natural Heritage Areas
Class III	Class III is land with serious limitations and hazards. Land in this class will generally support low intensity uses such as conservation and open space.	<ul style="list-style-type: none"> ▪ Coastal wetlands ▪ Exceptional or substantial non-coastal wetlands ▪ Beneficial non-coastal wetlands ▪ Estuarine Waters ▪ Soils with severe septic limitations ▪ Protected lands

The Environmental Composite Map summarizes the natural features in the study area. It shows the locations of the three categories of land described above. The map model uses 1-acre grid cells to represent the landscape. If a grid cell intersects a Class III feature (the most sensitive) then it will retain the Class III value despite any other features that also intersect that cell. Similarly if the cell intersects a Class II (but not Class III) feature, it retains the Class II values. In this way, the classification system will be determined by the highest class feature that the cell contains.

The majority of the land in the study area is Class III with areas of Class II located along the eastern area of the Town. Class II areas generally follow the NC 12 corridor south to the Town’s southern boundary. From NC 12 east large areas of this coastal area are predominately Class II designations. There are also small areas of Class II lands found intermittently along Dogwood Trail. Class I areas extend from the northern boundary to the Town’s southern boundary in the central area of the Town. The remainder of the Town is Class III designated lands. (See Map 3, Appendix A)

The Environmental Composite Map is a “broad-brush” depiction of the location of the three land classes discussed above. Due to the size and scale of the map, it cannot be used for permit decision-making or for final development plans.

Table 13 summarizes the natural features mapped and quantified by the Environmental Composite Map.

Table 13. Natural Features Inventory.

Natural Features and Environmental Conditions	Town of Southern Shores (Acres)	Southern Shores Extraterritorial Jurisdiction (Acres)
Total area	2,597	9.4
Coastal Wetlands	52.2	0.4
AE Floodzone	1,120.3	4.7
VE Floodzone	183.1	0
Hurricane Storm Surge Cat 1&2	184.1 (7 %)	1.2
Hurricane Storm Surge Cat 1,2&3	1,005.3 (39 %)	2 (21%)
Hurricane Storm Surge Cat 1,2,3,4&5	175.3 (67%)	8.5 (90%)

Source: DCM GIS data

V. Land Use and Development

The total planning study area, depicted in Map 12, in Appendix A is broken down as follows:

- Common area: 154 acres
- Education: 15 acres
- Municipal: 3 acres
- Recreation 275 acres
- Vacant: 447 acres
- Water access: 1 acre
- Residential: 1,608 acres (density average of 2 units per acre)
- Commercial: 9 acres

The total number of acres within the Town is 2,512

The 2000 U.S. Census identified 1,882 housing units in Southern Shores, while there are 2,310 units in 2007 according to the Town's building records. Approximately two-thirds of these units are owner occupied, and one-third are seasonal rentals.

The Town originally was platted and subdivided into a planned residential community designed for single family detached housing. There are two residential areas that have a higher density than the other areas of the Town. The higher density areas include Pelican Watch with permitted densities of six units per acre, and Mallard Cove with densities of ten units per acre. Most of Southern Shores has a minimum of 20,000 square foot lots with permitted densities of 2 units per acre.

In January 2007 there were an estimated 490 vacant lots in the Town, according to building permit data. The Existing Land Use Map generally depicts the land use categories described above. During the period of 2000 to 2007 the Town reports that there were a total of 787 additions, remodels and improvements to residential property greater than \$5,000. The majority of the developed lots are approximately 20,000 square feet.

There is a small amount of commercial property within the Town. During the period of 2000 to 2006 there were eight new commercial permits issued. In addition, there were 69 permits for additions, remodels or improvements to commercial properties that are greater than \$5,000. These included a new addition to the Southern Shores Volunteer Fire Department, a new addition to Southern Shores Realty, a new marina at the Southern Shores Civic Association, and remodeling of existing commercial properties.

Martin's Point is a gated, platted subdivision with land uses restricted to single-family residences and associated accessory uses. It is located adjacent to the Town of Southern

Shores. There is an area of commercial development along the frontage of US 158. Martin's Point was under the extraterritorial zoning jurisdiction of Southern Shores; however, the residential portions of the subdivision reverted back to the County's jurisdiction in October 2000.

The majority of the land area of the Town of Southern Shores is subdivided and platted for single family residential development and associated development. The Town does not own any vacant parcels, but does own the roadways, the canals, Public Works, Town Hall, and the cemetery. There are no designated historic, cultural or scenic areas within the Town of Southern Shores.

Most of the Outer Banks of Dare County is subdivided and platted for residential housing. An estimated 22 percent of potentially developable parcels within Dare County remain undeveloped. Approximately 87 percent of the undeveloped parcels are one acre or less.

Projection of Land Needs

Land use information can assist in the development of policies that address land use conflicts, the relationship between land use and water quality, and identify areas where land use is in transition and where redevelopment may occur.

Assuming that the current rate of development continues, the Town's supply of vacant lots will be developed in approximately seven to eight years. The few remaining vacant lots in Southern Shores, coupled with the near built-out of the neighboring Towns of Kitty Hawk and Duck prevent any future expansion of the Town. Future development pressure will be the development of the remaining lots, and redevelopment through tear downs of existing residential properties. At current permitted densities, approximately 2,800 total dwelling units can be expected at build-out in Southern Shores.

However, current house size and density restrictions will serve to limit the extent of this redevelopment. The Town's zoning ordinance restricts house size to seven bedrooms, and one unit per 20,000 square feet lot in RS-1 onlt, and up to ten bedrooms are permitted in the commercial zoning district.

An analysis of the number of platted lots without structures and projected rates of development indicate that the Town will reach build-out approximately in 2015 at current growth rates. The Town does regulate land within the ETJ, but does not plan to expand its jurisdiction beyond its ETJ.

Regional Growth and Development Issues

Within the Outer Banks, there are six municipalities and two Counties, Dare and Currituck, each with its own autonomy and unique interests. There also are many regional growth and development issues that transcend the boundaries of individual jurisdictions. Chief among these are transportation issues, evacuation in the event of a natural disaster, tourism, natural resource protection, stormwater management, and provision of adequate public facilities.

The counties and municipal jurisdictions can work together to help solve transportation and infrastructure needs and other growth related issues. The livability of individual communities or areas is, in fact, heavily influenced by what happens in adjacent jurisdictions. Southern Shores, along with the other beach communities has worked effectively in addressing stormwater issues through coordinated study, planning and recommended actions. It is important to consider the future health and sustainability of the region can be enhanced for the various jurisdictions if collaborative planning can occur.

VI. Community Facilities, Services and Infrastructure Capacity

The Town of Southern Shores has a Council-Manager form of government. The Town Council is the governing body, consisting of five Council Members. The Town Council sets the Town's policy, enacts ordinances and adopts the annual budget. The Town Manager is appointed by the Town Council and administers the daily operations of the Town as well as, implements the Council's policies and ordinances. The Town provides a range of community services, including police and volunteer fire protection, sanitation, construction and maintenance of public infrastructure, recycling, and chipping.

The Town of Southern Shores was incorporated in 1979. Prior to incorporation, the Town was a real estate development of the Kitty Hawk Land Company. A Southern Shores Civic Association, initially established by the developer, was instrumental in obtaining the Town's municipal incorporation.

The Town has a long history of volunteerism. The first Town Council, appointed after its incorporation by the legislature, drew its membership from the Civic Association. Many Town services are still routinely provided by volunteers who augment the staff. This tradition is carried on with volunteers serving on a variety of boards and commissions for the Town.

Police, Fire and Emergency Services

The Police Department of Southern Shores ensures that police and the community share the responsibility for finding workable solutions to problems that detract from community safety and security. The Police Department consists of the chief of police, administrative and uniform personnel. The chief of police is appointed by and reports to the Town manager.

The Southern Shores Volunteer Fire Department is a non-profit corporation consisting of an all-volunteer membership. It provides fire service and emergency medical support to Southern Shores and Martin's Point. Funding is provided by the Town of Southern Shores. The department also provides citizen education regarding fire safety. Dare County provides funding for Martin's Point.

The Southern Shores Emergency Management Team is organized to provide assistance to residents and visitors in times of natural disaster, such as hurricanes and flood events.

The team implements the Town's Emergency Plan and National Incident Management System (NIMS). The Team consists of:

- Volunteers
- Town employees
- Town Council
- Town staff
- Police Department
- Volunteer Fire Department members
- Local nurses and physicians and
- Short-wave radio operators.

In addition, there are a number of contractors on stand-by who have agreed to supply certain services that would normally be provided by a Department of Public Works. Before each hurricane season, the Team reviews procedures and responsibilities. In the event of a named storm the Team is activated. By 36 hours before an expected landfall, all support services will be in place and an evacuation order is issued by the Dare County Control Group.

The mayors of the Outer Banks municipalities and county emergency management staff make up the Emergency Management Control Group, which is chaired by the Vice-Chair of the Board of Commissioners. That group decides when to order an evacuation and announces the order through all available media. Visitors are encouraged to evacuate promptly. Residents are encouraged to leave as soon as they have secured their homes.

Water Supply

The Dare County Water Department provides water service to the community. It promotes safe, clean, healthy, fresh water for drinking and other purposes. The Department operates five water plants, four of which are reverse osmosis plants; located at Kill Devil Hills, Stumpy Point, Rodanthe and Frisco. The fifth is a freshwater softening plant on Roanoke Island. The five plants provide water service to Avon, Buxton, Colington, Duck, Frisco, Hatteras, Kitty Hawk, Roanoke Island, Rodanthe, Salvo, Southern Shores, Stumpy Point, and Waves. The Water Department also maintains the distribution system to ensure that the water is delivered to the customers in a safe/uninterrupted manner (See Map 10, Appendix A).

Wastewater Collection and Treatment System

The Town relies on individual wastewater septic systems. Septic tanks systems are the most common method of wastewater treatment in Southern Shores and Dare County.

Southern Shores has approximately 1,900 lots served by septic systems. Public comments recorded from the Town meeting, Speak Out for Southern Shores indicated a split in public opinion for providing sewer service to the Town.

Transportation Systems

The Outer Banks, its land forms, and extensive water bodies within Dare County greatly influences the transportation infrastructure. Bridges are a key component of this infrastructure and serve as entryways to Dare County and the barrier islands. Ferry service from Hatteras Village also serves as an alternative egress from Hatteras Island. US 158, the main arterial route extends north and south from Southern Shores to Nags Head. NC 12 extends north and south from the Dare/Currituck county line to the southern end of the County on Hatteras Island. Access to the Outer Banks is from US 64/264 through the Mainland and onto US 158 along the Currituck Sound Bridge, and via ferry service from Cedar Island at US 70 in Carteret County (See Map 9, Appendix A).

Traffic flow and the need to evacuate the islands is a critical consideration in the event of a hurricane. This factor is key in determining time necessary to evacuate the County during such an emergency. The time will vary based on the time of the year and the seasonal population. During the peak periods, it is estimated to take as long as 30 hours to evacuate. During off-season periods, it is estimated to take between 13 and 18 hours.

Since the mid 1990s, there have been several large transportation construction projects completed, including, construction of a second parallel bridge spanning Currituck Sound, widening of the Nags Head-Manteo Causeway to four lanes, and widening improvements to US 158 in Currituck and Dare Counties.

Other projects included in the NC DOT 2008-2015 Transportation Improvement Program (TIP) over the next seven years include construction of a flyover at the intersection of US 64/NC 345 on Roanoke Island for traffic heading to the northern beaches and Hatteras Island; replacement of the Bonner Bridge at Oregon Inlet; and widening of US 64 to four lanes through East Lake and Manns Harbor.

The NCDOT completed a Draft Environmental Impact Statement in 1998 for the Mid-Currituck Bridge. This project is now a NC Turnpike Authority candidate project. The new Draft Supplemental EIS for this project is scheduled for completion in January 2008, with the Final scheduled for January 2009, and the Record of Decision in April 2009. The construction award is planned for October 2009. The North Carolina Turnpike Authority developed a Purpose and Need document for the Mid-Currituck Bridge Project in April 2008. This document describes existing conditions within the region, including the Average Annual Daily Traffic (AADT) for segments of roadway within the study area. The Level of Service E denotes the capacity of a roadway where

passing is virtually impossible and average highway speeds can be as low as 25 mph when slow vehicles or other interruptions are encountered. Level of Service F denotes heavily congested flow with traffic demand exceeding the capacity of the highway. Level of service is normally calculated for the peak period on an average day of the year. This approach is typical of most urban areas where traffic volumes vary only slightly throughout the year and a distinct peaking of traffic occurs during the morning and afternoon rush hours when most commuting trips occur. In contrast, the Outer Banks has much higher traffic volumes in the summer than in the non-summer and the peak period occurs on the weekend rather than during weekdays.

The segment of roadway within the study area describes conditions on NC 12 just north of US 158 for three peak periods. The roadway has a level of Service E, with an AADT of 21,700 for 2006; a level of service F with an AADT of 31,900 projected in 2035. NC 12 has a non-summer level of service E for 2006 with an AADT of 19,400, and level of service F for an AADT of 28,800 in 2035. NC 12 has a level of service for summer weekdays of F for an AADT of 29,100, and a level of service F for an AADT of 43,100 for 2035.

An important transportation issue in Dare County is NC 12 on the northern beaches and Hatteras Island. Ocean overwash and erosion resulting from coastal storms have endangered portions of NC 12 in Kitty Hawk and other locations along Hatteras Island. The NC Department of Transportation has made the stabilization of the threatened portions of NC 12 a priority project. A task force was appointed in the late 1990s to study NC 12 and several improvements, including the relocation of several portions of NC 12 on Hatteras Island.

Bicycle paths and walkways along many of the major transportation routes in the County have been constructed over the last seven years and these alternate transportation routes are popular among residents and visitors to the area. Plans for similar improvements, including adding bike lanes along NC 12 in Kill Devil Hills and Kitty Hawk are underway.

The safety of US 158 and the seasonal traffic increases were a high priority of the survey respondents of the 2005 Long Range Plan. The 2005 Southern Shores Long Range Planning Committee Report identifies the Mid-Currituck Bridge as a priority, and calls for the Town to work with appropriate committees, NCDOT and the NC Turnpike Authority to prioritize the bridge to reduce traffic congestion on US 158, and the Wright Memorial Bridge and NC 12.

Approximately 88 percent of the 2005 survey respondents agree that the bridge should be built. The same respondents oppose widening NC 12 for a variety of reasons, with over 94 percent agreeing that widening would alter the Town's character.

Stormwater Systems

Several locations within the Town are subject to local flooding during rainfall events. Land development and increasing impervious surface areas disrupt the natural water absorption cycle and removes vegetation, which aids in the evaporation and transpiration of water back into the atmosphere. Land development also alters natural hydrology and removes and fills in natural depressions that temporarily store water during rainfall events, decreases soil permeability, and replaces pervious surfaces with impervious surfaces. The rainfall runoff then increases in volume and temperature and transports contaminants from a variety of sources including streets, driveways and surfaces which results in greater concentrations of pollutants downstream.

Prevention of stormwater runoff and proper sewage treatment are necessary to maintain and improve area water quality within the watershed and in the ocean and minimize stormwater effects to the canal system.

The Stormwater Policy Advisory Committee was formed to develop recommendations to address stormwater management issues. The Committee was formed in 2004 in response to concerns about significant localized flooding that occurred during a particularly rainy period. The Committee was represented on the Outer Banks Hydrology Committee formed by State Senator Marc Basnight. The Committee has received information from three studies performed at the direction of the Town:

- The NC 12 Drainage Improvements;
- Town of Southern Shores Drainage Study; and
- Analysis of Flooding within the Chicahawk Community.

These studies have provided information that can assist the Town in finding comprehensive solutions to stormwater problems. A report entitled, “*Stormwater Management Report*” was prepared by the Coastal Studies Institute that synthesized the three reports and brings forward three recommendations for Town Council Action:

1. Address the need for ongoing financial support to pay for stormwater management in the Town of Southern Shores.
2. Adopt ordinance changes for new development and redevelopment to help prevent flooding and stormwater runoff.
3. Appoint a Committee to prioritize and coordinate the design of sub-basin solutions for each of the 26 identified localized flooding problem areas, considering the hydro geography of each drainage area.

Civic Associations

The Southern Shores Civic Association (SSCA) was established before the Town was incorporated. There are currently six civic associations in Southern Shores as identified below:

- Southern Shores Civic Association (SSCA).
- Chicahawk Property Owners Association (CPOA).
- Pelican Watch Homeowners Association (PWHOA).
- Mallard Cove Patio Homes Association (MCPHA).
- Fairway Drive Homeowners Association (FDHOA).
- Southern Shores Landing Homeowners Association (SSLHOA)

The SSCA performs a variety of services for citizens and guests, and owns and maintains a large number of common areas within the Town, including:

- Thirty-five dune crossovers to the beach and several pedestrian accesses to Currituck Sound.
- Sea Oats Park, which contains a soccer field, basketball court and a children's playground.
- Hillcrest Beach Access, with parking area as well as a gazebo and other seating areas.
- Soundside Wading Beach, with picnic area and playground.
- Hillcrest Tennis Complex, with two regulation play tennis courts, managed in conjunction with the Southern Shores Tennis Club.
- Three marina properties are managed and maintained in conjunction with the Southern Shores Boat Club, providing wet and dry storage areas for boats, a boat launching ramp and a venue for numerous social events and gatherings.

VII. Land Suitability Analysis

Land Suitability Analysis (LSA) is required in Section .0702 (c)(f) of CAMA, in order to help determine the availability of suitable land for development. The LSA model used for this plan is intended to provide planners and the steering committee with information concerning the areas best suited and least suited for development.

The LSA model uses GIS data from state and local data sets to classify land using a rating system based on a number of factors. The model divides the planning study area into one-acre grids. Each one-acre grid is measured for suitability based on such factors as whether development is occurring within the grid, whether the site has available infrastructure, proximity to existing development or if there are identified coastal resources located on the parcel, such as wetlands. The model assigns a ranking to the various factors that then determine the suitability of the land for development (see Map 11 in Appendix A). The model classifies land into one of the following classifications:

- Least suitable;
- Low suitability;
- Medium suitability; and
- High suitability.

The factors considered in the model follow:

- Beneficial non-coastal wetlands have low suitability;
- Coastal wetlands are least suitable;
- Protected lands are least suitable;
- Estuarine waters are least suitable;
- Storm surge areas have low suitability;
- Flood zones have low suitability;
- Areas within 500 feet of a Significant Natural Heritage Area have low suitability;
- HQW/ORW Watersheds have low suitability;
- One half-mile from Primary Roads have high suitability, areas outside one-mile of primary roads have low suitability;
- One-half mile of developed land has high suitability, areas within one-half mile to a mile have medium suitability, and areas greater than one-mile away have low suitability; and
- The standards for sewer lines and water lines follow: within a quarter-mile have high suitability, areas within a quarter-mile to one-half mile have medium suitability, and areas greater than a half-mile have low suitability.

The LSA Model was not designed to determine the suitability of development for individual parcels, but rather as a general planning tool to assist Town officials and the Steering Committee in their decisions regarding the appropriateness of development. The default rankings and weights were not changed for the model. The assessment of existing

land use was updated using both the Town parcel data and 2005 aerial photography. Each one acre grid was assessed qualitatively, and assigned a value based on which buildings or developments were visible in the aerial photograph.

The GIS maps and environment composite maps also help to establish a baseline of quantified coastal resources which can assist the community in evaluating its policies and the efficacy of its regulations over time (See Map 11, Appendix A). Existing Land Use is illustrated on Map 12, in Appendix A.

Review of CAMA Land Use Plan

A review of the 1997 Sketch plan was undertaken by the Steering Committee at the initiation of the Phase 2 work. A power point presentation was delivered to the Steering Committee with a synopsis of the plan policies. The Committee ranked each of the following policy items and based on score of 1 for a policy achieved, .5 for partially achieved, and 0 for not achieved. The Committee findings from this review indicated that over 90 percent of the policies were being achieved, and six percent were partially achieved, while the remaining four percent were not achieved.

The following items were evaluated during the policy review:

- Rely on County septic regulations for development in AEC and COE regulations of wetlands
- Future consideration of bulk heading canals
- No other wetlands, ORW or historic resource policies
- Town relies on County policies for protection of potable water supply and county health dept
- Town permits package treatment plants as conditional use zoning
- The Town relies on state and county stormwater controls, will consider local regulations if circumstances necessitate
- Town relies on CAMA regulations, local zoning and FEMA and other agencies to address sea level rise
- Town will consider local regulations in Guinquite Bay and manmade canals if circumstances necessitate to prevent damage to marsh, Bulk heading is regulated by CAMA
- Town relies on zoning and subdivision review process to help address water quality issues, including pesticide and fertilizer use
- Town does not permit commercial marinas, floating homes, dry stack facilities, or other floating devices or boats as temporary or permanent residences
- No industrial development is permitted
- The Town is concerned with clear cutting and modification of wooded lots, and may enact a tree ordinance
- The Town has requested a marine fishery prohibition of menhaden in the Towns ETJ ocean area

- Growth and Community Services
- Development pays through fees, and exactions
- Growth affects Town's ability to accommodate and minimize negative effects
- Town will consider monitoring growth and consider slowing if needed
- No annexation plans
- Maintain existing land use/mix
- No expansion of multi-family, rezoning commercial to residential permitted by zoning ordinance
- Commercial district acceptable, may rezone commercial to residential on a case by case basis
- Commercial uses must serve residents
- Town opposed widening of Highway 12
- Town will coordinate /cooperate with transportation planning/projects
- Tourist attractions are discouraged
- Town will remain single family residential
- The Town will cooperate with the civic associations to maintain, improve and expand residents and guests water access
- The Town will follow its adopted Public Participation Plan and provide ample opportunities for public involvement in the update of the Plan
- The Planning Board has noted that the road access problems in Chicahauk and other areas may present problems for evacuation, fire and police services or other needs. Further study on road access in these and other areas is recommended
- The Town will enforce CAMA setbacks to ensure new development is setback at an adequate distance from areas subject to storm surge
- Enforce state building code and encourage private and public buildings can withstand wind, water, hurricanes and coastal storms
- The Town will protect dunes and wetlands through local and CAMA regulations
- Coordinate with County/beach communities on mitigation programs and policies and support NRIP participation
- Reconstruction – lobby for more storm resistant requirements
- Oceanfront reconstruction only after CAMA setback line is established
- Town may purchase damaged land and properties
- Town will encourage using natural features such as new inlets, drainage features and consider changes after a storm
- Special damage assessment team activated prior to June 1 each year
- Plan, guide and ordinance for reconstruction and task force to oversee recovery will identify opportunities for damage mitigation through managed reconstruction
- Town will integrate recovery into broader goals for Town and recognize storm damage may provide opportunities to modify existing development patterns
- Town will support Blue Sky project and consider more detailed policy

VIII. Land Use and Development Goals

The plan goals provide the overall direction and purpose for the framework of the plan. The goals can also serve to evaluate the effectiveness of the plan over time. The following goals address the key aspirations and concerns of the community that have been expressed during the planning process.

The public involvement process included a review of emerging issues and conditions, identified through input from a Town Meeting, numerous Steering Committee Meetings, and a review of the previous plan policies.

The following goals were formulated through input from the public involvement process described above, and from the Town staff, the Steering Committee, Planning Board and Town Council:

1. Encourage the maintenance and improvement of existing private access facilities to public trust waters and shorelines in order to maximize recreational opportunities.
2. To protect, enhance and support land uses that are compatible with surrounding land uses and maintain the community character of Southern Shores.
3. Ensure that providing infrastructure services do not affect the quality and productivity of Areas of Environmental Concern (AEC's), important resources and other fragile areas.
4. Preserve, protect, enhance, maintain and improve the natural environment and water quality within and near Southern Shores.
5. Protect public health and safety from the damaging effects of storm surges, wave action, flooding, high winds, and erosion associated with hurricanes, severe weather, nor'easters and other hazards
6. Promote and encourage volunteerism and civic opportunities in both Town and property owner associations' affairs and activities benefiting the entire community.
7. Budget consideration shall be addressed for all areas of this plan.

IX. Policies

The CAMA Land Use Planning Guidelines require that certain policy categories be organized under five management topics: (a) Public Access, (b) Land Use Compatibility, (c) Infrastructure Carrying Capacity, (d) Natural Hazard Areas, and (e) Water Quality. A sixth topic area, called Local Concerns allows the local government to address other growth and development issues that may not be covered under the first five topics. In the case of the Southern Shores Land Use Plan, additional categories have been added to address specific areas of community concern as shown below.

Organization of the Policies

PUBLIC ACCESS

Public Access Policies

LAND USE COMPATIBILITY POLICIES

Residential Development Policies

Commercial/Corridor Development Policies

Policies to Conserve Natural Resources, Trees and Environmentally Sensitive Lands

AEC Policies

Ocean Hazard Policies

Marinas and Floating Home Policies

INFRASTRUCTURE CARRYING CAPACITY

Energy Facility Policies

Water and Wastewater Service Policies

Capital Improvement Plan Policies

Transportation System Policies

NATURAL HAZARD AREAS

Natural Hazard Area Policies

WATER QUALITY

Water Quality Policies

LOCAL CONCERNS

Recreation Policies

Beach, Inlet and Waterway Management Policies

Public Access Policies

<p>CAMA Management Goal</p> <p>Maximize public access to the beaches and the public trust waters of the coastal region.</p>
<p>CAMA Planning Objective</p> <p>Develop comprehensive policies that provide beach and public trust water access opportunities for the public along the shoreline within the planning jurisdiction.</p>

Policy 1.A.1.: Support private access and improve parking and facilities.

Recommended Action Item 1.A.1.a: The Town should maintain a dialogue with the property owners associations.

Policy 1.A.2: Encourage and support a variety of recreational opportunities, including view corridors from pedestrian paths and bikeways, bird watching overlooks, nature trails, canoe/kayak access and boat ramps.

Land Use Compatibility Policies

<p>CAMA Management Goal</p> <p>Ensure that development and use of resources or preservation of land minimizes direct and secondary environmental impacts; avoids risks to public health, safety and welfare; and is consistent with the capability of the land based on considerations of interactions of natural and manmade features.</p>
<p>CAMA Planning Objective</p> <ul style="list-style-type: none"> • Adopt and apply local development policies that balance protection of natural resources and fragile areas with economic development. • Policies shall provide clear direction to assist local decision-making and consistency for zoning, division of land, and public and private projects.

Policy 2.A.1: The Town shall encourage new or expanded single-family residences that are in scale with neighboring houses and limit commercial development. The Town supports maintaining a height limit of 35 feet.

Recommended Action Item 2.A.1.a: The Planning Board shall research and recommend methods to address the size and scale of single-family development.

Recommended Action Item 2.A.1.b: The Planning Board shall recommend any changes to the subdivision provisions of the Town Code to ensure that existing lots cannot be subdivided into smaller lots, or combined in order to increase density or create an expansion in the number or size of homes in existing neighborhoods or increase density of multi-family residential development.

Policy 2.A.3: There shall be no expansion of the existing commercial zoning district.

Infrastructure Carrying Capacity Policies

<p>CAMA Management Goal</p> <p>Ensure that public infrastructure systems are appropriately sized, located, and managed so the quality and productivity of AECs and other fragile areas are protected or restored.</p>
<p>CAMA Planning Objective</p> <p>Establish level of service policies and criteria to ensure that the location and capacity of public infrastructure is consistent with the County’s growth and development goals and the projections of future land needs.</p>

Utilities

Policy 3.A.1: Encourage planned development that is compatible with limited infrastructure, considers land suitability, energy efficiency and avoids fragile areas. Infrastructure includes, but is not limited to natural gas, electricity, cellular and wireless service.

Recommended Action Item 3.A.1.a: Develop a Capital Improvement Plan to ensure existing and new services, and improvements to infrastructure are adequate for residents and seasonal visitors, and keep pace with growth. The CIP should contain provisions for compatibility of infrastructure with land suitability.

Recommended Action Item 3.A.1.b: Review water line extensions to ensure adequate water line capacity, pressure and water quality.

Recommended Action Item 3.A.1.c: Encourage the use of electric vehicles.

Stormwater Management

Policy 3.B.1: Support stormwater management programs that seek to regulate both the quantity and quality of stormwater runoff to reduce flooding and improve coastal water quality.

Recommended Action Item 3.B.1.a: Develop a Stormwater Management Program that requires peak runoff from new development to not exceed that of its pre-development condition (no net increase in pre-development runoff rates) and utilizes vegetative buffers to filter stormwater. The plan will address stormwater plans for

roadways, Low Impact Development (LID) concepts, and funding mechanisms to pay for stormwater improvements.

Recommended Action Item 3.B.1.b: Address the issue of including ponds owned by property owner associations or private owners if these are to be incorporated in the stormwater program.

Wastewater and Water Systems

Policy 3.C.1: The Town endorses the proper use and maintenance of approved septic systems in suitable soils for treating and disposing of waste from low-density development.

Recommended Action Item 3.C.1.a: Review the provisions of Nags Head Septic Tank Maintenance Program and consider implementation of similar measures that address the maintenance of septic systems.

Policy 3.C.2: The Town allows the use of Package Sewage Treatment Plants as a means of treating waste, with the assurance that a permanent organizational ownership will guarantee the proper management, operation, maintenance and replacement of the plant. The design of these systems should include the best available technology to eliminate odors, reduce impacts to adjacent properties, and allow for a future connection into a centralized sewer system.

Recommended Action Item 3.C.2.a: The Town shall research and evaluate the feasibility of sewer service.

Policy 3.C.3: The Town supports Dare County's water service and system maintenance to ensure that public health and safety of the public water supply is maintained.

Transportation

Policy 3.D.1: Maintain NC 12 as a two-lane highway, with no additional through lanes or two-way continuous turn lanes.

Policy 3.D.2: Support policies and actions to ensure that the functional life of existing roadways is maintained to meet the transportation needs of the Town.

Recommended Action Item 3.D.2.a: Develop a Town Road Maintenance Plan for general repairs, tree root control and tree trimming, road resurfacing crack sealing, and right-of-way clearance.

Policy 3.D.3: Integrate stormwater management planning with transportation planning, especially for critical areas such as NC 12 and integrate structural and non-structural Best Management Practices (BMP's) and consider Low Impact Development (LID) principles where appropriate, using all available tools in the plans and policies.

Policy 3.D.4: Encourage pedestrian and bikeway facilities to promote healthful alternatives to the automobile. Bikeways, trails, and other alternatives to the automobile shall be encouraged in both public and private developments.

Policy 3.D.5: Promote multi-modal transportation projects, including addressing improvements in interconnectivity of both the roadway and bikeway system within the Town.

Recommended Action Item 3.D.5.a: Support a plan to expand, maintain and enhance functions and safety of the multi-purpose path network within the Town.

Policy 3.D.6: Continue to support and encourage NC DOT, Dare County and its six municipalities to develop a Comprehensive Transportation Plan for Dare County.

Policy 3.D.7: Continue to support a new Mid-Currituck bridge to provide traffic relief, improve emergency access to and evacuation from the Outer Banks, and to provide better access to public and private services not readily available on the Outer Banks.

Policy 3.D.8: Local streets shall be maintained to allow for convenient multi-modal transportation by pedestrians and bicyclists. Local streets should be designed to allow for maximum connectivity without creating opportunities for “cut-through” traffic from outside of the connected areas.

Policy 3.D.9: Maintain and enhance the Canal and Lagoon system.

Recommended Action Item 3.D.9.a: Develop, support and implement a management plan for the Canal and Lagoon system that ensures maintenance, maintenance dredging, and enhancement of non-structural and structural improvements, best management practices and support of LID principles. Standards that should be considered include: installation/maintenance of bulk heading or stabilization techniques to ensure the shoreline integrity is maintained.

Solid Waste

Policy 3.F.1: The Town shall continue to encourage and support waste reduction, waste prevention, recycling, reuse, chipping, composting and mulching of organic materials, yard waste and storm debris.

Public Safety

Policy 3.G.1: The Town shall support and encourage the development and improvement of the Volunteer Fire Department to enhance the security and safety of life and property.

Recommended Action Item 3.G.1.a: The Town should annually evaluate public safety services (i.e. law enforcement, fire fighting and rescue) to ensure sufficient resources are made available for proper equipment, staffing and volunteers.

Recommended Action Item 3.G.1.b: The need for additional fire stations or improvements to existing fire stations should be examined annually to ensure service can keep pace with the growth of the area.

Policy 3.H.1: Maintain lifeguard services.

Recommended Action Item 3.H.1.a: Annually evaluate the lifeguard services.

Parks and Recreation

Policy 3.I.1: Encourage the protection, preservation, maintenance and use of common areas and open space.

Policy 3.I.2: Work in conjunction with the property owners associations to support more recreational opportunities for all people, including a youth activity program.

Recommended Action Item 3.I.2.a: Promote the development of recreation beach facilities and Youth Activities.

Recommended Action Item 3.I.2.b: Consider the development of a Community Center.

Natural Hazards Policies

<p>CAMA Management Goal</p> <p>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 issues.</p>
<p>CAMA Planning Objective</p> <p>Develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, flooding, or sea level rise.</p>

Policy 4.A.1: The Town will support, implement and update a Hazard Mitigation Plan as required by the state.

Recommended Action Item 4.A.1.a: Review and annually update the Hazard Mitigation Plan and educate the public of risks of natural hazards.

Policy 4.A.2: The Town shall support natural beach processes dune vegetation and sand fencing to help protect against storm surge.

Policy 4.A.3: The Town shall consider future development based on estimates of sea level rise to avoid inundations.

Policy 4.A.4: The Town shall support and implement activities that assist in protecting lives and properties from the effects of natural hazards.

Policy 4.A.5: The Town shall work to maintain and where possible improve its Community Rating System (CRS) score in order to make the community a safer place to live and to reduce premiums for Federal Flood Insurance.

Water Quality Policies

<p>CAMA Management Goal</p> <p>Maintain, protect, and where possible enhance water quality in all coastal wetlands, rivers, streams, and estuaries.</p>
<p>CAMA Planning Objective</p> <p>Adopt policies for coastal waters with the planning jurisdiction to help ensure that water quality is maintained if not impaired and improved if impaired.</p>

Policy 5.A.1: The Town acknowledges State studies and supports the objective of maintaining and improving existing water quality.

Policy 5.A.2: The Town endorses policies, plans and actions to help protect the water quality of the planning area’s beaches and estuarine systems by preventing soil erosion and sedimentation and by controlling stormwater entering the beach and estuary.

Policy 5.A.3: Protect, maintain, and conserve coastal and 404/401 wetlands and open space as established by State and Federal standards.

Policy 5.A.4: Encourage and support vegetative buffer requirements for all water bodies, drainage ditches, canals and lagoons to enhance water quality. The Town supports State Standards for Public Trust Waters.

Policy 5.A.5: Maintain and enhance the Canal and Lagoon system.

Recommended Action 5.A.5.a: Develop, support and implement a management plan, including amendment of zoning code, for the Canal and Lagoon system that ensures maintenance, improvement and enhancement of long-term water quality, navigation, maintenance dredging, a water quality monitoring program, integrated sills where feasible, and maintaining and stabilizing canal and lagoon banks.

Natural Environment

Policy 5.B.1: Promote tree protection, and natural vegetation diversity.

Policy 5.B.2: The Town should work with civic associations to identify and plan for a system of open space, unique natural areas, and expansion of the multi-path system.

Local Concerns Policies

CAMA Management Goal
Integrate local concerns with the overall goals of CAMA in the context of land use planning.
CAMA Planning Objective
Identify and address local concerns and issues, such as recreation, and beach management needs.

Volunteerism, Civic Opportunities and Communications

Policy 6.A.1: The property owner associations and the Town should work cooperatively to develop opportunities to enhance recreational, cultural and other activities for residents of all ages.

Policy 6.A.2: The Town / organizations shall work to inform property owners about Town / organizations activities and improve public information and communication.

Policy 6.A.3: The Town shall inform residents and improve public information and opportunities for everyone in the Town to participate in Town planning.

Policy 6.A.4: The Town and property owners associations shall coordinate the public outreach efforts to the extent possible.

Recommended Action Item 6.A.4.a: Encourage outreach efforts through the use of all methods available.

Grants and Funding

Policy 7.A.1: The Town should consider grants and all available sources of funding in the preparation of the annual budget, the capital improvement plan and review of this land use plan annually.

Recommended action item 7.a.1: Funding sources, grants and other financing mechanisms should be addressed annually.

Land Classification System for Future Land Use Map

Purpose of Land Classification System

The CAMA Land Use Planning Guidelines require that local governments in the coastal areas classify various parts of their planning jurisdictions in accordance with the desired density, character of development and level of services provided for each area. By delineating land classes on a map, the Town can specify where various forms of development and redevelopment might best occur, and where natural and cultural resources should be conserved.

The Land Classification Map or Future Land Use Plan Map (See Map 13, Appendix A) is supported and complemented by zoning, subdivision regulations, infrastructure investments and other management tools and regulations; these local tools should be consistent with the classification system as much as possible. Although general areas are outlined on the Future Land Use Map, it must be noted that land classification is a policy and is not a regulatory mechanism. It is intended to be used as a guide in adopting implementation ordinances and evaluating subdivision, land development, and rezoning requests.

Proposed Land Classification System

Conservation Areas

The purpose of the Conservation class is to provide for the long-term management and protection of areas of significance, open space, private green spaces, and other natural areas. Proper management is needed to conserve and maintain the natural, cultural, recreational, scenic or biologically productive values of these areas. The Conservation class should be applied to areas that should not be developed at all (preserved), or if developed (or managed and maintained), done so in a manner characterized by careful planning and cautious attention to the conservation of environmental features. The Conservation class includes:

1. Areas of Environmental Concern, as defined in 15A NCAC 7H (e.g. coastal wetlands, estuarine and coastal shorelines, estuarine waters, public trust waters, etc.)
2. Freshwater wetland areas under the jurisdiction of the US Army Corps of Engineers' 404 Wetlands Permit Program and as generally identified by the National Wetlands Inventory of the U.S. Fish and Wildlife Service.
3. Certain critical wildlife habitat areas as may be designated by the State Natural Heritage Program and approved or recognized by the Town Council for inclusion in this class. (e.g. name of natural heritage site) or coastal and other marsh areas.
4. Other lands, open space or currently undeveloped common areas that are environmentally significant because of their natural role in the integrity of the coastal region and which include, but are not limited to: bottom land hardwoods, pocosin, and swamp forests containing productive, natural, scenic, cultural or recreational resources, and may be recognized by the Town Council for inclusion in this class.

Low Density Residential

Low-density residential provides for development of one to two dwelling units per acre. Such areas are largely comprised of single family detached dwellings in low density residential neighborhoods, and those in a coastal environment that intends to preserve and

maintain sand dunes, coastal forests, wetlands and other natural features of the coastal barrier island environment.

High Density Family Residential

Dwelling types typically include single-family, duplex, attached dwellings, and multiple family residential dwellings. In accord with the current land use plan, densities generally would not exceed ten dwellings per acre.

ETJ Commercial/Commercial

This commercial area is small in scale and serves the needs of nearby residents. Typical uses include veterinarian, real estate, mortgage and similar service uses.

Government and Institutional

This area is a small that serves the needs of the community by providing government services and non-profit organization.

X. Relationship of Plan to Management Topics

The planning guidelines require the local government to provide an analysis of its land use and development policies and the future land use map. The analysis is described below.

Consistency between Goals/Policies and Management Topics

A. Public Access

Applicable Goal from Section VIII:

Encourage the maintenance and improvement of existing private access facilities to public trust waters and shorelines in order to maximize recreational opportunities.

Analysis: The policies call for support and improvement of existing accesses and new public and private access opportunities in the Town. No action items are included.

B. Land Use Compatibility

Applicable Goal from Section VIII:

To protect, enhance and support land uses that are compatible with surrounding land uses and maintain the community character of Southern Shores.

Analysis: The plan calls for residential development that are in scale with nearby residential development. The plan policies limit commercial development. The plan recommends methods to address scale and character of new single-family development including new development standards. The Plan recommends limits to increasing density by subdivision or combining existing residential lots.

C. Infrastructure Carrying Capacity

Applicable Goal from Section VIII:

Ensure that providing infrastructure services do not affect the quality and productivity of Areas of Environmental Concern (AEC's), important resources and other fragile areas.

Analysis: The plan's policies emphasize the need to protect the capacity of the infrastructure and ensure its relationship to development standards so that adequate public facilities are available. The policies support the protection of the function of

existing roadways, including stormwater management and LID provisions for new development, and encouraging multi-modal transportation, the expansion of the multi-purpose path. Water and septic system policies are proposed and specific controls for septic systems are set forth. Canal and Lagoon maintenance and planning are supported, as well as capital improvement planning.

D. Natural Hazards

Applicable Goal from Section VIII:

Protect public health and safety from the damaging effects of hurricanes, severe weather, and other natural hazards.

Analysis: The plan calls for continued implementation and updates of the Hazard Mitigation Plan and enforcement of the the National Flood Insurance Program and continue improvement of the Town's rating under the Community Rating System.

E. Water Quality

Applicable Goals from Section VIII:

Preserve, protect, enhance, maintain and improve the natural environment and water quality within and near Southern Shores.

Analysis: The plan policies intend to protect wetlands for multiple reasons, including water quality preservation. New developments will be required to provide buffers to protect surface waters. The Town will implement a Lagoon and Canal Management Plan to ensure the maintenance, improvement and enhancement of long-term water quality, and navigation of the canal system.

F. Local Concerns

Applicable goals from Section VIII:

Promote and encourage volunteerism and civic opportunities in both Town and property owner associations' affairs and activities benefiting the entire community

Budget consideration shall be addressed for all areas of this plan.

Analysis: The plan has two major goals (above) that address local concerns: (1) promoting volunteerism and civic opportunities that benefit the entire community; and (2) considering and planning for budgeting planning projects and initiatives. The relationship of the plan's policies to these goals is summarized below.

1. The plan encourages the Town to work with the property owners associations to enhance recreational and cultural activities for residents and improve public information and communication

2. The plan call for implementation of a capital improvement program, and grants for funding a variety of projects identified in the plan.

XI. Tools for Managing Development

Introduction

This section of the plan describes the relationship between Town's existing development structure and its official Land Use and Development Policies. It concludes by describing several recommended changes in the existing development structure to further the goals and policies of the new Land Use Plan. The section includes three parts:

1. Description of the role of the plan and the status of its policies as applied by various users involved in the Town's land use and development decisions.
2. Description of the Town's existing development program, including ordinances and plans, and how these ordinances and plans are used to implement the goals and policies.
3. Identification of additional tools that will be used to implement the plan.

Immediately following this section is Section XII: Action Plan and Schedule, which describes key implementation strategies that are recommended for consideration in carrying out the policies.

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

Planning Board

The Planning Board will use the plan and its policies to determine consistency of project plans and development proposals with Town goals in making recommendations to grant or deny requests, such as a zoning change or subdivision plat, or to approve project plans.

Division of Coastal Management and other State agencies

The Division of Coastal Management will use the Plan for consistency determinations on major development permits and by other state and federal agencies on the consistency of their projects and programs with local plans and policies.

Existing Regulation of Land Development

The Town's Planning, Codes Enforcement and Inspections Department consists of an Administrator, Code Enforcement Officer, Permit Officer, Fire Inspector and Administrative Support Assistant. The Administrator is responsible for the management of the department as well as special planning studies such as the CAMA Land Use Plan. Department staff works closely with the public to ensure understanding of the NC Building Code and other Town ordinances. The Department staff receives and reviews all development applications, rezoning requests and building plans for compliance with state and municipal regulations and ordinances within the Town.

Based on current staffing, code violations are usually discovered and corrected early on in the building process. The department is also responsible for the coordination of the activities in the event of a natural disaster.

In terms of resolving development violations, options include removing/correcting the structural problem or appealing to the Town's Board of Adjustment for a variance, or amending the zoning regulations to permit what has been built. In most instances structural modifications are selected as the preferred option. This is true for CAMA violations and rarely are CRC variances proposed as the means of resolution.

All land development is subject to state and local regulatory permitting requirements. The following sections describe Southern Shores's regulatory requirements as well as those applicable to CAMA.

Regulation of Land Development

All land development is subject to state and local regulatory permitting requirements. The following sections describe Southern Shore's regulatory requirements as well as those applicable to CAMA.

Southern Shores has general statutory authority to enact ordinances that protect and promote the health, safety and welfare of its citizens. Local ordinances, plans and policies are adopted by the Town Council.

The following ordinances primarily guide land use and development within the Town and its ETJ:

Southern Shores Zoning Ordinance. The zoning ordinance is the primary means of regulating land use by the Town. It establishes nine zoning districts and the uses permitted, prohibited or conditionally permitted in each district. It also establishes building heights, minimum lot sizes and the location of buildings. The code allows residential, planned unit development, and commercial uses, and establishes an Ocean, Sound and Water District.

Emergency Management and Planning. This ordinance provides for the government functions of maintaining the public health and safety during an emergency. The ordinance addresses the plans and preparations for protection and relief, recovery and rehabilitation from effects of a disaster.

Building Code Regulations. The Town of Southern Shores has an active building inspections program and enforces the N.C. State Building Code. A building inspection program is performed to ensure all structures comply with the Building Code.

Beaches and Waterways. Regulations address the construction of bulkheads, docks, and pilings on private property and the maintenance of local waterways. The Town also regulates certain activities within the waters of its jurisdiction, including motorized watercraft, surfing, swimming, and construction of docks, bulkheads and pilings.

Wastewater Systems. The ordinance establishes the basis for regulatory permits for all wastewater systems, public and/or private, within the Town's jurisdiction. The ordinance enforces both state and county regulations, except where Town requirements are more restrictive. The supervision and enforcement of rules and regulations by state and/or county government are mandated to be continuously monitored by the Town.

CAMA Permitting

The Coastal Area Management Act (CAMA) requires permits for development projects within the twenty coastal counties and their municipalities. The CAMA permit system is divided into major and minor permits, based on the size and possible impacts of the development project. There are three types of CAMA permits:

- Major Permits – for projects that involve development in an Area of Environmental Concern (AEC), or require another state or federal permit, license or authorization, such as for dredging and filling, wetlands fill, stormwater management, sedimentation control, wastewater discharge or mining; construction of one or more buildings that cover more than 60,000 square feet on a single parcel of land; alteration of more than 20 acres of land or water; or if there is any dredging or filling of water or marsh; excavation or drilling for natural resources on land or under water (which 10 state and four federal agencies must review before a decision is made). Each project is reviewed for compliance with local regulations and for consistency with the local Land Use Plan.
- General Permits – used for projects that usually pose little or no threat to the environment. An AEC Hazard Notice must be completed if your project is located in an Ocean Hazard AEC (a designated ocean erodible area, inlet hazard area or high hazard flood area). Examples of projects that would require a general permit include, piers, docks, wooden groins in the estuarine shoreline, construction and maintenance of boat ramps.

- Minor Permits – used for projects, such as single-family houses, that do not require major permits or general permits. They are reviewed, issued and administered to CRC standards by local governments under contract with the Division of Coastal Management. These projects are reviewed for compliance with use standards for AEC's and for consistency with local Land Use Plans. The minor permit program is administered by a local permit officer (LPO) that works for the local government but has the power to issue minor CAMA permits, and approve permit exemptions.

Town Permitting

If a development project will modify an existing structure or increase its size, or a new development is proposed the following permits may be required:

- Zoning Permit – Site plans, description of work to accompany a zoning permit application;
- Conditional Use Permits – For any development designated as a Conditional Use in the Town's Zoning Ordinance or any commercial development. These applications are reviewed and approved by the Planning Board and Town Council;
- CAMA Permit – If the development is located within the Ocean Hazard AEC, or within the 75 foot Estuarine Shoreline AEC, a CAMA permit will be required;
- Building Permit for all construction activities;
- Flood Zone Determination – If development is proposed in any flood zone, the lowest habitable floor must be elevated a minimum of two (2) foot above the Flood Insurance Rate Map (FIRM) base flood elevation (BFE).

The Town currently has one Code Enforcement Officer, a Permit Officer, Code Enforcement Administrator, and Fire Inspector. Based on this staffing, code violations are usually discovered and corrected early in the building process. This is also true for CAMA enforcement actions, as two staff members are LPO-certified. In addition, local citizens are the eyes and ears of the Town and routinely report violations to the Code Enforcement Office. In terms of resolving development violations, options include removing/correcting the structural problem or appealing to the Town's Board of Adjustment for a variance, or amending the zoning. This is true for CAMA violations as well, and rarely is a CRC variance proposed as the means of resolution.

Division of Water Quality Permitting

Development within the twenty coastal counties must comply with North Carolina Administrative Code (NCAC) 02H. Permitted projects are classified as low or high density, and impervious surfaces are established. For low density sites, developed areas are limited to 30 percent or less (twenty-five percent or less within one-half mile of and

draining to SA waters); the stormwater is conveyed by vegetated swales; and there is a thirty-foot vegetative buffer. High density areas require the use of stormwater controls to meet performance standards for stormwater runoff. Infiltration practices are mandated for areas draining to SA waters.

The DWQ rules apply within 30 feet of the normal high water line of public trust waters, and 75 feet of the normal high water line along estuarine waters. Along Outstanding Resource Waters, the rules apply within 575 feet of the normal high water line.

Additional Tools Recommended to Implement Land Use Policies

Section XII. Action Plan and Schedule that follows this section contains a wide range of implementation actions to be explored in order to carry out the goals and policies contained in the Land Use Plan. For a listing of the various actions, as well as an anticipated timeframe for the Southern Shores Land Use Plan completion, the reader is directed to the Action Plan. Some of the more significant new plans, and ordinance amendments recommended in the plan are shown below by subject area:

Public Access

- Expansion of multi-purpose path and access and view corridors.
- Maintain a dialogue with civic associations.

Land Use Compatibility

- Create new development standards that address the scale and size of single-family development.
- Recommend changes to subdivision provisions to ensure existing lots cannot be subdivided into smaller lots, or combined to increase density of single-family or multi-family development.
- Draft and adopt zoning standards to protect 401 and 404 wetlands.

Development Impacts

- Develop a Capital Improvement Plan to ensure services area adequate, and contains provisions for compatibility of infrastructure with land suitability.

Infrastructure Carrying Capacity

- Review and annually update the Hazard Mitigation Plan and educate the public of risks of natural hazards.
- Annually update, implement and incorporate strategies and infrastructure initiatives in a Capital Improvement Plan.

- Review Nags Head Septic Tank Maintenance Program and its implementation in Southern Shores.
- Develop a Town Road Maintenance Program for general repairs.

Natural Hazards

- Conduct an assessment of flood hazards, and conduct public involvement activities.
- Review and annually update the Hazard Mitigation Plan and educate the public of risks of natural hazards.

Water Quality

- Draft and adopt a Lagoon and Canal Management Plan that ensures maintenance and enhancement of non-structural and structural improvements be implemented to maintain navigation and water quality after completion of dredging project.
- Draft and adopt stormwater ordinance to control runoff and investigate LID requirements for new developments.

Recreation

- Implement programs to increase recreational and cultural opportunities for all residents.
- Pursue development of a Bike and Pedestrian Plan.

Beach Management

- Evaluate and enforce dune protection and maintenance of beach and dune system.
- Evaluate Public Safety and emergency access to the beach, as well as life guard services.

Section XI of this plan contains a detailed assessment of the various strategies recommended in the plan. The strategies are analyzed in depth as to their likely impact on each of the policy areas required by CAMA.

XII. Action Plan and Schedule

Introduction

This section of the land use plan sets forth implementation actions to carry out the policies. While the plan may list several actions, it is important to note that only a portion of these actions is likely to be implemented in the five-year period between land use plan updates, depending upon the number of actions to be taken. Implementation actions are not mandatory items but, rather, are intended to suggest options available to the Town. While the policies of the plan often remain relatively unchanged over time, implementation actions should be revisited annually and updated. With each annual review, the list of actions should change as new opportunities and needs arise.

Implementation Actions Concerning Public Access	Policies/Actions	Begin	End
The Town should maintain a dialogue with the property owners associations.	1.A.1.	FY 08	ongoing
Implementation Actions Concerning Land Use	Policies	Begin	End
Review development standards and amend to include size and scale of single-family development.	2.A.1.	FY 08	FY 10
Ensure there shall be no expansion of the existing commercial district.	2.A.3	FY 08	FY 10
Implementation Actions Concerning Infrastructure	Policies	Begin	End
Develop a Capital Improvement Plan that ensures existing and new services are adequate for residents and visitors, and keep pace with growth. The CIP should contain provisions for compatibility of infrastructure with land suitability.	3.A.1.a	FY 08	FY 10
Review water line extensions to ensure adequate water capacity, pressure and water quality	3.A.1.b	FY 08	FY 12
Develop a Stormwater Management Program that requires peak runoff from new development not to exceed that of its predevelopment condition. The plan will address stormwater plans for roadways, and LID, and funding mechanism for improvements.	3.A.2.a	FY08	FY 10
Evaluate and review Nags Head Septic Tank Maintenance Program for use in Southern Shores	3.A.3.a	FY08	FY10

Research sewer service feasibility	3.A.4.a	FY 08	FY 12
Develop a Town Road Maintenance Plan.	3.A.7.a	FY 08	FY 12
Develop a Multi-Purpose Pathway Plan to expand, enhance functions and safety of the multi-purpose pathway network in the Town.	3.A.10.a	FY 08	FY10
Develop and Implement a management plan for the Canal and Lagoon System that ensures maintenance dredging, best management practices and addresses shoreline stability.	3.A.14.a	FY 08	FY 10
Annually evaluate public safety services to ensure sufficient resources are available for equipment, staffing and volunteers.	3.A.16.a	FY 08	Continuing
Annually evaluate the lifeguard services.	3.A.17.a	FY 08	Continuing
Promote the development of recreation facilities and youth activities	3.A.17.a	FY 08	FY 10
Implementation Actions Concerning Natural Hazards	Policies	Begin	End
Review and annually update the Hazard Mitigation Plan and educate the public of risks of natural hazards.	4A.1	FY 08	Continuing
Implementation Actions Concerning Water Quality	Policies	Begin	End
Develop, support and implement a management plan for the Lagoon and Canal system that ensures maintenance dredging, and enhancement of long-term water quality, navigation and addresses stabilizing banks and monitoring.	5A.5	FY 08	continuing
Draft stormwater runoff ordinance and investigate LID requirements for new developments.	5.A.3	FY 08	FY 10
Implementation Actions Concerning Local Concerns	Policies	Begin	End
Encourage outreach efforts through the use of all methods available.	6A.4.a	FY 08	Continuing
Annually address grant funding and other funding sources during the budget preparation.	7.A.1.a	FY 08	Continuing

Appendix A

Appendix B

The list below summarizes issues identified at the workshop listed in order of ranking by participants. Single comments that had no points are identified below without a numeric value.

1. Public Access

- 50- Maintain private access but funding issues need to be addressed.
- 45- Keep current system of access.
- 24- Maintain existing walkovers and provide trash containers and beach facilities such as bathrooms.
- 10- Provide adequate “porta potty’s”.
- 9- Parking at access sites limited to residents and guests of Town or civic associations.
- 9- No improvements to parking.
- 8- Open a dialogue with Town and civic associations over permits
- 8- Access by civic association only.
- 7- Town should consider issuing permits and collect fees for beach access improvements.
- 6- Study the need for more parking access and the need to design walkovers for storm resistance.
- Variance procedures are needed for construction requirements for walkovers.
- No beach renourishment.
- No funding for crossover repairs.
- Enhance facility at Hillcrest restroom.
- The Town should not take over the walkovers.
- Better utilization of North Dogwood walking beach.

2. Land Use Compatibility

- 110- Maintain low density residential, no large mansions.
- 99- Existing lots should not be subdivided into smaller lots, or combined in order to create expansion in number or size of homes.
- 82- Prohibit development of green and common areas.
- 60- Problems with rental home size - single family occupancy exceeding fourteen persons, 7 bedrooms and square footage standards need to be addressed.
- 57- Limit future commercial development within existing zone and limit or freeze multi-family development.
- 34- Effective zoning enforcement.

- 32- Excavation should be prohibited, and natural elevations should be protected.
- 28- Preserve and replace trees affected by development.
- 18- Do not expand commercial districts and maintain existing ratio of residential and commercial.
- 17- Maintain and do not exceed 30 percent lot coverage.
- 14- The Town needs a public park.
- 12- Maintain existing standards of 7 bedrooms, 35 feet height limit, and 30 percent lot coverage.
- 10- Prohibit dredge spoils in natural areas.
- 6- Develop common areas as public parks.
- 6- Prohibit storage of construction trailers and heavy equipment in residential zones other than temporary use during construction.
- 3- Prohibit development that negatively impacts adjacent properties and creates stormwater.
- Limit commercial vehicles stored in residential areas.
- Limit motor homes and boat storage in front yards in residential areas.

3. Infrastructure Carrying Capacity

- 207- Maintain NC 12 as a two-lane highway and do not widen neighborhood streets.
- 130- Formalize, budget and fund a Town Road Maintenance Plan and program.
- 120- Prohibit new neighborhood cut-through roads and limit tourist cut through with no left turns and other controls.
- 89- Build new bridge as soon as possible.
- 31- Prevent access through the residential area to the commercial area at Skyline Road.
- 29- Underground utilities.
- 29- Expand sidewalks; provide crosswalks, walking/bike paths with maps and signage.
- 27- Planned development should be consistent with limited infrastructure and fragile environment.
- 22- Town should regulate new housing capacity.
- 20- Limit development and population rather than expanding infrastructure.
- 17- Enforce codes/environmental regulations.
- 11- Keep septic systems, do not allow sewer system.
- 8- Widen roads.
- 7- Evaluate sewer system.
- 4- Important to have fire/police/EMS keep pace with growing population and evaluate increased demand for these services.
- 2- Find ways to expand police and fire facilities on existing properties.
- 1- Improve telecommunications, cell phone provider's towers.
- Reduce infrastructure overhead and maintain right of ways by owner.

4. Natural Hazard Areas

- 111- Maintain dunes and dune vegetation.
- 28- To reduce fire hazards, remove excess vegetation and conduct controlled burns.
- 18- Increase setbacks so that redevelopment and new development is further from ocean and sound.
- 14- Recognize the value of natural vegetation in controlling localized flooding and groundwater levels.
- 12- Protect 18-inch diameter (dbh) or greater live oaks trees
- 11- Maintain lifeguard service.
- 9- Control burn the undergrowth in the marsh.
- 8- Address global warming.
- 4- Improve emergency communications.
- Allow beach pushes when necessary.
- Eliminate burn permits.
- Publicize the need for burn permits.
- Address hazard recovery from hurricanes and natural hazards.
- Maintain Hazard Mitigation Plan.

5. Water Quality

- 248- Create a Town policy to protect/ preserve trees, vegetation and wooded areas from future development and prohibit clear-cutting.
- 168- Create a Stormwater Management Program, integrated with a vegetation plan, including better controls for runoff, and prohibiting the pumping of stormwater into the sound.
- 93- Regular maintenance and monitoring of canals.
- 69- Vegetative swales and buffers are needed.
- 60- Require canal bulkheads.
- 40- Mandatory septic tank inspections.
- 34- Maintain quality of water suitable for recreational use, especially in the Sound.
- 27- Evaluate feasibility of sewer service.
- 26- Create a plan for the disposal of dredge spoil.
- 8- Improve potable water quality.
- 7- Require buffers to be planted along bulkheads to prevent runoff in canals.
- 6- Address the quality of recreational waters for bathing beaches.
- 3- Standards are needed for lawn and garden chemicals.
- 3- Stricter standards are needed for treating waste water.
- 1- Increase access to potable water to support development.
- Require peat septic system in beach areas.

6. Issues of Local Concern

- 62- Develop, maintain and fund long range Capital Improvement Program.
- 44- Trash can rollbacks.
- 33- Community Center for all ages with swimming pool, meeting area and recreation.
- 32- Maintain lifeguard service.
- 30- Maintain chipping.
- 28- Dog access to beaches year round.
- 27- Encourage use of native plants.
- 26- Develop, maintain and fund long range plans
- 26- Address affordability of living in the Town in future.
- 6- Feral cats, rabies, raccoons, fox, and wildlife deer management.
- 21- Regulations are needed for pools and problems they cause.
- 14- Town should study groundwater quality and look at effective stormwater controls in other areas.
- 10- Address flooding issues in Town.
- 7- Retirement Facility.
- 5- Eliminate Civic Associations
- 4- Provide for road maintenance.
- 2- Town should participate in Civic Association newsletters and improve communication.
- Oppose annexations.
- Underpass for pedestrians is needed.
- More transparency in government.
- Town should look at major CAMA permit for rip/rap as alternative for minor permit for bulkheads.
- Town should allow boat basins or boat driveways in canals.
- Town should designate a Town Commissioner as liaison for non-resident property owners.
- Home business issues.
- Noise controls needed.
- Light controls needed.

Visioning

- 135- Establish a plan for maintaining and enhancing natural vegetation and fauna and retain habitat, and a policy that prohibits clear-cutting.
- 94- Put electrical utilities underground.
- 68- Maintain low density residential, friendly, nurturing, tranquil, small Town/family atmosphere.
- 67- Do not add more commercial zoning/development.
- 63- Create a dark sky program to minimize upward lighting of the night sky.
- 52- Maintain 35 feet height limit.
- 50- Limit development and minimize density.
- 31- Do not widen NC 12.

- 24- Southern Shores is a community that shows pride in the environment and seeks to maintain beauty.
- 20- Do not nourish beaches, it does not work.
- 19- Require bulkheads.
- 18- Fix Chicahawk flooding problems.
- 18- Maintain the canals and their navigation, uniqueness and beauty.
- 15- Maintain beaches and dunes
- 14- Do not permit hotels, condos, or high rises in residential areas.
- 13- Promote pedestrian safety.
- 13- Maintain open space.
- 12- Maintain chipping program.
- 12- Evaluate options to improve hurricane evacuation.
- 9- Life guards.
- 7- Establish a roadway plan to improve Town streets.
- 7- Establish a long range plan.
- 7- Allow everyone in the Town to participate in Town planning.
- 6- Be respectful of history and heritage.
- 6- Build the Bridge.
- 5- Go back in time fifteen years.
- 5- Keep taxes low.
- 3- Initiate beach renourishment.
- 3- Reinforce volunteerism.
- 2- Landscape medians.
- 2- Improve pedestrian access to East Side Ocean Blvd.
- Keep beach access private and provide more beach access.
- Inform residents, attention to citizen input and improve public information.
- Provide bird watching overlooks and nature trails.
- Community should work together as a team; improve communications between residents and non-residents.
- Maintain Southern Shores image as a water community, with the beach, sound and boating and fishing.
- Maintain services, trash and garbage and recycle.
- Maintain current house size restrictions.
- Maintain balanced tax structure to maintain affordability.
- Create a Dark sky program.
- Look at zoning for height, size, lot coverage, and other standards.
- Improve water quality in estuary.
- Provide more recreational opportunities for all people and include a youth activity program.
- Community parks and recreation, cooperation between SSCA, CPOA, and the Town.
- Solve drainage problems, impervious surfaces, and driveways.
- Construct a sewer system.
- Do not transfer civic association property for commercial uses.

- Do not build on nourished beaches.
- Do not nourish beaches.
- Do not change much.
- Reduce speed limits to 35 mph, and drop speed limit on NC 12.
- Prohibit cut-through, use speed bumps.
- Develop commercially zoned land for recreation using tax incentives.
- Eliminate commercial use of right-of-ways and do not allow boats to park in ROW.
- Affordable housing.

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