

Town of Southern Shores

CAMA Land Use Plan Update



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Note

The first draft of this document was submitted by the Town of Southern Shores to the Department of Coastal Management in August 2008. The State's comments on this draft were received in December 2008. Due to a variety of factors, there has been a substantial delay in the Town's response to these comments. Despite this delay, this Land Use Plan update should be considered a 2008 update. The data in this Plan reflects the circumstances at the time of the initial submission.

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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
COE	U.S. Army Corps of Engineers
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 Administrative Code
NCSDC	North Carolina State Data Center
NFIP	National Flood Insurance Program
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
ORW	Outstanding Resource Water
OSW	Ocean and Sound Waters
PNA	Primary Nursery Area

SAC	Stormwater Advisory Committee
SSCA	Southern Shores Civic Association
T	Threatened
TOSS	Town of Southern Shores
U.S.	United States
USACE	United States Army Corp of Engineers
USGS	United States Geological Survey
VAC	Vegetation Advisory Committee

I. Introduction

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 State's 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 the north with the Town of Duck (see Map 1, Appendix B). Martins's Point is no longer in the Town's ETJ, but the commercial area along US 158 abutting Martin's Point is within the Town's planning jurisdiction.

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 2175 acres.

The Southern Shores CAMA Land Use Plan was prepared in accordance with 15A North Carolina Administrative Code (NCAC) 07B and 07 L and the 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 Concerns and Aspirations

A. Vision Statement

The Town of Southern Shores (TOSS) is a quiet seaside residential community comprised primarily of small low density neighborhoods consisting of single family homes primarily on large lots (i.e., at least 20,000 sq ft) interspersed with recreational facilities (e.g., marinas, tennis facilities, athletic fields, and parks), beach accesses, walkways and open spaces. These neighborhoods are served by picturesque local roads (rather than wide through streets) along the beach, in the dunes or in the sound-side maritime forest. The scale and architecture of new

development and re-development is compatible with existing homes. The community is served by a small commercial district, located on the southern edge of town, which focuses on convenience shopping and services. The desired plan for the future is to maintain the existing community appearance and form.

B. Key Issues

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 a 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. (revised 2008)
- 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
- NC 12 Drainage Study (January 2006)
- 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, updated 2006 and re-codified 2009
- Town Building Code
- Input from the public Town Meeting (March 29, 2007)
- Stormwater Management Report (April 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 were 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 A 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. Analysis of Existing and Emerging Conditions

A. Population, Housing, and Economy Analysis

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 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 a few 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 and Southern Shores Landing with densities of ten units per acre. Most of Southern Shores has a minimum of 20,000 square foot lots with permitted densities of two units per acre.

Community input with respect to growth consistently reinforces a strong community preference for no significant growth and for preserving the single family detached housing on half acre lots character of Southern Shores. All land in Town is currently platted and there are no plans to up-zone any residential districts for increased density of dwelling units. Significant population growth is not expected. Some could occur with redevelopment and if more vacation rental homes become owner occupied on a year-round basis. Therefore, there are no significant dominant growth-related conditions that influence land use, water quality, and other environmental concerns in the planning area.

The issues identified at the Town meeting related to land use compatibility are maintaining private beach access and the low density residential character of the Town, not allowing lots to be further subdivided or combined to increase density, and prohibiting development of green and common areas. The Town residents want to maintain NC 12 as a two-lane road, want no widening of neighborhood streets, and to prohibit cut-through traffic. The residents also want a well thought out capital improvement plan. A stormwater management program was endorsed along with prohibiting the pumping of stormwater into the sound. They also wanted the capital improvement projects to be coordinated with stormwater management projects. The maintenance and protection of dunes and dune vegetation is a high priority to the community, as well as the reduction of fire hazards, and maintaining setbacks from the ocean and sound. The residents expressed the desire to protect and preserve trees and vegetation and prohibit clear

cutting. Regular maintenance of the canals is supported. Lifeguard services were also supported.

The six management topics and the key land use and development issues important to the planning areas follow:

- Public Access - Southern Shores access to beaches and public trust waters are private. It is recognized that lack of public access to beaches means that the Town is not eligible for beach nourishment funds from the State.
- Land Use Compatibility – Redevelopment of older smaller housing units to larger homes is a key issue. Limiting future commercial development, and issues to minimize its primary and secondary impacts on coastal resources are of key importance to the community.
- Infrastructure Carrying Capacity – Developing a capital improvement program and stormwater strategies is a key issue to ensure that infrastructure supports planned development and protects areas of environmental concern (AEC's) and fragile areas.
- Natural Hazard Areas - Maintaining and improving policies that reduce community vulnerability to natural hazards is a key issue.
- Water Quality - Maintaining the Town's canals and ensuring water quality is protected is a key issue.
- Local Areas of Concern – Transportation, stormwater and a more northern bridge from the mainland to the Outer Banks are local issues of concern.

Population and Growth Trends

This 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. Since the Plan was drafted prior to the 2010 U.S. Census, the data reflects the 2000 U.S. Census and does not reflect the actual 2010 census counts.

The population of Southern Shores includes permanent residents (full time and part time) and non-residents (property owners, seasonal/holiday visitors, and day visitors).

The permanent population refers to those persons who 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 estimated seasonal population for Southern Shores in 2008 is 5,192. 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. The dominant growth -related conditions that influence land use, water quality and other environmental concerns are: redevelopment of smaller single-family homes to larger homes used for seasonal purposes, and building on vacant lots. There is relatively little land zoned for new commercial development within the Town.

Tables 1, 2 and 3 present the evolving population growth for Southern Shores.

Table 1 - Population Growth in Southern Shores & Dare County

Year	Southern Shores	Dare County
1980	520	13,377
1990	1,447	22,746
2000	2,201	29,746
2005 (estimate)	2612	34,790

Source: Data was derived from the US Census Bureau.

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

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 families with children may desire more community facilities such as a community center that has facilities for all ages, including recreational and playground facilities. 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 & 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 2,175 acres contains approximately 2,800 single-family lots of which approximately 490 are vacant, according to Town staff. The Town building data identifies 2,310 units in February 2007 in 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 permanent and seasonal rental homes. The redevelopment of older homes on the east side of 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 persons) 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 is seasonal rentals.

Tables 5, 6 and 7 provide comparisons of various aspects of housing in Southern Shores.

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.

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

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 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 490 unimproved vacant single family lots remaining within the Town. The small commercial area is also almost entirely built out.

Table 7 - Owner Occupied 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	1985	1994	5.2	\$249,145
Municipal Average				

Source: 2000 US Census

Economic Trends

According to the 2000 U.S. Census, 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 receipts and gross retail sales tax receipts have generally been steadily increasing during the last twenty years (1988-2008) 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.

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 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 & 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. The suppressed category means that data is not readily available in this analysis.

Projections

The North Carolina State Data Center (NCSDC) provides population projections for all counties, but not municipalities. Table 9 provides the State Data Center projections for Dare County for twenty years, and Southern Shores' percentage share of the population as of 2000. The projections assume that Southern Shores percent of the county's share of the population remains the same throughout the planning period. Since the Plan was drafted prior to the 2010 U.S. Census, the data reflects the 2000 U.S. Census and does not reflect the actual 2010 census counts.

Table 9 - Town & County Population Projections

Year	Town	Dare County
2000	2,201	29,967
2005	2,393	32,615
2010	2,588	35,263
2015	2,802	38,183
2020	3,016	41,103
2025	3,231	44,023

Source: North Carolina State Data Center

The Town felt that the projections provided above were too low and developed the population projections provided in Table 10. The population projections for the Town of Southern Shores assume an annual average growth rate of 4.7 percent.

Table 10 - Population Projections for Southern Shores

Year	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 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 tear-down and rebuilt seasonal units per year with an average of 8 occupants.

The projections assume that Southern Shores percent of the County's share of the population remains the same throughout the planning period.

The population, housing, and economic trends suggest that land use and development will remain relatively stable. This analysis is based on the fact that (1) all land in Town is currently platted and there are no plans to up-zone any residential districts for increased density of dwelling units (i.e., RS1, R1, R8, and R10) or change zoning requirements in the commercial district, and (2) it is expected that the projected increases can be accommodated within the existing and future land use plans.

B. Natural Systems Analysis

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 commercial Extraterritorial Jurisdiction (ETJ) that abuts Martin's Point.

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 a natural system analysis and a 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, Appendix B). 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/constraints map was developed that shows the extent of environmental features within the study area and the generalized compatibility of development (See Map 3, Appendix B). 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)

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 the Ocean Hazard System. There are no Public Water Supply 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.

Estuarine and Ocean System AEC

The Estuarine and Ocean System AEC is comprised of the following categories: estuarine waters, coastal wetlands, public trust areas, and coastal shorelines (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 adjacent to the study area include Ginquite Creek and its tributaries. These waters are designated as Inland Primary Nursery Areas, even though the species diversity is mainly estuarine dependent finfish and invertebrate species. Currituck Sound adjacent to the western portion of the study area is designated Joint Waters. Shorelines along inland classified waters are public trust shoreline and part of the Coastal Shoreline AEC. North of the tip of Martin's Point is estuarine. The Town's canals within inland waters are regulated as Public Trust 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 water level of estuarine waters. This definition also includes lands within 30 feet of the normal 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.

The Estuarine and Ocean System AEC includes 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 the many tidal creeks within the study area, many of which are not named.

Coastal wetlands 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 wetlands 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 B. Large expanses of salt marsh are found along the southern shorelines of Ginguite Bay. 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 and/or Public Trust shoreline to site the structure landward of wetland areas.

Other coastal wetlands include 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 the reed *Phragmites australis*, an invasive plant species, 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 shorelines 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. Public Trust shoreline is located along Ginguite Bay and canals opening to Ginguite Bay.

The Ocean Hazard AEC

The Ocean Hazard AEC is 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 B). 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 B).

The ocean erodible zones include 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 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.

The inlet hazard zone includes land near the ocean inlets. Inlet shorelines are highly fluctuating land forms, and vulnerable to erosion and flooding. Each inlet hazard zone 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 size of these zones is estimated to encompass those lands that are anticipated to migrate. There are no inlet hazard zones within the study area.

The unvegetated beach zone 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 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 zone 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 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 boundaries of the AECs and their sub-categories are difficult to map at a macro scale, particularly coastal wetlands, shorelines and the ocean hazard AEC. 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, these are:

- 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 AECs

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 AECs in the State designated by the Coastal Resource Commission. There are no Natural or Cultural AECs within the planning area.

Vegetation and Soils

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

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

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

Fore dunes are built with wind deposited material and northern beach grass (*Ammophila breviligulata*), sea oats (*Uniola paniculata*), and salt meadow cordgrass (*Spartina patens*). The roots of these grasses act much like rebar in cement to hold and stabilize the fore dune. Activities that breach or weaken the fore dune, 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 shrub zone contains 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 fore dune, which may be periodically inundated by storm surges over, or through breaks in the fore dune. 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; and a portion of the Town of Kitty Hawk Coastal Reserve, under conservation easement with the State are outside of the study area. In Southern Shores, there is one area under private ownership. These maritime forests are the only maritime forest communities 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 (Appendix B) 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 the 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 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 in Table 11.

Table 11 - 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 Ginquite Creek are two named water bodies 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.

There are no 303(d) listed waters within the study area according to the current N.C. Division of Water Quality listing of impaired waters.

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). Prohibited areas of shellfishing waters include Ginquite Creek.

Determining how well the water body 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 water body 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. Testing to separate animal and human coliform bacteria is expensive. Because of the cost, this testing is not routinely conducted. When the tests were conducted, the coliform bacteria were found to be from animals. A swimming advisory was issued from May 13, 2008 to June 17, 2008 at a "private sound side access" (i.e., the SSCA wading beach) in Southern Shores.

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 few 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 Table 12.

Table 12 - Approximate Water Table Depths on Potentially Developable

Parcel Status	Outer Banks Parcels				
	Depth of 6 Feet	5 - 6 Feet	1.5 - 3.0 Feet	1 - 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 through evaporation.

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 in residential zoning districts of Southern Shores is 30 percent (60 percent in the commercial district). 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 significant problems associated with private septic systems within the study area.

Stormwater

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, gasoline residuals (e.g., 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 Low Impact Development (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.

Effective October 1, 2008, Session Law 2008-211, Senate Bill 1967 made changes to the Coastal Stormwater Rules from the Division of Water Quality. The new rules apply to:

1. Activities that require a CAMA major permit or an erosion and sedimentation control plan (sites that disturb one acre or greater)
2. Areas within ½ mile of shellfishing waters (SA waters) and those within 575 feet of ORW
3. Areas not within ½ mile of shellfishing waters (non-SA waters)

The Town of Southern Shores has limited situations which would be applicable. The Town has only two platted parcels of greater than one acre which are non-residential that would require either a major CAMA permit or an erosion sedimentation plan. There are no SA waters within the Town's jurisdiction and no platted parcels of over one acre within 575 feet of ORW at this time. If in the future, any parcel falls within any of the above perimeters then the Coastal Stormwater Rules would apply.

Flood and Natural Hazard Areas

The Southern Shores Hazard Mitigation Plan (September 23, 2008) states that hurricanes and nor'easters are the two major natural threats to Southern Shores because of flooding concerns (see Table 13).

Hazard	Likelihood of Occurrence	Location	Impacts	Hazard Index
Hurricane	Likely	Large	Limited	5
Nor'easter	Highly Likely	Large	Limited	5
Wildfire	Possible	Small	Limited	3
Thunderstorm / Lightning	Highly Likely	Medium	Negligible	3
Coastal Erosion	Highly Likely	Medium	Negligible	3
Tornado	Possible	Small	Limited	2
Heat Wave / Drought	Possible	Large	Negligible	2
Landslide / Sinkhole	Unlikely	Small	Negligible	1
Severe Winter Storm	Possible	Large	Negligible	1
Earthquake / Tsunami	Unlikely	Large	Catastrophic	1

Source: Town of Southern Shores Hazard Mitigation Plan, September 23, 2008

The *Hazard Index* is a scoring system based on a 1 to 5 scale, with 5 being the highest possible score and 1 being the lowest. The score is obtained by how much impact and how frequently the hazard might affect the community.

The 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 the Community Rating System (CRS). The 100-year floodplain defines the flood hazard areas. The flood hazard areas in Southern Shores are mapped in two classifications (see Map 6, Appendix A):

- 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. The Town continues to be an active participant in the National Flood Insurance Program (NFIP). 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 Maps 5 and 6, Hurricane Storm Surge and Flood Hazard Areas in Appendix B.

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

- Reduce flood losses
- Facilitate accurate insurance ratings
- 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.

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.

The progressive loss of salt marsh along coastal shorelines has adversely affected 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 (also known as Cypress Pond) is an example of a rare non-coastal wetland that is designated as a Natural Heritage Site. Another non-coastal wetland type found in the study area is the freshwater marsh. They are defined as herbaceous areas that are flooded for extended periods during the growing season within the study area. Freshwater marshes often occur 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 (*Typa 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, 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.

Within the planning area, Ginquite Creek and associated canals are water bodies designated as primary nursery areas (PNAs) by the NCWRC as stated under Administrative Code 15A NCAC 10C.0503 (3) (a). PNAs are defined as areas inhabited by embryonic, larval, or juvenile life stages of marine or estuarine fish or crustacean species due to favorable physical, chemical or biological factors. Activities that would cause significant adverse impact to these aquatic systems should be avoided.

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 areas that may be included in or overlap with those managed in the Areas of Environmental Concern (AEC) or may include non-coastal regulated resources, such as non-coastal wetlands. The Albemarle/Pamlico estuarine and barrier island system and their geomorphology may be considered “fragile” by some but are in fact a highly dynamic, complex and rapidly changing coastal system. That is not to say that some of these areas cannot be easily damaged by natural and human activity. Some of these areas may contain valuable natural resources, such as high quality sand deposits, that could potentially be affected by incompatible development. Map 8 (Appendix B) shows the location of the Southern Shores Cypress Swamp, an area considered to be a fragile environmental area.

Protected and Natural Heritage Areas

Natural Heritage Areas include those lands that support unique or rare plants, animals or other important ecological features identified by the North Carolina Natural Heritage Program. One of these areas, the Cypress Swamp (also known as the Cypress pond), is located in Southern Shores (see Map 8, Appendix B).

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, the sand heather (*Hudsonia tomentosa*), and maritime pinweed, (*Lechia Maritima* var. *virginica*).

Although Cypress Swamp has been designated as a Significant Natural Heritage Area, this designation is not associated with any regulatory program and designated sites carry no protection status of their own. In addition, it is not afforded protection from development by State or local regulation and does not have a conservation easement or other protection for conservation or preservation purposes.

The Cypress Swamp area, as well as other isolated dune areas, might be considered as a source of sand or an area for future development. This is not the case. These areas are zoned RS1 (Single Family Residential District). The Town is currently fully platted and there are no plans to up-zone any residential district for increased density of dwelling units. In addition, the Cypress Swamp area is owned by one of the Town’s civic associations whose covenants and by-laws make it very difficult for the civic association to change the ownership or use of this property for any purpose other than a conservation area.

Although Dare County is a “hotspot” of species diversity with several known endangered and threatened species, the Town of Southern Shores is not known to have any of these species.

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 B). 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 14. There were no changes made to the default model.

TABLE 14 – 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 Area
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 B)

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.

C. Analysis of Land Use and Development: Existing Land Use Map

Existing land use within the study area is shown on Map 12, Appendix B. Additional information on each of the land use categories is contained in Table 15.

Table 15 - EXISTING AND FUTURE LAND USE			
Category	Acres	%	Description
Residential	1593	73%	Vast majority of the residential area contain 20,000 square foot lots that are zoned “Single Family Residential” with the remainder zoned as “Multi-Family Residential.”
Commercial	56	3%	This area consists of destination service oriented stores and professional services.
Municipal	3	0.1%	Town hall, Pitts Center (meeting rooms and civic association offices), police department and public works facilities.
Recreational	322	15%	Golf course, small non-commercial marinas (that do not have fuel or pump-out services), parks, walking / biking paths and beach / sound access areas
Educational	14	1%	Elementary school and associated outdoor play areas
Conservation	187	9%	Unimproved areas left in a natural state. The Cypress Swamp Significant Natural Heritage Area (about 30 acres) is part of this area.
Total	2175	100	

Source: Dare County tax base

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 is seasonal rentals.

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 owns limited property, including the roadways, the canal bottoms, the Public Works facility, Town Hall and Pitts Center (meeting rooms), and the cemetery. There are no designated historic, cultural or scenic areas within the Town of Southern Shores.

The Town originally was platted and subdivided as a planned residential community designed for single family detached housing. There are a few 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) and Southern Shores Landing (with densities of eight units per acre). Most of Southern Shores has a minimum of 20,000 square foot lots with permitted densities of 2 units per acre. All zoning districts limit building height to 35 feet.

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. It should be noted that there are areas of vacant land along Ginguite Bay that are not platted. These areas contain wetlands and are not to be developed.

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, Inc., a new addition to Southern Shores Realty, a new marina at the Southern Shores Civic Association, and remodeling of existing commercial properties.

There are no industrial uses or zoning, dedicated open space, agriculture, forestry or confined animal feeding operations within the Town limits.

Martin's Point is a gated, platted subdivision with land use restricted to single-family residences and associated accessory uses. It is located west of and adjacent to the Town of Southern Shores. Along the southern boundary of the Martin's Point subdivision there is an area of commercial development. Until October 2000, both the residential and commercial sections of Martin's Point were considered to be within the Southern Shores' extraterritorial jurisdiction (i.e., Southern Shores has the authority to plan and regulate development in areas immediately outside the Town's corporate limits). The residential portions of Martin's Point reverted back to the County's jurisdiction in October 2000. This residential area is not in the study area. However, the commercial area is still considered to be under the extraterritorial jurisdiction (ETJ) of Southern Shores.

The land use conflicts that currently exist are flood hazards, water quality, and soil septic limitations. These conflicts are mainly due to the fact that these concerns were not recognized at

the time Southern Shores was platted and began to be developed. It should be noted that, to date, these conflicts have not caused major problems.

The State building code, Town ordinances, zoning, and LUP goals and policies attempt to minimize any problem resulting from these conflicts. Because the Town is close to being built out and major zoning changes are not expected, development during the planning period is likely to be in the areas of infill and tear down/redevelopment. This scattered development is not expected to cause significant conflicts on Class II or Class III land identified on the Environmental Composite/Constraints map (Map 3, Appendix B).

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 (through 2008), the Town’s supply of vacant lots will be developed in approximately seven to eight years. The limited number of remaining vacant lots in Southern Shores, coupled with the near build-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.

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 foot lot in RS-1 only, 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. Although the Town does regulate land within the commercial ETJ, it does not plan to expand its jurisdiction beyond its current boundaries and commercial ETJ.

Projecting residential land demand for the next twenty years assumes that the current rate of building (470 units between 2000 and 2006) continues over the next twenty years irrespective of actual land availability. Land demand projections are shown in Table 16 below:

Year	Single Family Acreage	Multi-Family Acreage	Non-Residential Acreage
2005	47	0	7
2010	47	0	0
2015	47	0	0
2020	47	0	0

2025	47	0	0
Total	235	0	7

Source: Town of Southern Shores

In the next twenty years, commercial development is, and is expected to remain, limited to small scale local convenience shopping and service establishments at the southern boundary of the town. No industrial, agricultural, big-box retail and entertainment businesses exist or are desired. Assuming current commercial building restrictions will remain in place, commercial land demand in the next twenty years is expected to grow minimally. Therefore, the demand for commercially zoned land in Southern Shores is deemed adequate to meet the needs for the next twenty years.

Regional Growth and Development Issues

Within the northern 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 work together to help solve transportation and regional 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 and is working to address stormwater issues through coordinated study, planning and recommended actions. It is important to consider that the future health and sustainability of the region can be enhanced for the various jurisdictions if collaborative planning can occur.

D. Community Facilities Analysis

The Town of Southern Shores has a Council-Manager form of government as provided in G.S. Chapter 160A, Article 7, Part 3. The Town Council, consisting of a mayor and four additional Council members, is the governing body. The Town Council sets the Town's policies, enacts ordinances and adopts the annual budget. The Town Manager is appointed by the Town Council and administers the daily operations of the Town and 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. The 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 Town staff. This tradition is carried on with volunteers serving on a variety of Town boards and commissions.

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 uniformed personnel. The chief of police is appointed by and reports to the Town Manager.

The Southern Shores Volunteer Fire Department, Inc. is a non-profit corporation. It provides fire protection service and emergency medical support to Southern Shores under a contract with the Town. The department also provides citizen education regarding fire safety.

The Southern Shores Emergency Management Team is organized to provide assistance to residents and visitors in times of natural disasters, 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
- 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 may be 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.

Electrical and Natural Gas Systems

Dominion Power provides electrical service to the Town of Southern Shores. This service is provided through a combination of above ground and underground cables. Due to current ordinances, future service is to be underground unless new service is requested in an area with existing above ground service. Currently there are no plans for eliminating above ground

electrical service. Due to the Town's nearly built-out development, there is adequate power to supply all Town needs now and in the foreseeable future.

Currently, the Town has very limited natural gas service. This service is along South Dogwood Trail from the corner of South Dogwood and NC 158 to the Duck Woods Country Club. These facilities are located underground.

Water Supply System

The Dare County Water Department provides water service to the community. It promotes safe, clean, healthy, fresh water for drinking and other purposes. The Water 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 B).

The Dare County Regional Water System provides drinking water for approximately 33,800 permanent residents and summer tourists through four distribution systems. Southern Shores water is provided by both the Skyco Water Plant and the North Reverse Osmosis Plant. The Skyco plant produces 10.4 million gallons per day (MGD) and the North Reverse Osmosis Plant produces 4.7 MGD. Because it is a county-wide system, the Dare County Water Department is unable to separate Southern Shores' demand for water or any unused capacity to Southern Shores.

Due to the expected build-out rate, the population of Southern Shores is expected to increase at a relatively slow pace. With this relatively slow increase in population and the state of the drinking water infrastructure, water service provided by Dare County is expected to accommodate development over the planning period.

Wastewater Collection and Treatment

The Town relies on individual wastewater septic systems. Septic tank 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 Southern Shores" indicated a split in public opinion for providing sewer service to the Town.

Although the call for a sewer system was raised at the Town meeting, it was a minority opinion. There are no documented reports or data indicating significant numbers of septic tank failures in Southern Shores according to Town Staff. However, it has been recommended that the Town be proactive and consider a septic tank maintenance program.

Transportation Systems

Nearly all of the streets in Southern Shores are owned and maintained by the Town. For the most part these roads are in relatively good shape, even though many of the roads are 25-30 years old. The Town's Capital Improvement Plan (CIP) has identified and prioritized those roads needing repairs.

The North Carolina Department of Transportation (NCDOT) is responsible for and maintains NC 158, which borders the southern edge of the Town, and NC 12, which is the major north-south through road in Southern Shores (see Map 9, Appendix B). During the summer tourist season, particularly on the weekends, these roads carry large traffic volumes and can become quite congested. To avoid this congestion on the weekends, many vehicles cut through Southern Shores. This additional traffic, along with heavy vehicles (e.g., trucks and buses), has caused additional wear and tear on the Town's streets.

Due to the large traffic volume and the need for better evacuation of the northern Outer Banks, a new mid-Currituck bridge has been proposed. Because of the potential for reducing summer traffic on NC 158, NC 12 and the cut-through traffic, the residents of Southern Shores strongly support building the mid-Currituck bridge.

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.

The safety of US 158 and the seasonal traffic increases were a high priority of the survey respondents of the 2005 Long Range Plan (a plan accepted by, but not adopted by, the Southern Shores Town Council). The 2005 Southern Shores Long Range Planning Committee Report identifies construction of the Mid-Currituck Bridge as a priority, and calls for the Town to work with appropriate NCDOT, NC Turnpike Authority and local committees to get the construction of the bridge started.

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.

The bridge is not anticipated to induce growth in Southern Shores because of the bridge's distance from the Town and the fact that there is relatively little available vacant land in the Town.

Another important transportation issue in Dare County is ocean overwash and erosion resulting from coastal storms. However, ocean overwash has not been, and is not expected to be, a problem in Southern Shores.

Bicycle paths and walkways are located along some of the Town's streets, NC 158 and NC 12. These pathways are used by large numbers of Town residents and visitors. Southern Shores wants to maintain, expand and connect the multi-use path system throughout the Town. This convenient multi-use pathway system will encourage and support a variety of recreational activities and promote health for the Town's citizens and visitors. It is Town policy that when a Town street must be replaced or upgraded, consideration will be given to potential upgrades to maintain or improve pedestrian and bicyclists safety.

Although not associated with the multi-use/bike paths, improvements have been made to several crosswalks along NC12. These crosswalks connect the multi-use/bike path along NC 12 to beach access paths (some improved, some un-improved). The safety of these crosswalks is being evaluated. The goal is to make pedestrian access to the beach as safe as possible

Because the Town is completely platted and the population of Southern Shores is expected to increase at a relatively slow pace, any improvements in the transportation system are not expected to change development patterns or put undo developmental pressure on the Town.

Stormwater Systems

Although Southern Shores does not have point-source discharges that cause water quality issues, several locations within the Town are subject to local flooding during some rainfall events.

The soils associated with the canal side of the Chichahauk community are soil types that would have been small hammocks within an old marsh or back barrier bay. Dune migration occurred westward, burying these areas of vigorously growing plant materials. These organic rich hammocks decomposed and are currently identified as peat layers buried at various depths below the sand. These buried peat layers have a lower hydraulic conductivity (the rate water moves through soil) than the sandy soils around them. This causes a physical barrier to the otherwise

rapid movement of rainwater through the soil profile. Also, thick mats of organic material may actually repel water (hydrophobic) moving through the soil.

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 Town’s Stormwater Management Report from the Stormwater Policy Advisory Committee identifies localized areas with drainage problems. Table 17 summarizes this information.

TABLE 17 – LOCALIZED STORMWATER		
1	370 Sea Oats Trail	Subbasin E1-A
2	37 Eleventh Ave	Subbasin E1-D
3	30 Twelfth Ave @ NC 12	Subbasin E1-E
4	30 Thirteenth Ave & Sea Oats Trl @ NC12	Subbasin E1-E
5	222 and 236 Sea Oats Trl	Subbasin E3-D and E3-B
6	E. Dogwood Trl @ Duck Rd	Subbasin E3-IJK
7	177 Ocean Blvd	Subbasin E4-N
8	141 and 145 Clam Shell Trl	Subbasin E6-E1, E6-E2
9	125 Ocean Blvd	Subbasin E6-N
10	135 Ocean Blvd	Subbasin E6-O
11	Ocean Blvd @ Duck Rd	Subbasin E6-P
12	Ocean Blvd @ Skyline Rd	Subbasin E7
13	3 Ocean Blvd and NC12	Subbasin E8-E
14	309 N. Dogwood Trl	Subbasin W4-C
15	39 N. Fox Grape	Subbasin W10-D
16	163 Chicahauk Trl	Subbasin W10-H3
17	185 Chicahauk Trl	Subbasin W10-F2
18	95 and 109 Trinite Trl	Subbasin W10-I
19	8 Juniper Trl	Subbasin W10-V
20	56 Deer Path Ln	Subbasin W11-E4
21	61 Duck Woods Rd	Subbasin W11-E6
22	19 Ginguite & Pintail Mitigation	Subbasin W11-O
23	15 S. Dogwood Trl @ Pintail Trl/Pintail Ct	Subbasin W11-Q
24	Kitty Hawk Elementary School @ S. Dogwood Trl	Subbasins W11-R, W11-S

TABLE 17 – LOCALIZED STORMWATER		
25	44 E. Dogwood Trl (Dip)	”improved”
26	26 Widgeon Ct	Subbasin W11-W
27	Dewberry Court	Subbasin W10-C
28	NC12 and 4 th Ave	Subbasin E2-5

Source: Southern Shores Stormwater Report

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 evaluated information from three studies performed at the direction of the Town. These are:

- The NC 12 Drainage Improvements
- Town of Southern Shores Drainage Study
- Analysis of Flooding within the Chichahauk 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. These are:

- Address the need for ongoing financial support to pay for stormwater management in the Town of Southern Shores.
- Adopt ordinance changes for new development and redevelopment to help prevent flooding and stormwater runoff.
- Appoint a Committee to prioritize and coordinate the design of sub-basin solutions for each of the 28 identified localized flooding problem areas, considering the hydro geography of each drainage area.

The Town of Southern Shores plans to install stormwater improvements individually either in association with Street Improvement Projects or as defined in the Capital Improvement Plan. The Town of Southern Shores Stormwater Management Program Drainage Study prepared by Quible & Associates, P.c., and the Stormwater Study of the NC 12 corridor entitled "NC 12 Drainage Improvement Report" as prepared by Vanasse Hangen Brustin, Inc., will be referenced in the design of the improvements.

Effective October 1, 2008, Session Law 2008-211, Senate Bill 1967 made changes to the Coastal Stormwater Rules from the Division of Water Quality. The new rules apply to activities that:

1. Require a CAMA major permit or an Erosion & Sedimentation Control Plan (sites that disturb one acre or greater)
2. Are within ½ mile of Shellfishing Waters (SA waters) and within 575 ft of ORW
3. Are not within ½ mile of Shellfishing Waters (non-SA waters)

The Town of Southern Shores has limited situations which would be applicable.

At this time, The Town has only two platted parcels of greater than 1 acre which are non-residential that would require either a major permit or an erosion sedimentation plan. There are no SA waters within the Town's jurisdiction and no platted parcels of over one acre in the ORW at this time. If in the future, any parcel falls within any of the above parameters then the Coastal Stormwater Rules would apply.

Non-Traditional Utilities

Non-traditional utilities include services such as wireless communication, wind power and solar power. Nearly all of Southern Shores is wired for telephone and cable television. These services are carried thru both above ground and underground cables/wires.

At this time, wireless communication antennae are only located on the water tower near the Kitty Hawk Elementary school and on the water tower in Duck, NC. The location of these antennae has resulted in a large "hole" in wireless service in the middle of Town. This wireless service "hole" is expected to be eliminated if a new wireless tower(s) is constructed.

As people search for ways to reduce their energy costs, increased interest in installing solar panels and small scale (non-commercial) wind turbines is increasing. This interest is mirrored in Southern Shores. Currently there are a few solar panels in Town. However, wind turbines are not permitted in Southern Shores.

Civic Associations

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 largest civic associations, and those owning the most land, are the SSCA and the CPOA.

The SSCA was established before the Town was incorporated. 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 the Currituck Sound.
- Sea Oats Park, which contains a soccer field, basketball court and a children's playground.
- Hillcrest beach access, with parking, a gazebo and other seating areas.
- Soundside wading beach, with picnic area and playground.
- Hillcrest tennis courts.

- Three marina properties that provide wet and dry storage areas for boats, a boat launching ramp and at one marina, a pavilion for social events and gatherings. (In an effort to protect water quality, the marinas do not have fuel pumps or pump out stations for sewage and living aboard a boat is not permitted by the Town.)

The CPOA maintains facilities for Chicahauk citizens and guests. Chief among these are:

- Trinitie Park, which contains a basketball court, pavilion, picnic tables, Bocce court, playground, ball field, and tennis courts.
- A parking lot near the Chicahauk beach crossover.

E. 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, the plan steering committee, Town staff and Council, and residents 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 B). 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 plan Steering Committee in their decisions regarding the appropriateness of development. The default rankings and weights were not changed from the model. The assessment of existing land use was updated using both the Town parcel data and 2005 aerial photography. Flood zone information was based on the September 20, 2006 flood insurance rate map. Each one acre grid was assessed qualitatively, and assigned a value based on which buildings or developments were visible in the aerial photograph. The results of this analysis are shown in Table 18.

TABLE 18 – LAND SUITABILITY ANALYSIS FACTOR RATINGS AND WEIGHTS (UNCHANGED)					
Layer Name	0	1	2	3	Initial Assigned Weight
Coastal Wetlands	Inside	Outside			3
“404” wetlands	Inside	Outside			3
Estuarine waters	Inside	Outside			3
Protected lands	Inside	Outside			3
Storm Surge areas		Inside		Outside	2
Soils (septic limit)		Severe	Moderate	Slight	2
Flood zones		Inside		Outside	2
HQW/ORW watersheds		Inside		Outside	1
Natural Heritage Areas		500 feet		500 feet	1
Hazardous waste sites		500 feet		500 feet	1
NPDES sites		500 feet		500 feet	1
Wastewater treatment		500 feet		500 feet	1
Discharge points		500 feet		500 feet	1
Land application sites		500 feet		500 feet	1
Airports		500 feet		500 feet	1
Developed land		1 mile	0.5 - 1.0 mi.	0.5 mi.	1
Major roads		1 mile	0.5 - 1.0 mi.	0.5 mi.	2
Water lines		0.5 mi.	0.25 -0.5 mi.	0.25 mi.	3

TABLE 18 – LAND SUITABILITY ANALYSIS FACTOR RATINGS AND WEIGHTS (UNCHANGED)					
Layer Name	0	1	2	3	Initial Assigned Weight
Sewer Pipes		0.5 mi.	0.25 - 0.5 mi.	0.25 mi.	3

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 B). Existing land use is illustrated on Map 12, in Appendix B.

F. Review of Current 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 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
- 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 NC 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 Chicahawk 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.

IV. Plan for the Future

A. 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 improve recreational opportunities.
2. To protect, enhance and support land uses that are compatible with surrounding land uses and maintain the existing 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.

B. Land Use and Development 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.

The Town's policies do not exceed those of the State and Federal requirements; rather they almost always supplement and support State and Federal policy.

Definitions

Definitions of the terms used that indicate the Town's commitment to the policies follow:

Adequate:	sufficient to achieve intended purpose
Allow/permit:	authorize, let something happen
Consider:	to think about carefully
Continue:	follow past and present procedures to maintain desired goal
Control:	to regulate or direct
Discourage:	to not favor; to dissuade
Encourage:	to favor or foster

Endorse:	to approve of an action
Ensure:	to make sure, certain or safe
Establish:	to bring into existence or institute permanently
Identify:	catalog and confirm resource or desired item(s)
Implement:	to carry out or accomplish
Limit:	to bound, restrain, maintain or reduce
Maintain:	keep in an existing state or good condition
May:	provides the option, but not required
Preferred:	among alternatives, the favored course
Prohibit:	not allowed; period
Promote:	to proactively encourage, positive steps
Protect:	to guard against a deterioration of a desired state
Require:	to mandate something
Shall:	mandatory, not optional
Should:	ought to, if no valid reason not to
Significant:	important, as determined by impact
Support:	to shore up; may imply financial support

Public Access

CAMA Management Goal

Maximize public access to the beaches and the public trust waters of the coastal region.
--

CAMA Planning Objective

Develop comprehensive policies that provide beach and public trust water access opportunities for the public along the shoreline within the planning jurisdiction.
--

Policy 1 The Town will continue to recognize existing private ownership, control, and maintenance of current accesses to the beach and public trust waters.

Action Item 1-a Currently the Town does not own or control access to public ocean or sound-front beaches, or to public trust waters – from a public street or road. If a reasonable opportunity arises, the Town will consider acquiring title or control of any such accesses.

Land Use Compatibility

CAMA Management Goal

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.
--

CAMA Planning Objective

- | |
|---|
| <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/private projects. |
|---|

Policy 2 The community values and the Town will continue to comply with the founder’s original vision for Southern Shores: a low density (1–3 units per acre) (see Map 13 Land Use Densities) residential community comprised of single family dwellings on large lots (20,000 square feet or larger) served by a small commercial district (56 acres out of 2,175 acres) for convenience shopping and services located at the southern end of the Town. This blueprint for land use naturally protects environmental resources and fragile areas by limiting development and growth.

Action Item 2-a The Town will promote the maintenance of the boundaries of all zoning districts as they were defined as of September 2007.

Action Item 2-b The Town shall encourage the use of low impact development techniques and sound environmental preservation practices for all new development, remodeling and redevelopment within Southern Shores.

Infrastructure Carrying Capacity

CAMA Management Goal
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.
CAMA Planning Objective
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.

Utilities

Policy 3 Encourage development/redevelopment that considers land suitability, and avoids fragile areas. This includes all forms of communications and power supply infrastructure systems, and natural gas.

Action Item 3-a Maintain long range plans for public infrastructure systems to ensure that these systems are appropriately sized, located and managed to deliver the services the community needs while protecting adjacent environmental resources.

Action Item 3-b Encourage the use of defined service level standards in conjunction with demand estimates for both residents and seasonal visitors as a basis for determining infrastructure capacity requirements.

Wastewater and Water Systems

Policy 4 The Town endorses the proper use and maintenance of approved septic systems in suitable soils for treating and disposing of waste from both low-density (1–3 units per acre) and high density (4-10 units per acre) development (see Map 13 Land Use Densities).

Action Item 4-a Consider the establishment of a septic maintenance program to encourage the use of the best available technology and management practices to eliminate odors, avert impacts to adjacent properties and prevent degradation of water quality.

Policy 5 The Town may allow commercial and municipal sites to use package sewage treatment plants as an alternative means of treating waste to traditional septic systems when and only when traditional septic is environmentally infeasible.

Action Item 5-a Follow State requirements for package sewage treatment plants including but not limited to: permanent organizational ownership backed by financial guarantees to ensure the proper management, operation, maintenance and replacement of the plant.

Policy 6 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 for personal use and fire protection.

Action Item 6-a Review water line extensions to ensure adequate water line capacity, pressure and water quality.

Stormwater Management

Policy 7 Support stormwater management programs that reduce flooding and improve coastal water quality.

Action Item 7-a Consider the development of a stormwater management program for all properties and roadways, based on the Stormwater Management Report (2007).

Action Item 7-b Encourage the use of Low Impact Development (LID), vegetative buffers to filter stormwater, impervious surface limits, and innovative stormwater management alternatives to reduce runoff and to improve water quality.

Action Item 7-c Implement the following *performance standards* to ensure that all stormwater management facilities and infrastructure within Southern Shores, whether public or private, are designed, constructed and operated in a manner that, to the fullest extent possible:

1. Eliminates flooding without intensifying other runoff related problems
2. Preserves and enhances the natural drainage systems within the Town [as defined in the Quible Drainage Study (March 2006)]
3. Contributes to preserving and enhancing overall water quality
4. Does not require power to function
5. Requires minimal regular maintenance to function properly

Action Item 7-d Implement *engineering design standards* for stormwater management and infrastructure.

Action Item 7-e Support and request NCDOT to make necessary stormwater improvements to NC 12 as outlined in the TOSS stormwater report.

Transportation

Policy 8 Maintain NC 12 as a two-lane highway, with no additional through lanes or two-way continuous turn lanes.

Action Item 8-a Continue to support and encourage NC DOT, Dare County and its municipalities to develop a Comprehensive Transportation Plan for Dare County.

Action Item 8-b Continue to support a new Mid-Currituck bridge.

Action Item 8-c With the exception of widening NC 12 in Southern Shores, support improvements to NC 12 and US158. These improvements will provide traffic relief, improve emergency access to and evacuation from the Outer Banks.

Policy 9 Ensure an adequate system of roads, bridges and pathways to meet the transportation and pedestrian safety needs of the Town in a way that protects, preserves and where possible improves the environment and water quality.

Action Item 9-a Consider development of a town road maintenance plan for general repairs, tree root control and tree trimming, road resurfacing crack sealing, and right-of-way clearance.

Action Item 9-b Integrate transportation and stormwater management planning 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.

Action Item 9-c Develop and implement a plan to expand, maintain and enhance a multi-purpose path network within the Town.

Action Item 9-d To improve public safety, support transportation projects that promote interconnectivity for emergency vehicles.

Canals

Policy 10 Maintain the aesthetic quality and navigability of the town-owned canal system.

Action Item 10-a Maintain programs for town-owned canal and lagoon system maintenance that includes but is not limited to: periodic dredging, control of overhanging vegetation and debris removal.

Action Item 10-b Encourage the owners of canal front properties to stabilize the canal/lagoon banks through appropriately designed, installed and maintained bulkheads or other means of stabilization and to maintain all appurtenant structures including but not limited to docks, piers, boat lifts and ramps in an environmentally sustainable manner.

Solid Waste

Policy 11 Encourage the practice of waste reduction, reuse and recycling.

Action Item 11-a Continue to provide trash pickup, curb side recycling, large item pickup, and chipping programs.

Public Safety

Policy 12 The Town shall encourage and support the improvement of all of the public safety services [i.e., the TOSS Police Department and Southern Shores Volunteer Fire Department, Inc. (a Town contractor), ocean rescue (a Town contractor), and the Dare County EMS rescue services] to enhance the security and safety of the life and property of Southern Shores citizens.

Action Item 12-a The Town should annually evaluate public safety services (i.e. law enforcement, fire fighting and rescue) needs to ensure sufficient resources are made available for proper equipment, training, staffing, and volunteers.

Action Item 12-b The need for additional/new fire stations or improvements to existing fire stations should be examined, in conjunction with the Southern Shores Volunteer Fire Department, Inc.

Policy 13 Maintain lifeguard services.

Action Item 13-a Annually evaluate the lifeguard services to assure that they meet the Town's needs.

Parks and Recreation

Policy 14 Encourage the protection, preservation, maintenance and use of common areas and open space.

Action Item 14-a Maintain a dialog with and promote civic associations regarding their open space and recreational facilities.

Natural Hazard Areas

CAMA Management Goal

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.

CAMA Planning Objective

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

Policy 15 Support and implement the Dare County Hazard Mitigation Plan as it applies to Southern Shores.

Action Item 15-a Coordinate Southern Shores efforts to maintain a hazard mitigation plan with Dare County and other municipalities.

Policy 16 Increase flood awareness

Action Item 16-a Continue enforcement of the zoning ordinances as a hazard mitigation tool.

Action Item 16-b Identify “at risk” X Zone properties for added emphasis on flood risks and notify the responsible agencies about discrepancies between floodplain maps (FIRM vs SLOSH).

Action Item 16-c Continue enforcement of the Flood Damage Prevention Ordinance.

Action Item 16-d Implement stormwater management regulations.

Policy 17 Reduce the Town’s vulnerability to wildfires

Action Item 17-a Continue the enforcement of the NC State Fire Prevention Code, referenced by the Town’s Fire Code.

Action Item 17-b Continue enforcement of the Lot Disturbance provisions of the Town’s Zoning Ordinance.

Action Item 17-c Support continued testing of fire hydrants (including hydrant function and water pressure) once a year, recording data, and attaching blue reflectors on the roads to ease night spotting of hydrants.

Policy 18 Minimize and mitigate potential damages to individual properties from natural hazards.

Action Item 18-a Continue implementation of the Beach and Waterway Ordinance.

Action Item 18-b While considering resources needed, seek the most points available from the Community Rating System to keep flood insurance costs to the citizens as low as possible.

Action Item 18-c Conduct the canal inspection and debris removal program twice a year.

Action Item 18-d Continue enforcement of the State building code, including wind load requirements.

Action Item 18-e Provide property owners and developers with information regarding the construction of FEMA “safe rooms” from the effects of tornadoes and severe storms.

Policy 19 Integrate natural resource protection polices with property protection measures.

Action Item 19-a Continue enforcement of the Dune Protection regulations.

Action Item 19-b Coordinate and adjust wildfire prevention efforts with vegetation preservation policies.

Action Item 19-c Continue enforcement of the Coastal Area Management Act (CAMA) regulations.

Action Item 19-d Continue enforcement of the State Erosion and Sedimentation Control regulations.

Policy 20 Establish plans to support reconstruction efforts after a natural hazard.

Action Item 20-a Continue to have a Reconstruction Task Force

Action Item 20-b Develop guidelines for reconstruction efforts.

Action Item 20-c Communicate with citizens about plans for and the problems of providing services after a storm event.

Policy 21 Implement activities that assist in protecting lives from the effects of natural hazards.

Action Item 21-a Develop an efficient flood and storm warning system.

Action Item 21-b Continue to monitor NC Turnpike Authority plans for the Mid-Currituck Bridge to expedite evacuation.

Policy 22 Coordinate emergency plans from the impacted services (i.e., water, telephone, electric, fire, rescue, and medical).

Action Item 22-a Encourage food stores, pharmacies, and communication providers (including wireless) within the town to have alternative power supplies during and after storm events.

Action Item 22-b Continue to provide a TOSS Emergency Operations Center.

Action Item 22-c Keep emergency plans current and provide staff with continuing education opportunities.

Action Item 22-d Continue participation in Dare County Emergency Management Plan and operations procedures.

Policy 23 Communicate with citizens about the susceptibility to natural hazards and their effects.

Action Item 23-a Educate citizens on the expected impacts of hazards on daily lives.

Action Item 23-b Continue current public information outreach efforts regarding flooding.

Action Item 23-c Continue e-mail and website services.

Policy 24 The Town shall support protection and maintenance of the dune system.

Action Item 24-a Maintain existing dune vegetation wherever and whenever possible.

Action Item 24-b Restore vegetation and install sand fencing to help stabilize dunes and protect against storm surge.

Water Quality

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

Policy 25 Protect, maintain, and conserve coastal and 404/401 wetlands as established by State and Federal standards.

Action Item 25-a Promote programs and practices that prevent soil erosion and sedimentation, and control stormwater entering the beach and estuarine waters.

Action Item 25-b Encourage and support State and Federal vegetative buffer requirements for all water bodies, canals and lagoons to enhance water quality.

Action Item 25-c Prevent or control non-point source discharges to the Town's waters.

Policy 26 Promote open space, tree protection, and natural vegetation diversity.

Action Item 26-a The Town should work with civic associations to identify and plan for the protection of open spaces and unique natural areas.

Action Item 26-b Encourage lot preparation methods that preserve natural vegetation and minimize clear cutting.

C. Future Land Use

Land Classification Scheme

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 B) 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. The Land Use Plan is used in the consistency review of CAMA major permit applications and inconsistency with the LUP policies and the Future Land Use Plan Map could result in the denial of State Permits, or require an amendment to the Land Use Plan.

Effective January 1, 2006 state statutes require that all (not just CAMA) 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 or board of commissioners must also adopt a statement to address this issue (and also address why the board believes the action taken is reasonable and in the public interest). G.S. 160A-383 and 153A-341. It is also important to note that other state statutes G.S. 160A-382 and 153A-342 specifically require that a statement be prepared analyzing the reasonableness of all conditional use permits (CUP), conditionally zoning, or other small-scale rezoning. The statutes allow substantial flexibility as to how these statements are prepared.. Many jurisdictions have a staff analysis on this issue, often including a draft statement, prepared for planning board and governing board consideration, amendment, and adoption.

Residents of Southern Shores have expressed a strong preference for keeping things the same. Therefore, the land classification system is organized to follow the Town’s vision and preferences for future land use. This system does not preclude, supersede, negate, or repeal current or future zoning regulations and districts; nor does it supersede any private restrictive covenants. The land classification system includes the following land use areas: residential, commercial, municipal, recreational, educational, and conservation areas.

Although not selected as an area in the classification system, it should be noted that there are areas that the Town will protect under the jurisdiction of various State and Federal agencies. These include coastal and freshwater wetlands, estuarine and coastal shorelines, estuarine waters, and public trust waters.

Because of the residents' preference to keep things the same, the size of each of these areas on the Future Land Use Plan Map (FLUPM) (Map 13, Appendix B) is the same as the existing land use map (Map 12, Appendix B) and Table 15 . The boundaries of these areas are also the same.

Land Use Categories

Future land use categories and existing zoning districts are generally compatible. Brief descriptions of the land use categories and zoning districts follow. Specifics on density, intensity, maximum heights, lot coverage, etc. can be found in Tables 15, 20 and 21.

Future Land Use Categories

The largest (72% of the Town's total area) land use category is "Residential" which encompasses 1593 acres. The vast majority of the residential area contain 20,000 square foot lots that are zoned "Single Family Residential." These areas are largely comprised of single family detached dwellings in low density (1-3 units per acre) residential neighborhoods that are to preserve and maintain sand dunes, coastal forests, wetlands and other natural features of the coastal barrier island. The remainder of the residential category is considered high density (4-10 units per acre) and is zoned as "Multi-Family Residential." Dwelling types in these areas typically include single-family, duplex, attached dwellings, and multiple family residential dwellings. In this category, incompatible uses include commercial, educational, and municipal activities.

The "Commercial" area consists of destination service oriented stores and professional services. This area totals 56 acres (3% of the Town's total area). Incompatible uses in this area are limited to residential (low density), educational and conservation activities.

The smallest (0.1% of the total Town's total area) land use category is the "Municipal" category which totals 3 acres. This area contains the Town hall, Pitts Center (meeting rooms and civic association offices), police department and public works facilities. It serves the needs of the community by providing government services and provides a location for a non-profit organization that serves the entire county. Incompatible uses in this area include commercial and educational activities.

The "Recreational" category includes a golf course (the largest component of this category), small non-commercial marinas (that do not have fuel or pump-out services), parks, walking / biking paths and beach / sound access areas. With the exception of the golf course, nearly all of these recreational areas are constructed and maintained by civic associations. The Town does not plan to construct or, because they are privately owned, maintain any recreational facilities. This area totals 322 acres (15% of the Town's total area). Commercial, residential, educational, and municipal activities are incompatible uses in this area.

An elementary school and its associated outdoor play areas make up the “Educational” category. The size of this land use category is 14 acres, 1% of the Town’s total area. All other activities, except conservation, are incompatible uses in this area.

The “Conservation” land use category is unimproved areas left in a natural state. This area totals 187 acres (9% of the Town’s total area). The purpose of the Conservation category is to provide for the long-term management and protection of areas of significance, open space, and other natural areas. Proper management is needed to conserve and maintain the natural, scenic or biologically productive values of these areas. The Conservation category is applied to areas that should not be developed (i.e., 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 category includes:

- Areas of environmental concern, as defined in 15A NCAC 7H (e.g., coastal wetlands, estuarine and coastal shorelines, estuarine waters, public trust waters, etc.).
- 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 US Fish and Wildlife Service.
- Certain critical wildlife habitat areas as may be designated by the State Natural Heritage Program (e.g., the Cypress Swamp Significant Natural Heritage Area).
- 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.

All other activities are incompatible uses in this area.

Table 19 provides additional information on these land use categories.

TABLE 19 – FUTURE LAND USE	
Category	Description
Residential	<p><u>Zoned Use</u> – Low Density Residential (R1), Single Family Residential (RS1) & Multi-Family Residential (RS8 & RS10)</p> <p><u>Density</u> – 2-10 units per acre</p> <p><u>Intensity</u> – 30% lot coverage; 35’ height limit</p> <p><u>Infrastructure</u> – Existing infrastructure (i.e., roads, septic/package treatment systems & utilities) is expected to meet planning period needs. Some capital improvement projects (i.e., road & bridge rebuilds/resurfacing) may be undertaken if resources become available.</p> <p><u>Community Facilities</u> – Community facilities are permitted in residential zones.</p> <p><u>Future Development</u> – Limited infill and redevelopment are expected during the planning period.</p>
Commercial	<p><u>Zoned Use</u> – Commercial</p> <p><u>Density</u> – NA</p> <p><u>Intensity</u> – 60% lot coverage; 35’ height limit</p> <p><u>Infrastructure</u> – Existing infrastructure (i.e., roads, septic/package treatment systems & utilities) is expected to meet planning period needs.</p> <p><u>Community Facilities</u> – No community facilities are planned.</p>

TABLE 19 – FUTURE LAND USE	
Category	Description
	<u>Future Development</u> – Limited redevelopment is expected during the planning period.
Municipal	<u>Zoned Use</u> – Government & Institutional (G&I) <u>Density</u> – NA <u>Intensity</u> – 30%-85% lot coverage; 35’ height limit <u>Infrastructure</u> – Existing infrastructure (i.e., roads, septic/package treatment systems & utilities) is expected to meet planning period needs. <u>Community Facilities</u> – No community facilities are planned. <u>Future Development</u> – Limited redevelopment may occur during the planning period.
Recreational	<u>Zoned Use</u> – Low Density Residential (R1) & Single Family Residential (RS1) <u>Density</u> – NA <u>Intensity</u> – 30%-85% lot coverage; 65’ height limit <u>Infrastructure</u> – Existing infrastructure (i.e., roads, septic/package treatment systems & utilities) is expected to meet planning period needs. Some capital improvement projects (i.e., road & bridge rebuilds/resurfacing) may be undertaken if resources become available. <u>Community Facilities</u> – Community facilities are allowed. <u>Future Development</u> – Limited infill and redevelopment may occur during the planning period.
Educational	<u>Zoned Use</u> – Low Density Residential (R1) <u>Density</u> – NA <u>Intensity</u> – 40% lot coverage; 55’ height limit <u>Infrastructure</u> – Existing infrastructure (i.e., roads, septic/package treatment systems & utilities) is expected to meet planning period needs. Some capital improvement projects (i.e., road & bridge rebuilds/resurfacing) may be undertaken if resources become available. <u>Community Facilities</u> – NA <u>Future Development</u> – Limited redevelopment may occur during the planning period.
Conservation	<u>Zoned Use</u> – Low Density Residential (R1) & Single Family Residential (RS1) <u>Density</u> – NA <u>Intensity</u> – NA <u>Infrastructure</u> – Existing infrastructure (i.e., roads, septic/package treatment systems & utilities) is expected to meet nearly all of the planning period needs. The exception may include an additional wireless tower. <u>Community Facilities</u> – No community facilities are planned. <u>Future Development</u> – Very limited development (i.e., a wireless tower) may occur.

Zoning Districts

The Low Density District (R1) is intended to encourage the development of permanent low density residential neighborhoods and community facilities necessary for the health, safety and general welfare of the community.

The Single Family Residential District (RS1) was established to provide the low density development of single-family detached dwellings in an environment which preserves sand dunes, coastal forests, wetlands, and other unique natural features of the coastal area. The district is intended to promote stable, permanent neighborhoods characterized by low vehicular traffic flows, abundant open space, and low impact development on the natural environment and adjacent land use.

Multi-Family Zoning Districts (RS8) (RS10) are areas in which the principal use of the land is for high density residential purposes not to exceed eight (8) or ten (10) dwelling units per acre. These districts also provide for the development of less intensive residential uses as well as for compatible supporting uses.

The Commercial (C) district was established to provide for the proper grouping and development of commercial facilities to serve permanent and seasonal residents.

The Government and Institutional (G&I) Zoning District creates a location for government and institutional operations and structures necessary to provide public services operated by governmental and non-profit entities [501 (c) (3) of the US Internal Revenue Code].

Although nothing in this zoning district prohibits or regulates commercial fishing and navigation, the Ocean and Sound Water (OSW) district is intended to provide for the proper use of the ocean and sound waters, including islands and creeks, that adjoin the Town to ensure the continued scenic, conservation and recreational value that these waters provide.

Zoning district requirements are summarized in Table 20.

TABLE 20 - ZONING DISTRICT REQUIREMENTS*					
Zoning District Requirements	Zoning Districts				
	Low Density Residential (R1)	Single Family Residential (RS1)	Multi-Family Residential (RS8 & RS10)	Commercial	Governmental & Institutional
Minimum Lot Size (sq ft)	20,000 150 acres – country club	20,000	RS8-20,000 (single family detached) 20,000 (duplex) 7500-5151 (multi-family dwelling)	Lots shall be of sufficient size to meet requirements of the Dare County Health Department	10,000

TABLE 20 - ZONING DISTRICT REQUIREMENTS*					
Zoning District Requirements	Zoning Districts				
	Low Density Residential (R1)	Single Family Residential (RS1)	Multi-Family Residential (RS8 & RS10)	Commercial	Governmental & Institutional
			RS10-3000 (single family detached house & townhouses)	to provide adequate siting for structures, and to provide parking, loading and maneuvering space for vehicles	
Maximum Lot Coverage (%)	30%-houses 40%-school 85%-Town owned facilities & fire stations	30%-houses 85% - fire stations	30% (RS8) 100% (RS10)	60%	30%-Residential & 501 (c) (3) non-profit entities 85% - Town owned facilities & fire stations
Maximum Bldg Height	35'-house 55'-school 65'-church & country club	35'	35'	35'	35'
Maximum Density (dwelling units/lot)	1	1	8 (RS8) 10 (RS10)		
* "Ocean & Sound Waters" zoning district not included					

Although presented here, the zoning district information is provided for informational purposes only and will not be used in Land Use Plan consistency reviews.

Land Use Category and Zoning District Compatibility

Future land use categories and existing zoning districts are generally compatible (see Table 21).

TABLE 21 - CONSISTENCY OF FUTURE LAND USE CATEGORIES & ZONING DISTRICTS*					
GC – Generally Consistent, CC – Conditionally Consistent, I – Inconsistent, NA – Not Applicable					
Future Land Use Categories	Zoning Districts				
	Low Density Residential (R1)	Single Family Residential (RS1)	Multi-Family Residential (RS8 & RS10)	Commercial	Governmental & Institution
Residential	GC	GC	GC	NA	NA
Commercial	NA	NA	NA	GC	NA
Municipal	NA	NA	NA	NA	GC
Recreational	GC	GC	NA	NA	NA
Educational	GC	NA	NA	NA	NA
Conservation	GC	GC	NA	NA	NA
* “Ocean & Sound Waters Zoning District” not included					

Future Land Use vs Projected Land Use Needs

The projected land need analysis indicates that future development pressure in Southern Shores will be due to the development of the remaining vacant lots and redevelopment through tear downs of existing residential and commercial properties. It is expected that this development pressure can be accommodated within the existing land use structure. Since the existing and future land use structures are the same, by both category and size of category (see Table 16), and the Town residents have expressed a strong desire to “keep things the same,” future land use is expected to meet projected land needs within the planning period.

Land Use Conflicts

After a slow start, development of the Town of Southern Shores (TOSS) increased in the 1960s with the platting of the property and lot development. Lot development was done in stages. The developer loved the area and tried to minimize the impacts on the environment. This resulted in both bad and good impacts on the environment. For example, low areas were dredged for canals and the resulting dredged materials used to raise areas for better building sites, and a conscious decision was made to stop dredging a canal because of a potential negative impact on Cypress Swamp/Pond. After incorporation in 1979, development continued until it reached the current state of near complete build out.

In general, development occurred without taking into account many natural conditions. These areas where development conflicted with/had the potential to conflict with natural conditions include wetlands (see Map 4, Appendix A), areas potentially impacted by hurricane storm surge (see Map 5, Appendix A), flood hazard areas (see Map 6, Appendix A), septic limitations due to

soil types (see Map 7, Appendix A), and areas that are considered to have least and low suitability for development (see Map 11, Appendix A).

Because the development of Southern Shores occurred prior to the enactment of CAMA, it was too late to avoid many of these potential areas of land use/natural conditions conflicts. However, many of the Town's policies (e.g., numbers 2, 3, 4, 7, 9, 10, 16, 19, 24, 25, and 26), and the associated Action Items, are aimed at minimizing the impacts of land use on natural systems.

Although there are numerous impacts/potential impacts between land use and natural conditions, there are few potential conflicts between expected future land uses and existing zoning districts. The most significant potential for conflict is that the land designated as "Conservation" is zoned for "Single Family Residential (RS1)" use. No "Conservation" zoning district or overlay exists or is planned. The land included in the "Conservation" land use category is owned by civic associations. Because of civic association bylaws and the likely opposition of Town residents to development within these areas, development of these areas for residential use in the planning period is unlikely.

Inconsistencies involving the "Recreational" and "Educational" future land use categories are minor. While the "Recreational" future land use category shows small recreational areas (i.e., marinas), these areas are included in the "Single Family Residential (RS1)" zoning district. Similarly, the small "Educational" land use category is included in the "Low Density Residential (R1)" zoning district. In both cases there are no plans to establish new zoning districts to reflect the future land use categories.

Consistency of Town's Goals with Management Topics

The following describes the consistency between the Town's goals and the management topics.

Goal 1 - Encourage the maintenance and improvement of existing private access facilities to public trust waters and shorelines in order to improve recreational opportunities.

Public Access – As indicated in 15A NCAC 07M.0306(b) under Local Government and State Involvement in Access, "(a) local policy in a land use plan sets the community objective for access. A local government may determine that public access is not a pressing issue and thus develop a policy of private sector access provision and no public involvement..." The Town's goal is inconsistent with the management topic. All of the property adjacent to the ocean or sound is currently owned by private entities (i.e., a civic association and private land owners). No ocean or sound front property is owned by the Town. The goal encourages the private landowners to maintain and improve their private access facilities for the benefit of Town residents and those renting in the Town. The Town recognizes that the lack of public access prohibits it from participating in some State programs (e.g., receipt of beach nourishment funds).

Land Use Compatibility – Not Applicable

Infrastructure Carrying Capacity – Not applicable

Natural Hazards Areas – Not applicable

Water Quality – Not applicable

Goal 2 - Protect, enhance and support land uses that are compatible with surrounding land uses and maintain the existing character of Southern Shores.

Public Access – Not applicable

Land Use Compatibility – The Town’s goal is consistent with the management topic. The goal calls for residential development that is in scale with nearby residential development. The Plan’s 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.

Infrastructure Carrying Capacity – Not applicable

Natural Hazards Areas – Not applicable

Water Quality - Not applicable

Goal 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.

Public Access – Not applicable

Land Use Compatibility – The Town’s goal is consistent with the management topic. The goal calls for the development and use of resources that minimize environmental impacts and avoiding risks to public health, safety, and welfare.

Infrastructure Carrying Capacity – The Town’s goal is consistent with the management topic. 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.

Natural Hazards Areas – Not applicable

Water Quality - The Town’s goal is consistent with the management topic when attempting to dredge its canals.

Goal 4 - Preserve, protect, enhance, maintain and improve the natural environment and water quality within and near Southern Shores.

Public Access – Not applicable

Land Use Compatibility – Not applicable

Infrastructure Carrying Capacity – Not applicable

Natural Hazards Areas – Not applicable

Water Quality - The Town’s goal is consistent with the management topic. The Plan policies intend to protect wetlands and water quality preservation and improvement.

Goal 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.

Public Access – Not applicable

Land Use Compatibility – Not applicable

Infrastructure Carrying Capacity – Not applicable

Natural Hazards Areas – The Town’s goal is consistent with the management topic. 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.

Water Quality - Not applicable

Relationship Between Policies and Management Topics

Table 22 describes the relationship between the Town’s policies and the State’s management topics.

TABLE 22 - POLICY ANALYSIS MATRIX – MANAGEMENT TOPICS					
Policy Benchmarks – Beneficial (B), Neutral (N) or Detrimental (D)					
Policies	Management Topics				
	Public Access	Land Use Compatibility	Infra-structure	Natural Hazards	Water Quality
Public Access					
#1 – Maintain a policy of private access to the beaches and the public trust waters	D	N	N	N	N
Land Use Compatibility					
#2 – Maintain a low density residential community comprised of single family dwellings on large lots served by a small commercial district	N	B	B	N	B
Infrastructure					
#3 – Encourage development / redevelopment that is compatible with limited infrastructure, considers land suitability, and avoids fragile areas.	N	B	B	N	B
#4 - Town endorses the proper use and maintenance of approved septic systems in suitable soils for treating and disposing of waste from both low-density and high density development.	N	B	B	N	B
#5 - The Town may allow commercial and municipal sites to use package sewage treatment plants as an alternative means of treating waste to traditional septic systems when and only when traditional septic is environmentally infeasible.	N	B	B	N	B
#6 - Support Dare County’s water service and system maintenance to ensure that public health and safety of the public water supply is maintained.	N	N	B	N	B
#7 - Support stormwater management programs that seek to regulate both the quantity and quality of stormwater runoff to reduce flooding and improve	N	N	N	B	B

TABLE 22 - POLICY ANALYSIS MATRIX – MANAGEMENT TOPICS					
Policy Benchmarks – Beneficial (B), Neutral (N) or Detrimental (D)					
Policies	Management Topics				
	Public Access	Land Use Compatibility	Infra-structure	Natural Hazards	Water Quality
coastal water quality.					
#8 - Maintain NC 12 as a two-lane highway, with no additional through lanes or two-way continuous turn lanes.	N	N	B	N	B
#9 - Ensure an adequate system of roads, bridges and pathways to meet the transportation and pedestrian safety needs of the Town in a way that protects, preserves and where possible improves the environment and water quality.	N	N	B	N	N
#10 - Maintain the aesthetic quality and navigability of the canal system.	N	N	B	N	B
#11 - Encourage the practice of waste reduction, reuse and recycling.	N	N	N	N	B
#12 - Encourage and support improvement of all of the Town’s public safety services to enhance the security and safety of the life and property of Southern Shores citizens.	N	N	B	N	N
#13 - Maintain lifeguard services.	N	N	B	N	N
#14 - Encourage the protection, preservation, maintenance and use of common areas and open space.	N	B	N	N	B
Natural Hazards					
#15 - Support, implement and update the State required Hazard Mitigation Plan.	N	N	N	B	B
#16 - Increase flood awareness	N	N	N	B	B
#17 - Reduce the Town’s vulnerability to wildfires	N	N	N	B	N
#18 - Minimize and mitigate potential damages to individual properties from natural hazards.	N	N	N	B	N
#19 - Integrate natural resource protection polices with property protection measures	N	B	N	B	B
#20 – Establish plans to support reconstruction efforts after a natural hazard.	N	N	N	B	N
#21 - Implement activities that assist in protecting lives from the effects of natural hazards.	N	N	N	B	N
#22 - Coordinate emergency plans from the impacted services (i.e., water, telephone, electric, fire, rescue, and medical).	N	N	N	B	N
#23 - Communicate with citizens	N	N	N	B	N

TABLE 22 - POLICY ANALYSIS MATRIX – MANAGEMENT TOPICS					
Policy Benchmarks – Beneficial (B), Neutral (N) or Detrimental (D)					
Policies	Management Topics				
	Public Access	Land Use Compatibility	Infra-structure	Natural Hazards	Water Quality
about the susceptibility to natural hazards and their effects.					
#24 - The Town shall support natural beach processes.	N	B	N	N	N
Water Quality					
#25 - Protect, maintain, and conserve coastal and 404/401 wetlands as established by State and Federal standards.	N	B	N	N	B
#26 - Promote open space, tree protection, and natural vegetation diversity.	N	B	N	N	B

Relationship of Policies to Zoning Regulations

Table 23 describes the relationship between the Town’s policies and the zoning regulations.

RELATIONSHIP OF POLICIES TO ZONING REGULATIONS						
<u>Zoning Districts</u> – Low Density Residential (R1), Single Family Residential (RS1), Multi-Family Residential (RS8 & RS10), Commercial (C), Governmental & Institutional (G&I)						
<u>Status</u> – Generally Consistent (GC), Conditionally Consistent (CC), Inconsistent (I), Not Applicable (NA)						
Management Topic & Policies	Zoning Districts					Comments
	R1	RS1	RS8 & RS10	C	G & I	
Public Access						
#1 – Continue to recognize existing private ownership, control, and maintenance of current accesses to the beach and public trust waters.	NA	NA	NA	NA	NA	
Land Use Compatibility						
#2 – Maintain a low density residential community comprised of single family dwellings on large lots served by a small commercial district	GC	GC	I	GC	GC	High density residential areas are limited
Infrastructure						
#3 – Encourage development / redevelopment that is compatible with limited infrastructure, considers land suitability, and avoids fragile areas.	GC	GC	GC	GC	GC	
#4 - Town endorses the proper use and maintenance of	GC	GC	GC	GC	GC	

RELATIONSHIP OF POLICIES TO ZONING REGULATIONS						
Zoning Districts – Low Density Residential (R1), Single Family Residential (RS1), Multi-Family Residential (RS8 & RS10), Commercial (C), Governmental & Institutional (G&I)						
Status – Generally Consistent (GC), Conditionally Consistent (CC), Inconsistent (I), Not Applicable (NA)						
Management Topic & Policies	Zoning Districts					Comments
	R1	RS1	RS8 & RS10	C	G & I	
approved septic systems in suitable soils for treating and disposing of waste from both low-density and high density development.						
#5 - The Town may allow commercial and municipal sites to use package sewage treatment plants as an alternative means of treating waste to traditional septic systems when and only when traditional septic is environmentally infeasible.	I	I	CC	GC	GC	
#6 - Support Dare County's water service and system maintenance to ensure that public health and safety of the public water supply is maintained.	NA	NA	NA	NA	NA	
#7 - Support stormwater management programs that seek to regulate both the quantity and quality of stormwater runoff to reduce flooding and improve coastal water quality.	I	I	I	GC	I	Possible ordinance amendment
#8 - Maintain NC 12 as a two-lane highway, with no additional through lanes or two-way continuous turn lanes.	NA	NA	NA	NA	NA	
#9 - Ensure an adequate system of roads, bridges and pathways to meet the transportation and pedestrian safety needs of the Town in a way that protects, preserves and where possible improves the environment and water quality.	NA	NA	NA	NA	NA	
#10 - Maintain the aesthetic quality and navigability of the canal system.	NA	NA	NA	NA	NA	Possible ordinance amendment
#11 - Encourage the practice of waste reduction, reuse and recycling.	GC	GC	GC	GC	GC	
#12 - Encourage and support improvement of all of the Town's public safety services to enhance the security and safety of the life and property of	NA	NA	NA	NA	NA	

RELATIONSHIP OF POLICIES TO ZONING REGULATIONS						
Zoning Districts – Low Density Residential (R1), Single Family Residential (RS1), Multi-Family Residential (RS8 & RS10), Commercial (C), Governmental & Institutional (G&I)						
Status – Generally Consistent (GC), Conditionally Consistent (CC), Inconsistent (I), Not Applicable (NA)						
Management Topic & Policies	Zoning Districts					Comments
	R1	RS1	RS8 & RS10	C	G & I	
Southern Shores citizens.						
#13 - Maintain lifeguard services.	NA	NA	NA	NA	NA	
#14 - Encourage the protection, preservation, maintenance and use of common areas and open space.	NA	NA	NA	NA	NA	
Natural Hazards						
#15 - Support, implement and update the State required Hazard Mitigation Plan.	GC	GC	GC	GC	GC	
#16 - Increase flood awareness	GC	GC	GC	GC	GC	
#17 - Reduce the Town’s vulnerability to wildfires	GC	GC	GC	GC	GC	
#18 - Minimize and mitigate potential damages to individual properties from natural hazards.	GC	GC	GC	GC	GC	
#19 - Integrate natural resource protection polices with property protection measures	GC	GC	GC	GC	GC	
#20 – Establish plans to support reconstruction efforts after a natural hazard.	GC	GC	GC	GC	GC	
#21 - Implement activities that assist in protecting lives from the effects of natural hazards.	GC	GC	GC	GC	GC	
#22 - Coordinate emergency plans from the impacted services (i.e., water, telephone, electric, fire, rescue, and medical).	GC	GC	GC	GC	GC	
#23 - Communicate with citizens about the susceptibility to natural hazards and their effects.	NA	NA	NA	NA	NA	
#24 - The Town shall support natural beach processes.	NA	NA	NA	NA	NA	
Water Quality						
#25 - Protect, maintain, and conserve coastal and 404/401 wetlands as established by State and Federal standards.	GC	GC	GC	GC	GC	
#26 - Promote open space, tree protection, and natural vegetation diversity.	I	I	I	I	I	Possible ordinance amendment

V. Tools for Managing Development

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 the following parts:

- 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.
- 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.
- Identification of additional tools that will be used to implement the plan.
- Description of the priority actions that the Town will take to implement the plan and a general schedule for accomplishing these actions.

A. Role of Land Use Plan in Local Decisions

The Southern Shores Land Use Plan is intended to 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. The following describes the use of the plan by various Town and State entities and programs.

General Public. Residents may use the plan when developing a request of the Town staff, Planning Board or Town Council to ensure that the request is consistent with the Town's policies, thereby increasing the chances of approval. The residents can also reference the plan when speaking in favor of or against a proposed Town ordinance, action or policy.

Planning Board. The Planning Board shall 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.

Town Council. The Town Council must take into account the Plan's goals and policies when considering a request by a petitioner, the Town staff, the Planning Board, or Town residents, as well as its own interpretations and priorities, in making its decisions.

State Division of Coastal Management. 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.

B. Existing Development Management Program

The Town's Code Enforcement Department staff works closely with the public to ensure understanding of the North Carolina 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.

Code violations are usually discovered and corrected early on in the building process. 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 also 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 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:

Southern Shores Zoning Ordinance The zoning ordinance is the primary means of regulating land use by the Town. It establishes seven 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 A Dare County 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).

Code violations are usually discovered and corrected early in the building process. This is also true for CAMA enforcement actions. 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.

State Division of Water Quality Planning 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 waters that are classified for commercial shellfish harvesting (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.

C. Additional Tools

In addition to those activities/tools already included in the Town's existing development management program, tools that will/may be used to implement the plan include ordinances, a capital improvements program, an acquisition program, and specific projects. The following describes the Town's expected use of these additional tools.

Ordinances A few new land use related ordinances are possible during the planning period. These new ordinances, or zoning amendments, are associated with current planning projects related to wireless facilities, transportation and wind generators.

Capital Improvements Program The Town has a Capital Improvements Plan (CIP). This plan focuses on the Town's transportation infrastructure and is expected to be reviewed, and updated as needed, at least twice during the planning period.

Acquisition Program The Town does not expect to acquire any additional land during the planning period.

Specific Projects In addition to the ordinance work described above, the Town will complete efforts currently underway related to wind generators and transportation (e.g., emergency road/multiuse pathway interconnectivity and safety related to crosswalks to the beach). Additional land use related projects will be undertaken as future circumstances dictate and opportunities occur.

D. Action Plan and Schedule

This section of the land use plan sets forth implementation actions to carry out the policies (see Table 24). 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.

TABLE 24 – IMPLEMENTATION ACTIONS FOR MANAGEMENT TOPICS			
Implementation Actions	Policies-Actions	Begin	End
The town will continue to support the private access policies of individuals and/or civic associations that own property with access to the beaches and the public trust waters within Town.	1-a	FY 09	Ongoing
The Town will promote the maintenance of the boundaries of all zoning districts as they were defined as of September 2007.	2-a	FY09	Ongoing
The Town shall encourage the use of low impact development techniques and sound environmental preservation practices for all new development, remodeling and redevelopment within Southern Shores.	2-b	FY09	Ongoing
Utilities - Maintain long range plans for public infrastructure systems to ensure that these systems are appropriately sized, located and managed to deliver the services the community needs while protecting adjacent environmental resources.	3-a	FY09	Ongoing
Utilities - Encourage the use of defined service level standards in conjunction with demand estimates for both residents and seasonal visitors as a basis for determining infrastructure capacity requirements.	3-b	FY09	Ongoing
Wastewater & Water - Consider the establishment of a septic maintenance program to encourage the use of the best available technology and management practices to eliminate odors, avert impacts to adjacent properties and prevent degradation of water quality.	4-a	FY10	Ongoing
Wastewater & Water - Follow State requirements for package sewage treatment plants including but not limited to: permanent organizational ownership backed by financial guarantees to ensure the proper management, operation, maintenance and replacement of the plant.	5a	FY09	Ongoing
Wastewater & Water - Review water line	6-a	FY09	Ongoing

TABLE 24 – IMPLEMENTATION ACTIONS FOR MANAGEMENT TOPICS			
Implementation Actions	Policies-Actions	Begin	End
extensions to ensure adequate water line capacity, pressure and water quality.			
Stormwater - Consider the development of a stormwater management program for all properties and roadways, based on the Stormwater Management Report (2007).	7-a	FY09	Ongoing
Stormwater - Encourage the use of Low Impact Development (LID), vegetative buffers to filter stormwater, impervious surface limits, and innovative stormwater management alternatives to reduce runoff and to improve water quality.	7-b	FY09	Ongoing
Stormwater- Implement performance standards to ensure that all stormwater management facilities and infrastructure within Southern Shores, whether public or private, are designed, constructed and operated in the best manner possible.	7-c	FY09	Ongoing
Stormwater - Implement engineering design standards for stormwater management and infrastructure.	7-d	FY09	Ongoing
Stormwater - Support and request NCDOT to make necessary stormwater improvements to NC 12 as outlined in the TOSS stormwater report.	7-e	FY09	Ongoing
Transportation - Continue to support and encourage NC DOT, Dare County and its municipalities to develop a Comprehensive Transportation Plan for Dare County.	8-a	FY09	Ongoing
Transportation - Continue to support a new Mid-Currituck bridge.	8-b	FY09	Ongoing
Transportation - With the exception of widening NC 12 in Southern Shores, support improvements to NC 12 and US158. These improvements will provide traffic relief, improve emergency access to and evacuation from the Outer Banks.	8-c	FY09	Ongoing
Transportation - Consider development of a town road maintenance plan for general repairs, tree root control and tree trimming, road resurfacing crack sealing, and right-of-way clearance.	9-a	FY09	Ongoing
Transportation - Integrate transportation and stormwater management planning and	9-b	FY09	Ongoing

TABLE 24 – IMPLEMENTATION ACTIONS FOR MANAGEMENT TOPICS			
Implementation Actions	Policies-Actions	Begin	End
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.			
Transportation – Develop and implement a plan to expand, maintain and enhance a multi-purpose path network within the Town.	9-c	FY09	Ongoing
Transportation - To improve public safety, support transportation projects that promote interconnectivity for emergency vehicles.	9-d	FY09	Ongoing
Transportation - Maintain programs for town-owned canal and lagoon system maintenance that includes but is not limited to: periodic dredging, control of overhanging vegetation and debris removal.	10-a	FY09	Ongoing
Transportation - Encourage the owners of canal front properties to stabilize the canal/lagoon banks through appropriately designed, installed and maintained bulkheads or other means of stabilization and to maintain all appurtenant structures including but not limited to docks, piers, boat lifts and ramps in an environmentally sustainable manner.	10-b	FY09	Ongoing
Solid Waste - Continue to provide trash pickup, curb side recycling, large item pickup, and chipping programs.	11-a	FY09	Ongoing
Public Safety - The Town should annually evaluate public safety services (i.e. law enforcement, fire fighting and rescue) needs to ensure sufficient resources are made available for proper equipment, training, staffing, and volunteers.	12-a	FY09	Ongoing
Public Safety - The need for additional/new fire stations or improvements to existing fire stations should be examined, in conjunction with the Southern Shores Volunteer Fire Department, Inc.	12-b	Ongoing	Ongoing
Public Safety - Annually evaluate the lifeguard services to assure that they meet the Town's needs.	13-a	FY09	Ongoing
Parks & Recreation - Maintain a dialog with and promote civic associations regarding their open space and recreational facilities.	14-a	FY09	Ongoing

TABLE 24 – IMPLEMENTATION ACTIONS FOR MANAGEMENT TOPICS			
Implementation Actions	Policies-Actions	Begin	End
Coordinate Southern Shores efforts to maintain a hazard mitigation plan with Dare County and other municipalities.	15-a	FY09	Ongoing
Continue enforcement of the zoning ordinances as a hazard mitigation tool.	16-a		Ongoing
Identify “at risk” X Zone properties for added emphasis on flood risks and notify the responsible agencies about discrepancies between floodplain maps (FIRM vs SLOSH).	16-b	FY09	Ongoing
Continue enforcement of the Flood Damage Prevention Ordinance.	16-c	FY09	Ongoing
Implement stormwater management regulations.	16-d	FY09	Ongoing
Continue the enforcement of the NC State Fire Prevention Code, referenced by the Town’s Fire Code.	17-a	FY09	Ongoing
Continue enforcement of the Lot Disturbance provisions of the Town’s Zoning Ordinance.	17-b	FY09	Ongoing
Support continued testing of fire hydrants (including hydrant function and water pressure) once a year, recording data, and attaching blue reflectors on the roads to ease night spotting of hydrants.	17-c	FY09	Ongoing
Continue implementation of the Beach and Waterway Ordinance.	18-a		Ongoing
While considering resources needed, seek the most points available from the Community Rating System to keep flood insurance costs to the citizens as low as possible	18-b	FY09	Ongoing
Conduct the canal inspection and debris removal program twice a year.	18-c	FY09	Ongoing
Continue enforcement of the State building code, including wind load requirements.	18-d	FY09	Ongoing
Provide property owners and developers with information regarding the construction of FEMA “safe rooms” from the effects of tornadoes and severe storms.	18-e	FY09	Ongoing
Continue enforcement of the Dune Protection Ordinance.	19-a	FY09	Ongoing
Coordinate and adjust wildfire prevention efforts with vegetation preservation policies.	19-b	FY09	Ongoing
Continue enforcement of the Coastal Area Management Act (CAMA) regulations.	19-c	FY09	Ongoing
Continue enforcement of the State Erosion and	19-d	FY09	Ongoing

TABLE 24 – IMPLEMENTATION ACTIONS FOR MANAGEMENT TOPICS			
Implementation Actions	Policies-Actions	Begin	End
Sedimentation Control regulations.			
Continue to have a Reconstruction Task Force.	20-a	FY09	Ongoing
Develop guidelines for reconstruction efforts.	20-b	FY09	Ongoing
Communicate with citizens about plans for and the problems of providing services after a storm event.	20-c	FY09	Ongoing
Develop an efficient flood and storm warning system.	21-a	FY09	Ongoing
Continue to monitor NC Turnpike Authority plans for the Mid-Currituck Bridge to expedite evacuation.	21-b	FY09	Ongoing
Encourage food stores, pharmacies, and communication providers (including wireless) within the town to have alternative power supplies during and after storm events.	22-a	FY09	Ongoing
Continue to provide a TOSS Emergency Operations Center.	22-b	FY09	Ongoing
Keep emergency plans current and provide staff with continuing education opportunities.	22-c	FY09	Ongoing
Continue participation in Dare County Emergency Management Plan and operations procedures.	22-d	FY09	Ongoing
Educate citizens on the expected impacts of hazards on daily lives.	23-a	FY09	Ongoing
Continue current public information outreach efforts regarding flooding.	23-b	FY09	Ongoing
Continue e-mail and website services.	23-c	FY09	Ongoing
Maintain existing dune vegetation wherever and whenever possible.	24-a	FY09	Ongoing
Restore vegetation and install sand fencing to help stabilize dunes and protect against storm surge.	24-b	FY09	Ongoing
Promote programs and practices that prevent soil erosion and sedimentation, and control stormwater entering the beach and estuarine waters.	25-a	FY09	Ongoing
Encourage and support State and Federal vegetative buffer requirements for all water bodies, canals and lagoons to enhance water quality.	25-b	FY09	Ongoing
Prevent or control non-point source discharges to the Town's waters.	25-c	FY09	Ongoing
The Town should work with civic associations to identify and plan for the protection of open	26-a	FY09	Ongoing

TABLE 24 – IMPLEMENTATION ACTIONS FOR MANAGEMENT TOPICS			
Implementation Actions	Policies-Actions	Begin	End
spaces and unique natural areas.			
Encourage lot preparation methods that preserve natural vegetation and minimize clear cutting.	26-b	FY09	Ongoing

Jurisdictional Issues

No comments on jurisdictional issues related to the Southern Shores draft CAMA Land Use Plan were received from Duck, Kitty Hawk or Dare County.

Appendix A: Issues Identified at 3/27/07 Workshop

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 wading 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 re-nourishment.

- 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.

Appendix B: Maps

Map 1	2008 CAMA Land Use Plan - Vicinity Map
Map 2	2008 CAMA Land Use Plan – Water Quality
Map 3	2008 CAMA Land Use Plan – Environmental Composite Map
Map 4	2008 CAMA Land Use Plan – Wetlands
Map 5	2008 CAMA Land Use Plan – Hurricane Storm Surge Inundation
Map 6	2008 CAMA Land Use Plan – Flood Hazard Areas
Map 7	2008 CAMA Land Use Plan – Soils
Map 8	2008 CAMA Land Use Plan – Environmentally Fragile Areas
Map 9	2008 CAMA Land Use Plan – Transportation and Community Facilities
Map 10	2008 CAMA Land Use Plan – Utilities
Map 11	2008 CAMA Land Use Plan – Land Suitability Analysis
Map 12	2008 CAMA Land Use Plan – Existing and Future Land Uses
Map 13	2008 CAMA Land Use Plan – Land Use Densities

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