1997 CAMA Land Use Plan

Town of Carolina Beach, North Carolina

Prepared by
The Town of Carolina Beach Planning Board

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Town of Carolina Beach, North Carolina
1997 CAMA LAND USE PLAN

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1. Executive Summary

This executive summary consists of three parts:

1.1 Summary of Local Land Use Issues
A summary of some of the salient issues being faced by the Town at the present time and anticipated to be an on-going concern over the coming months or years.

1.2 Policy Statements
The Town's officially adopted positions and statements of principle concerning growth and development issues at Carolina Beach.

1.3 The Land Classification System
A method for translating the Town's growth and development policies to specific parts of the community, recognizing that not all parts of the Town are alike.

Each element of the Executive Summary will now be presented in turn.

Section 1.1 Summary of Local Land Use Issues

As Carolina Beach approaches the year 2000, the town is entering a significant new redevelopment phase which promises to be no less significant, in terms of its potential impact, than the initial development of the community. Many sites, previously developed at a much lower intensity of use, are now being redeveloped for intensive commercial and multi-family residential uses. And, as one of the older beach communities in North Carolina, the Town's infrastructure—particularly regarding water and sewer systems—is beginning to show its age. This Land Use Plan addresses several emerging development trends at Carolina Beach. Among the most critical issues facing the community today are:

- **Intensification of Exclusive Waterfront Development.**
With the advent of I-40 from the Piedmont to Wilmington and the continued emergence of the town of Carolina Beach as a bedroom community for the greater Wilmington urbanizing area, there is an ever-increasing demand for intensive residential development on the water. Developers push for "exclusive" developments, those which provide an image of greater security to potential buyers, but which also, unfortunately, have the effect of walling the public off from the water. In addition, recent proposals for such developments have included a variety of other impacts which must be addressed. These impacts include:
  - Increased traffic volumes through existing single family residential neighborhoods to reach waterfront properties,
  - the displacement of former "semi-public" commercial marinas with "private" marinas associated with particular residential developments.
  - Parking demands for both the residential units developed as well as for the marina boat slips provided.
  - Stormwater runoff from intensive development immediately adjacent to sensitive estuarine areas.

- **Ongoing Efforts to Upgrade the Image and Economics of the Boardwalk**
Town residents and Town officials alike have expressed a strong interest in redirecting the image and economics of the boardwalk away from an area perceived by many as a collection of bars and toward a more family-oriented atmosphere. Plans for the revitalization of the boardwalk area have been prepared and implemented, in part. It will take a concerted effort on the part of the Town, boardwalk area property owners, and boardwalk businesses to move the

boardwalk area decisively in a direction which both maximizes its economic potential and brings its image in alignment with the objectives of the community at large.

• **Continued Increases In Traffic Congestion.**
As the popularity of the town of Carolina Beach continues to grow and development densities gradually increase, traffic volumes will escalate at an even faster rate. This will be especially true for certain critical streets such as Lake Park Boulevard through the central business district, and Carl Winner Drive at the marina/boat basin. Further compounding the traffic congestion in this part of town will be increasing demand for residents and visitors wishing to get to the north beach via Canal Drive.

• **A Critical Need To Upgrade and Repair Vital Water and Sewer Systems.**
Problems with the Town's water supply and distribution system and sewage collection and treatment system have been known since at least 1990, when annexation feasibility reports were prepared on behalf of the Town. In the ensuing years, however, the reality of these various problems have come to the forefront with a critical need to repair or replace crumbling sewer lines, to find additional sources of potable water, and to increase the sewage treatment capacity of the Town's waste water treatment plant. To its credit, the Town has heightened its efforts to address these problems: now, an organized, long term approach to the water and sewer issue is urgently needed, including a repair, replacement and maintenance program, and the establishment of capital reserve accounts through a capital improvement plan. This must continue to be a top priority of the Town for the next several years.

• **Concern About Storm Water Runoff and Drainage.**
Despite ongoing efforts by the Town to tighten up stormwater management standards during its review of development proposals, the problem of inadequate drainage continues to vex the community. Many areas of the town are low lying and become quickly flooded by regular storm events—typical of the subtropical climate of the Cape Fear region. While drainage problems are not unique to the town of Carolina Beach, they are certainly a major problem for many residents of the community.

These emerging trends are not intended, by any means, to represent the full range of issues confronting the Town of Carolina Beach. They are indicative, however, of a community undergoing tremendous growth and development pressures while relying upon an outdated and outgrown system of infrastructure. A successful future for the Town of Carolina Beach will be dependent in no small way on the degree to which the Town can effectively manage growth in concert with critical infrastructure improvements. The policies which follow are intended to help guide the decisions necessary to make the effort work.

1.2 Policy Statements

OVERALL COMMUNITY VISION

8.0 General Vision Policy for Next Ten Years
We, the residents, business, and property owners of the Town of Carolina Beach, shall seek to preserve and enhance our community as both an appealing destination resort and year round place in which to live. We will continually strive to protect and nurture the natural and man-made features of our community which make it so unique. These features include our boardwalk/amusement area, marina and boat basin, Carolina Beach Lake, Carolina Beach State Park, and our stable, permanent single family residential neighborhoods. As the inherent value of our community continues to increase over the coming years, and the forces of investment and change influence that growth, the Town's mission shall be to positively direct growth such that the quality of each of these features is continually enhanced within the context of a small, family oriented beach resort town.

RESOURCE PROTECTION POLICIES

8.1.0 Basic Policy Statement Regarding Resource Protection

The natural and scenic resources of Carolina Beach enable business owners to earn a livelihood, residents to have an outstanding quality of life, and property owners to realize continued appreciation of real estate values. The Town of Carolina Beach, through its policies and actions, shall not support or approve any action, in singular or cumulative effect, which would jeopardize the long term viability of our natural and scenic resources, or the small town character of our community.

8.1.1 Constraints Caused By Soil Limitations and Flood Prone Areas

Development will be discouraged from locations where stormwater runoff related flooding exists, unless appropriate corrective improvements are to be completed as part of the project. Appropriate corrective improvements shall be defined as those which resolve the drainage problem without increasing stormwater runoff on adjacent properties or in area waters, whether directly or indirectly. Similarly, new development which would be susceptible to sound flooding shall also be discouraged unless mitigative actions are taken.

8.1.2 Areas Of Environmental Concern

The Town will support and enforce, through its CAMA permitting capacity, the State policies and permitted uses in the Areas of Environmental Concern (AEC's). Such uses shall be in accord with the general use standards for coastal wetlands, estuarine waters, public trust areas and ocean hazard areas as stated in 15A NCAC Subchapter 7H.

8.1.2 A Coastal Wetlands

Due to the critical role that wetlands play in protecting the quality of estuarine waters and in providing habitat for fish and wildlife, the Town strongly supports the proper designation and preservation of all remaining coastal wetlands. Acceptable land uses may include utility easements, fishing piers, and docks. *Unacceptable* uses may include, but would not be limited to, restaurants, businesses, residences, apartments, motels, hotels, parking lots, private roads, and highways.

8.1.2 B Estuarine Waters

(1) Appropriate uses may include simple access channels, structures which prevent erosion, navigational channels, private boat docks, marinas, piers, and mooring pilings.
(2) Any development or activity which will profoundly and adversely affect coastal and estuarine waters will be discouraged. In the design, construction and operation of water dependent structures, efforts must be made to mitigate negative effects on water quality and fish habitat, as determined by NCAC 15A Subchapter 7H and the Coastal Resources Commission. The developer and/or owner will bear the cost of any required mitigation.

8.1.2 C Public Trust Areas

(1) Any use which significantly interferes with the public right of navigation or other public trust rights shall be discouraged. Projects which would directly or indirectly block or impair existing navigational channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters shall be discouraged.
(2) The Town shall seek to ensure the responsible use of jet skis and other similar "personal" water craft within the public trust waters of Carolina Beach. Responsible use shall mean controlled, predictable movements similar to other powered water craft while in navigation channels, marinas, and other regularly trafficked areas, and the avoidance of marshes and other shallow water estuaries, where damage to the resource is likely.
(3) The length of docks and piers, as they project into public trust waters, shall be controlled jointly by CAMA standards and the Town's official pierhead line. Whenever a discrepancy exists between the two sets of standards, the more restrictive shall apply.

(4) The Town shall allow for the construction of docks and the development of boat slips in reasonable proportion to the amount of land area and shoreline associated with the docks and slips. Factors considered shall include the total number of boat slips relative to the total acreage and total number of housing units on shore, if any, and the number of parking spaces necessary to serve the dock or marina. Standards which serve to reasonably restrict the over-development of marinas in limited public trust waters shall be supported.
(5) To manage existing and potential conflicts between activities competing for use of public trust waters, the Town shall support the preparation and periodic updating of a water use and harbor management plan for coastal waters at Carolina Beach.

8.1.2 D Estuarine Shorelines
Unlike the other components of the estuarine system of AEC's, land uses along estuarine shorelines may include some uses that are not strictly water dependent (e.g. residential and hotels). However, non-water related commercial uses (commercial enterprises that have no real economic relationship to the water) shall be strongly discouraged. Regardless of the use proposed, all standards of NCAC 15 Subchapter 7H relevant to estuarine shoreline AEC's must be met, and the proposed use must be consistent with other policies set forth in this Plan.

8.1.2 E Ocean Hazard Areas
The Town supports state policies for ocean hazard areas in Chapter 15A, Subchapter 7H of the state CAMA regulations. Suitable land uses in ocean hazard areas include ocean shoreline renourishment, temporary erosion control activities, and dune establishment/stabilization. Residential, commercial, and recreational land uses and parking lots for beach access are also acceptable types of use in ocean hazard areas provided that they meet all general and specific use standards of NCAC 15A: 7H.

8.1.4 A Freshwater Wetlands
The Town shall avoid undertaking any activity or approving of any activity which would result in the destruction or removal of remaining "404" wetlands within the Town's jurisdiction, whether fresh or saltwater.

8.1.4 B Maritime Forests, Tree Cover and Landscaping
Tree cover at Carolina Beach, whether maritime or otherwise, is a highly valued asset. The Town encourages efforts to preserve existing tree cover in new development and redevelopment. The Town also encourages the generous use of indigenous landscape materials in new and existing developments to improve appearances, absorb stormwater runoff, and reduce ambient air temperatures.

8.1.4 C Outstanding Resource Waters
Although Carolina Beach does not contain ORW waters, the Town supports the designation and preservation of Outstanding Resource Waters. State efforts to protect water quality and thereby the fishing industry of North Carolina, are supported.

8.1.4 D Shellfishing Waters
The Town supports and encourages the activities of the State's Shellfish Management Program. The Town promotes estuarine water quality through its storm drainage planning and stormwater runoff policies.

8.1.4 E Water Supply Areas and Other Waters with Special Values
The Town shall protect the long term viability of the Castle Hayne aquifer by properly managing the municipal well system, including proper well head spacing, proper pumping and draw down, adequate storage, and other related factors. In recent years, the aquifer's recharge potential at Carolina Beach has been severely stressed due to heavy pumping. Therefore, the Town shall make additional storage and the exploration of alternative sources of water among its highest objectives for the next five years.

8.1.4 F Cultural and Historic Resources
The Town encourages the preservation of its older, potentially historic structures and sites, including recent efforts by the Federal Point Historic Preservation Society to inventory important historic resources within the entire area of the County south of Snow's Cut.

8.1.4 G Man-Made Hazards
None, but see policy on Sunny Point Buffer Zone

8.1.4 H Myrtle Grove Sound and Cape Fear River
To protect water quality in Myrtle Grove Sound, Snows Cut, and the Cape Fear River, the Town supports reduction in the amount of runoff from proposed developments, preservation of existing wetlands and associated vegetation, controls over the number and size of new marinas, reduction of dredging activities to the minimum extent necessary to allow safe vessel movements, and maintenance of the tidal flushing action.

8.1.4 I North End Natural Area
The Town of Carolina Beach supports retaining the coastal wetland and ocean dune area at the north end of Carolina Beach in its natural state. Vehicular traffic shall be restricted to the ocean side of the dune line as a means of protecting the ecological function of this important resource area.

8.1.4 J Carolina Beach Lake
The Town supports leaving wetland areas associated with Carolina Beach Lake undeveloped, since these areas play a critical role in reducing the amount of floodwaters which threaten already developed properties. The Town supports those development proposals in the vicinity of the lake which reduce the amount of impervious surface or which otherwise reduce the drainage load placed on the Lake, and which provide improved visual access to the Lake. Also, the Town supports measures which limit the flow of pollutants into the Lake. The Town supports the activities of the Coastal Land Trust to accept tax deductible donations of property adjacent to the lake for permanently dedicated public open space.

8.1.4 K Sunny Point Buffer Zone/
The Buffer Zone is owned and controlled by the U.S. Department of the Army to serve as a natural blast shield for private properties in the event of an accident involving munitions at the Sunny Point Military Ocean Terminal. Because of the importance of this area for wildlife habitat and as permanent open space, the Town supports maintenance of this area in its natural condition with development limited solely to additional recreational facilities. Area-wide prohibition of off-road vehicles and stepped up enforcement against illegal dumping in this area shall be supported.

8.1.4 L Carolina Beach State Park
Carolina Beach State Park is owned and operated by the State of North Carolina as a means of providing public access to a natural coastal environment and to the waters of the Cape Fear River. Because of the importance of this area for wildlife habitat, nature study, and as permanent open space, the Town supports maintenance of this area in its natural condition or with limited development for recreational purposes.

8.1.4 M Snow's Cut (AIWW) Right of Way and Spoil Area
Snow's Cut, a component of the Atlantic Intracoastal Waterway (AIWW), has its banks controlled by a spoil deposition easement owned by the U.S. Army Corps of Engineers; this easement takes precedence over any other possible use of this property. Because of the importance of this area for wildlife habitat, permanent open space, and potential placement of spoil materials, the Town supports maintenance of this area in its natural condition or with limited use for recreational purposes.

8.1.5 Protection Of Potable Water Supply
The Town shall work with other appropriate governmental bodies, namely New Hanover County and Wilmington, to provide for a continued pure supply of potable water, particularly from the Castle Hayne aquifer. The Town shall also conserve it's groundwater resources for longevity through proper management of its system of wells, and by the encouragement of water conservation practices, including measures which can be taken in construction of new structures. These measures shall be designed to help the Town of Carolina Beach get through the potential water crisis of the next five years.

8.1.6 Package Sewage Treatment Plants
All new developments are required to connect to the Town's central sewer system. Package sewage treatment plants and septic systems are not allowed within the corporate limits of Carolina Beach.

8.1.7 Storm Water Runoff
(1) Future developments must continue to meet all local, State and federal stormwater runoff regulations as applicable to the individual development.
(2) The Town encourages the use of "best management practices" to minimize the release of pollutants to coastal waters through stormwater runoff. Examples include using pervious or semi-pervious materials, such as turfstone or gravel for driveways and walks, retaining natural vegetation along marsh and waterfront areas to retain its natural filtering properties, and allowing stormwater to percolate into the ground rather than discharging it directly to coastal waters.

8.1.8 A Marinas
To protect water quality, conserve limited public trust waters, keep boat traffic within the ability of area waters to absorb it safely, and minimize land side traffic congestion and parking demands, the number and size of new marinas at Carolina Beach shall henceforth be permitted only in accordance with the reasonable carrying capacity of area waters and near shore lands. Carrying capacity shall be determined by land side traffic volumes on area streets, the sufficiency of parking, and by competing water use demands as identified in a Town "water use plan".

8.1.8 B Floating Home Development
Due the limited surface area of public trust waters for use and enjoyment by the public, floating homes shall not be permitted within the jurisdictional waters of Carolina Beach.

8.1.8 C Moorings and Mooring Fields
Due the limited surface area of public trust waters for use and enjoyment by the public, freestanding private moorings of any kind shall be discouraged within the public trust waters of Carolina Beach. However, the Town shall support public mooring buoys designed to serve currently unmet needs of transient boaters who could contribute substantially to the local economy.

8.1.8 D Dry Stack Storage
Due to their unsightliness and the traffic congestion associated with such facilities, dry stack facilities shall be prohibited at Carolina Beach.

8.1.8 E Commercial Fishing Operations
Due to the important role of commercial and recreational fishing to the economy and ambient character of Carolina Beach, the Town shall encourage and support commercial fishing operations and sports fishing operations, provided that such operations meet all applicable development standards and are otherwise consistent with the policies of this plan.

8.1.9 Industrial Impacts On Fragile Areas
New light industrial development, of a scale and nature suited to a small, fragile coastal community, may be approved on appropriate sites, provided that impacts related to stormwater runoff, traffic generation, and other factors can be properly mitigated.

8.1.10 Development Of Sound And Estuarine System Islands
Carolina Beach does not have any islands in its planning jurisdiction that would be feasible for future development under current State and Federal permit regulations. The Town does support, however, all County and State efforts to preserve Masonboro Island in its natural state.

8.1.11 Restriction Of Development Within Areas That Might Be Susceptible To Sea Level Rise
The Town shall monitor the work of State and Federal agencies conducting research on sea level rise and its effect on coastal areas. The Town shall consider any State and Federal policies prior to formulating specific local policies regarding sea level rise; specifically, development within areas up to 5 feet above sea level.

8.1.12 Upland Excavation For Marina Basins
Due to the limited amount of developable land at Carolina Beach, the Town shall not support the excavation of upland areas for marina basins.

8.1.13 Marsh Damage From Bulkhead Installation
Bulkheading and filling of the Town's shorefront forward of the mean high water mark along the Town's estuarine shorelines shall be prohibited. Re-establishment of wetlands is to be strongly encouraged. Any bulkheading operations must comply with all local, State and Federal regulations. No private bulkheading of any kind shall be permitted around Carolina Beach Lake.

8.1.14 Water Quality Problems and Management Measures Designed to Address Them
The Town shall continue to seek improved marina management and stormwater runoff standards which will protect and enhance the water quality of the estuarine system including, but not limited to the waters of Myrtle Grove Sound, Snows Cut, and the Cape Fear River.

RESOURCE PRODUCTION AND MANAGEMENT POLICIES

8.2.0 Basic Policy Statement Regarding Resource Production and Management
Carolina Beach is located in the midst of one of the most biologically productive ecosystems on earth—estuarine waters and marshes. The Town shall take no action nor approve of any action which would seriously harm the long term viability and productivity of this ecosystem.

8.2.1 Productive Agricultural Lands
Not applicable

8.2.2 Commercial Forest Lands
Not applicable, but see policy 8.1.4 B on **Maritime Forests, Tree Cover and Landscaping**, generally

8.2.3 Mineral Production Areas—Existing and Potential
Mineral production and extraction activities are not consistent with the limited, valuable land and water resources of Carolina Beach. Mineral production and extraction activities, excepting those directly related to channel maintenance and beach renourishment, shall not be permitted within the planning jurisdiction of Carolina Beach.

8.2.4 Fisheries Resources (Commercial and Recreational)
The Town will support State and federal regulations to insure the water quality of local waters that support both commercial and recreational fishing.

8.2.5 Off Road Vehicles
Off-road vehicles (with the exception of emergency vehicles or other vehicles specifically permitted by the Town) are not allowed on the Beach Strand within the corporate limits of Carolina Beach.

8.2.6 Development Impacts
New development and redevelopment activities shall not be permitted which would act to degrade the quality of natural and scenic resources at Carolina Beach, diminish the small town character of the community, or create an adverse relationship between development types of incompatible scale, design, or land use.

ECONOMIC AND COMMUNITY DEVELOPMENT POLICIES

8.3.0 Basic Policy Statement Regarding Economic & Community Growth & Development
The Town of Carolina Beach shall work to diversify the local economy while at the same time protecting the natural and man-made environment and improving the area as a more attractive community in which to work, live and play. Economic and community development initiatives which capitalize upon and enhance the pedestrian oriented, small town character exemplified by the Town boardwalk and marina area, and by the relatively small scale of most residential and commercial development in the Town shall be supported. Special emphasis shall be given to those types of businesses which also foster a family-oriented community and resort market niche.

8.3.0 A Growth of Town's Jurisdiction
The Town shall periodically evaluate the costs and benefits of annexing additional areas into the Town. Before considering such annexations, first priority shall be given to addressing infrastructure and service needs within the existing corporate limits, prior to taking on additional responsibilities.

8.3.0 B Building Height
The Town shall support and implement a maximum building height throughout the community of thirty-five (35) feet, measured from the average ground plane of the lot to the top of the ceiling plate of the highest habitable floor. Exceptions to this height shall require an additional one foot setback for each additional one foot of height.

8.3.1 Types and Locations of Industries Desired & Local Assets Desirable to Such Industries
To diversify the economy of the Town, and to provide for desirable wages to community residents, the Town shall be open to limited, appropriate, light industrial development in locations as allowed for under the Town's Zoning Ordinance, and that will do no harm to the fragile coastal environment.

8.3.2 Provision of Services to Development
The Town will make all municipal facilities available to existing and future development/redevelopment, provided that such development is compatible with the growth and development objectives embodied in this land use plan, and that all development pays for the growth impacts it causes. Connection to water and sewer lines will be at the expense of the developer. If water or sewer facility upgrades or expansions would be required for new development, the needed improvements would be at the expense of the developer.

8.3.2 A Potable Water Supply
The Town requires all new development to tie into its system for potable water supply and prohibits individual wells for potable use. The Town shall continue to take measures to ensure that the water supply system is adequate to meet the needs of Town residents and businesses. Special emphasis shall be given to this policy during the next two to five years, to avert a potential water crisis concerning the capacity of the Town's well system to serve increased pumping demands.

8.3.2 B Wastewater Treatment and Disposal
All new developments are required to connect to the Town's central sewer system. Package sewage treatment plants and septic systems are not allowed within the corporate limits of Carolina Beach. The Town shall continue to take measures (including on-going waste water treatment plant expansions) to ensure that the waste water treatment system is adequate to meet the needs of Town residents and businesses.

8.3.2 C Solid Waste Disposal
The Town supports measures to recycle and reduce the amount of solid waste generated by all permanent residents and businesses, as well as visitors to the Beach.

8.3.3 Urban Growth Pattern Desired
The Town shall support a small town growth pattern which reinforces the community's existing commercial areas and protects existing residential areas from inappropriately designed and scaled non-residential development. The compact, pedestrian oriented nature of the Town's historic center—the boardwalk/amusement area and boat basin area—shall receive special diligence in this regard.

8.3.4 Types of Residential Development Desired
(1) The Town will encourage medium density (6,000 to 10,000 sq. ft. lots) single family homes as the predominant housing form at Carolina Beach. Construction of additional small scale multi-family projects shall be allowed to occur such that the current percentage of multifamily units relative to single family units is held constant.

(2) The Town will discourage further high density and or "intense" development including large multifamily complexes, condominiums, high-rise structures, large hotels/motels. Single family "mini-castles" should be permitted in locations where their scale and mass is compatible with other structures in their vicinity, or with the overall vision of a particular neighborhood.

8.3.5 Types of Commercial Development Desired
(1) The Town will encourage new and expanding businesses that provide goods, services, and family oriented entertainment to year round residents and visitors. Examples include appropriately scaled and designed grocery stores, drug stores, restaurants, and amusements. Businesses locating in or near the boardwalk and marina/boat basin area shall be pedestrian oriented, while those locating along US 421, away from the town center, may be more automobile oriented.

(2) Architectural design which is not in keeping with the character of a small, coastal community atmosphere shall be discouraged.

(3) The Town shall continually seek to strengthen its signage controls so that as the community grows, additional signage will not overwhelm the streetscape, thereby detracting from the image of the town, and devaluing its attractiveness as a place in which to live or vacation.

8.3.6 Redevelopment, Including Relocation of Threatened Structures
(1) Relocation of structures endangered or damaged by wave action and or shoreline erosion is encouraged. Redevelopment of damaged or destroyed structures will be permitted by the Town according to Town ordinances, provided all setback and other CAMA requirements are met.

(2) The Town shall encourage owners of run-down buildings to rehabilitate their structures. If the structure is not historic in nature or part of an assembly or streetscape of interrelated buildings, clearance of the structure at the owners cost may be required in accordance with the State minimum housing code, public safety and related laws.

Also see **Boardwalk** for redevelopment initiatives related to that area.

8.3.7 Commitment to State and Federal Programs, Generally
While there are a number of State and Federal programs which the Town supports, those that are of special interest to the Town of Carolina Beach include the State Coastal Area Management Act, the State's beach access program, beach renourishment and channel maintenance programs, and bridge, road and bikeway improvement programs.

8.3.8 A Assistance to Channel Maintenance, Including Interstate Waterways
(1) The Town supports State and Federal efforts to dredge areas along the Intracoastal Waterway and other major bodies of water in the Carolina Beach area to provide safe access for commercial and recreational boating. Spoil will be placed in approved spoil areas.

(2) Town officials will work with the Army Corps of Engineers, other State and federal agencies, and with other local governments to ensure continued dredging and maintenance of channels and rivers as needed to keep these facilities open to navigation. The provision of borrow or spoil areas and easements for work will be determined on a case-by-case basis. However, the Town would prefer that known spoil areas with existing easements for such purposes be used.

(3) Town officials will maintain contact with congressional representatives and federal officials as dredging or other channel maintenance operations are needed, and will continue to assist local users of these facilities as feasible.

8.3.8 B Beach Maintenance
(1) The Town supports all State, Federal, and inter-local efforts to determine, finance and implement environmentally and aesthetically acceptable methods of beach renourishment consistent with locally adopted policies. Innovative approaches to beach preservation and renourishment shall be supported, including the testing of new prototypical research projects at Carolina Beach.

(2) The Town is committed to maintaining its man-made beach, dune system and vegetation as close environmental substitutes for the natural systems which protect undeveloped coastal areas. This precludes encroachment of development upon these systems. The Town, therefore, supports non-structural means of stabilizing the ocean shoreline except for temporary structures (i.e. sandbags) erected to protect property from imminent danger of destruction due to erosion, as allowed by the CAMA program.

8.3.9 Energy Facility Siting and Development
Due to the potential risk of oil spills, and related adverse impact on the Town's tourist-based economy, the Town shall not support off-shore drilling for gas or oil and shall not permit facilities such as oil refineries, storage facilities, or staging areas within the Town limits or Extraterritorial Planning Jurisdiction.

8.3.10 Tourism
The Town of Carolina Beach shall seek to provide residents with a high quality of life and visitors to the area with a quality tourist experience, including especially, factors related to public safety, community image and appearance, an atmosphere conducive to families, pedestrian and bicycle oriented movement, convenient shopping and services, a quality beach strand, and fishable, swimmable waters. Businesses oriented toward higher per capita expenditures by visitors to the Town shall be especially encouraged.

8.3.11 Public Beach and Waterfront Access
(1) The Town shall secure financial assistance through the CAMA access program and any other programs to create, expand and improve public access to the beach front and estuarine waters of Carolina Beach.

(2) The Town shall avoid development of the soundside shoreline for exclusive residential development, thereby effectively walling off other Town residents and visitors from the public trust waters of the sound and intracoastal waterway. Public access, water oriented businesses, and mixed use developments with ground floor commercial shall be preferred along the soundside shoreline.

8.3.12 Parks and Recreation
As the community of Carolina Beach grows and annexes, the Town shall support a commensurate increase in the development, maintenance and enhancement of its parks, open space and recreational facilities, including sound and ocean access facilities. The Town shall employ national and State recreation standards as the minimum for such facilities—for the benefit of both residents and visitors alike. The Town shall explore alternative means of funding for parks facilities, including State and Federal grants, development impact fees, general obligation bonds, and other sources of revenue.

8.3.13 Boardwalk Area
Carolina Beach shall continue to work with merchants and property owners on efforts to revitalize the Central Business and Amusement District/Boardwalk area. Town officials will also seek grants and/or low-interest State or federal loans to revitalize the area. Any such revitalization efforts shall be in keeping with the historic small scale, pedestrian oriented character of the area.

8.3.14 Marina/Boat Basin
The Town shall continue to provide financial support and managerial guidance to the Carolina Beach Boat Basin and Marina, including periodic major capital improvement projects as may be authorized and budgeted by the Town. Day to day management of the marina shall be handled by a semi-autonomous Town Council-appointed Marina Authority. Alternatively, the Town may elect to lease the boat basin out to a private management company, but with the Town maintaining ownership of all facilities. Under either management option, the marina's normal operation and maintenance shall be self sustaining through revenues received. Future improvements to the marina area shall be in keeping with the pedestrian-oriented character of the central part of Town.

8.3.15 State Port Facilities
Due to the regional economic benefits of the State Port at Wilmington, the Town supports their continued expansion.

8.3.16 A Highway Improvements
The Town supports continued highway improvements providing improved access to Carolina Beach as identified in the State Transportation Improvement Program (TIP). The Town shall not support changes in the design of Lake Park Boulevard which would increase the volume or speed of traffic flow through the center of Town at the expense of east-west pedestrian and bicycle movement across the roadway. Rather, the Town supports the use of Dow Road for through traffic.

8.3.16 B Street System Planning
The Town shall periodically prepare, update and approve a Comprehensive Street System and Traffic Management Plan, consistent with the overall Thoroughfare Plan as approved by NC DOT. The plan shall encompass automobile, bicycle and pedestrian traffic movement, as well as on-street and off-street parking needs. The plan shall be employed in carrying out a planned program of street, bikeway, sidewalk, signage and signalization improvements, as well as in evaluating various public and private sector actions and development proposals as related to transportation issues. Preparation and implementation of the plan shall occur in concert with the residents, business, and property owners of the neighborhoods and streets involved.

8.3.16 C Bikeways
The Town supports the use of bicycles as a functional way of reducing automobile traffic and parking demand at the beach, as well as providing a convenient means to get around in many parts of Carolina Beach. The Town shall undertake a continuing program of bicycle friendly improvements to town streets in keeping with the Town's Bikeway Plan and periodically updated Street System and Traffic Management Plan.

8.3.16 D Parking
(1) In the absence of parking under elevated structures, the Town recognizes that on-street parking is one of the most efficient forms of parking available at Carolina Beach. The Town shall avoid actions which would eliminate on-street parking.

(2) Large off-street parking areas or structures are viewed as an inefficient use of limited land resources in a beach community. Where such uses are created, however, they shall be in keeping with the character, scale and design of their location within the Town.

(3) The Town shall seek to more carefully tailor fee parking spaces to match actual demand by time of year, day of week and time of day.

8.3.16 E Dow Road Intersection
Efforts by the Department of Transportation, acting in cooperation with the Town of Carolina Beach to correct operational deficiencies at the Dow Road/North Lake Park Boulevard intersection, shall be supported.

8.3.17 A Scenic Vistas and Views
Natural views and vistas provided by street corridors and street ends, open spaces, and other opportunities within the Town shall be preserved and protected to the maximum extent possible. This may require forethought in the design of new development or redevelopment which would otherwise act to close off such views and vistas.

8.3.17 B Neighborhood Character and Preservation
The Town encourages the improvement, preservation and enhancement of the Town' s areas of unique character and neighborhoods. To accomplish this, the Town shall initiate an on-going neighborhood planning program, to be addressed on a rotating basis among the various neighborhoods as staff resources allow.

8.3.17 C Historic Preservation
The Town encourages the preservation of its older, potentially historic structures and sites, including recent efforts by the Federal Point Historic Preservation Society to inventory important historic resources within the entire area of the County south of Snow's Cut.

CONTINUING PUBLIC PARTICIPATION POLICIES

8.4.0 Basic Policy Statement Regarding Continuing Public Participation
Carolina Beach believes that on-going, effective public involvement, combined with a coherent factual analysis of any public issue, is the key to creating and maintaining a direction for the community upon which all may agree.

8.4.1 Land Use Plan Update Process
Public involvement will be encouraged among all permanent residents, seasonal visitors, and property owners during each Land Use Plan Update.

8.4.2 On-going Public Participation
Public involvement in planning matters will continue beyond the plan update process through providing public education and information, utilization of the news media and mailers, and public opportunities for discussion and comment on land use issues. The Planning Board will advertise the public meetings held to discuss land use and associated matters.

8.4.3 Neighborhood Planning
To encourage a high level of involvement by citizens and property owners in planning decisions, the Town shall institute an on-going neighborhood planning program, within which different parts of the Town will be addressed on a rotating basis as staff resources allow.

STORM HAZARD MITIGATION/POST-DISASTER RECOVERY, AND EVACUATION POLICIES AND PLANS

8.5.0 Storm Hazard Mitigation/Post-Disaster Recovery, & Evacuation Policies and Plans
The Town shall continually seek to establish procedures and take actions to reduce the potential for the loss of life and property damage prior to a storm event, and to provide a framework for orderly reconstruction in the aftermath of a hurricane or other significant damaging event.

Storm Hazard Mitigation Policies

8.5.1 A Storm Effect Mitigation
(1) High Winds: The Town supports enforcement of the NC State Building Code. The Town will continue to enforce the State Building Code on wind resistant construction with design standards of from 120 to 150 mph wind loads.

(2) Storm Surge: The Town supports and is a participant with the State in administering the development standards of the CAMA Ocean Hazard Area of Environmental Concern (AEC). These standards help ensure that structures particularly susceptible to storm surge (e.g. first row) are set back from the ocean a distance based on the average annual erosion rate at that location.

(3) Flooding: The Town is an active participant in the National Flood Insurance Program and is supportive of its hazard mitigation elements. The Town shall continue to seek improvements in development standards which would result in lower insurance premiums for Town property owners. The Town also supports proper enforcement of State and Federal wetlands development permit processes in areas potentially susceptible to flooding.

(4) Wave Action and Shoreline Erosion: The Town is supportive of the CAMA development permit process for estuarine shoreline areas and the requisite development standards which encourage both shoreline stabilization and facilitation of proper drainage.

8.5.1 B Discouragement of Hazardous Development
(1) In reviewing development proposals, the Town shall act in concert with CAMA standards which discourage or prohibit development in hazardous locations.

(2) The Town shall conduct a public education and information sharing program approximately once per year with the goal of making the town more resistant to the forces of a storm. This will include a public outreach program to educate the public as to storm resistant building design and construction standards, as well as the Town's policies on evacuation, reentry, restoration of services and reconstruction.

(3) The Town will periodically conduct studies to analyze both the feasibility and benefits of revising local development controls to lessen the effects of storm damage. Included shall be an examination of the Town's floodplain management and building standards which could have the effect of reducing flood insurance rates for Town property owners.

8.5.1 C Public Land Acquisition
(1) The Town supports advanced planning for property acquisition in areas of *extreme* and *high* hazards, where such acquisition serves a useful public purpose, such as for public access to the beach, where such access is needed. In evaluating potential property purchases, the Town shall take into

consideration rates of erosion or other factors which could have a bearing on the longevity and ultimate usefulness of the property for public use.

(2) The Town shall investigate outside funding sources for land acquisition and shall encourage gifts and donations for tax credits, as a mitigative measure for future storm events. To provide a proactive approach, priority areas for acquisition shall be identified in advance of storm events.

8.5.1 D Evacuation
The Town, in cooperation with County and State officials, shall periodically evaluate the impact of continued growth on existing transportation facilities with regard to evacuation routes and times. Actions to meet needed transportation improvements shall be taken well in advance of need.

Post Disaster Reconstruction Policies

8.5.2 A Emergency Management Plan and Near Term Response
The Town shall prepare and annually update an Emergency Management and Operations Plan, in concert with County and State emergency management officials, and with input from Town residents. The plan shall encompass pre-storm and immediate post storm activities and policies of the Town, including policies on evacuation and reentry. Distribution of a "Citizen's Guide" to important elements of the plan shall occur on a year round basis at Town Hall, with heightened education about the policies of the plan occurring at the beginning of each hurricane season.

8.5.2 B Local Post Disaster Reconstruction Policies
Redevelopment in the most hazardous areas will be discouraged. Structures and sites which were destroyed by 50% or more of their value and which did not conform to the Town's building regulations, zoning ordinances, and other storm hazard mitigation policies shall be redeveloped according to current standards. In some instances, this may mean relocation of construction or no reconstruction at all. Structures and sites suffering damages at less than 50% of their value shall be allowed to be restored to their original condition prior to the storm.

The Town shall create and have on hand a Municipal Facilities Master Plan for the reconstruction of public buildings and facilities. The plan shall address functional as well as aesthetic considerations.

8.5.2 C Recovery Task Force
The Town shall have a predetermined Recovery Task Force to orchestrate the Town's recovery activities following a major storm event. The composition and duties of the Task Force shall be specified in the Town's Emergency Management and Operations Plan.

8.5.2 D Staging Schedule For Reconstruction and Repair
(1) To deal with the large number of requests for permits after a major storm, the Town shall employ a "building permit triage" for orderly issuance of building permits. Criteria for the order of issuance shall be developed in advance, with the need for modification acknowledged based upon the specific circumstances being faced.

(2) The Town shall also develop a planned sequence for the restoration of public utilities and services, with allowance for adjustment to deal with circumstances at hand.

8.5.2 E Public Infrastructure Repairs/ Replacement
The Town supports underground installation, replacement and storm proofing of public and private utilities and infrastructure. The Town shall also encourage the use of appropriate wind resistant traffic signals as may be available for new installation and replacement by NC DOT and private individuals.

1.3 The Land Classification System at Carolina Beach

• Purpose of Land Classification and the Land Classification Map

(a) Purpose

The CAMA Land Use Planning Guidelines require that local governments in the coastal area classify various parts of their planning jurisdictions in accordance with the desired density and character of development for each area of their community. For example, the **Developed** class is intended for areas that are already urban in nature. The **Urban Transition** class is intended for areas that are expected to become urban within the next decade. The **Rural** class is intended for areas that are not expected to become urban within the next decade—and so forth.

In the case of Carolina Beach, however, the incorporated area, (excluding marshes, the beach strand, and public trust waters) is largely urban in nature. In other words, most of the area is either already developed or platted for development, and is currently receiving the full range of urban services, including particularly, centralized water and sewer. According to CAMA Guidelines, therefore, most of the developable area of Carolina Beach qualifies for inclusion in the **Developed** class, with the balance of the area—i.e. marshes, the beach strand and public trust waters—qualifying for the **Conservation** class.

Designating nearly all of the land area of the Town into a single land class, however, defeats the purpose of providing policy guidance to the Town for different parts of the community. For this reason, this plan subdivides the **Developed** class into several sub-categories. These sub-categories correspond to neighborhood planning areas within the Town with distinct development characteristics or common attributes. Policy positions can then be included in each of these neighborhood sub-classifications to help the Town maintain the distinguishable neighborhood qualities unique to each area.

(b) The Land Classification Map

The land classification map, provided at the back of this document, identifies several "neighborhood planning areas" at Carolina Beach. Factors employed in determining the extent of each area varied from area to area, but generally related to one or more of the following: (1) The era or period in which the neighborhood was first developed. (2) The size of platted lots. (3) The height and character of buildings. (4) The nature of streets and parking. (5) The type(s) of land uses prevalent in the area. (6) The pedestrian or automobile oriented nature of the area. Ten of eleven neighborhood planning areas fall into the broad classification of **Developed** under the State guidelines for planning in the coastal area. The eleventh has been placed in the **Urban Transition** class. For a more complete description of each neighborhood area, please see Section 9 Land Classification.

• Developed Neighborhood Areas

(1) The St. Joseph/Spencer-Farlow Area

The policy emphasis of this plan is to protect the viability of the existing residential neighborhoods in this part of town, while allowing for reasonable development and redevelopment of other properties in the area. A primary focus of the Town's growth management efforts will be on controlling the nature and intensity of new multi-family/marina developments so that they are compatible with the existing character and use of the area. Particular attention shall be paid to traffic generation, cut through traffic, and parking demands related to new developments. Areas of freshwater wetlands shall also be conserved for the valuable functions they serve in filtering urban runoff and reducing flooding problems.

(2) The Post Office Area

The policy emphasis of this plan will be on working proactively with area property owners to address land development and gateway appearance issues. For its part, the Town has installed a number of streetscape improvements along this portion of US 421, including landscaping and decorative street lighting. Future developments will be reviewed particularly for roadway appearance, attractive signage, and landscaping. The Town will also work cooperatively with the State Department of Transportation on traffic management issues and the ultimate reconfiguration of the Dow Road intersection.

(3) The US 421 Commercial Area

The policy emphasis of this plan will be on working to mitigate the adverse visual affects of the strip development concentrated in this area. This may include improvements in area signage and landscaping, the addition of sidewalks to encourage pedestrian movement, and a close monitoring of additional driveway cuts onto US 421. These improvements might be carried out through an entryway corridor plan, prepared in cooperation with area property owners, or through changes in the Town's sign ordinance, landscaping standards, and zoning ordinance, plus a billboard abatement plan.

(4) The Mixed Use Area Near the Central Business District

The policy emphasis of this plan is on retaining the modest scale of most of the structures in the Mixed Use Area, as well as its pedestrian oriented nature. Large scale commercial uses and parking lots, which would detract from the pedestrian oriented, small village nature of the area, shall not be permitted. While the current mixture of single family residential, multi-family residential, and commercial uses is considered appropriate for this area, careful monitoring will be required to see that pressures for multi-family and commercial development do not get out of balance with the livability of the area. As an alternative to commercial and multi-family development, this area may be an appropriate location for small scale office and institutional uses. This is especially true for that portion of the area between Third and Fourth Streets which must serve as a true transition between the more commercial area adjacent to Lake Park Boulevard and the more solidly residential area west of Fourth Street.

(5) The Main Residential Area

The policy emphasis of this plan is to protect the viability of this area for single family residences with an appropriate mix of community and institutional uses. Duplexes on small (5000 to 6000 square foot) lots shall be discouraged in this area through appropriate zoning amendments. Opportunities for greater pedestrian and bicycle movement from this area to services located in and around the Central Business District should be encouraged. The Town can facilitate this objective by the addition of sidewalks in the area as Town capital improvement budgets allow.

(6) The North End

The policy emphasis of this plan is for the older section of the North End to continue as a single family residential area. Incremental improvements and investments in single family homes in this area shall be encouraged. Multi-family development, whether by new development or by increases in development intensity or scale at existing locations, shall not be permitted. With the possible exception of the MB-1 commercial district at the marina, the Spinnaker Pointe area shall be allowed to continue to develop in accordance with the plan as approved by the Town, and as permitted by the zoning ordinance.

(7) North Beach

The policy emphasis of this plan is to allow for the continued use of each land parcel as currently built upon or as approved for development. To keep traffic and parking problems from escalating further, no additional multi-family development, (beyond that which has already been approved) is to be permitted in the area, whether by new development or by increases in the development intensity or scale of existing projects. Conversion of single family homes and duplexes to multi-family housing is to be specifically discouraged. This may require rezoning of appropriate single family/duplex areas to exclude multi-family development. It may also require re-examining the extent of the T-1 (Tourist-oriented) zoning district to limit further increases in development intensity in this, the most congested part of Carolina Beach. In the event of major storm damage to ocean front structures in this area, the Town would prefer to see a higher quality of development with no increases in density and improvements in off-street parking for each residential unit.

(8) The Marina Area

The policy emphasis of this plan is on establishing a long-term vision and management plan for Myrtle Grove Sound. This plan would include recommendations for harbor management, maintenance dredging, boating safety and patrolling, shoreside access, transient moorings and other issues as they arise. It is recommended that this plan be developed under the auspices of a *water use plan* in accordance with the guidelines of the Coastal Area Management Act program. Included in this plan would also be proposals for improvements to sound side access ways at all public street ends.

(9) The Boardwalk Area and Central Business District

The policy emphasis of this plan is to achieve two objectives: (1) Reestablish the family-oriented market niche of the Boardwalk Area, and (2) Create a common architectural theme and sense of unity to the Boardwalk Area and surrounding business areas, including especially, the Marina.

The first objective is to firmly reestablish the boardwalk area as a family attraction. Currently, instead of projecting a clear image to the family market, the Boardwalk Area presents a split image, part adult and part family. By returning the Boardwalk Area to a family-oriented market niche, it is hoped that the Boardwalk Area can regain its economic potential. One opportunity to do this is through the future sale and reuse of the old Town Hall complex and Police Station. This site should undergo adaptive reuse or, if necessary, redeveloped with a use that supports the economic health of the boardwalk area. (As discussed in the paragraph below, it should also be in keeping with the scale and character of development in the area.)

The second objective is to create a common architectural theme and sense of unity between the Boardwalk Area and surrounding business areas, including the Marina. Implementation of the architectural theme will require cooperation form area property owners and businesses. For its part, the Town will continue to install streetscape enhancements within the Boardwalk Area itself, and between the Boardwalk Area and surrounding areas. In particular, the area between the end of Woody Hewett and the beginning of Canal Drive needs to have a sense of connectedness to the pedestrian. Assisting in this continuous connection will be the addition of landscaping, street lighting and continuous sidewalk improvements. Also helpful will be informational signage, including for example, kiosks with mounted locator maps. At the same time, the Town may want to revisit the potential closing of Cape Fear boulevard east of Lake Park Boulevard during some parts of the tourist year.

Consistent with both of the above objectives, the Town will not support nor allow proposals which would displace the historic, pedestrian-oriented heart of its community with large-scale enterprises and automobile oriented establishments (whether commercial or residential). To do so, would destroy that which is unique to Carolina Beach alone on the North Carolina coast.

(10) The South End

The policy emphasis of this plan is to allow for the retention and development of traditional single family beach cottages at a scale compatible with the original homes, modest lot sizes and narrow street rights- of-way in the area. The avoidance of single family "mini castles" packed onto small lots will also help avoid fire safety problems related to fire spreading quickly from one large structure to the next. Building heights of two to no more than three stores (total, from ground level) shall be considered appropriate in this area. Multi-family development shall not be permitted in the northern part of the South End. No additional high rise development, whether by new development or by increases in the development intensity or scale at existing locations, shall be allowed. Development of commercially zoned properties along Lake Park Boulevard should be oriented toward community and neighborhood services. Consideration should be given to rezoning that portion of the area currently zoned T-1 to a uniform RA-5A zoning designation. This may act to encourage healthy reinvestment in the area.

• Urban Transition Neighborhood Areas

(11) Wilmington/Hanby Beach

The Town will continue to plan ahead for the future annexation of this area. In keeping with this objective, the Town shall continue to annually set aside funds necessary to complete the installation of municipal water, sewer and other services upon annexation of the area. Over the long term, the Town may consider a rezoning of the area for an eventual transition from a predominance of manufactured housing to a predominance of traditional single family (site built) development. This should be done in a manner which does not penalize current property owners or residents, but rather allows for the transition to occur as properties are sold and redeveloped over time. As the area develops, strong measures should be taken to retain maritime forest and wetland areas.

• Conservation Areas

The policy emphasis of this plan for Conservation areas shall be to protect the natural integrity and functioning of these areas, as well as in providing open space and visual relief. Approved uses shall be in accordance with CAMA General Use Standards, with priority given to direct and indirect public access having a minimal impact on the natural functioning of these systems. The Town shall also maintain an on-going concern for the preservation of views and vistas to these areas, by carefully controlling development along the water's edge which would serve to block or wall off the public from these valuable scenic and recreational resources. (Also see specific policy statements for specific areas within the Conservation Classification, e.g. **8.1.4 J Carolina Beach Lake, 8.1.4 K Sunny Point Buffer Zone, 8.1.4 L Carolina Beach State Park, 8.1.4 M Snow's Cut (AIWW) Right of Way and Spoil Area** etc.)

2. Introduction

2.1 Why Prepare a CAMA Land Use Plan?

The Town of Carolina Beach and the whole of Pleasure Island have undergone tremendous change, particularly in the past two decades. Permanent and seasonal population levels have increased significantly and new construction has occurred at a rapid pace. With the coming of Interstate 40 from the piedmont of North Carolina several years ago, the attractiveness of Carolina Beach as a weekend retreat and second home vacation resort has increased markedly. From a variety of standpoints, Carolina Beach is reemerging as a tourism center on the North Carolina coast. At the same time, the Town's convenient proximity to the Wilmington-New Hanover urban area has heightened interest in the community as a year round residential locale.

As pressures for redevelopment have heightened, new problems must be faced, including: an intensification of development on environmentally sensitive sites, stormwater management problems, increased traffic congestion, increased parking demand for day visitors and residents alike, and a pressing, critical need for improvements to the Town's water and sewer systems. These needs point up the potential for degradation of the natural and built environment and quality of life that have brought people to Carolina Beach for so long.

The intent of the Land Use Plan is to anticipate and deal with these development pressures in an organized fashion. Such planning should work to protect and enhance the quality of life of area residents and should also conserve and manage the natural resources with which the Town has been blessed. At the same time, advanced planning and foresight can help minimize increases in the local tax burden, through sound public and private investment decisions.

The North Carolina General Assembly recognized these issues when it passed the Coastal Area Management Act of 1974, which requires local governments in the coastal area to develop land use plans and update them regularly in accordance with the State Guidelines. The first Land Use Plan for Carolina Beach was adopted in 1976, with updates following in approximate five year increments through 1990. This plan updates the previous plan to address ever changing issues and development trends affecting the Town.

2.2 Functions of the Land Use Plan

The Land Use Plan performs several important functions for local governing bodies and the general public; these functions are briefly described below:

• ***Source of Information*** - The plan's technical studies provide information on a number of topics, including the local economy, population, environmental features, land use trends and community facility needs.

• ***Guidance for Government Decisions*** - Once the governing body adopts the plan, it then has a foundation for guiding future decisions on budgets and ordinances, including public investments, zoning and other development decisions.

• ***Preview of Government Action*** - Decisions of the public in general, and developers in particular, are easier to make when the probable outcome of governmental decisions is understood; the adoption of a land use plan increases the predictability of government actions.

• ***Public Participation in Managing Development*** - Public meetings and hearings held during the plan's preparation help to insure that the plan reflects, to the extent possible, the specific nature of the current development issues facing the town.

The next section of the plan seeks to address several of the above functions by stating an overall community vision for Carolina Beach, and a series of objectives to be implemented through the land use plan.

3. Community Vision And Objectives

3.1 Community Vision

The CAMA Land Use Planning Guidelines state that "land use planning offers the best chance for developing a common vision and goals for the future that balance economic development and resource protection necessary for a healthy coast." (NCAC Subchapter 7B Land Use Planning Guidelines, Section .0100 - Introduction to Land Use Planning, .0101 Purpose). For the Carolina Beach Land Use Plan, the following overall vision for the community has been established:

General Vision Statement for Next Ten Years

We, the residents, business, and property owners of the Town of Carolina Beach, shall seek to preserve and enhance our community as both an appealing destination resort and year round place in which to live. We will continually strive to protect and nurture the natural and man-made features of our community which make it so unique. These features include our boardwalk/amusement area, marina and boat basin, Carolina Beach Lake, Carolina Beach State Park, and our stable, permanent single family residential neighborhoods. As the inherent value of our community continues to increase over the coming years, and the forces of investment and change influence that growth, the Town's mission shall be to positively direct growth such that the quality of each of these features is continually enhanced within the context of a small, family oriented beach resort town.

3.2 Objectives

In addition, for the land use plan to be effective, it must be driven by a clear set of overall objectives. These objectives help bring form to a distinct growth strategy that is consistent with the desires of the community.

Land Use Planning Objectives

The Town's Land Use Plan and development regulations should:

- Allow for new development and redevelopment consistent with the Town's long range infrastructure and service capabilities—particularly water and sewer, traffic and parking.
- Support the preparation of a capital improvement plan giving special attention to water and sewer system repair , replacement and upgrading.
- Encourage transportation improvements which would redirect through traffic to Dow Road, and encourage in-town alternatives to the automobile (i.e. trolleys, bicycle paths or lanes, and sidewalks)

(continued)

(continued)

- Allow for new development and redevelopment which recognizes legitimate development interests while conserving the long range environmental quality of surrounding land, water and marshes.
- Allow for development types, uses, and services which conserve and foster a family beach atmosphere.
- Discourage development and redevelopment that would result in disproportionate high density and "intense" development. Encourage a residential development mix which maintains the current proportion of single family and multi-family housing units.
- Pursue the most effective, financially feasible, equitable, and environmentally acceptable methods of beach and shoreline preservation.
- Establish a plan and system of ordinances that, following a natural disaster, provides the community with a rational method for re-entry and reconstruction consistent with each of the above community growth objectives.
- Welcome all visitors to the community, but provide special attention to the needs of weekly visitors and other visitors which are consistent with a family oriented atmosphere.
- Structure development impact fees and encourage development forms which pay for themselves over both the short and long term.
- Preserve the scale, ambiance and pedestrian orientation of the Town's existing central business district, boardwalk area and marina/boat basin.
- Support efforts to preserve the historic and architectural character of many of the remaining older residential structures in the community.
- Seek to enhance and beautify the US 421/Lake Park Boulevard main entryway corridor into the community. Discourage typical strip commercial development.
- Establish a management plan for the short and long term use and preservation of the Town's public trust waters, particularly Myrtle Grove Sound.

While the above objectives are not intended to be comprehensive, they do provide the foundation for many of the specific policies of the Town's Land Use Plan and ultimately, for guiding public expenditures and changes in the Town's development regulations.

4. Summary of Data Collection & Analysis

4.1 Establishment of Information Base

4.1.1 Components of the Analysis

Coastal Area Management Act (CAMA) guidelines for preparing land use plans in the coastal area of North Carolina require that an analysis of existing conditions and future trends be performed prior to policy development. The intent of this requirement is to ensure that the policies as developed respond as closely as possible to current problems and issues facing the community. Key components of the analysis may be described in four categories:

- **present conditions**—including population, economy, existing land use, and current plans and regulations;
- **land suitability constraints**—including physical limitations for development, fragile areas, and areas with resource potential;
- **community facility and service constraints**—including water, sewer, transportation, police, fire, schools, parks and recreation, and solid waste; and
- **estimated demand**—including population and economic projections, future land use needs, and community facility demands.

4.1.2 Subject Areas Examined

A number of basic studies are required so that a solid information base can be established for sound policy decisions. These basic studies include the following subjects:

- **Population and Economy**
- **Impact of Seasonal Population**
- **Existing Land Use Analysis**
- **Current Plans, Policies and Regulations**
- **Evaluation of Previous Land Use Plan Effectiveness**
- **Physical Limitations for Development**
- **Fragile Areas**
- **Areas with Resource Potential**
- **Water Supply**
- **Sewage Treatment and Storm Water Runoff**
- **Transportation Facilities**
- **Police**
- **Fire and Rescue**
- **Schools**
- **Parks and Recreation**
- **Solid Waste**
- **Population and Economic Projections**
- **Future Land Use Needs**
- **Community Facility Demands**

The technical reports listed above were geared to gathering and summarizing information related to the development of the Town. Collectively, these studies summarize past and present conditions, while providing the basis for estimating future conditions. Building upon this information, a number of policies were prepared by the Town Planning Board for consideration by the Town Council.

4.2 Some Findings from the Technical Studies

Population Growth Trends
After many decades of modest population increases, population growth at Carolina Beach accelerated dramatically during the 1980's and 1990's. The Town appears to be riding the wave of interest and the unprecedented building and development boom in New Hanover County.

Housing Types
About 45% of all housing units at Carolina Beach are either a single family residence or a duplex. About 53% of all housing units are multi-family units, while the remaining 2% are in mobile homes or other residential units.

Economic Profile of Residents
An examination of employment patterns and occupations of residents at Carolina Beach reveals that there are no remarkable differences between Town residents and County residents. This lends support to the notion that Carolina Beach is, in some respects, a bedroom community for employers in New Hanover County and the City of Wilmington. Household incomes of Town residents are also on a par with residents of the County as a whole.

Water Supply
The Carolina Beach water system consists of 10 wells which can pump water at an average rate of 100 gallons per minute. During peak summer population, pumps are operating at capacity for up to 20 hours per day, far exceeding the recommended 12. The maximum capacity of the total system is about 1.6 MGD. While the Town recognizes a pressing need to increase the water supply, the ability to drill additional wells is limited, in areas available to do so, without the additional wells adversely influencing existing wells. Alternative sources of water must therefore be sought in the very near future.

Waste Water Disposal
Peak summer season usage wastewater flow rates have approached, and occasionally exceeded, the average daily permitted flow rate for the Town's wastewater treatment plant. In response to concerns from the NC DEHNR, the Town hired an engineering firm to design an expansion of the wastewater treatment plant from 1.85 MGD to 3.10 MGD. The start of construction was delayed by hurricane Fran. Construction was initiated in November 1996 with completion anticipated within nine to twelve months. Even with this treatment plant expansion, Town officials recognize that an additional plant expansion (i.e. from 3.0 to 4.0 MGD) may have to follow closely on the heels of this expansion, due to continued growth and planned annexation initiatives.

Fragile and Natural Areas
For a community of its size, Carolina Beach has an abundance of fragile and natural areas providing habitat to a wide range of coastal flora and fauna. Areas providing important habitat include the Sunny Point Military Terminal Buffer Area, Carolina Beach State Park, Carolina Town Lake, and the natural area at the north end of Carolina Beach.

4.3 For Further Information

The full studies from which the above findings were drawn are contained in **Section 5, Present Conditions** and **Section 6, Constraints**. To find out more about various aspects of land use and development trends at Carolina Beach, the interested citizen is also invited to visit the Town offices where a variety of studies, plans, maps, aerial photographs and booklets are maintained on file.

5. Present Conditions

This section presents a variety of information about current human, economic and physical conditions at Carolina Beach. Also included is a summary of local plans, policies, and regulations pertinent to the formulation of the land use plan.

5.1 Present Population and Economy

5.1.1 Population and Housing

(a) Population Growth, 1930 to 1994

Year	Carolina Beach	% of County Population	New Hanover County
1930	95	<1	43,010
1940	637	1.3	47,935
1950	1,080	1.7	63,272
1960	1,192	1.7	71,742
1970	1,663	2.0	82,996
1980	2000	2.0	102,779
1990	3,630	3.0	120,284
1995 (Estimate)	4,625	3.3	139,577

Absolute Increase

Decade	Carolina Beach	% of County Growth	New Hanover County
1930-40	542	11.0	4,925
1940-50	443	2.9	15,337
1950-60	112	1.3	8,470
1960-70	471	4.2	11,254
1970-80	337	1.7	19,783
1980-90	1,630	9.3	17,505
1990-95	995	5.2	19,293

Source: Census of Population and Housing, 1930 through 1990 and North Carolina Office of Budget and Management

The **Population Growth** table above reflects the growth in the permanent population of Carolina Beach from 1930 to 1990 based on census information, with a 1995 population estimate provided by the State Office of Management and Budget. The table indicates a relatively modest growth rate for the town for the period from 1930 to 1980. Beginning in the 1980's, however, and continuing into the 1990's, the growth rate of the community has accelerated to a higher level. It has also been during the 80's and 90's that much of the higher density multi-family development has occurred at Carolina Beach.

(b) Racial Composition, 1990

Race	Carolina Beach	% of Total	New Hanover County	% of Total
Total	3,630	100%	120,284	100%
White	3,568	98%	94,895	79%
Black	33	1%	24,097	20%
Other	29	1%	1,323	1%

Source: 1990 Census of Population and Housing, STF 1 Profile 1—Characteristics of the Population, P7. Race, for Carolina Beach and New Hanover County

The **Racial Composition, 1990** table shows that the town is less than 2% non-white compared to 21% non-white for the county.

(c) Persons by Age, 1990

Age Group	Carolina Beach	% of Total	New Hanover County	% of Total
0-4	165	5%	7,434	6%
5-17	498	14%	19,880	17%
18-24	357	10%	15,000	12%
25-44	1,239	34%	39,155	33%
45-64	908	25%	23,749	20%
65+	464	13%	15,066	13%
Total	3,631	100%	120,284	100%

Source: 1990 Census of Population and Housing, STF 3 Page 2 of 29 Population: Age, Race and Sex (Part 1), P13/14/15. Race by Sex by Age, for Carolina Beach and New Hanover County

The **Persons By Age, 1990** table shows the relative distribution of age groups in the town. The percentages shown indicate few significant differences between the age composition of Carolina Beach and the age composition of New Hanover County. The largest differential is in the 45-64 year old age group in which Carolina Beach has 1 out of every 4 residents in that category compared to 1 out of 5 in the county.

(d) Educational Attainment, Persons 25 and Over in 1990

Education Completed	Carolina Beach	% of Total	New Hanover County	% of Total
<9th grade	104	4%	5,279	7%
9-12 No Diploma	355	14%	11,767	15%
H.S. Graduate	782	30%	22,578	29%
College, no degree	693	27%	15,760	20%
Associates Degree	185	7%	6,045	8%
Bachelors Degree	321	12%	11,935	15%
Graduate or Professional Degree	171	7%	4606	6%
Total	2,611	100%	77,970	100%

Source: 1990 Census of Population and Housing, STF 3 Page 10 of 29 Population: School Enrollment and Educational Attainment, P57/58/59/60. Educational Attainment by Race and Hispanic Origin, for Carolina Beach and New Hanover County

The **Educational Attainment** of the residents of Carolina Beach is generally in line with the educational attainment of residents of New Hanover County as a whole. The most significant difference would be in the category "College, No Degree" in which 27 percent of the Carolina Beach respondents to the census survey said that they fit this category, compared with 20 percent of respondents in New Hanover County as a whole.

(e) Housing Types, 1990

	Carolina Beach	% of Total	New Hanover County	% of Total
Total, All Housing Units	3,342	100%	57,076	100%
Total, All Single Family Units	1,271	38%	36,102	63%
Detached	1,191	36%	33,587	59%
Attached	80	2%	2,515	4%
Multi-family	2,024	61%	15,683	28%
2 units per structure	242	7%	3,289	6%
More than 2 Units per structure	1,081	53%	12,385	22%
Mobile Homes	24	<1%	4831	9%
Other	23	<1%	460	<1%

Source: 1990 Census of Population and Housing, STF 1 Profile 8—Housing Unit Characteristics and Tenure, H41/H42/H43. Units in Structure, for Carolina Beach and New Hanover County

As shown in the **Housing Types, 1990** table, about 45 percent of all housing units at Carolina Beach are either a single family residence or a duplex. About 53 percent of all housing units are in multi-family structures while less than 2 percent are in mobile homes or other housing units.

(f) Owner vs. Renter Occupied Housing, 1990

	Carolina Beach	% of Total	New Hanover County	% of Total
Total, All Housing Units	3,342	100%	57,076	100%
Occupied	1,605	48%	48,139	84%
Owner Occupied	801	24%	30,193	53%
Renter Occupied	804	24%	17,946	31%

Source: 1990 Census of Population and Housing, STF 1 Profile 5—Housing Unit Characteristics and Tenure, H1/H2/H3/H5. Housing Units, Tenure and Vacancy, for Carolina Beach and New Hanover County

The **Owner vs. Occupied Housing, 1990** table shows that in 1990, 48 percent of all housing units at Carolina Beach were occupied on a year-round basis, compared with 84 percent in the county as a whole. Of the year-round units in the town, the percentages were evenly split between owner occupied and renter occupied units.

(g) Vacant and Seasonal Housing, 1990

	Carolina Beach	% of Total	New Hanover County	% of Total
Total, All Housing Units	3,342	100%	57,076	100%
Vacant	1,737	52%	8,937	16%
For Seasonal, Recreational & Occasional Use	1,040	31%	3,345	6%
All other vacant	698	21%	5593	10%

Source: 1990 Census of Population and Housing, STF 1 Profile 5—Housing Unit Characteristics and Tenure, H1/H2/H3/H5. Housing Units, Tenure and Vacancy, for Carolina Beach and New Hanover County

The **Vacant and Seasonal Housing, 1990** table shows that in 1990, 31 percent of all housing units at Carolina Beach were being held for seasonal, recreational, and occasional use, compared with just 6 percent in the county as a whole (which includes the beach communities).

(h) Housing Value, Owner-Occupied Housing Units

Value	Carolina Beach	New Hanover County
Lower Quartile ($)	$57,300	$52,000
Median ($)	$80,100	$72,000
Upper Quartile ($)	$104,900	$103,700

Source: 1990 Census of Population and Housing, Summary Population and Housing Characteristics, North Carolina, Table 9, page 158 for Carolina Beach and New Hanover County

In 1990, the value of **owner occupied housing units** at Carolina Beach was slightly higher than the value of housing units in the county as a whole. In the upper quartile of housing value, housing units at Carolina Beach were roughly equivalent to the value of housing units in the county as a whole.

(i) Contract Rent, Renter-Occupied Housing Units

Contract Rent	Carolina Beach	New Hanover County
Lower Quartile ($)	$317	$241
Median ($)	$386	$324
Upper Quartile ($)	$482	$416

Source: 1990 Census of Population and Housing, Summary Population and Housing Characteristics, North Carolina, Table 11, page 189 for Carolina Beach and New Hanover County

In 1990, the **contract rent of renter occupied units** at Carolina Beach was about 30 percent higher in the lower quarter of all units, 20 percent higher in terms of the medium contract rent, and 15-20 percent higher in the upper quartile. In stating these figures, it is important to note that these contract rent figures apply only to rental units occupied on April 1, 1990, the date of the official U.S. census. Thus, most "high season" rental rates would not be reflected in these figures.

5.1.2 Local Economy

(a) Industry, Employed Persons 16 and Over in 1990

	Carolina Beach	% of Total	New Hanover County	% of Total
Agriculture, forestry, and fisheries	80	4%	931	2%
Mining	0	0%	53	<1%
Construction	202	11%	5,243	9%
Manufacturing				
Non durable goods	82	5%	5,396	9%
Durable Goods	92	5%	4,093	7%
Transportation	60	3%	2,325	4%
Communications & public utilities	51	3%	1,901	3%
Wholesale Trade	58	3%	2,567	4%
Retail Trade	404	22%	13,161	22%
Finance, insurance and real estate	156	9%	3,371	6%
Services				
Business and Repair	103	6%	2,636	4%
Personal Services	38	2%	2,228	4%
Entertainment and Recreation	23	1%	969	2%
Professional & related services				
Health Services	193	11%	5,091	8%
Educational Services	99	5%	4,718	8%
Other Professional and related services	119	7%	3,322	6%
Public Administration	57	3%	2,174	4%
Total, Employed Persons 16+	1,817	100%	60,179	100%

Source: 1990 Census of Population and Housing, STF 3 Page 12 of 29 Population: Industry and Occupation, P77. Industry, Employed Persons 16 years and over, for Carolina Beach and New Hanover County

The table above is a summary of employment patterns and occupations of Carolina Beach permanent residents. The figures indicate that there are no remarkable employment differences between permanent town residents and county residents. This lends support to the notion that Carolina Beach is, in some respects, a bedroom community for employers in New Hanover County and the City of Wilmington.

(b) Household Income, 1989

	Carolina Beach	New Hanover County
Median Household Income	27,500	27,320
Mean Household Income	35,391	34,397

Source: 1990 Census of Population and Housing, STF 3 Page 16 of 29 Population: Population: Income, P80/81/107/108/110/111. Household, Family, and Non-Family Income in 1989, for Carolina Beach and New Hanover County

The **Household Income, 1989** table shows that the mean and median household incomes of town residents in 1989 were nearly on a par with residents of the county as a whole.

5.1.3 Impact of Seasonal Population

(a) Estimate of Peak Overnight Population, 1995

Household Type:	Number of Units/Parties	Household or Party Size	Total Peak Overnight Population
Year Round, Occupied Residential Units	2074	2.23	4,625
Guests Staying in 1/3 of Year Round Residences	691	2.0	1,383
Vacant and Seasonal Residential Units	1812	4.0	7,248
Hotel and Motel Rooms	800	3.5	2,800
Staying in Recreational Vehicles, Tents and Boats	250	2.5	625
Total	5587	—	16,681

Source: 1990 Census of Population and Housing, NC Office of State Budget and Management, and Glenn Harbeck Associates. Basic methodology is from "A Methodology for Estimating Seasonal Population in Coastal North Carolina, 1996 DRAFT" available from the NC Division of Coastal Management, Raleigh, NC.

The table immediately above is a matrix for calculating the estimated **Peak Overnight Population** for Carolina Beach as it would likely have occurred over the July 4th holiday in 1995 (1995 is the most recent year for which permanent population estimates are available from the State). In choosing the July 4th holiday, it is important to note that the occupancy rates and party sizes are assumed to be at their *most extreme limits for the year.* This is consistent with the intent of the calculation: to determine the *peak* overnight population for the entire year. The estimate consists of five components, in order from top to bottom:

(1) Year round residents
(2) Visitors staying with year round residents
(3) Visitors and summer residents staying in vacation homes, second homes, or condominiums.
(4) Visitors staying in hotel and motel rooms
(5) Visitors staying in recreational vehicles, tents, boats and other similar portable or temporary housing.

Assumptions are as follows:

- About one third of all year round homes at Carolina Beach would have an average of 2 overnight visitors over the peak day of the July 4th holiday.
- Vacation homes, second homes, and condos would house an average of 4 occupants—much higher than the average household size of year round residents.
- The figure for the total number of hotel and motel rooms at Carolina Beach is an estimate based on 40 hotels/motels with an average of 20 rooms per hotel *(Source: Carolina Beach/Kure Beach Chamber of Commerce and Yellow Pages for hotels/motels with a Carolina Beach address.)*
- It is not unreasonable to expect that there would be a total of 250 temporary or mobile accommodations throughout the Town and its marinas on July 4th, with an average party size of 2.5 persons.

(b) Estimate of Peak Day Population (Including Day Visitors), 1994

In recent years, **Peak Day Population Estimates** have ranged from 25,000 to over 30,000 people. (Source: Chamber of Commerce and Carolina Beach Police Department) With the advent of Interstate-40 and the tremendous growth of the permanent population of New Hanover County since 1990, projections of future peak day population range as high as 40,000 by the year 2000. Because available parking space typically reaches the saturation level by mid-morning on a peak summer day, continued increases in peak day population will be dependent in the future upon higher vehicle occupancy levels, shuttle services, public transportation, and other methods.

5.2 Existing Land and Water Uses

5.2.1 Existing Land Uses Mapped

(a) Categories of Land Use

The Existing Land Use Map 1996 provides a detailed, lot by lot inventory of existing land uses throughout the Town of Carolina Beach. Categories of land use selected for the inventory, along with their working definitions are as follows:

Single family residential— a free standing, site built structure intended for occupancy by a single household unit.

Single Family, Manufactured Housing—a freestanding, factory built structure intended for occupancy by a single household unit.

Duplex Residential— two separate living quarters in a single structure.

Multi-family residential—any structure with three or more separate living quarters in the building. (Includes condominium buildings with multiple ownership but which may have a central management service.)

Office and Institutional— includes offices, churches, schools, and similar uses.

Commercial—traditional retail establishments, commercial marinas, restaurants, and hotels and motels, and amusements.

Commercial Services and Storage—includes wholesale establishments, repair shops and garages, contractors buildings and yards, warehousing and self storage, etc.

Municipal/Public Works—public buildings and lands, water and sewer facility sites, etc.

Parks and Recreation—passive and active parks, trails, picnic areas, open space, public boat ramps and docks, public ballfields, etc.

Vacant—developable land that is not occupied. (Does not include, for example, tidal marshes and other undevelopable "vacant" areas.)

(b) Existing Land Use Pattern, Generally

The distribution of existing land uses at Carolina Beach reflects a distinct pattern of residential and commercial development, influenced strongly by several predictable factors. In general, large lot, automobile-oriented commercial uses are located along US 421/Lake Park Boulevard leading into the community from the north. Smaller commercial uses have historically clustered in the traditional central business district/boardwalk/marina boat basin area of the community. Traditional single family residential developments have been developed away from the ocean shoreline, while intensive multi-family residential has clustered along the water's edge.

Note: While Hurricanes Bertha and Fran (both 1996) caused damage to many structures at Carolina Beach, such damage did not result in the total destruction of any buildings within the Town. Two or three oceanfront properties at the extreme north end of the Town limits experienced heavy damage; it is yet to be decided as to how or whether these lots will be utilized in the future.

(c) Existing Land Use Analysis By Sub-Watersheds

CAMA land use planning guidelines suggest that the analysis of existing land use be conducted in conjunction with an assessment of water quality classifications—within the context of sub-watersheds, if possible. In the case of Carolina Beach, there are three principal sub-watersheds, as depicted on the **Existing Land Use, 1996** map: (1) Carolina Beach Lake, (2) Hennicker's Ditch, and (3) Myrtle Grove Sound. Land uses will now be discussed for each of these areas.

1. Carolina Beach Lake.
This is the southernmost sub-watershed in the Carolina Beach community. It consists of intensive oceanfront development along much of the eastern, oceanfront edge of the watershed, a predominance of manufactured housing in the extreme south end of the area, more traditional single family residential development south, west and northwest of the lake proper, and a mixture of single family, multi-family and commercial uses closest to the central business district and immediately north of Carolina Lake. This area ultimately drains into Myrtle Grove Sound.

2. Hennicker's Ditch.
This area is comprised almost exclusively of traditional ground level, single family structures. It drains into the Cape Fear River.

3. Myrtle Grove Sound.
This sub-watershed has the most diverse range of land uses of any of the three in Carolina Beach. As stated previously, highway commercial style retail establishments have clustered along the US 421/Lake Park Boulevard corridor. These developments include many of the features normally associated with commercial strip development, including extensive paved parking areas, numerous driveway cuts, relatively large land tracts and a proliferation of highway-oriented signage. Land areas west of the US 421 corridor are predominantly single family residential and have a relatively low development density. Developments east of the US 421 corridor exhibit a gradual transition from traditional single family residential (closest to the highway and farthest from the sound) and more intensive multi-family residential properties immediately adjacent to the west side of Myrtle Grove Sound. Finally, the outer beach area on the north end of Carolina Beach is comprised of a mixture of single family residential, a great many medium-sized, multi-family "six-pack" developments, and more intensive oceanfront housing, particularly closest to the boat basin/marina area. This area also includes the extreme northern end of Carolina Beach, which is natural and undeveloped.

(d) Land use conflicts
Land use conflicts at Carolina Beach have been customarily minimal regarding the mixture of residential and small-scale commercial uses in the older part of town. The fine grain mixture of uses actually encourages a sense of community, fosters pedestrian movement and reduces demand for automobile-dependent trips. Rather, most land use conflicts have centered on two types of development: (1) large, traffic generating commercial developments and (2) intensive multi-family development which must be accessed through pre-existing single family residential neighborhoods.

For a more detailed analysis of land use and development patterns within various neighborhoods at Carolina Beach, the reader is directed to **Section 9, Land Classification.**

5.2.2 Existing Water Conditions Mapped

CAMA land use planning guidelines call for the mapping and inventory of existing water conditions, including the identification of DEM (Department of Environmental Management), stream classifications, water quality use support (as identified by DEM), water shed boundaries, wetlands, primary and secondary nursery areas, outstanding resource waters, and other features such as shell fish beds and beds of submerged aquatic vegetation. The intent is also to show these water quality conditions in relation to landside development conditions.

(a) Water Quality Categories

At Carolina Beach, water quality conditions in and around the town include DEM water quality use support classifications (SA, SB, SC) and coastal estuarine wetlands. These categories of water quality condition may be further described as follows:

> **SA Waters**—generally suitable for shellfish harvesting and primary recreation involving swimming on a frequent or organized basis.
>
> **SB Waters**—suitable for primary recreation involving swimming on a frequent or organized basis, but not for shellfish harvesting.
>
> **SC Waters**—suitable for aquatic life propagation and secondary recreation including recreational fishing, boating, and water related activities involving minimal skin contact.
>
> **Coastal Estuarine Wetlands**—salt water marshes, subject to regular or occasional flooding by tides, including normal wind tides. Marsh plants found here include saltwater Cordgrass (Spartina alterniflora), Black Needlerush (Juncus roemerianus), Glasswort (Salicornia, spp.), Salt Grass (Distichlis spicata), Sea Lavender (Limonium, spp.), Salt Meadow Grass (Spartina patens), and Salt Reed Grass (Spartina cynosuroides).

(b) Existing Water Conditions Analysis

The **Existing Land Use, 1996** map also shows the location of estuarine waters by their water quality classification. The water quality classification for Snows Cut is *SC*. Myrtle Grove Sound has a classification of *SB*, with the exception of the central navigation channel, which is classified ***SA-Unsuited for Shellfishing***. Prospects for improving the water quality of Myrtle Grove Sound—adjacent to some of the most intensively developed land at Carolina Beach—are doubtful, given on-going pressures to intensify land and water uses in the area, with associated increases in pollutants and storm water runoff.

It should be noted that Masonboro Sound, while outside the Town's planning jurisdiction, has been designated as an ***outstanding resource water*** **(ORW)** by the state. The Town's efforts to minimize future increases in pollutants and runoff may result in long term benefits to the preservation of water quality in these outstanding waters. In addition, while there are no ***primary nursery areas*** within the planning jurisdiction of Carolina Beach, a ***secondary nursery area*** is located in the vicinity of Carolina Beach Inlet, north of Snows Cut. For a more detailed analysis of water quality issues and the estuarine system of AEC's at Carolina Beach, the reader is directed to Section 8.1.2, **Areas of Environmental Concern.**

5.3. Current Plans, Policies, and Regulations

This section includes a summary of certain local plans, policies and regulations that are pertinent to the growth and development of Carolina Beach.

5.3.1. Thoroughfare Plan

In October 1990, Carolina Beach contacted the NC Department of Transportation and requested an update of the Carolina-Kure Beach Thoroughfare Plan, which was originally adopted in 1973 and updated in November 1982. Because of the close proximity of Carolina Beach to Kure Beach, and their common economic ties, the Department of Transportation deemed it advisable to analyze the needs of the island as a whole. At Carolina Beach, the plan noted that several intersections were experiencing severe congestion problems. Two of the most troublesome of these were Carl Winner Street at US 421 and Carl Winner Street at Canal Drive. Heavy traffic volumes, particularly during the summer months, were

especially noted on US 421 through town (Lake Park Blvd.) At the same time, Dow Road, which is a parallel facility to Lake Park Boulevard, was not very well utilized. The 1992 Carolina Beach Thoroughfare Plan makes recommendations regarding many of these traffic congestion problems and opportunities. At the same time, it suggests alternative transportation modes, including recommendations regarding trolleys and bike ways.

5.3.2. Capital Improvement Plan

Carolina Beach does not have a capital improvement plan. As noted elsewhere in this document, the community would benefit greatly from a planned and orderly system for scheduling and financing needed improvements to water and sewer systems, parks, sidewalks, streets, and public buildings.

5.3.3. Utility Extension Policy

The Town of Carolina Beach currently extends utilities only to those areas that request annexation into the Town's corporate limits.

5.3.4. Open Space and Recreation Policy

Carolina Beach has 27 ocean access points that are provided by either the Town or by New Hanover County (20 Town, 7 County). The Town also has estuarine access points off Canal Drive with facilities ranging from bulk headed grassy areas to gazebos over the water. More detailed information on the location and types of recreational facilities at Carolina Beach can be found under Section 6.2.8. Parks and Recreation. In addition to beach access areas, the community has a 10 acre regional park at Dow Road which contains a softball field, picnic shelter and tables and open space.

5.3.5. 1990 Carolina Beach CAMA Land Use Plan

The Carolina Beach CAMA Land Use Plan, first adopted in 1976, has been used as a general guide to direct future growth and development in the town. State law requires that an update to the land use plan be prepared every five years. An evaluation of the effectiveness of the 1990 update to the Land Use Plan is presented in the appendices to this plan under Section 12.2.

5.3.6. National Flood Insurance Plan

In 1985, the results of the Federal Flood Insurance Study were reviewed and accepted by Carolina Beach. The Flood Insurance Rate Maps are dated September 4, 1986 and consist of Community Panel Numbers 375347 0001 C and 375347 0002 C. The two flood maps show that approximately one half of the developed area of Carolina Beach is located within the 100 year flood zone.

5.3.7. Zoning

The current Town zoning ordinance was adopted on November 29, 1984. The 1984 zoning rewrite updated the Town's previous zoning ordinance, first adopted on January 11, 1977. The ordinance includes general provisions for development as well as district regulations specific to uses ranging from single family residential to marina businesses. The Town's zoning ordinance also controls off street parking, signs, fences, and conditional uses. The ordinance is amended from time to time in keeping with state and local statutes.

5.3.8. Subdivision Regulations

The subdivision regulations of the Town of Carolina Beach, enacted in 1977, specify the procedure by which land may be subdivided and recorded. Minimum design standards and required improvements for new subdivisions are also included, such as grading, curb and gutter, sidewalks, and other utilities.

5.3.9. Building Code

All components of the North Carolina State Building Code are administered and enforced on behalf of the Town by New Hanover County.

5.3.10. Nuisance Ordinance

The Carolina Beach Code of Ordinances, Chapter 10, addresses nuisances such as indecent exposure, drinking in public, unnecessary noises, weeds and junk on property and abandoned property.

5.3.11. Dune Protection

The Town's local CAMA Permit Officer and state CAMA Permit Officers have regulatory control over construction which would effect the frontal dune line of Carolina Beach. While the Town code of ordinances does not specifically address dune protection elsewhere in the community, the Town does seek to protect all dune areas in the development review process.

5.3.12. Sedimentation and Erosion Control

In addition to the requirements of the State regarding soil erosion and sedimentation control, Section 12.154 in the Town code of ordinances addresses erosion control measures to be taken during all grading, excavation or other land disturbing activities.

5.3.13. Storm Water Management Plans

Section 12-218 through 12-231 of the Town code of ordinances addresses storm water management and drainage. The ordinance requires, prior to authorization or any building permit, that plans be submitted for review and approval by the Town, showing stream flow, runoff calculations and drainage plans.

5.3.14. Mobile Home Park Ordinance

Section 6.13 of the zoning ordinance addresses the development of mobile home parks as a permitted use in the RA-5T District. Requirements for roads and drives, parking spaces, set backs, recreation space and utility requirements are outlined in this ordinance.

5.3.15. Water Supply Plan

This 1995 Plan assesses the water supply needs of the Town of Carolina Beach through the year 2020 and compares those needs with the current availability of water supply sources to meet those needs. The plan then suggests a strategy for meeting the projected water demand. The plan also includes specific goals for the five year period 1995 to the year 2000. By law, this plan must be updated at least every five years, or more frequently as conditions change.

(c) Means of Enforcement, (Staffing and Ordinance Adequacy)

Responsibilities for enforcing each of the plans, policies, and regulations contained in this section are outlined in many of the applicable paragraphs above. Generally, enforcement for plans and ordinances not specifically noted is the responsibility of the Town's planner/local CAMA enforcement officer—who coordinates all planning and zoning matters. Planning and land development matters are brought before the Carolina Beach Planning Board, which meets monthly. The Planning Board conducts reviews and makes recommendations to the Town Council, which has final responsibility for making planning and zoning decisions.

5.4. Relationship of Land Use Regulations to CAMA Land Use plan

The CAMA Land Use plan, when used properly, can be instrumental in helping to guide future growth and development at a rate and degree acceptable to the town, while maintaining the quality of life and environmental integrity. The land use plan should be viewed as the policy foundation for the Town's zoning ordinance and its other land use and regulatory controls. Following completion of each land use plan update, a major objective of the Town should be to implement appropriate amendments to local government regulations consistent with the land use plan.

6. Constraints

6.1 Land Suitability

6.1.1 Physical Limitations for Development

(a) Natural Hazard Areas

Natural hazard areas at Carolina Beach may be described, for the most part, in one of three categories: (1) areas subject to washover and "static" flooding (2) areas subject to storm surge and "dynamic" flooding, and (3) areas subject to shoreline erosion and loss of property.

(1) Areas Subject To "Static" Flooding

About one half of the developed land area at Carolina Beach is subject to total inundation during the 100 year storm. The Federal Emergency Management Agency (FEMA) has identified these areas on the flood insurance rate maps (F.I.R.M.'s) as being in the A Zone, subject to washover and flooding. As older structures have been replaced over the years, the Town has been successful in implementing new construction standards that elevate most substantial new improvements above the 100 year flood level.

(2) Areas Subject To Storm Surge And "Dynamic" Flooding.

These are areas of the coast subject to high velocity wave action and storm surge during severe storms. These areas typically extend along the shoreline and to some distance landward of the frontal dune. The Federal Emergency Management Agency (FEMA) has identified these areas on the flood insurance rate maps (F.I.R.M.'s) as being located in the V zone. The Division of Coastal Management has also provided the Town with a copy of the so-called SLOSH maps which identify the anticipated extent of storm surge under different hurricane scenarios. These maps are available for inspection at Town Hall.

(3) Areas Subject To Shoreline Erosion

These are typically areas along the ocean shoreline which are especially vulnerable to effects of sand, wind, water and erosion. Such hazardous areas may include 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. Within CAMA such hazardous areas have been framed as the Ocean Hazard system of Areas of Environmental Concern (AEC's), and may be further identified according to four specific sub areas as follows:

(1) The ocean erodible area
(2) The high hazard flood area
(3) The inlet hazard area and
(4) The unvegetated beach area.

Each of these areas is described in greater detail under Section 8.1.2E of this plan.

(b) Areas with Soil Limitations

Soil characteristics for Carolina Beach are described in the 1977 **Soil Survey of New Hanover County** and referenced in the **1991 Land Use Plan Update**. Based on the soils report, Carolina Beach is made up primarily of six soil types identified on the following chart:

CAROLINA BEACH SOILS

Symbol	Name	Flooding	High Water Table	Shallow Soils	Compaction (Roads)	Septic Tank Use
Ur	Urban Land	Varies	Varies	Varies	Varies	Varies
Rm	Rimini	None	-6'	Moderate (Cutbanks Cave)	Slight	Slight*
Mu	Murville	Frequent	-1	Severe	Severe	Severe
Le	Leon	None	-1	Severe	Severe	Severe
Ly	Lynn Haven	Frequent	-1	Severe	Severe	Severe
Jo	Johnston	Frequent	-1.5	Severe	Severe	Severe

**Contamination of nearby water supplies is a hazard if the soils are used for sewage disposal.*
***Severe limitations for shallow soils, compaction and septic tank use are due primarily to wetness. Soils with high water table conditions may be considered "404" wetlands by Army Corps of Engineers. Final determination must be made by on-site inspection of each property.*

Much of Carolina Beach has already been developed. Many of these developed areas are shown as Urban Land or Rimini soils. The Town's remaining undeveloped areas are designated largely as Murville (Mu), Leon (Le), Lynn Haven (Ly) and Johnston (Jo) soils. The table shows that each of these last four soil types have severe problems because of wetness or shallow soils, compaction and severe problems for septic tank use. Leon soils are the only soils of these four that do not have frequent flooding problems. Each of the last four soils shown on the chart have a high water table.

For a more detailed explanation of the capabilities and characteristics of soil types found at Carolina Beach, please see the **Soil Survey of New Hanover County** published by the US Department of Agriculture Soil Conservation Service, 1977. The report also shows the general location and extent of these soils on maps.

(c) Water Supply Areas

The Town of Carolina Beach obtains its water supply from 11 wells that draw from the Castle Hayne Aquifer. (See the **Water and Sewer Map** for well site locations.) While this deep aquifer does receive some recharge from overlying aquifers, the primary recharge area is located some distance away in the Scotts Hill, Murrayville area and Pine Valley area of New Hanover County and Wilmington.

The 1990 Annexation Report for Carolina Beach prepared by Municipal Engineering Services Company, PA, observed that during summer months the Town's wells often run in excess of 20 hours per day in order to meet water demands. Division of Health Services regulations require that the average daily water demand be satisfied within a 12-hour pumping period on any well. Water records for 1993 through 1996 indicate average daily water use during the peak summer months of 1.0 to 1.2 million gallons per day.

(d) Areas With Slopes Exceeding 12%

Slopes exceeding 12% are located in some areas on the western side of Carolina Beach and inside the Sunny Point Buffer Zone. The areas on the western side of Carolina Beach are along Snow's Cut. The areas in the Buffer Zone include several large sand dunes with steep slopes subject to erosion. None of these areas are subject to development based upon restrictions on their use.

(e) Shoreline Areas With High Erosion Potential

Much of the north end of Carolina Beach has the potential for high erosion rates. Virtually any portion of the oceanfront, however, may be subject to significant changes in erosion/accretion rates.

(f) Small Watersheds Draining Into Special Waters

There are three principal sub-watersheds within the planning jurisdiction of Carolina Beach. As depicted on the **Existing Land Use, 1996** map, they are: (1) Carolina Beach Lake, which ultimately drains into Myrtle Grove Sound, (2) Hennicker's Ditch, which drains into the Cape Fear River, and (3) Myrtle Grove Sound, which also drains into the Sound. None of these areas are considered to be "special waters" in that they are classified as either SB (suitable for swimming but not shellfishing) or SC (suitable for general recreation with limited skin contact with the water). For a complete description of the land use activities prevalent in each of these sub-watersheds, see Section 5.2.1 (B)

6.1.2 Fragile Areas

(a) General

"Fragile areas" are those areas which could easily be damaged or destroyed by inappropriate or poorly planned development. Included are coastal wetlands, sand dunes, ocean beaches and shorelines, estuarine waters and shorelines, outstanding resource waters, public trust waters, complex natural areas, areas sustaining remnant species, unique geologic formations, national landmarks, wooded swamps, prime wildlife habitats, scenic points, archaeological and historical sites, maritime forests, and "404" wetlands.

As a coastal and estuarine community, virtually all of Carolina Beach consists of or is adjacent to fragile areas associated with the coastal environment: the tidal and nontidal wetlands, the ocean and estuarine areas, dunes, scenic points, natural areas, and public trust waters. The general location and extent of important fragile area resources at Carolina Beach are identified on the **Fragile Areas Map, 1996**.

Some of these fragile areas have been specifically designated by the State of North Carolina as being critical resource areas; environmentally significant and vulnerable to damage and destruction by development. These "Areas of Environmental Concern" or "AEC's" are described in detail, along with applicable policies, under Section 8.1.2 of the Resource Protection Policies Section of this plan. Other fragile areas are more fully described below.

(b) Coastal Complex Natural Areas

Coastal complex natural areas are defined as lands that support native plant and animal communities and provide habitat qualities which have remained essentially unchanged by human activity. Such areas may be either significant components of coastal systems or especially notable habitat areas of scientific, educational or aesthetic value. They may be surrounded by landscape that has been modified but does not drastically alter conditions within the natural areas. Coastal complex areas are significant in that they function as a key biological component of natural systems and provide habitat suitable for threatened or endangered species or support plant or animal communities representative of pre-settlement conditions. Coastal complex natural areas may be designated as an Area of Environmental Concern (AEC) by the Coastal Resources Commission.

The *Carolina Beach Natural Area* is cited on the Natural Heritage Priority List and could be nominated as a Coastal Complex Natural Area AEC. The Carolina Beach Natural Area includes portions of the Carolina Beach State Park and the Sunny Point Military Buffer Zone. The Carolina Beach State Park contains numerous significant ecological systems including Brackish Marsh, Coastal Evergreen Fringe Forest,

Coastal Fringe Sandhill, Small Depression Pocosin, Small Depression Pond, Streamhead Pocosin, Vernal Pool, Wet Pine Flatwoods, and Xeric Sandhill Scrub. Likewise, the Military Buffer Zone has significant ecological sites of a Coastal Fringe Evergreen Forest, Coastal Fringe Sandhill Area, Pond Pine Woodland, Wet Pine Flatwoods, Small Depression Pond, Streamhead Pocosin, Pine Savanna, and Xeric Sandhill Scrub. These types of natural areas are becoming more significant as development consumes more and more of these coastal ecosystems.

(c) Areas That Sustain Remnant Species

Coastal areas that sustain remnant species are those areas that support native plants or animals which are determined to be rare or endangered (synonymous with threatened and endangered), within the coastal area. These places provide habitat necessary for the survival of existing populations of rare or endangered species within the coastal area and preserve our natural heritage and protect natural diversity which is related to biological stability.

Carolina Beach State Park is a habitat for numerous threatened and endangered species. The American Alligator, the Crawfish Frog, the Branched Gerardia, the Venus Fly Trap, the Southern Bog-Button, the Coastal Beakrush, and the Tracy Beakrush are animal and plant species which warrant special protection and are found within the Park.

The *natural area on the north end of Carolina Beach* is a habitat for the plant Seabeach Amaranth, a threatened species which has been further endangered from O.R.V. traffic and erosion. This area in the past has also been a nesting site for gulls, terns, and skimmers but was listed as inactive during 1983 and 1988 surveys.

The *Carolina Beach Town Lake* is a habitat for the American Alligator.

(d) Areas Containing Unique Geologic Formations

The *Carolina Beach State Park* contains three unique geological formations. The first is Sugarloaf, a prominent relic sand dune. There is also a regionally significant ridge and swale formation which has marine deposits underlain by detrital limestone of the Cape Fear Coquina Formation. Solution has resulted in elliptical sinks.

There is also an outcrop of coquina rock which was exposed when *Snow's Cut* was engineered.

(e) Registered Natural Landmarks

There are no Registered Natural Landmarks within the Carolina Beach area according to the Natural Heritage Division. The Sugarloaf area in the Carolina Beach State Park could conceivably qualify for registration because of its regional significance.

(f) Wooded Swamps

Swamp forest communities occur in two locations --the *Carolina Beach State Park* and a larger site in the *Military Buffer Zone* according to the 1984 report "Conservation Resources in New Hanover County" prepared by the New Hanover County Planning Department.

(g) Prime Wildlife Habitats

Several areas within Carolina Beach are prime wildlife habitats according to the N. C. Wildlife Resources Commission. The *beach strand* is an important habitat for birds and nesting sites for loggerhead turtles. The *north end of Carolina Beach* is a fish nursery area as well as providing nesting sites for colonial birds. The *Carolina Town Lake* is a habitat for the American Alligator as well as a prime bird watching area. Of

course, the *Carolina Beach State Park and Military Buffer Zone* are prime habitats for numerous wildlife species.

(h) Scenic and Prominent High Points

Sugarloaf, located in the *Carolina Beach State Park*, is the most prominent point in the Carolina Beach area. Sugarloaf is a 50-60 foot relic sand dune. In fact, this large sand dune was used as a navigation point along the Cape Fear River during colonial times and, reportedly, offers one of the most scenic views in New Hanover County.

(i) Archeological and Historic Sites

According to the 1984 report "Conservation Resources in New Hanover County" by the New Hanover County Planning Department, there is only one significant archeological site within Carolina Beach. A Prehistoric Late Woodland Ceramic site is located within the *Military Buffer Zone* in the vicinity of Ocean Boulevard and Federal Point Cemetery.

(j) Maritime Forests

The Coastal Fringe Evergreen Forests located within the *Military Buffer Zone* and *Carolina Beach State Park* are considered by the Natural Heritage Office to be Maritime Forests because of the maturity of the trees. Former sites of Maritime Shrub Thickets were located at various points along the Myrtle Grove Sound as identified in the "Conservation Resources in New Hanover County" report. However, these sites have since been developed for residential use.

(k) Lands Identified Through the U.S. Fish and Wildlife National Wetlands Inventory

Carolina Beach, like other coastal communities, has been included in the National Wetlands Inventory Program. U.S. Fish and Wildlife has used the U.S.G.S. 7.5' or 15' map series as a base. The Carolina Beach quad has wetland delineation depicted by stereoscopically interpreting high altitude aerial photography and then transferring the information with a zoom transfer scope to the base map. Based on a review of this information, the following major locations and types of wetlands have been identified:

East and west side of N.C. 421 entering Carolina Beach from the Snows Cut Bridge. This area includes a Palustrine system with mixed forests of evergreens and loblolly pine forests.

Northwestern sound front at Myrtle Grove Sound near Snows Cut. This area includes the salt marsh community with Cord Grass and some Palustrine system species of plants.

The north point of Carolina Beach between the Intracoastal Waterway and Atlantic Ocean. This area includes Estuarine system and Riverine system species of plant material including Wax myrtle, Yaupon, Red Bay, Loblolly Bay on dredged material.

Carolina Lake Area. This area is included in the Palustrine system and includes a shallow pond colonized by water lilies.

Area located north of Ocean Boulevard and east of Dow Road. This area is also included in the Palustrine System with mixed forests of evergreens and loblolly pine forests.

Carolina Beach State Park and Sunny Point Buffer Zone. This area includes a large area of mixed evergreen forests which is part of the Palustrine system and some Estuarine system and fresh water marsh.

Each of these areas may be located on the **Fragile Areas, 1996** map.

(l) Areas Identified Through NRCD's Natural Heritage Program

A major portion of the Carolina Beach State Park is a Registered Natural Heritage Area. Portions of the registered area are owned by the State Park, while a major section is leased from the Department of Defense. Registration as a Natural Heritage Area is a voluntary agreement between the landowner and the State which can be rescinded within 30 days.

6.1.3 Areas with Resource Potential

(a) General

As defined by CAMA, Areas with Resource Potential include productive and unique agricultural lands: potentially valuable mineral sites; publicly owned forests, parks, fish and game lands, and other non-intensive outdoor recreation lands; and privately owned wildlife sanctuaries. These areas may be nominated for approval and designation as AEC's by the Coastal Resources Commission. Some may also be a part of other AEC's.

Within the jurisdiction of the Town of Carolina Beach there are no traditionally accepted areas with resource potential. However, there is significant park and open space acreage within the Town limits. Also, it could be said that the extensive marsh and estuarine waters at the north end of Carolina Beach are indeed productive fish and game lands. Residents of the Town expressed strong interest in preserving the environmental quality and productivity of these critically important natural areas. Various resource areas are more fully described as follows:

(b) Productive and Unique Agricultural Lands

Two major soil associations exist within the Carolina Beach area: the Tidal Marsh-Newhan Association and the Murville-Seagate-Leon Association. Neither of these associations is considered prime agricultural land.

(c) Potentially Valuable Mineral Sites

To date, no mining permits have been issued in the Carolina Beach area. The geologic setting of Carolina Beach could indicate the possibility of oil, natural gas, limestone, marl, phosphate and heavy mineral deposits. In fact, the 1990 Land Use Plan Update noted that "exploratory drilling for oil has occurred just outside the study area north of Snow's Cut." However, according to the North Carolina Geological Survey Division, no valuable mineral sites, economically feasible to mine, have been identified at Carolina Beach

(d) Publicly Owned Forests

There are no publicly owned forests within Carolina Beach.

(e) Parks

Carolina Beach State Park is a 1,773-acre State park offering camping, a marina, picnic facilities, hiking trails as well as a habitat for numerous significant plants and animals and unique geological formations.

(f) Fish and Game Lands

The northern beach end of Carolina Beach is a fish nursery area and warrants conservation. The 1990 Land Use Plan Update noted that here had been discussion about designating the Military Buffer Zone as a game land and permitting bow deer hunting for short-time intervals. To date, such designation has not occurred.

(g) Non-Intensive Outdoor Recreation Lands

The Carolina Beach State Park offers non-intensive outdoor recreation.

(h) Privately Owned Wildlife Sanctuaries

There are no privately owned wildlife sanctuaries in the Carolina Beach area.

(i) Prime Farm Land (Consistent with Governor's Executive Order Number 96)

There are no known prime farm lands in the Carolina Beach area.

6.2 Community Facilities and Services Capacity

In this section, the design capacity and level of utilization of the existing community facilities and services within the Town are examined and analyzed to determine if future demands can be met. Future demands are generally considered in the context of a ten year planning horizon, or the year 2006.

6.2.1 Wastewater Management System

(a) System Overview

Carolina Beach has one waste water treatment plant which discharges into the Cape Fear River. It is located west of Dow Road within the Sunny Point Military Ocean Terminal Buffer Area. (See **Water and Sewer Map**). *Average, minimum,* and *maximum* daily wastewater flow figures for the past few years are as follows:

WASTEWATER FLOW FIGURES, (MGD*) 1993 TO 1996

	Average		*Minimum*		*Maximum*	
	Feb	**Aug**	**Feb**	**Aug**	**Feb**	**Aug**
1993	1.182	1.562	0.963	1.153	1.444	2.696
1994	1.322	1.737	1.137	1.461	1.808	2.164
1995	1.531	1.741	1.237	1.344	2.252	2.529
1996	1.063	1.627	0.751	1.299	1.265	1.889

*Wastewater flows, provided in millions of gallons per day (MGD), are strongly affected by rainfall and flooding conditions and resulting infiltration and inflow into the wastewater collection system of the Town. Thus, wastewater flow volumes may, at times, appear to be erratic rather than gradually progressive in nature.

(b) Waste Water Treatment Plant Expansion

Peak summer season usage wastewater flow rates have approached, and occasionally exceeded, the average daily permitted flow rate for a month. In response to concerns from the NC DEHNR, the Town hired an engineering firm to design an expansion of the wastewater treatment plant from 1.85 MGD to 3.10 MGD. The start of construction was delayed by hurricane Fran. Construction was initiated in November 1996 with completion anticipated within nine to twelve months.

Even with this treatment plant expansion, Town officials recognize that an additional plant expansion (i.e. from 3.0 to 4.0 MGD) may have to follow closely on the heels of this expansion, due to continued growth and planned annexation initiatives.

(c) Condition of the Waste Water Collection System

The Town's wastewater collection system consists of a series of underground pipes made out of terra cotta (clay), cast iron, and PVC. The Town has become aware of increasing problems with many of these pipes, particularly the older sections made of terra cotta and cast iron. A remote camera inspection of sample pipe sections revealed pipes that were in various stages of deterioration and with significant offsets from one pipe section to another.

The Town is now planning a more thorough camera inspection of at least 20,000 linear feet of suspect pipes, especially along the oceanfront. Options will then be explored as to the most cost effective means of repairing or replacing the deteriorated pipes. Correcting infiltration and inflow problems (where ground water enters the sewage collection system) will also free up capacity at the treatment plant, thereby extending the life of treatment plant expansions.

6.2.2 Drinking Water Supply System

(a) System Overview

The Town of Carolina Beach is located in the Cape Fear River basin and utilizes the Castle Hayne Aquifer for its water source. The Carolina Beach water system provides service to approximately 2,200 residences. Carolina Beach uses deep wells, only, for its water supply. The existing water system consists of 10 wells which can pump water at an average rate of 100 gallons per minute. During peak summer population, pumps are operating at capacity for up to 20 hours per day, far exceeding the recommended 12. These wells are located throughout the Town and their locations are shown on **Water and Sewer Map**. The maximum capacity of the total system is about 1.6 MGD. To date there has been no detectable levels of contaminants in the raw water.

Storage is provided by one underground reservoir holding 800,000 gallons, and one elevated water tank holding 500,000 gallons. The water is treated with chlorine prior to delivery. Treatment occurs at the wellhead for five wells, and at the water treatment plant for five other wells. The water treatment plant is located on the west side of Dow Road opposite Clarendon Avenue.

(b) Condition of the Water Supply and Distribution System

While the condition of the Town's water supply distribution lines are thought to be clearly better than the condition of many suspect sewer lines, Town officials do not have good information about water lines, either. Because of this, the Town administration will be pursuing a planned approach to assessing the condition of water system lines on a scheduled basis.

(c) Current Water Demand

The monthly average water use for the past several years was as follows:

AVERAGE WATER USE (MGD)

	Minimum (Feb)	Maximum (July)
1993	.509	1.100
1994	.560	1.122
1995	.607	1.184
1996	.736	1.211

In all years, the highest usage day has traditionally been July 4 with water consumption averaging over 1.4 MGD.

(d) Future Water Demand

The 1990 annexation feasibility report prepared by Municipal Engineering Services Company, PA, estimated a need for an additional 760,000 gallons per day of water to annex Wilmington Beach and Hanby Beach and 330,000 additional gallons per day for the northern annexation area. If implemented, and absent expansion of production capability, this 1.1 million gallons per day additional load would result in a dramatic shortage in the water supply. To comply with the State Division of Health Services regulations, (which require that the average daily water supply demand be satisfied within a 12 hour pumping period on any given well), a total of 28 wells with an average pumping rate of 125 gallons per minute would be necessary to provide a firm 2.5 million gallons per day water supply. This would require an additional 18 wells and a new 750,000 elevated storage tank to serve existing and proposed needs.

(e) Potential Sources of Future Supply

The Town of Carolina Beach recognizes a pressing need to evaluate potential sources of future water supply. The ability of the Town to drill additional wells is limited, in areas available to do so, without the additional wells adversely influencing existing wells. No formal studies have been performed; however, the following options appear to be those which are readily available:

- Reverse Osmosis Plant: Areas within the Cape Fear River flood plane along the western shore of the Island appear suitable for such an installation. None of this property is within the corporate limits of Carolina Beach; therefore, permission would have to be obtained from either the Sunny Point Military Terminal or the North Carolina State Park System.

- Additional Well Fields: To drill additional wells, the Town would have to procure additional property across the Intracoastal Waterway (Snows Cut) within New Hanover County. The water would then have to be piped to the Town.

- Procurement of Water from other Systems: Water would be available from the Brunswick County Water System via a subaqueous piping system. Water would also be available from New Hanover County. Deliverable quantities of water from either source is unknown.

(f) Goals For Next Five Years

The following goals are contained in the Town's 1995 Water Supply Plan:

1. Develop a water conservation program.
2. Increase water flow rate capabilities to south end of Town.
3. Evaluate need for additional water tank.
4. Complete construction of waste water treatment plant expansion.
5. Complete construction of water and sewer lines to annexed areas.

Generally, the Town administration is recommending that the Town move quickly toward a capital improvement program approach to managing future water ad sewer system repair, replacement and expansion.

6.2.3 Schools

The capacities and enrollments of New Hanover County public schools serving the Town of Carolina Beach are shown as follows:

School	Design Capacity w/o mobile units	Design Capacity w mobile units	Oct. 1996 Enrollment
Carolina Beach Elementary	471	NA	446
Myrtle Grove Middle	810	NA	810
Hoggard Senior High	1460	1768	2186

Source: Mark Strickland, New Hanover County Schools

While increases in the number of school aged children at Carolina Beach have been small at best, the New Hanover County School System has experienced an explosion in the student population. As a result, many schools in the system are at or over capacity. Carolina Beach Elementary School, serving grades K through 5, is an exception. Myrtle Grove Middle School is currently at capacity, while Hoggard High School is substantially over capacity , even with the addition of mobile classroom units.
New Hanover County school officials do not anticipate dramatic growth in the number of elementary school age children within Carolina Beach proper over the next few years. However, growth in the elementary school age population in the County is expected to continue to mushroom. Despite the approval of a school bond referendum two years ago, County officials continue to struggle with the need for additional classroom space.

Other educational services in New Hanover County, in addition to the public school system, include several private schools (primary, secondary, and special education), the University of North Carolina at Wilmington, and Cape Fear Community College.

6.2.4 Transportation Facilities

Next to water and sewer system upgrades, highway and street system improvements are the most important infrastructure issues facing the community. After many years of operating under an old thoroughfare plan, the Towns of Carolina Beach and Kure Beach came together in 1992 and, with assistance from the North Carolina Department of Transportation, developed a new thoroughfare plan for Pleasure Island. Three of the plan's most significant recommendations can be summarized as follows:

(1) More emphasis should be given to Dow Road as a bypass around the heavily congested part of Lake Park Blvd. through the heart of Carolina Beach,
(2) Harper and Carl Winner should be converted into a one-way pair system to alleviate traffic congestion problems for vehicles seeking to get to the north beach area,
(3) alternative means of transportation at Carolina Beach should be emphasized, including, for example, a potential rubber wheel trolley and bike lane facilities.

It should be noted that while the Town does support greater use of Dow Road as a bypass facility, the Town does not support the widening of Lake Park Boulevard or "improvements" which would increase the volume or speed of traffic through the center of town at the expense of east-west pedestrian and bicycle movement across the roadway.

In 1995, the Town attempted to implement significant portions of a thoroughfare plan by developing a Comprehensive Street System and Traffic Management Plan. Support for the implementation of the street system plan, however, was mixed. Generally, residents supported the plan while the business community was opposed to it. As a result, the street system plan was shelved, and by default, the Thoroughfare Plan also.

6.2.5 Solid Waste Disposal

Carolina Beach, like other municipalities in New Hanover County, is using the County's sanitary landfill and incinerator. The County incinerator has a current capacity of 200 tons of waste per day with plans to expand to 450 tons per day. Waste pick up and disposal is done under contract with Waste Management, Incorporated. Over the past few years, the state of North Carolina has required and then relaxed, standards for recycling and waste reduction at the local government level. Regardless of these requirements, residents of the Town of Carolina Beach have voiced an ongoing interest in the development and implementation of a voluntary recycling program.

6.2.6. Police

The Carolina Beach Police Department currently consists of 28 employees with 22 sworn officers (of which one is a code enforcement officer) and 5 dispatchers (of which one doubles as a parking lot attendant) and one secretary. During the summer months, (from about May 15 to September 20) the Department also has responsibility for 28 lifeguards. The department has 5 patrol cars, 3 detective cars, one beach patrol (4 wheel drive), and 3 all terrain vehicles (used by lifeguards). In the aftermath of hurricane Fran, the Department has been housed on the second floor of the Town Recreation Center behind Town Hall. The old Town Hall suffered extensive water damage, making cost effective renovation of the building questionable at best. The most pressing need of the Department, therefore, is for a new Police Department building or space within a building.

6.2.7. Fire

The Carolina Beach Fire Department has one full time employee (Fire Chief) and one part-time paid employee. The department has 35 volunteer firemen. Equipment includes 2 pumper trucks, one 27 years old and one 4 years old. The department also has one aerial truck (75' vertical reach*), one hose van and one utility van. Carolina Beach has a fire class rating of five (5). In the aftermath of Hurricane Fran, Fire Department offices were temporarily located in the Town's new Recreation Center. The Department has since relocated back to its former site at the old Town Hall near the marina. Fire trucks and other equipment are also at the old Town Hall. Like the Police Department, the most pressing need of the Fire Department, therefore, is for a new building.

***All "high rise" structures at Carolina Beach, i.e. those structures which cannot be effectively reached by the Town's fire fighting equipment, are required to have sprinkler systems.**

6.2.8. Parks and Recreation

In addition to the beach strand and water amenity offered by Myrtle Grove Sound, the Town of Carolina Beach is blessed with a significant amount of park and open space land in and around the corporate limits of the community. Foremost among these significant open space areas are the undeveloped north end of Carolina Beach, Carolina Beach Town Lake, the Sunny Point Military Terminal Buffer Zone, and Carolina Beach State Park. Because of these existing opportunities for recreation and open space enjoyment, there is not significant pressure to create additional natural and open space areas. However, increasing demands and pressures on the active use of the Town's existing facilities (ball fields, gymnasiums, play equipment, etc.) call for continued attention to improvements and enhancements to organized facilities. Among these enhancements has been the recent addition of a major recreation center on the same site as the Town Hall Complex. This new facility offers significant indoor recreational opportunities to town residents and visitors alike.

According to the Town's Director of the Parks and Recreation, the Town has no recreation plan and the existing facilities are at "maximum buildout" until such time as additional land is acquired. Existing facilities at Chappel Park cannot be expanded because they are located in the Sunny Point Buffer Zone.

6.2.9 Public Administrative Capability

The Town of Carolina Beach has a Council-Manager form of government. The Town Council consists of a Mayor and four Council Members elected at large every four years with staggered terms. The Mayor is elected for a two-year term. The Town Council is the governing body of the Town with the Mayor as a voting member and the presiding officer. The Town Manager is appointed by the Town Council and administers the daily operations of the Town as well as being responsible for implementing and explaining the policies of the Town Council .

The Town provides a full range of services. These services include police and fire protection (with volunteers), sanitation, the construction and maintenance of streets and infrastructure, beach rescue, planning, and parks and recreation. The Town also provides water and wastewater services. There is no anticipation regarding major changes in the form or size of local government in the Town.

7. Estimated Demand

7.1 Population and Economic Projections

7.1.1 Projections of Permanent Population

Population projections for Carolina Beach are an extrapolation from overall County-wide growth trends and historic patterns over the past several decades. (See Section 5.1.1 Population and Housing) The projections assume that the number of housing units being added to the County's housing stock will resume a more normal rate of increase of 2000 units per year, down from the current torrid pace of 3000 units annually. At the same time, additions to the housing stock at Carolina Beach will continue to hold the town's population level steady at about 3.3% of the County total through the year 2000. Projections of population beyond the year 2000 will be dependent in no small way upon the ability of the Town to deal with upgrades of the water supply and wastewater treatment capabilities of the Town. At the same time, tendencies toward greater year round occupancy at Carolina Beach will be offset by economic forces (obtainable rents, property taxes) which will increase incentives for rental properties.

POPULATION PROJECTIONS

Year	Carolina Beach	% of County Population	New Hanover County
1930	95	< 1	43,010
1940	637	1.3	47,935
1950	1,080	1.7	63,272
1960	1,192	1.7	71,742
1970	1,663	2.0	82,996
1980	2000	2.0	102,779
1990	3,630	3.0	120,284
1995 (Estimate)	4,625	3.3	139,577
2000 Projection	5,280	3.3	160,000
2010 Projection	6,160	3.5	176,000

Source: Census of Population and Housing, 1930 through 1990, North Carolina Office of Budget and Management, New Hanover County Planning Department, and Glenn Harbeck Associates.

7.1.2 Projections of Seasonal Population

With the advent of Interstate-40 and the tremendous growth of the permanent population of New Hanover County since 1990, estimates of peak summer service population have averaged about two and one half to three times the off-peak permanent population. Thus, peak summer service population (overnight visitors) is currently estimated to be in the range of 12,000 to 14,000 people and could reach as high as 16,000 to 18,000 by the year 2010. (For more detail on Projections of Seasonal Population, see Section 5.1.3). These numbers have their greatest significance when determining demand for water and sewer services, but also have an impact on traffic generation, solid waste management, recreation services, law enforcement and a variety of other municipal services. In addition, it is important to note that these numbers do not include the peak day visitor population, which can exceed 25,000 to 30,000 people—and which also must be factored in when determining equipment, facilities and personnel needs of the Town.

7.1.3 Economic Projections

Section 5.1.2 of this plan provided a comparative examination of the employment characteristics of Carolina Beach residents as opposed to New Hanover County residents. This comparison revealed no remarkable differences between the employment patterns and occupations of Carolina Beach residents and County residents. Due to Carolina Beach 's increasing role as a residential "bedroom community" for the Greater Wilmington area, the Town's economic outlook is apt to continue to reflect the overall economic prospects for New Hanover County. In the absence of a major national economic downturn, such prospects, as described frequently by economists at the University of North Carolina at Wilmington, as well as by several financial institutions in the State, call for continued economic growth and prosperity for the Greater Wilmington area for the foreseeable future. Such continued advances in economic growth for the region can only result in increasing demand for properties at Carolina Beach and continued inflationary pressures on real estate values, rents, and taxes, relative to the balance of the region.

7.2 Future Land Use Needs

As stated so many times previously in this plan, future growth and development at Carolina Beach, and thus, future demand for developable land, will be highly dependent upon the ability of the Town to provide for adequate water and sewer systems. While there are a sizable number of undeveloped lots in both the main residential area of Carolina Beach, as well as in Hanby Beach and Wilmington Beach, (See **Existing Land Use, 1996** map) most of these lots are not developable with septic systems. Once adequate water and sewer is made available, pressures for redevelopment of currently underutilized properties will mount, resulting in a higher intensity of use on existing developed lots. This will be particularly true for the oceanfront area south of the Boardwalk all the way to the corporate limits of the Town of Kure Beach.

7.3 Demand for Community Facilities and Services

For the sake of uninterrupted analysis and continuity of presentation, a discussion of community facilities demands is included in each of the community facility evaluations provided in Section 6.2 of this plan.

8. Policy Statements

Introduction to the Policies

The data collection and analysis completed in Sections 4,5,6, and 7 of this plan was geared to gathering and summarizing information related to the future development and redevelopment of the Town of Carolina Beach. Building on this information, a series of official local government policies are hereby set forth. As officially adopted policies of the Town of Carolina Beach, they serve as the basis for future decisions on land use, development and capital improvements.

Policy Format

Each major category in the policy section of the land use plan is addressed according to the following format:

Discussion	A brief summary of the issues, relevant findings and, where applicable, alternative policy responses.
Policy Statement	**Statement(s) of local government principal designed to achieve legitimate public objectives related to the issue.**

In addition, Section 12.3 of this Plan, entitled the Action Agenda, includes a number of potential Implementation ***Actions*** designed to carry out the Policies of the Land Use Plan over the next five years.

It is important to understand that the narrative (discussion) is not policy, and does not carry the same degree of importance as the actual policy statements. The narrative is designed to provide background and rationale for the ensuing policy statement. In most instances, the discussion serves to identify a problem or issue, and may present a summary of findings from other technical studies. There is no intent to establish policy within any discussion section. More detailed discussions of issues related to policies are found in the earlier information sections of the Plan.

The policy statements, on the other hand, must be viewed in a wholly different light. As statements of local government principle, the policies should remain substantially unchanged during the five year planning period. Frequent changes to the policies would undermine their effectiveness in achieving intended goals and objectives. Indeed, the policies are designed to maintain a consistent and predictable direction for local government decisions affecting local growth and development during the planning period. In reviewing the pages that follow, the reader is asked to focus greatest attention on the policies, while relying upon the discussion primarily as explanations as to intent.

Resource Protection Policies

8.0 General Vision Policy for Next Ten Years

The CAMA Land Use Planning Guidelines suggest that the policy section begin with an overall guiding policy regarding future growth and development. The Town of Carolina Beach is generally known as having a casual, high quality of life highlighted by its proximity to the services of the Wilmington urban area, and the quality of its natural setting. The Town wishes to direct development and redevelopment in keeping with a small town, family-oriented community. The following policy statement emphasizes the need for diligence in working to preserve and enhance these qualities.

8.0 General Vision Policy for Next Ten Years

We, the residents, business, and property owners of the Town of Carolina Beach, shall seek to preserve and enhance our community as both an appealing destination resort and year round place in which to live. We will continually strive to protect and nurture the natural and man-made features of our community which make it so unique. These features include our boardwalk/amusement area, marina and boat basin, Carolina Beach Lake, Carolina Beach State Park, and our stable, permanent single family residential neighborhoods. As the inherent value of our community continues to increase over the coming years, and the forces of investment and change influence that growth, the Town's mission shall be to positively direct growth such that the quality of each of these features is continually enhanced within the context of a small, family oriented beach resort town.

8.1 Resource Protection Policies

Section 8.1.0 Basic Policy Statement Regarding Resource Protection

Carolina Beach derives much of its economic revenue and its cultural charm from the natural amenities of its coastal location. For the town to continue to be a desirable place in which to live, visit, and work, these natural amenities must be protected, preserved, and whenever possible, improved upon. The Town's land use plan therefore must establish decision making policies and implementation actions designed to achieve a balance between the commercial and residential development of the town and the continued maintenance of the natural systems and vistas that encourage such development.

8.1.0 Basic Policy Statement Regarding Resource Protection

The natural and scenic resources of Carolina Beach enable business owners to earn a livelihood, residents to have an outstanding quality of life, and property owners to realize continued appreciation of real estate values. The Town of Carolina Beach, through its policies and actions, shall not support or approve any action, in singular or cumulative effect, which would jeopardize the long term viability of our natural and scenic resources, or the small town character of our community.

(Note: In keeping with this policy, the Town shall consider each proposed development activity for its individual impact on natural and scenic resources. For example, while the addition of a single residence with a poorly designed drainage plan may not have a significant impact on water quality in the sound, the cumulative impact of a great many such poorly designed drainage plans would eventually have a profound adverse effect on the volume and quality of water entering estuarine waters.)

Section 8.1.1 Constraints Caused by Soil Limitations and Flood Prone Areas

Flood insurance rate maps dated September 4, 1986, show that approximately one half of the developed area of Carolina Beach is located within the 100 year flood area. The 1977 Soil Survey of New Hanover County shows that Carolina Beach consists primarily of Urban Land (Ur) and Rimini (Rm) in the developed areas with Murville (Mu), Leon (Le), Lynn Haven (Ly) and Johnston (Jo) making up much of the remaining undeveloped portions of Carolina Beach. These four soils, making up much of the undeveloped portion of Carolina Beach, are subject to frequent flooding, have high water tables and not suitable for septic tank use. Town officials will not encourage development in areas prone to flooding or on poor soils, unless effective mitigative actions can be taken.

8.1.1 Constraints Caused By Soil Limitations and Flood Prone Areas

Development will be discouraged from locations where stormwater runoff related flooding exists, unless appropriate corrective improvements are to be completed as part of the project. Appropriate corrective improvements shall be defined as those which resolve the drainage problem without increasing stormwater runoff on adjacent properties or in area waters, whether directly or indirectly. Similarly, new development which would be susceptible to sound flooding shall also be discouraged unless mitigative actions are taken.

8.1.2 Areas of Environmental Concern

The Coastal Area Management Act (CAMA) of North Carolina calls for the identification of certain environmentally fragile and important land and water areas that are judged to be of greater than local significance. The Coastal Resources Commission (CRC), in cooperation with local governments in the twenty county coastal area, has developed a program of permit review within these Areas of Environmental Concern (AEC's) . The intent of the regulatory program is not to stop development , but rather to insure the compatibility of the development with the continued productivity and value of certain critical land and water areas. Each basic AEC category is summarized below with the applicable policy statement immediately following. The reader is urged to consult with the full definition and State-promulgated use standards of each AEC category before contemplating development in these areas.

8.1.2 Areas Of Environmental Concern

The Town will support and enforce, through its CAMA permitting capacity, the State policies and permitted uses in the Areas of Environmental Concern (AEC's). Such uses shall be in accord with the general use standards for coastal wetlands, estuarine waters, public trust areas and ocean hazard areas as stated in 15A NCAC Subchapter 7H.

Note: The first four AEC's described below together make up the so-called estuarine system AEC's: Coastal Wetlands, Estuarine Waters, Estuarine Shorelines, and Public Trust Waters. They are presented as a system of AEC's due to the strong degree to which they are ecologically interrelated.

8.1.2 A Coastal Wetland AEC'S

Coastal wetland AEC's are marshes, subject to regular or occasional flooding by tides, including normal wind tides. At Carolina Beach, these are predominantly salt water marshes associated with the Myrtle Grove Sound and the intracoastal waterway. These marshlands serve as a critical component in the coastal ecosystem. The marsh is the basis for the high productivity of the estuary, which is the primary input source for the food chain of the entire coastal environment. Estuarine dependent species of fish and shellfish, such as menhaden, shrimp, flounder, oysters, and crabs, contribute tremendous value to the economy of North Carolina's commercial and recreational fisheries.

Marsh plants found in coastal wetlands include saltwater Cordgrass (Spartina alterniflora), Black Needlerush (Juncus roemerianus), Glasswort (Salicornia, spp.), Salt Grass (Distichlis spicata), Sea Lavender (Limonium, spp.), Salt Meadow Grass (Spartina patens), and Salt Reed Grass (Spartina cynosuroides). The roots and rhizomes and seeds of the marsh grasses serve as food for waterfowl, and the stems as wildlife nesting material. The tidal marsh also serves as the first line of defense in retarding estuarine shoreline erosion. The plant stems and leaves tend to dissipate wave action while the vast network of roots resists soils erosion. Coastal wetlands operate additionally as traps for sediments, nutrients and pollutants originating from upland runoff. Siltation of the estuarine bottom is reduced, and pollutants and excess nutrients absorbed by plants do not burden the coastal waters.

The primary coastal wetland or salt marsh area for Carolina Beach is located along the western edge of the northern extension of the island. Other significant wetlands are found along the Cape Fear River. Protection of these sensitive habitats continues to be a high priority for local officials. These marshes should be considered unsuitable for all development and for those land uses which would alter their natural functions.

8.1.2 A Coastal Wetlands

Due to the critical role that wetlands play in protecting the quality of estuarine waters and in providing habitat for fish and wildlife, the Town strongly supports the proper designation and preservation of all remaining coastal wetlands. Acceptable land uses may include utility easements, fishing piers, and docks. *Unacceptable* uses may include, but would not be limited to, restaurants, businesses, residences, apartments, motels, hotels, parking lots, private roads, and highways.

8.1.2 B Estuarine Water AEC'S

An estuary is a semi-enclosed water body having free connection with the open sea and within which sea water is measurably diluted with fresh water drained from the adjacent land. The immense productivity of estuarine waters results largely from unique circulation patterns, nutrient trapping mechanisms, and the protective habitats they provide. Estuarine circulation, influenced by tidal currents, fresh water influx, and shallow bottom depth, keeps the estuarine waters well flushed, dispersing nutrients, juvenile stages, and wastes. In their natural state, these waters provide many diverse and productive habitats. Common features in estuarine waters include mud flats, eel grass beds, clam and oyster beds, and fish and shellfish nursery areas.

At Carolina Beach, estuarine waters are found in the Intracoastal Waterway, (including Snow's Cut) the Cape Fear River, and the Myrtle Grove Sound area. Within the Town's jurisdiction, the Sound area and intracoastal waterway north to Carolina Beach Inlet is classified SB, suitable for swimming but not for shellfishing . Snow's Cut and the Cape Fear River are classified SC, suited for general recreation, but not for swimming or shellfishing. North of the Inlet, Masonboro Sound was nominated and designated as an Outstanding Resource Water (ORW) by the State. A secondary nursery area is located adjacent to the natural area at the northern end of the Town.

The high value of commercial and sports fisheries and the aesthetic appeal of coastal North Carolina are dependent upon the conservation and protection of its estuarine waters. Appropriate uses in and around estuarine waters are those which preserve estuarine waters so as to safeguard and perpetuate their biological, economic and aesthetic values.

Acceptable uses should be water dependent uses such as navigable channels, piers and docks, and mooring pilings, provided that they do not directly or indirectly block or impair existing navigation channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards or cause degradation of shellfish waters.

8.1.2 B Estuarine Waters

(1) Appropriate uses may include simple access channels, structures which prevent erosion, navigational channels, private boat docks, marinas, piers, and mooring pilings.

(2) Any development or activity which will profoundly and adversely affect coastal and estuarine waters will be discouraged. In the design, construction and operation of water dependent structures, efforts must be made to mitigate negative effects on water quality and fish habitat, as determined by NCAC 15A Subchapter 7H and the Coastal Resources Commission. The developer and/or owner will bear the cost of any required mitigation.

8.1.2 C Public Trust Waters AEC'S

Pubic Trust Waters at Carolina Beach generally are all ocean and estuarine waters from the mean high water mark to the seaward limit of State jurisdiction. The State of North Carolina supports the traditional public rights of access to and use of Public Trust Waters for purposes including navigation, fishing, and recreation. These areas support valuable commercial and sports fisheries, have aesthetic value, and are important resources for economic development. Navigation channels, piers, marinas, and bulkheads to control erosion are examples of uses which may be found acceptable in Public Trust Waters.

An issue of growing concern at Carolina Beach and on recreational waters throughout the nation, has been the advent of the jet ski and other similar personal water craft. Concerns have been raised regarding the tendencies of jet skiers to operate these watercraft in a reckless manner. Other concerns relate to their operation in marshes and other shallow water estuaries, where damage to the marsh may occur and where wildfowl is disturbed. Locally, New Hanover County has been taking the lead in coordinating the efforts of various local governments in working with the jet ski industry in developing standards for the operation of these watercraft.

A second issue of concern at Carolina Beach has been the trend toward lengthy piers extending out into the town's estuarine waters. As prime waterfront sites—those with deep water close to shore—have become developed, remaining "waterfront" sites have been building longer piers to reach water of adequate depth for boat dockage. This oftentimes results in unsightly and environmentally damaging piers extending out into the coastal marsh. And, while State regulations require that such piers shall not block stream channels, the effect in many instances is to inhibit the movement of water craft in the shallow water estuary. This can be evident at high tide when small boats, which would normally have free movement through the estuary, must constrain their navigation to limited pockets of open water, essentially fenced in by these long pier lengths. In the case of small shallow draft sailing craft, the presence of these long piers may totally prevent the craft from sailing through the affected body of water. Thus, the Town's policy reserves the right to be more restrictive than the State's standards where the public's right to the reasonable, unobstructed use of public trust waters is being compromised.

8.1.2 C Public Trust Areas

(1) Any use which significantly interferes with the public right of navigation or other public trust rights shall be discouraged. Projects which would directly or indirectly block or impair existing navigational channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters shall be discouraged.

(2) The Town shall seek to ensure the responsible use of jet skis and other similar "personal" water craft within the public trust waters of Carolina Beach. Responsible use shall mean controlled, predictable movements similar to other powered water craft while in navigation channels, marinas, and other regularly trafficked areas, and the avoidance of marshes and other shallow water estuaries, where damage to the resource is likely.

(3) The length of docks and piers, as they project into public trust waters, shall be controlled jointly by CAMA standards and the Town's official pierhead line. Whenever a discrepancy exists between the two sets of standards, the more restrictive shall apply.

(4) The Town shall allow for the construction of docks and the development of boat slips in reasonable proportion to the amount of land area and shoreline associated with the docks and slips. Factors considered shall include the total number of boat slips relative to the total acreage and total number of housing units on shore, if any, and the number of parking spaces necessary to serve the dock or marina. Standards which serve to reasonably restrict the over-development of marinas in limited public trust waters shall be supported.

(5) To manage existing and potential conflicts between activities competing for use of public trust waters, the Town shall support the preparation and periodic updating of a water use and harbor management plan for coastal waters at Carolina Beach.

8.1.2 D Estuarine Shoreline AEC'S

Estuarine Shorelines are non-ocean shorelines extending from the mean high water level along the Town's estuarine sounds for a distance of 75 feet landward. Although characterized as dry land and thus potentially "developable", estuarine shorelines are considered a component of the estuarine system because of the close association with adjacent estuarine waters. These shorelines may be especially vulnerable to erosion, flooding, or other adverse affects of wind and water and are intimately connected to the estuary.

Because development within the estuarine shoreline AEC can harm the marshlands and estuarine waters, and because of the inherent dynamic and hazardous nature of coastal shorelines, specific restrictions, limitations and standards have been adopted by the State for construction in these areas, as outlined in 15A NCAC 7H at .0209. By regulation, projects cannot weaken natural barriers to erosion, shall have limited impervious surfaces, and shall take measures to prevent pollution of the estuary by sedimentation and runoff. A CAMA (Coastal Area Management Act) permit must also be obtained for compliance with these standards.

8.1.2 D Estuarine Shorelines

Unlike the other components of the estuarine system of AEC's, land uses along estuarine shorelines may include some uses that are not strictly water dependent (e.g. residential and hotels). However, non-water related commercial uses (commercial enterprises that have no real economic relationship to the water) shall be strongly discouraged. Regardless of the use proposed, all standards of NCAC 15 Subchapter 7H relevant to estuarine shoreline AEC's must be met, and the proposed use must be consistent with other policies set forth in this Plan.

8.1.2 E Ocean Hazard Area AEC'S

These are natural hazard areas along the ocean shoreline which are especially vulnerable to effects of sand, wind, water and erosion. Ocean hazard areas include 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, and where uncontrolled or incompatible development could unreasonable endanger life or property. Improper development can also disturb the natural barrier island dynamics and sediment transport, and can interfere with the beach's natural defenses against erosion. Furthermore, there is considerable evidence that sea level has been and is expected to continue rising steadily. This will result in higher water levels, inundation of wetland areas, and loss of beachfront area.

Within the Ocean Hazard Area AEC are four sub areas as follows: (1) The ocean erodible area (2) The high hazard flood area (3) The inlet hazard area and (4) The unvegetated beach area. Each may be described as follows:

• Ocean Erodible AEC. The ocean erodible area is the portion of the island where there exists a substantial possibility of excessive erosion and significant shoreline fluctuation. The ocean erodible AEC is based on a setback from the first line of stable natural vegetation plus an additional area where erosion can be expected from storm surges and wave action. This area includes the ocean beaches and the frontal dune system.

Ocean erodible areas are extremely dynamic lands highly susceptible to becoming displaced by the ocean due to erosion, storms, and sea level rise. The sand deposits of ocean beaches and shorelines represent a dynamic zone which does not afford long term protection for development. The nature of tidal action and the force of storms is such that they cause the beach areas to constantly shift. In addition, littoral drift is a natural phenomenon whereby sand is removed from beaches by wave action and littoral currents and is deposited upon a different stretch of the beach.

The major management objective is to avoid unnecessary hazards to life or property and to maintain reasonable requirements for public expenditures to protect property or maintain safe conditions. This area must be preserved to the greatest extent feasible with opportunity to enjoy the ocean beaches of the State. Appropriate development within the area must be that which will withstand the prevalent natural forces, comply with CAMA and other state requirements, and not unreasonably interfere with the public's use and enjoyment of the beach area.

• High Hazard Flood AEC. This is the area of the coast subject to high velocity wave action and storm surge during severe storms. This area typically extends along the shoreline and to some distance landward of the frontal dune. The Federal Emergency Management Agency (FEMA) identifies flood zones for a "100 year" storm on the flood insurance rate maps (F.I.R.M.'s), and designates the high hazard flood AEC as the V zone. The extent of flood hazard areas in Carolina Beach is shown on the **Hazard Areas, 1996** map.

• Inlet Hazard AEC. Inlet Hazard areas of environmental concern are especially vulnerable to erosion, flooding, and other shoreline changes due to their proximity to extremely dynamic, migrating coastal inlets. The inlet hazard area is defined to "extend landward from the mean low water line a distance sufficient to encompass that area within which the inlet will, based on statistical analysis, migrate, and shall consider such factors as previous inlet territory, structurally weak areas near the inlet (such as an unusually narrow barrier island, an unusually long channel feeding the inlet, or an overwash area), and external influences such as jetties and channelization."

The State's original inlet hazard areas were identified in the report to the CRC entitled "Inlet Hazard Area" by Loie J. Priddy and Rick Carraway (September 1978). The inlet hazard area "shall be an extension of the adjacent ocean erodible area and in no case shall the width of the inlet hazard area be less than the width of the adjacent ocean erodible area." At Carolina Beach, areas adjacent to the Inlet are designated a high hazard area for development.

• Unvegetated Beach AEC. These areas are fragile, unstable and unpredictable areas of the island. They are subject to rapid changes from wind and wave action. They include the sand reaches often found near inlets and undeveloped beach strands. As in other beach areas, the public maintains a right to access to these beaches. While there are many areas of "unvegetated beach" at Carolina Beach, there is no unvegetated beach AEC recognized by the Coastal Resources Commission within the Town.

Detailed maps with precise information on each **Ocean Hazard Area** AEC boundary are available for inspection at the local CAMA permit officer's office at Town Hall.

8.1.2 E Ocean Hazard Areas

The Town supports state policies for ocean hazard areas in Chapter 15A, Subchapter 7H of the state CAMA regulations. Suitable land uses in ocean hazard areas include ocean shoreline renourishment, temporary erosion control activities, and dune establishment/stabilization. Residential, commercial, and recreational land uses and parking lots for beach access are also acceptable types of use in ocean hazard areas provided that they meet all general and specific use standards of NCAC 15A: 7H.

(Note: Also see Policy 8.3.8 B regarding development encroachment on the beach and dune system and on acceptable ocean shoreline stabilization methods.)

8.1.4 A Freshwater Wetlands

Not too long ago in the United States, wetlands were viewed as "wastelands" to be filled in and made "usable". With the passage by the U.S. Congress of the Clean Water Act of 1972, wetlands came under the protection of Section 404 of that Act. As a result of that legislation, many wetlands are now known as "404" wetlands. These wetlands come under the permitting program authorized by the Clean Water Act and promulgated by the U.S. Army Corps of Engineers. Today, both the scientific community and the general population recognize the critical importance of wetlands in providing habitat for many, many forms of wildlife and in helping to mitigate the severity of flooding and erosion. For this reason, the Town wishes to go on record regarding its support for the designation and preservation of all "404" wetlands in its planning jurisdiction, whether fresh or estuarine. (Note: If Town officials suspect that a site proposed for development contains wetlands, the Army Corps of Engineers is contacted to initiate the necessary process of site review and permit issuance.)

8.1.4 A Freshwater Wetlands

The Town shall avoid undertaking any activity or approving of any activity which would result in the destruction or removal of remaining "404" wetlands within the Town's jurisdiction, whether fresh or saltwater.

8.1.4 B Maritime Forest and Tree Cover

According to a report published by the North Carolina Division of Coastal Management in November of 1988 (An Assessment Of Maritime Forest Resources On The North Carolina Coast, Michael J. Lopazanski, et al) maritime forests are the woody plant communities that develop as the end result of primary succession on coastal dune systems. The report further notes that maritime forests are generally restricted to coastal barrier islands. Fortunately for Carolina Beach, several large areas of maritime forest still exist as a distinct environmental entity within the Town's planning jurisdiction. Also, all tree cover at Carolina Beach, whether officially maritime forest or not, is considered a highly valued asset. Some sections of Carolina Beach, both old and new, are blessed with a sizable number of significant trees that are worthy of attention and preservation.

8.1.4 B Maritime Forests, Tree Cover and Landscaping

Tree cover at Carolina Beach, whether maritime or otherwise, is a highly valued asset. The Town encourages efforts to preserve existing tree cover in new development and redevelopment. The Town also encourages the generous use of indigenous landscape materials in new and existing developments to improve appearances, absorb stormwater runoff, and reduce ambient air temperatures.

8.1.4 C Outstanding Resource Waters

There are currently no Outstanding Resource Waters (ORW) within the planning jurisdiction of the Town of Carolina Beach. On the other hand, there is an area north of the town's estuarine waters that has received the ORW designation. In the case of Carolina Beach, stormwater runoff from landside development and the presence of a large number of marinas and boat traffic are the most likely causes of water quality impacts in the Carolina Beach area. Given current trends at Carolina Beach toward even more intensive development and greater impervious surface areas, it is unlikely that the waters around the Town would be likely to receive the ORW designation. On the other hand, the Town wishes to do its part in controlling storm drainage and stormwater runoff so that Outstanding Resource Waters within the general area of New Hanover County are not adversely affected.

8.1.4 C Outstanding Resource Waters

Although Carolina Beach does not contain ORW waters, the Town supports the designation and preservation of Outstanding Resource Waters. State efforts to protect water quality and thereby the fishing industry of North Carolina, are supported.

8.1.4 D Shellfishing Waters

There are no estuarine waters within the planning jurisdiction of the Town of Carolina Beach classified as SA—suitable for shellfishing. Nonetheless, the Town will do its part in controlling storm drainage and stormwater runoff so that shellfish waters within the general vicinity of Carolina Beach (e.g. north of Carolina Beach Inlet) are not adversely affected.

8.1.4 D Shellfishing Waters

The Town supports and encourages the activities of the State's Shellfish Management Program. The Town promotes estuarine water quality through its storm drainage planning and stormwater runoff policies.

8.1.4 E Water Supply Areas and Other Waters with Special Values

As noted in Section 6.2.2 of this report (Drinking Water Supply), the Town of Carolina Beach relies upon a system of wells into the Castle Hayne aquifer for its source of potable water. Over the years, the Town has worked to add additional wells to the system and increase the pumping capacity of the total system of wells. However, the Town recognizes the limitations of the current system and the critical importance of a viable water supply for the continued growth of the community. The Town also recognizes that nearly all of southeastern North Carolina now depends on either the Castle Hayne Aquifer or the Caper Fear River for its potable water. Therefore, the Town supports regional efforts to protect the water quality of both the Castle Hayne Aquifer and the Cape Fear River.

8.1.4 E Water Supply Areas and Other Waters with Special Values

The Town shall protect the long term viability of the Castle Hayne aquifer by properly managing the municipal well system, including proper well head spacing, proper pumping and draw down, adequate storage, and other related factors. In recent years, the aquifer's recharge potential at Carolina Beach has been severely stressed due to heavy pumping. Therefore, the Town shall make additional storage and the exploration of alternative sources of water among its highest objectives for the next five years.

8.1.4 F Cultural and Historic Resources

In recent years, support for the protection and enhancement of historic structures at Carolina Beach has grown in some sectors of the resident population. At the same time, there is a natural dichotomy between those who wish to preserve the historic beach cottage flavor of many of the older structures and those who wish to redevelop these properties with sizable structures at a level commensurate with the increased value of the real estate. The Town's position is that while it encourages the preservation of its older, potentially historic structures, it cannot reasonably require property owners to do so. While the Town will not attempt to mandate historic preservation, it can establish reasonable standards for redevelopment so that new structures are not grossly out of scale or out of character with remaining older structures. (See Policy 8.3.4)

There is also some debate among residents as to whether there are any historic *commercial* structures at Carolina Beach. It could be argued, for example, that most commercial structures in the traditional boardwalk and downtown area have limited architectural merit. In this case, it may be necessary to consider "historic" in terms of an entire cluster of buildings, or in terms of an entire streetscape. Proponents of historic preservation have often said that to remove one building from the streetscape of a city block has the effect of creating a "missing tooth" in the face of a street. Thus, while the preservation of particular buildings in the boardwalk and downtown area may be subject to debate, the commitment of the Town to preserve the historic and cultural atmosphere in the boardwalk/downtown area is clear. (See Policy 8.3.13)

8.1.4 F Cultural and Historic Resources

The Town encourages the preservation of its older, potentially historic structures and sites, including recent efforts by the Federal Point Historic Preservation Society to inventory important historic resources within the entire area of the County south of Snow's Cut.

8.1.4 G Man-Made Hazards

Carolina Beach does not contain an airport or tank farms within its planning jurisdiction. However, the community is impacted by a major munitions facility at the Sunny Point Military Ocean Terminal as well as the CP&L Nuclear Power Plant located on the west side of the Cape Fear River. Although this Sunny Point facility is outside the Town's jurisdiction, a buffer zone has been established on the western edge of Carolina Beach to serve as a natural blast shield for private properties in the event of an accident. The buffer zone is Zoned RA-20: however no development is permitted in this area. The Town can best assist the Army in its attempts to mitigate damage in the event of an explosion by supporting the Army's policies restricting access and development within the buffer zone area.

CP&L's Brunswick County Nuclear Power Plant is subject to federal regulation by the Nuclear Regulatory Commission. CP&L periodically sponsors similar disaster simulation drills to alert local public safety agencies of the correct response to various disaster situations at the nuclear power plant. The Town can best assist CP&L in its disaster preparedness programs by insuring that its public safety officials are fully informed of emergency measures to be taken and by requiring their participation in these drills.

8.1.4 G Man-Made Hazards

None, but see policy on Sunny Point Buffer Zone

8.1.4 H Myrtle Grove Sound and the Cape Fear River

Myrtle Grove Sound is the main body of water and primary access channel from the heart of Carolina Beach to Snows Cut and the Intracoastal Waterway. The western edge of Myrtle Grove Sound has witnessed a trend toward condominium/marina developments gradually displacing former single family and commercial marina areas. The eastern edge, or ocean side of Myrtle Grove Sound, has land which is much lower lying and prone to flooding. It is bordered by numerous smaller condominium projects and a mixture of small, medium and large single family homes. The south end of the sound contains the municipal marina which berths a number of sport fishing vessels in a picturesque setting.

Because of the extent to which development has occurred along the shores of Myrtle Grove Sound, the sound is unfortunately prone to many pollution problems, ranging from excessive dredging for marinas to increased storm water runoff from streets and structures. Fortunately, the regular tidal flushings that the sound receives, along with the pollutant trapping wetland vegetation within the sound area to help cleanse the water. To help counteract further declines in water quality in Myrtle Grove Sound, the Town supports a variety of standards and review procedures to help reduce runoff and pollution into this water body.

Recent studies by the University of North Carolina at Wilmington have revealed continuing declines in the water quality of the Cape Fear River. While efforts to improve water quality in the Cape Fear will require a basin wide effort, the Town shall support activities within its jurisdiction which will help reduce adverse impacts on water quality in the Cape Fear River.

8.1.4 H Myrtle Grove Sound and Cape Fear River

To protect water quality in Myrtle Grove Sound, Snows Cut, and the Cape Fear River, the Town supports reduction in the amount of runoff from proposed developments, preservation of existing wetlands and associated vegetation, controls over the number and size of new marinas, reduction of dredging

activities to the minimum extent necessary to allow safe vessel movements, and maintenance of the tidal flushing action.

8.1.4 I North End Natural Area

The North End of the northern extension is the most environmentally productive and sensitive area within the Town of Carolina Beach. This coastal beach and wetland area includes a wide spectrum of ecological activity. The eastern portion is a low ocean dune system occasionally inundated by high ocean waters. The western portion is a classic estuarine wetland, highly important in the life cycle of most marine creatures. These estuarine wetlands are where many of the oceans finfish and shellfish live for some portion of their lives. In addition, the beach and dune area serves as nesting habitat for endangered sea turtle species.

Because of the high ocean and estuarine erosion rates, low elevation, high water table, and unsuitable soils, this area is regarded as undevelopable. However, unrestricted access to this area by off-road vehicles endangers many of its fragile ecological communities. By keeping vehicular traffic off the dune areas and out of the wetland areas, it may be possible to improve the functioning of these ecosystems, as well as improve the area's resistance to oceanfront erosion.

8.1.4 I North End Natural Area

The Town of Carolina Beach supports retaining the coastal wetland and ocean dune area at the north end of Carolina Beach in its natural state. Vehicular traffic shall be restricted to the ocean side of the dune line as a means of protecting the ecological function of this important resource area.

8.1.4 J Carolina Beach Lake

Other than the Atlantic Ocean, and possibly the Town's public marina, the most widely recognized body of water in Carolina Beach is Carolina Beach Lake. The lake has historically been the Town's primary drainage basin. It also provides an important scenic vista within the town. Recent years have seen increasing interest on the part of citizens and community groups to develop the recreational and scenic potential of the lake.

Carolina Beach Lake is subject to periodic flooding, particularly after hurricanes and tropical storms deluging the town with large amounts of rainfall. This flooding is increased by a high water table, low lake elevation and development in the surrounding area. Also, the lake's only outfall, Myrtle Grove Sound, is itself generally at unusually high levels during these major storm events, thus limiting its capacity to drain the lake.

The large wetland area to the south of the lake helps alleviate the effects of flooding by serving as an overflow retention pond during periods of high water. It also absorbs many of the pollutants carried through drainage ditches and streets that might otherwise reach the lake. This wetland area has received some development pressure, but because it qualifies as a 404 wetland, it is therefore subject to the development restrictions of the Army Corps of Engineers. As a result, it has remained largely undeveloped. The spongy soils of this wetland area classified as *tidal marsh* by the Soil Conservation Service, providing a very useful environmental function by absorbing water and releasing it slowly.

Civic efforts related to the long term conservation use of Carolina Beach Lake have included interest in acquiring wetlands on the southwest side of the lake, the need for a water quality study to address the lake's eutrofication and algae overgrowth problem, the addition of trails and interpretative signs around the lake, and the creation of a nature center in one or more vacant buildings in or near the lake.

8.1.4 J Carolina Beach Lake

The Town supports leaving wetland areas associated with Carolina Beach Lake undeveloped, since these areas play a critical role in reducing the amount of floodwaters which threaten already developed properties. The Town supports those development proposals in the vicinity of the lake which reduce the amount of impervious surface or which otherwise reduce the drainage load placed on the Lake, and which provide improved visual access to the Lake. Also, the Town supports measures which limit the flow of pollutants into the Lake. The Town supports the activities of the Coastal Land Trust to accept tax deductible donations of property adjacent to the lake for permanently dedicated public open space.

8.1.4. K, L, M Buffer Zone/Carolina Beach State Park/Snows Cut (AIWW)

These three areas are considered together because the Town has jurisdictional limitations on its ability to effect environmental and other land use decisions in these areas. The buffer zone is owned and controlled by the US Dept. of the Army to serve as a natural blast shield for private properties in the event of an accident involving munitions at the Sunny Point Military Ocean Terminal. The Carolina Beach State Park is owned and operated by the State of North Carolina as a means of providing public access to a natural coastal environment and the waters of the Cape Fear River. Snows Cut, a component of the Atlantic Intracoastal Waterway, has its banks controlled by a spoil deposition easement owned by the US Army Corps of Engineers; this easement takes precedence over any other possible use of the property.

All three of these areas service as important wildlife habitats and as permanent open space areas within the town. Because of their aesthetic and recreational significance, the Town supports maintenance of these areas in their natural condition or with limited development for recreational purposes.

8.1.4 K Sunny Point Buffer Zone

The Buffer Zone is owned and controlled by the U.S. Department of the Army to serve as a natural blast shield for private properties in the event of an accident involving munitions at the Sunny Point Military Ocean Terminal. Because of the importance of this area for wildlife habitat and as permanent open space, the Town supports maintenance of this area in its natural condition with development limited solely to additional recreational facilities. Area-wide prohibition of off-road vehicles and stepped up enforcement against illegal dumping in this area shall be supported.

8.1.4 L Carolina Beach State Park

Carolina Beach State Park is owned and operated by the State of North Carolina as a means of providing public access to a natural coastal environment and to the waters of the Cape Fear River. Because of the importance of this area for wildlife habitat, nature study, and as permanent open space, the Town supports maintenance of this area in its natural condition or with limited development for recreational purposes.

8.1.4 M Snow's Cut (AIWW) Right of Way and Spoil Area

Snow's Cut, a component of the Atlantic Intracoastal Waterway (AIWW), has its banks controlled by a spoil deposition easement owned by the U.S. Army Corps of Engineers; this easement takes precedence over any other possible use of this property. Because of the importance of this area for wildlife habitat, permanent open space, and potential placement of spoil materials, the Town supports maintenance of this area in its natural condition or with limited use for recreational purposes.

8.1.5 Protection of Potable Water Supply

The Town of Carolina Beach depends upon the Castle Hayne Aquifer as its sole source of potable water. This deep aquifer receives little recharge from the Carolina Beach soil system and underline geologic

strata. While there are few development practices or regulations affecting land use that can have an effect on the long-term quality of fresh water from this aquifer, the Town's main concern for the long-term viability of the aquifer is to properly manage, space, and pump the well system serving the town. (Also see **Section 6.2.2,** regarding the Town's drinking water supply system).

8.1.5 Protection Of Potable Water Supply

The Town shall work with other appropriate governmental bodies, namely New Hanover County and Wilmington, to provide for a continued pure supply of potable water, particularly from the Castle Hayne aquifer. The Town shall also conserve it's groundwater resources for longevity through proper management of its system of wells, and by the encouragement of water conservation practices, including measures which can be taken in construction of new structures. These measures shall be designed to help the Town of Carolina Beach get through the potential water crisis of the next five years.

8.1.6 Package Sewage Treatment Plants

Carolina Beach's long range annexation plans are to extend water and sewer services to all areas within the corporate limits and extraterritorial jurisdiction not currently served by water and sewer. The Town therefore does not allow package sewage treatment plants and septic systems within the corporate limits of Carolina Beach.

8.1.6 Package Sewage Treatment Plants

All new developments are required to connect to the Town's central sewer system. Package sewage treatment plants and septic systems are not allowed within the corporate limits of Carolina Beach.

8.1.7 Stormwater Runoff

Noted North Carolina hydrogeologist, Ralph C. Heath, when speaking about the coastal area of North Carolina, has stated that the ..."construction...of multi story condominiums, motels and other vacation facilities with their parking lots, tennis courts and swimming pools, is resulting in the creation of large expanses of impervious areas. Disposing of the runoff from these areas during storms in a manner that is not detrimental to the adjacent sounds and ocean is among the most pressing water management problems now confronting the developer and the public officials in this area." (News: Water Resources Research Institute of the University of North Carolina, November 1986).

The construction of large, impervious services associated with commercial and residential development accelerates the rate at which rain waters reach the estuarine sound waters. This rapid influx of fresh water can change the natural salinity of the sound water and disrupt the biological balance of the natural system. The water can also carry higher than normal levels of nutrients and other biodegradable materials that can create excessive oxygen demand for decomposing the material.

Much of what is described above can be observed in the continued redevelopment of the Town of Carolina Beach. While it may be too late to return the estuarine waters of the Town back to a pristine condition, the Town of Carolina Beach continues to seek methods by which storm water runoff from new developments can be minimized. The Town intends to give greater attention to this element of development plan review in the future, with the intent of more carefully controlling stormwater runoff into the estuary.

8.1.7 Storm Water Runoff

(1) Future developments must continue to meet all local, State and federal stormwater runoff regulations as applicable to the individual development.
(2) The Town encourages the use of "best management practices" to minimize the release of pollutants to coastal waters through stormwater runoff. Examples include using pervious or semi-pervious materials, such as turfstone or gravel for driveways and walks, retaining natural vegetation along marsh and

waterfront areas to retain its natural filtering properties, and allowing stormwater to percolate into the ground rather than discharging it directly to coastal waters.

8.1.8 A Marinas

Due to its strategic location at the confluence of Myrtle Grove Sound the, Intracoastal Waterway, Snows Cut, the Cape Fear River and Carolina Beach Inlet, the Town of Carolina Beach has been a natural draw for marina development. As a result, the sound and intracoastal waters adjacent to Carolina Beach, like those of Wrightsville Beach, are some of the most congested waters for boating the entire coastal area of North Carolina.

Recent trends at Carolina Beach have included the displacement of general commercial marinas by large marinas associated with new, landside condominium developments. These large marinas increase demand for landside parking spaces and cause increased traffic on streets leading to the water's edge. For these reasons, the Town wishes to more carefully monitor the further development of marinas so that their size and location are reasonably related to the carrying capacity of the waters they serve and the near-shore lands they impact. Future marina development may also be influenced by the preparation of a *water use and harbor management plan* for Myrtle Grove Sound.

8.1.8 A Marinas

To protect water quality, conserve limited public trust waters, keep boat traffic within the ability of area waters to absorb it safely, and minimize land side traffic congestion and parking demands, the number and size of new marinas at Carolina Beach shall henceforth be permitted only in accordance with the reasonable carrying capacity of area waters and near shore lands. Carrying capacity shall be determined by land side traffic volumes on area streets, the sufficiency of parking, and by competing water use demands as identified in a Town "water use plan".

8.1.8 B Floating Home Development

According to CAMA Guidelines, a floating structure is ..."any structure, not a boat, supported by a means of flotation designed to be used without a permanent foundation, which is used or intended for human habitation or commerce. A structure will be considered a floating structure when it is inhabited or used for commercial purposes for more than 30 days in any one location. A boat may be deemed a floating structure when its means of propulsion has been removed or rendered inoperative and it contains at least 200 square feet of living space area."

Floating home development is viewed by the residents of Carolina Beach as a waterborne activity which permanently "consumes" public trust waters which are already in short supply. Potential environmental and aesthetic problems associated with floating structures are also deemed to far outweigh any potential economic benefits for the town.

8.1.8 B Floating Home Development

Due the limited surface area of public trust waters for use and enjoyment by the public, floating homes shall not be permitted within the jurisdictional waters of Carolina Beach.

8.1.8 C Moorings and Mooring Fields

According to CAMA Use Standards, a "**free standing mooring**" is any means to attach a ship, boat, vessel, floating structure or other watercraft to a stationary underwater device, mooring buoy, buoyed anchor, or piling (as long as the piling is not associated with an existing or proposed pier, dock, or boathouse). According to CAMA Standards, free standing moorings shall be permitted under only two circumstances (1) to riparian property owners within their riparian corridors or (2) to any applicant

proposing to locate a mooring buoy consistent with a *water use plan* that may be incorporated into either the local zoning or land use plan.

At Carolina Beach, concern for the limited amount of public trust waters available for public enjoyment also creates a major disincentive for additional free standing moorings. At the same time, residents and merchants attending public meetings for the land use plan noted that the absence of convenient dockage serving transient boaters using the Intracoastal Waterway could have the effect of a significant economic opportunity lost. Until such time as the Town of Carolina Beach undertakes the developmental of a *water use plan,* and the issue can be addressed in a comprehensive manner, additional free standing moorings will not be approved. However, when such a plan is developed, there should be an attempt to incorporate proper transient moorings and dockage for the use of the traveling boating public.

8.1.8 C Moorings and Mooring Fields

Due the limited surface area of public trust waters for use and enjoyment by the public, freestanding private moorings of any kind shall be discouraged within the public trust waters of Carolina Beach. However, the Town shall support public mooring buoys designed to serve currently unmet needs of transient boaters who could contribute substantially to the local economy.

8.1.8 D Dry Stack Storage

Dry stack storage facilities require substantial amounts of associated parking, are significant traffic generators, and contribute to boating congestion on already intensively used waters. Also, residents attending public meetings for the land use plan noted that the dry stack storage facilities contributed little to the aesthetics of Carolina Beach and generally served day visitors to the community who had little interest in the community at Carolina Beach or in spending dollars. For these reasons, the expansion and development of additional dry stack storage facilities at Carolina Beach will not be approved.

8.1.8 D Dry Stack Storage

Due to their unsightliness and the traffic congestion associated with such facilities, dry stack facilities shall be prohibited at Carolina Beach.

8.1.8 E Commercial Fishing Operations

The fishing industry of Carolina Beach consists of two distinct components—commercial fishing and sports fishing. Each of these components faces a very different future. Due to a number of factors, including reduced catches and expensive dockage, the commercial fishing industry is in a general decline across much of North Carolina: Carolina Beach is no exception to that state wide trend.

8.1.8 E Commercial Fishing Operations

Due to the important role of commercial and recreational fishing to the economy and ambient character of Carolina Beach, the Town shall encourage and support commercial fishing operations and sports fishing operations, provided that such operations meet all applicable development standards and are otherwise consistent with the policies of this plan.

8.1.9 Industrial Impact on Fragile Areas

The only industrial area of Carolina Beach is located on the west side of Dow Road and east of the Sunny Point Buffer Area and Carolina Beach State Park. This relatively small industrial area has a natural buffer area between the site and the Cape Fear River by virtue of the Sunny Point Buffer Area and Carolina Beach State Park.

The Town's policy shall continue to be to encourage land use compatibility between the industrial/commercial sectors and residential/commercial sectors and residential sectors through use of the Town's Zoning Ordinance.

8.1.9 Industrial Impacts On Fragile Areas

New light industrial development, of a scale and nature suited to a small, fragile coastal community, may be approved on appropriate sites, provided that impacts related to stormwater runoff, traffic generation, and other factors can be properly mitigated.

8.1.10 Development of Sound and Estuarine System Islands

Carolina Beach does not have any islands in its planning jurisdiction that would be feasible for future development under current State and federal permit regulation.

8.1.10 Development Of Sound And Estuarine System Islands

Carolina Beach does not have any islands in its planning jurisdiction that would be feasible for future development under current State and Federal permit regulations. The Town does support, however, all County and State efforts to preserve Masonboro Island in its natural state.

8.1.11 Development Within Areas That Might Be Susceptible to Sea Level Rise

There has been considerable discussion and debate over the past decade or more about the influence of sea level rise on beach and shore line erosion along North Carolina's coast. The most commonly held viewpoint is that gradual sea level rise is causing the barrier Islands of the North Carolina coast to migrate landward. Individual oceanfront land owners experience this migration as "beach erosion". Generally, the Town supports a policy of regular beach renourishment as the most practical means of balancing the public's interest in the beach shoreline with the protection of private property investments. In the absence of renourishment, the Town's next policy of choice is for relocation of threatened structures.

8.1.11 Restriction Of Development Within Areas That Might Be Susceptible To Sea Level Rise

The Town shall monitor the work of State and Federal agencies conducting research on sea level rise and its effect on coastal areas. The Town shall consider any State and Federal policies prior to formulating specific local policies regarding sea level rise; specifically, development within areas up to 5 feet above sea level.

8.1.12 Upland Excavation for Marina Basins

As the immediate coastal area of New Hanover County, indeed the State of North Carolina, has become more intensively developed for shoreline uses, natural sites for deep water marinas have become increasingly scarce. State regulations which discourage or prohibit the destruction of wetland habitats, primary nursery areas and other important, environmentally sensitive estuarine areas have made opportunities for new marina developments difficult at best. As a result, marina facilities carved out of upland areas have occasionally been viewed as a viable option. In the case of Carolina Beach, however, the value of "upland" real estate is generally too costly to justify excavating such land for a marina basin. In addition, previously mentioned concerns about parking demands and traffic generation associated with any form of marina development cause the Town to discourage such developments.

8.1.12 Upland Excavation For Marina Basins

Due to the limited amount of developable land at Carolina Beach, the Town shall not support the excavation of upland areas for marina basins.

8.1.13 Damaging of Existing Marshes by Bulkhead Installation

Myrtle Grove Sound and the municipal dock facilities are considered a major asset for tourism, commercial and recreational fisherman, and boaters. During the planning process there was much discussion regarding the long term use and development along the shorelines of Myrtle Grove Sound. Regardless of the development forms, only water dependent uses should be allowed and any bulkheads should be constructed landward of any significant marshland or marsh grass fringe in compliance with 15A NCAC 7H .0208(7) (B).

It is also Carolina Beach policy to prohibit bulkheading and filling of the Town's lakefront around Carolina Beach Lake. Re-establishment of wetlands is to be strongly encouraged. Any bulkheading operations must comply with all local, State and federal regulations.

8.1.13 Marsh Damage From Bulkhead Installation

Bulkheading and filling of the Town's shorefront forward of the mean high water mark along the Town's estuarine shorelines shall be prohibited. Re-establishment of wetlands is to be strongly encouraged. Any bulkheading operations must comply with all local, State and Federal regulations. No private bulkheading of any kind shall be permitted around Carolina Beach Lake.

8.1.14 Water Quality Problems and Management Measures Designed to Address Them

The majority of the Resource Protection Policies stated above, including but not limited to policies concerning Areas of Environmental Concern, marina development, and stormwater runoff, are designed to curtail or halt the further degradation of water quality of sound and beach waters at Carolina Beach. The Town continually seeks to develop new management practices and measures to implement improvements in water quality.

8.1.14 Water Quality Problems and Management Measures Designed to Address Them

The Town shall continue to seek improved marina management and stormwater runoff standards which will protect and enhance the water quality of the estuarine system including, but not limited to the waters of Myrtle Grove Sound, Snows Cut, and the Cape Fear River.

Resource Production and Management Policies

8.2.0 Resource Production and Management

Due to the predominantly developed, urban nature of much of the Town of Carolina Beach, resource production and management of the land resource, in the traditional sense of those words, is not really applicable at Carolina Beach. Real estate values are sufficiently high so as to preclude the use of available land for significant agricultural, commercial forest lands, and mineral production areas. Nonetheless, the estuarine system within which the town is located is one of the most "productive" ecosystems on earth. For this reason the Town has committed itself to participating in no activity nor approving of any activity which would seriously damage the long-term productive capability of the estuarine system.

8.2.0 Basic Policy Statement Regarding Resource Production and Management

Carolina Beach is located in the midst of one of the most biologically productive ecosystems on earth—estuarine waters and marshes. The Town shall take no action nor approve of any action which would seriously harm the long term viability and productivity of this ecosystem.

8.2.1 Productive Agricultural Lands

Not applicable

8.2.2 Commercial Forest Lands

Not applicable, but see policy 8.1.4 B on **Maritime Forests, Tree Cover and Landscaping**, generally

8.2.3 Mineral Production Areas—Existing and Potential

Mineral production and extraction activities are not consistent with the limited, valuable land and water resources of Carolina Beach. Mineral production and extraction activities, excepting those directly related to channel maintenance and beach renourishment, shall not be permitted within the planning jurisdiction of Carolina Beach.

8.2.4 Fisheries Resources (Commercial and Recreational)

The fishing industry in Carolina Beach consists of two distinct components -- commercial fishing and sports fishing. Due to a number of factors, including reduced catches and expensive dockage, operation of a commercial fleet is growing more and more expensive. On the other hand, the sports fishing industry in Carolina Beach has had continued growth which should be further enhanced as interest in the Town continues to grow.

8.2.4 Fisheries Resources (Commercial and Recreational)

The Town will support State and federal regulations to insure the water quality of local waters that support both commercial and recreational fishing.

8.2.5 Off-Road Vehicles

Carolina Beach policy is to prohibit off-road vehicles on the beach strand—the area between the barrier dunes and water. The North End of the beach (outside the corporate limits of the Town, beginning at a point north of the approximate eastward extension of Snow's Cut) does not come under this policy. Enforcement of vehicular traffic at the North End is regulated by the New Hanover County Sheriff's Department. The Town appreciates the efforts of the Sheriffs Department to control traffic at the North End and supports their on-going presence there.

8.2.5 Off Road Vehicles

Off-road vehicles (with the exception of emergency vehicles or other vehicles specifically permitted by the Town) are not allowed on the Beach Strand within the corporate limits of Carolina Beach.

8.2.6 Development Impacts

All of the town's major development impact issues, such as the intensification of residential development, management of stormwater runoff and marina expansions, are covered under specific policy headings in various parts of this plan. The table of contents provides a means of quickly identifying the location of policies concerning particular development issues. Nonetheless, this approach to addressing development impacts points up the need to consider the "cumulative impacts" of a whole host of development activities occurring simultaneously at Carolina Beach. It is ultimately the combined effect of all development and redevelopment activities that together define the impact on the area's natural resources, particularly water quality. The Town, therefore, recognizes the need to address each new development or redevelopment activity on a case-by-case basis to minimize the cumulative effect of incremental impacts.

8.2.6 Development Impacts

New development and redevelopment activities shall not be permitted which would act to degrade the quality of natural and scenic resources at Carolina Beach, diminish the small town character of the community, or create an adverse relationship between development types of incompatible scale, design, or land use.

Economic and Community Development Policies

8.3.0 Economic and Community Growth and Development

This policy section is concerned with those issues associated with the development and redevelopment of the Town of Carolina Beach. Among the several issues discussed are the types of development to be encouraged, the density of development, provision of public facilities to serve development, the urban growth pattern desired, local support for State and Federal programs influencing development, and the provision of access to public open space and land and water recreational areas.

The Town's overall policy statement in this subject area calls for the continued enhancement of the Town in the direction of a small scale, pedestrian-friendly, and family-oriented community.

A commitment to this policy implies follow through on a broad range of policies and actions. For example, the Town will take steps to discourage large increases in population that might be associated with larger or more intensive multi family developments. Also, rather than allowing for more intensive development and its associated increases in stormwater runoff, parking demand, and traffic congestion, the Town will act in support of a continued emphasis on single family and duplex residences and appropriate neighborhood-oriented and local businesses. At the same time, the Town will also work to preserve and enhance parks and natural areas within and around the community.

Implementation actions in furtherance of this policy will require a reexamination of the Town's zoning ordinance and building standards to encourage building forms in keeping with the existing character of development at the beach. Current building heights, in particular, should be reviewed as to there appropriateness in neighborhoods where the predominant building height is clearly less than 40 feet.

8.3.0 Basic Policy Statement Regarding Economic & Community Growth & Development

The Town of Carolina Beach shall work to diversify the local economy while at the same time protecting the natural and man-made environment and improving the area as a more attractive community in which to work, live and play. Economic and community development initiatives which capitalize upon and enhance the pedestrian oriented, small town character exemplified by the Town boardwalk and marina area, and by the relatively small scale of most residential and commercial development in the Town shall be supported. Special emphasis shall be given to those types of businesses which also foster a family-oriented community and resort market niche.

Section 8.3.0 A Growth of Town's Jurisdiction

In recent years, the Town has prepared, or had prepared for it, various studies regarding the feasibility of annexations north and south of the Town's existing corporate limits. An annexation report prepared by Municipal Engineering Services Company PA of Garner, North Carolina in December 1990 evaluated the feasibility of three distinct annexation areas: the "northern annexation area," the "Wilmington Beach" annexation area and the "Hanby Beach" annexation area. This annexation report and several subsequent studies pointed out that additional annexations to the Town's corporate limits would be dependent upon significant improvements in the Town's water supply and sewage collection and treatment systems.

In considering the merits of these annexation areas, the Town must carefully weigh the capital costs involved in upgrading the Town's systems. At the same time, these evaluations have brought to light certain deficiencies in the Town's water distribution and sewage collection systems which must be addressed regardless of annexation. Annexations completed in 1992 involved mostly spot annexations for developments such as Atlantic Towers, Casa del Playa, Pelican Watch, Sea Colony, etc. All

presently have water and sewer service. For the time being, the Town has adopted a course of action calling for corrections to existing water and sewer systems before considering additional annexations. At the same time, however, the Town continues to express its interest in annexing Wilmington-Hanby Beaches. Budget allocations have been set aside for this purpose.

8.3.0 A Growth of Town's Jurisdiction

The Town shall periodically evaluate the costs and benefits of annexing additional areas into the Town. Before considering such annexations, first priority shall be given to addressing infrastructure and service needs within the existing corporate limits, prior to taking on additional responsibilities.

Section 8.3.0 B Building Height

Discussions by the Town Planning Board regarding building height considerations indicated a general consensus that Carolina Beach should seek to retain its original character as a "low profile," family-oriented beach community. As building heights increase, the effective density on any given lot also increases. Such density increases, in turn, have the effect of increasing demand for water supply, sewage treatment, parking, traffic volumes, and solid waste management. Given the current limitations of the Town's water supply and waste water treatment systems, efforts to limit additional increases in building height and density are well justified. The policy adopted by the Town reflects a general commitment to relatively low profile buildings with exceptions based on tradeoffs between additional building height and additional building setback.

8.3.0 B Building Height

The Town shall support and implement a maximum building height throughout the community of thirty-five (35) feet, measured from the average ground plane of the lot to the top of the ceiling plate of the highest habitable floor. Exceptions to this height shall require an additional one foot setback for each additional one foot of height.

8.3.1 Industries Desired and Local Assets Desirable to Such Industries

The Town of Carolina Beach for a variety of reasons, has traditionally not received nor pursued significant levels of industrial development. Chief among those reasons were for example, a lack of suitable extensive areas of land at reasonable prices, and the general incompatibility of industrial development with the desired vision for the future of Carolina Beach by most town residents. In addition, the town's growing position as a "bedroom community" for the greater Wilmington urbanizing area allows industries to be located elsewhere in southeastern North Carolina on lands more suited for such use. Currently, any industrial uses would have to be located in the I-1 district of the Town's zoning ordinance; the district is located adjacent to Dow Road and east of the Sunny Point Buffer Area and Carolina Beach State Park.

8.3.1 Industries Desired and Local Assets Desirable to Such Industries

To diversify the economy of the Town, and to provide for desirable wages to community residents, the Town shall be open to limited, appropriate, light industrial development in locations as allowed for under the Town's Zoning Ordinance, and that will do no harm to the fragile coastal environment.

Section 8.3.2 Provision of Services to Development

Carolina Beach Town officials understand the importance of providing needed infrastructure such as water, sewer, roads and recreational amenities to sustain beneficial economic growth. Ongoing efforts to upgrade the Town's water and sewer systems reflect a continuing commitment on the part of the Town to provide these critical infrastructure services. At the same time, the Town believes that additions or expansions of the Town's public facilities or services made necessary by new or expanding development

should be paid for by that new or expanding development. The Town's position is that existing residents and property owners should not be burdened with the expense of subsidizing new development.

Also, regarding the future provision of municipal services to the Wilmington/Hanby Beach area, the Town recognizes that once municipal water and sewer services are in place serving that area, there will be pressure for an intensification of uses and the scale of development in that part of Carolina Beach. The Town must therefore plan ahead for the additional impacts of such increased development in this area, including concerns for additional storm water runoff, additional traffic generated, additional solid waste generated, demand for recreational facilities, etc.

8.3.2 Provision of Services to Development

The Town will make all municipal facilities available to existing and future development/redevelopment, provided that such development is compatible with the growth and development objectives embodied in this land use plan, and that all development pays for the growth impacts it causes. Connection to water and sewer lines will be at the expense of the developer. If water or sewer facility upgrades or expansions would be required for new development, the needed improvements would be at the expense of the developer.

8.3.2 A Potable Water Supply

The Town requires all new development to tie into its system for potable water supply and prohibits individual wells for potable use. The Town shall continue to take measures to ensure that the water supply system is adequate to meet the needs of Town residents and businesses. Special emphasis shall be given to this policy during the next two to five years, to avert a potential water crisis concerning the capacity of the Town's well system to serve increased pumping demands.

8.3.2 B Wastewater Treatment and Disposal

All new developments are required to connect to the Town's central sewer system. Package sewage treatment plants and septic systems are not allowed within the corporate limits of Carolina Beach. The Town shall continue to take measures (including on-going waste water treatment plant expansions) to ensure that the waste water treatment system is adequate to meet the needs of Town residents and businesses.

8.3.2 C Solid Waste Disposal

The Town supports measures to recycle and reduce the amount of solid waste generated by all permanent residents and businesses, as well as visitors to the Beach.

Section 8.3.3 Urban Growth Pattern Desired

The urban growth pattern at Carolina Beach is, at once, one of the Town's greatest and worst features. The traditional core of the community, for example, contains the historic boardwalk and municipal marina area. These two amenities, accentuated by a pedestrian-oriented character and existing and potential charm, are unique to Carolina Beach on the coast of North Carolina. On the other hand, the traffic bottleneck created by these two areas—as visitors and residents alike seek to go to the heavily developed north end of the beach—is a significant problem.

Similarly, the economic benefits of commercial development along Lake Park Boulevard must be balanced against the unsightliness of strip commercialization, signage and expansive parking lots. Any policies which address this issue must satisfy several complimentary objectives: (1) preserve the integrity of residential neighborhoods and minimize cut-through traffic, (2) preserve the historic and cultural significance of the boardwalk/marina area in the middle of town, (3) avoid increasing development density in locations where the traffic cannot be handled or where storm water runoff problems are evident, (4) encourage a mixture of uses in the area between the traditional central business district and the town's primary residential neighborhoods, (5) seek to enhance the image of

the community along US 421 (Lake Park Blvd.) by controlling strip development, turning movements, ugly signage, and other factors.

8.3.3 Urban Growth Pattern Desired

The Town shall support a small town growth pattern which reinforces the community's existing commercial areas and protects existing residential areas from inappropriately designed and scaled non-residential development. The compact, pedestrian oriented nature of the Town's historic center—the boardwalk/amusement area and boat basin area—shall receive special diligence in this regard.

Section 8.3.4 Types of Residential Development Desired

In keeping with the general vision statement for the community, including preservation of the small town character and quality of the natural and built environment, the Town has elected to discourage the development of additional large multi-family complexes and high rise structures at Carolina Beach. In contrast, the Town wishes to encourage a mixture of medium density single family development and small scale multi-family development in a proportion that maintains the current percentage of single family/multi-family units.

8.3.4 Types of Residential Development Desired

(1) The Town will encourage medium density (6,000 to 10,000 sq. ft. lots) single family homes as the predominant housing form at Carolina Beach. Construction of additional small scale multi-family projects shall be allowed to occur such that the current percentage of multifamily units relative to single family units is held constant.

(2) The Town will discourage further high density and or "intense" development including large multifamily complexes, condominiums, high-rise structures, large hotels/motels. Single family "mini-castles" should be permitted in locations where their scale and mass is compatible with other structures in their vicinity, or with the overall vision of a particular neighborhood.

Note: Within the Town's existing zoning ordinance, the RA-6A residential district allows up to 29 units per acre and the RA-5A district allows up to 39 units per acre. See Implementation Action 8.3.4(2) for recommended changes to the zoning ordinance in keeping with the intent of Policy 8.3.4 above.

Section 8.3.5 Types of Commercial Development Desired

Town residents attending public meetings for the land use plan voiced a consistent concern about the image and character of development coming in along US 421 (Lake Park Blvd.) into town. Comments regarding commercial strip development, franchise type building facades, neon signs, a general lack of landscaping, a proliferation of banners and a lack of sidewalks were noted. Support for discouraging this type of development along the town's main entryway corridor was among the strongest of any issue facing the community. The Town's commercial development policies reflect a desire for appropriately scaled and designed businesses serving year-round residents and visitors in locations appropriate to their size.

8.3.5 Types of Commercial Development Desired

(1) The Town will encourage new and expanding businesses that provide goods, services, and family oriented entertainment to year round residents and visitors. Examples include appropriately scaled and designed grocery stores, drug stores, restaurants, and amusements. Businesses locating in or near the boardwalk and marina/boat basin area shall be pedestrian oriented, while those locating along US 421, away from the town center, may be more automobile oriented.

(2) Architectural design which is not in keeping with the character of a small, coastal community atmosphere shall be discouraged.

(3) The Town shall continually seek to strengthen its signage controls so that as the community grows, additional signage will not overwhelm the streetscape, thereby detracting from the image of the town, and devaluing its attractiveness as a place in which to live or vacation.

Section 8.3.6 Redevelopment, Including Relocation of Threatened Structures

Windshield surveys conducted in support of this land use plan revealed that Carolina Beach does not have a concentration of substandard housing in any one part of the community. This does not diminish, however, the concerns of many town residents about those properties which are not being kept up and which are a blight on the neighborhood in which they are located. Discussions at the Planning Board and Town Council level revealed the level of difficulty in forcing compliance with minimum housing code standards. While efforts to enforce necessary building improvements should continue, the best long-term solution to this problem would appear to be market driven. That is, as the economic conditions in Carolina Beach continue to prosper over the coming years, it is hoped that the value of the real estate will eventually cause these building eyesores to be replaced by higher and better uses.

Regarding the relocation of structures threatened by wave action or shoreline erosion, the Town supports the relocation of structures rather than trying to stop the natural migration of the ocean shoreline.

Finally, while not specifically related to shoreline erosion, Town officials and residents alike have an ongoing interest in the continued revitalization of the boardwalk area. For discussion of the Town's policies and commitment to the boardwalk, see Section 8.3.13.

8.3.6 Redevelopment, Including Relocation of Threatened Structures

(1) Relocation of structures endangered or damaged by wave action and or shoreline erosion is encouraged. Redevelopment of damaged or destroyed structures will be permitted by the Town according to Town ordinances, provided all setback and other CAMA requirements are met.

(2) The Town shall encourage owners of run-down buildings to rehabilitate their structures. If the structure is not historic in nature or part of an assembly or streetscape of interrelated buildings, clearance of the structure at the owners cost may be required in accordance with the State minimum housing code, public safety and related laws.

Also see **Boardwalk** for redevelopment initiatives related to that area.

8.3.7 Commitment to State and Federal Programs

CAMA Guidelines suggest that local governments address the level of local commitment to State and Federal programs including items such as erosion control, public access, highway improvements, dredging and other related government activities.

The Town of Carolina Beach acknowledges and supports applicable State and Federal programs which work to improve the quality of life of town residents and protect the quality of the natural environment. The Town attempts to cooperate and assist in the implementation of these programs whenever possible. Federal and State assistance programs of most importance to Carolina Beach include the State's beach access program, State and Federal channel maintenance and inlet projects, beach renourishment, and bridge and road improvement programs.

It is worth noting that for each Federal or State program mentioned above, both local area residents as well as residents from outside the community are benefited. This is consistent with what the Town believes State and Federal programs should do.

8.3.7 Commitment to State and Federal Programs, Generally

While there are a number of State and Federal programs which the Town supports, those that are of special interest to the Town of Carolina Beach include the State Coastal Area Management Act, the State's beach access program, beach renourishment and channel maintenance programs, and bridge, road and bikeway improvement programs.

Section 8.3.8 A Assistance to Channel Maintenance, Including Interstate Waterways

Channel maintenance of areas such as the Cape Fear River, Snow's Cut, Carolina Beach Inlet, Myrtle Grove Sound and the Atlantic Intracoastal Waterway is vitally important to the quality of life and tourism based economy of Carolina Beach. Continued maintenance of these waterways for commercial and recreational boating is a very high priority for Town officials and residents alike.

8.3.8 A Assistance to Channel Maintenance, Including Interstate Waterways

(1) The Town supports State and Federal efforts to dredge areas along the Intracoastal Waterway and other major bodies of water in the Carolina Beach area to provide safe access for commercial and recreational boating. Spoil will be placed in approved spoil areas.

(2) Town officials will work with the Army Corps of Engineers, other State and federal agencies, and with other local governments to ensure continued dredging and maintenance of channels and rivers as needed to keep these facilities open to navigation. The provision of borrow or spoil areas and easements for work will be determined on a case-by-case basis. However, the Town would prefer that known spoil areas with existing easements for such purposes be used.

(3) Town officials will maintain contact with congressional representatives and federal officials as dredging or other channel maintenance operations are needed, and will continue to assist local users of these facilities as feasible.

Section 8.3.8 B Beach Maintenance

Beach maintenance and renourishment is a continuing major concern for the Town of Carolina Beach. Concerns that the federal government may be seeking to pull out of its long-standing commitment to beach renourishment are quite real. Town officials have indicated that current methods of raising revenue locally, including the room tax, are grossly insufficient to generate the amount of revenue necessary to support a regular beach renourishment program. The Town will therefore do everything within its means to maintain a cooperative state/federal/local effort to determine, finance and implement beach renourishment. Further, Town officials have indicated a willingness to be a testing site for new prototypical research projects regarding beach maintenance, protection and renourishment.

8.3.8 B Beach Maintenance

(1) The Town supports all State, Federal, and inter-local efforts to determine, finance and implement environmentally and aesthetically acceptable methods of beach renourishment consistent with locally adopted policies. Innovative approaches to beach preservation and renourishment shall be supported, including the testing of new prototypical research projects at Carolina Beach.

(2) The Town is committed to maintaining its man-made beach, dune system and vegetation as close environmental substitutes for the natural systems which protect undeveloped coastal areas. This precludes encroachment of development upon these systems. The Town, therefore, supports non-structural means of stabilizing the ocean shoreline except for temporary structures (i.e. sandbags) erected to protect property from imminent danger of destruction due to erosion, as allowed by the CAMA program.

8.3.9 Energy Facility Siting and Development

As defined in the CAMA Guidelines, "major energy facilities are those energy facilities that, because of there size, magnitude and scope of impacts, have the potential to significantly effect the coastal zone. For the purposes of this definition, major energy facilities include but are not necessarily limited to (1) all oil refining facilities, (2) natural gas terminals and associated facilities, (3) oil and gas storage facilities storing more than 15 million gallons on a single site, (4) electric generating facilities of 300 MGW or larger, (5) thermal energy generation, (6) pipe lines greater than 12 inches in diameter that carry crude petroleum, natural gas, or LNG-LPG or synthetic gas."

In the past two decades, proposals have been brought forward by energy companies to explore the outer continental shelf of the coast of North Carolina for natural gas and/or oil. These proposals would typically be located approximately 25 miles or more off the coast with exploration occurring in deep water. Offshore activity normally generates land-based support facilities and operations. Public input on this subject has demonstrated consistent strong local opposition to both off shore drilling and land-based activities—not only in Carolina Beach but in most areas along the coast of North Carolina.

8.3.9 Energy Facility Siting and Development

Due to the potential risk of oil spills, and related adverse impact on the Town's tourist-based economy, the Town shall not support off-shore drilling for gas or oil and shall not permit facilities such as oil refineries, storage facilities, or staging areas within the Town limits or Extraterritorial Planning Jurisdiction.

Section 8.3.10 Tourism

Tourism continues to be the major driving force in the economy of Carolina Beach. From day visitors to vacationing families that spend an extended period of time in the community, providing for the needs of these visitors is a high priority for the Town. While shopping and amusement services are the proper responsibility of the private sector, the Town also has a role in supporting tourism, primarily through the provision of recreational facilities and public access to the beach and sound. The Town can also be instrumental in facilitating a family-oriented atmosphere. Town law enforcement officials can, for example, be instrumental in helping to foster public behaviors which are supportive of a family-oriented environment. Finally, the Town can also be effective in helping to maintain and improve the quality of the town's beach and area waters as major tourism assets.

One specific element of the tourism economy that Town officials would like to see encouraged is the promotion of weekly stays (as opposed to day visitor stays) at Carolina Beach. It is felt that weekly stays have many positive effects on the nature of the tourism economy, including more dollars spent per day per visitor, less traffic congestion, a greater likelihood of family visitors, etc. Town officials expressed their desire to support the Chamber of Commerce in its initiatives in this direction.

8.3.10 Tourism

The Town of Carolina Beach shall seek to provide residents with a high quality of life and visitors to the area with a quality tourist experience, including especially, factors related to public safety, community image and appearance, an atmosphere conducive to families, pedestrian and bicycle oriented movement, convenient shopping and services, a quality beach strand, and fishable, swimmable waters. Businesses oriented toward higher per capita expenditures by visitors to the Town shall be especially encouraged.

Section 8.3.11 Public Beach and Waterfront Access

The Town of Carolina Beach provides a sizable number of public access points to both the beach and sound areas of the community. Carolina Beach has 27 ocean access points that are provided by either

the Town or by New Hanover County. The Town also has estuarine access points off Canal Drive with facilities ranging from bulkheaded grassed areas to gazebos over the water. Information on the specific location and general nature of each of these access areas is provided on the Community Facilities Map contained in this plan. Finally, in the development of this plan, town residents expressed a concern that private development of soundside waterfront property for exclusive residential use has, in many instances, effectively walled off the waterfront from the public. Recent development proposals to replace former commercial marinas with private, residentially oriented marinas are an example of this trend.

Carolina Beach has 20 public beach front access areas between Carolina Beach Avenue and the Atlantic Ocean, with 10 access areas between Canal Drive and Myrtle Grove Sound. Each access contains varying degrees of facilities ranging from boardwalks with some parking, to no facilities at all. At the southern end of the beach, there are 7 county operated access areas to the beach plus a small park with access to Carolina Lake at Lake Park Blvd.

8.3.11 Public Beach and Waterfront Access

(1) The Town shall secure financial assistance through the CAMA access program and any other programs to create, expand and improve public access to the beach front and estuarine waters of Carolina Beach.

(2) The Town shall avoid development of the soundside shoreline for exclusive residential development, thereby effectively walling off other Town residents and visitors from the public trust waters of the sound and intracoastal waterway. Public access, water oriented businesses, and mixed use developments with ground floor commercial shall be preferred along the soundside shoreline.

Section 8.3.12 Parks and Recreation

In addition to the beach strand and water amenity offered by Myrtle Grove Sound, the Town of Carolina Beach is blessed with a significant amount of park and open space land in and around the corporate limits of the community. Foremost among these significant open space areas are the undeveloped north end of Carolina Beach, Carolina Beach Town Lake, the Sunny Point Military Terminal buffer zone, and Carolina Beach State Park. Because of these existing opportunities for recreation and open space enjoyment, there is not significant pressure to create additional natural and open space areas. However, increasing demands and pressures on the active use of the Town's existing facilities (ball fields, gymnasiums, play equipment, etc.) call for continued attention to improvements and enhancements to organized facilities. Among these enhancements has been the recent addition of a major recreation center on the same site as the Town Hall Complex. This new facility offers significant indoor recreational opportunities to town residents and visitors alike.

According to the Town's Director of the Parks and Recreation, the Town has no recreation plan and the existing facilities are at "maximum buildout" until such time as additional land is acquired. Existing facilities at Chappel Park cannot be expanded because they are located in the Sunny Point Buffer Zone.

8.3.12 Parks and Recreation

As the community of Carolina Beach grows and annexes, the Town shall support a commensurate increase in the development, maintenance and enhancement of its parks, open space and recreational facilities, including sound and ocean access facilities. The Town shall employ national and State recreation standards as the minimum for such facilities—for the benefit of both residents and visitors alike. The Town shall explore alternative means of funding for parks facilities, including State and Federal grants, development impact fees, general obligation bonds, and other sources of revenue.

Section 8.3.13 Boardwalk Area

The boardwalk area of Carolina Beach is the cultural and historic heart of the community. Yet, despite its central location and importance to the community, the boardwalk area continues to fall short of its economic potential. Many officials, merchants and residents feel that the revitalization of this area is critical in the Town's attempts to draw more visitors to the community. Comments received at public meetings held for the land use plan focused on a continuing need to counteract the current undesirable bar atmosphere and image of the boardwalk area. There is also an ongoing need to improve the physical appearance and upkeep of boardwalk buildings and walkways and to provide a greater sense of security and organization to the boardwalk—perhaps through identification and directional maps at entryways to the boardwalk/marina area.

8.3.13 Boardwalk Area

Carolina Beach shall continue to work with merchants and property owners on efforts to revitalize the Central Business and Amusement District/Boardwalk area. Town officials will also seek grants and/or low-interest State or federal loans to revitalize the area. Any such revitalization efforts shall be in keeping with the historic small scale, pedestrian oriented character of the area.

Section 8.3.14 Marina/Boat Basin

Like the boardwalk area, the marina/boat basin in Carolina Beach has become an historic and traditional public gathering place and unique point of focus within the community. Recent physical improvements to the marina area, combined with a proliferation of charter boat services and cruise boats, has created a picturesque focal point within the community and much dockside activity. Concerns regarding the marina focus on not only how it looks or who uses it, but also on how it is to be most effectively managed in the future. The Town's policy regarding the marina/boat basin suggests that the marina might best be managed by a Town Council appointed *marina authority*. Such a marina authority would then have the ability to lease the boat basin out to a private management company while still retaining ownership and major control over significant policy issues.

8.3.14 Marina/Boat Basin

The Town shall continue to provide financial support and managerial guidance to the Carolina Beach Boat Basin and Marina, including periodic major capital improvement projects as may be authorized and budgeted by the Town. Day to day management of the marina shall be handled by a semi-autonomous Town Council-appointed Marina Authority. Alternatively, the Town may elect to lease the boat basin out to a private management company, but with the Town maintaining ownership of all facilities. Under either management option, the marina's normal operation and maintenance shall be self sustaining through revenues received. Future improvements to the marina area shall be in keeping with the pedestrian-oriented character of the central part of Town.

Section 8.3.15 State Port Facilities

Major port facilities do not exist at Carolina Beach; however, Town officials feel that the State Port in Wilmington does have some economic benefit to the community due to its close proximity to the town. For that reason, local officials support continued expansion of the facility.

8.3.15 State Port Facilities

Due to the regional economic benefits of the State Port at Wilmington, the Town supports their continued expansion.

Section 8.3.16 Highway Improvements

As noted in Section 6.2.3, highway and street system improvements are the most important infrastructure issues facing the community, next to water and sewer system upgrades. After many years of operating under an old thoroughfare plan, the Town's of Carolina Beach and Kure Beach came together in 1992 and, with assistance from the North Carolina Department of Transportation, developed a new thoroughfare plan for Pleasure Island. (The contents of the thoroughfare plan are discussed in greater detail in Section 6.2.3)

In 1995, the Town attempted to implement significant portions of a thoroughfare plan by developing a comprehensive street system and traffic management plan. Support for the implementation of the street system plan, however, was mixed. Generally, residents supported the plan while the business community was opposed to it. As a result, the street system plan was shelved, and by default, so also was the Thoroughfare Plan. The Town's policy calls for revisiting this plan periodically and attempting to implement it in concert with residents, businesses and property owners.

It should be noted that while the Town does support greater use of Dow Road as a bypass facility, the Town does not support the widening of Lake Park Blvd. or "improvements" which would increase the volume or speed of traffic through the center of town at the expense of east-west pedestrian and bicycle movement across the roadway.

Regarding bikeways in particular, residents at public meetings voiced very strong and consistent support for expansion of bikeway facilities throughout the town. Residents attending public meetings universally recognized the advantages of bicycles as a convenient means of getting around the town, particularly given the flat topography of the island, the mild climate and the limited availability of parking. In light of this strong support, the Town should pursue, with diligence, funding for those parts of the Thoroughfare Plan and other studies dealing with bikeway improvements.

8.3.16 A Highway Improvements

The Town supports continued highway improvements providing improved access to Carolina Beach as identified in the State Transportation Improvement Program (TIP). The Town shall not support changes in the design of Lake Park Boulevard which would increase the volume or speed of traffic flow through the center of Town at the expense of east-west pedestrian and bicycle movement across the roadway. Rather, the Town supports the use of Dow Road for through traffic.

8.3.16 B Street System Planning

The Town shall periodically prepare, update and approve a Comprehensive Street System and Traffic Management Plan, consistent with the overall Thoroughfare Plan as approved by NC DOT. The plan shall encompass automobile, bicycle and pedestrian traffic movement, as well as on-street and off-street parking needs. The plan shall be employed in carrying out a planned program of street, bikeway, sidewalk, signage and signalization improvements, as well as in evaluating various public and private sector actions and development proposals as related to transportation issues. Preparation and implementation of the plan shall occur in concert with the residents, business, and property owners of the neighborhoods and streets involved.

8.3.16 C Bikeways

The Town supports the use of bicycles as a functional way of reducing automobile traffic and parking demand at the beach, as well as providing a convenient means to get around in many parts of Carolina Beach. The Town shall undertake a continuing program of bicycle friendly improvements to town streets in keeping with the Town's Bikeway Plan and periodically updated Street System and Traffic Management Plan.

Section 8.3.16 D Parking

Much of the older part of Carolina Beach, including particularly the boardwalk and marina area, was developed in an era when off-street parking was not part of the standard development model. As a result, demand for on-street parking spaces can be at a premium, depending upon the time of day and year. Nonetheless, studies have shown that on-street parking is one of the most efficient forms of parking in terms of the amount of land area consumed relative to the number of parking spaces provided. (This is because the travel lanes for the street also serve as maneuvering lanes for the parking spaces.) On-street parking has also been shown to have a calming influence on the speed of traffic on the street. For all these reasons, the Town's policies on parking reflect an emphasis on preserving on-street parking whenever possible. At the same time, the Town wishes to avoid the creation of expansive large off-street parking areas adding little but asphalt to the appearance and economy of the town. Finally, there was considerable discussion at the Planning Board level regarding the strategic use of metered parking, custom-tailored to the time of year and time of day. The consensus of the board was that there were, perhaps, certain times of the day (evening) and year (off season) when parking could be free.

8.3.16 D Parking

(1) In the absence of parking under elevated structures, the Town recognizes that on-street parking is one of the most efficient forms of parking available at Carolina Beach. The Town shall avoid actions which would eliminate on-street parking.

(2) Large off-street parking areas or structures are viewed as an inefficient use of limited land resources in a beach community. Where such uses are created, however, they shall be in keeping with the character, scale and design of their location within the Town.

(3) The Town shall seek to more carefully tailor fee parking spaces to match actual demand by time of year, day of week and time of day.

Section 8.3.16 E Dow Road Intersection

This intersection is a maze of traffic islands. It was created when there was not much desire to go down Dow Road. The construction of the post office has brought an increase in traffic to this intersection, and the potential for hazardous turning movements. In addition, the increasing importance of Dow Road to the total island transportation system will further necessitate improvements to this intersection.

8.3.16 E Dow Road Intersection

Efforts by the Department of Transportation, acting in cooperation with the Town of Carolina Beach to correct operational deficiencies at the Dow Road/North Lake Park Boulevard intersection, shall be supported.

Section 8.3.17 A Scenic Vistas and Views

The Town of Carolina Beach recognizes that its economic base is highly dependent upon the natural amenities of its geographic location on the coast of North Carolina. Without these amenities, the town's economy would cease to function. Therefore, the preservation of the town's shorefront access, open space, and its views and vistas is recognized as being of great importance to the continued prosperity of businesses and property values at Carolina Beach. New development trends have been toward creating exclusive waterfront developments that in many respects, act to wall off the waterfront. The Town's policy on scenic views and vistas is to strongly discourage such development forms.

8.3.17 A Scenic Vistas and Views

Natural views and vistas provided by street corridors and street ends, open spaces, and other opportunities within the Town shall be preserved and protected to the maximum extent possible. This may require forethought in the design of new development or redevelopment which would otherwise act to close off such views and vistas.

Section 8.3.17 B Neighborhood Character and Preservation

One distinguishing feature of this land use plan update is its emphasis on the identification and preservation of neighborhoods within the community. The purpose of this effort is to preserve those aspects of each neighborhood that make it unique within the Town of Carolina Beach. At the same time, those aspects of neighborhoods which are not desirable can be eliminated or phased out.

8.3.17 B Neighborhood Character and Preservation

The Town encourages the improvement, preservation and enhancement of the Town' s areas of unique character and neighborhoods. To accomplish this, the Town shall initiate an on-going neighborhood planning program, to be addressed on a rotating basis among the various neighborhoods as staff resources allow.

Section 8.3.17 C Historic Preservation

In a resort community like Carolina Beach, there is a natural tendency for property owners to want to maximize the development potential of their real estate. (As property values continue to escalate, larger and more expensive structures can be justified as a percentage of total real estate value.) At the same time, there is growing interest in the Carolina Beach community for historic preservation of older structures and sites. Interest is represented, in part, by the Federal Point Historic Preservation Society, which has taken a leadership role in efforts to inventory important historic resources within the entire area of the county south of Snow's Cut. At the present time, however, requiring owners of property to preserve the historic character of the structures on their lots is not deemed feasible. Regardless, the Town does wish to encourage owners of older homes to keep them in good condition.

8.3.17 C Historic Preservation

The Town encourages the preservation of its older, potentially historic structures and sites, including recent efforts by the Federal Point Historic Preservation Society to inventory important historic resources within the entire area of the County south of Snow's Cut.

8.4 Continuing Public Participation Policies

The public participation plan and program for the Carolina Beach Land Use Plan is discussed fully in section 11 of this document. For the sake of completeness, however, a summary of the importance of public participation in the Carolina Beach Land Use Plan is included here.

Since its inception, North Carolina's Coastal Area Management Act land use planning program has placed a high level of emphasis on public participation in the development of local use plans and policies. The intent is to insure that the resulting plan and policies reflect, as closely as possible, the will of the people in the community. Two key elements must be included in any effective public participation program: (1) public education, and (2) public involvement. The most effective format for public participation involves two way communication between citizens and local planning officials.

The public participation strategy employed in the development of the Carolina Beach land use plan involved a variety of activities. Included were key town meetings held at the beginning, midpoint and conclusion of the planning process. Numerous meetings with the Town Planning Board, all advertised and open to the public, focused the Board's attention on the plan and its policies. It should also be noted that the Planning Board was pleased at the level of local newspaper coverage given to the development of the plan.

Regarding neighborhood planning in particular, the intent of this plan is to encourage planning to be as responsive as possible to the specific wishes of the residents of various neighborhoods within the Town. At the same time, neighborhood planning has been found to be effective in gaining the participation of more citizens in the future of their community. As a consequence, the Town achieves greater participation and resident commitment to the proper governance of the community, and the citizens gain a greater say in decisions affecting their everyday lives.

The following policies are designed to affirm the Town's position on public participation during plan development, as well as following plan adoption.

8.4.0 Basic Policy Statement Regarding Continuing Public Participation

Carolina Beach believes that on-going, effective public involvement, combined with a coherent factual analysis of any public issue, is the key to creating and maintaining a direction for the community upon which all may agree.

8.4.1 Land Use Plan Update Process

Public involvement will be encouraged among all permanent residents, seasonal visitors, and property owners during each Land Use Plan Update.

8.4.2 On-going Public Participation

Public involvement in planning matters will continue beyond the plan update process through providing public education and information, utilization of the news media and mailers, and public opportunities for discussion and comment on land use issues. The Planning Board will advertise the public meetings held to discuss land use and associated matters.

8.4.3 Neighborhood Planning

To encourage a high level of involvement by citizens and property owners in planning decisions, the Town shall institute an on-going neighborhood planning program, within which different parts of the Town will be addressed on a rotating basis as staff resources allow.

8.5 Storm Hazard Mitigation, Post-Disaster Recovery And Evacuation Plans

8.5.0 Description of Storm Hazard Risk

8.5.0 A Storm Effects

During coastal storms, including both hurricanes and northeasters, Carolina Beach is subject to beach erosion, storm surge, wave action, flooding, high winds, and beach washover. Of these, storm surge and high winds are typically the two most damaging storm effects at Carolina Beach. These storm effects may be listed at the following levels during hurricane events of increasing magnitude(as measured on the Saffir-Simpson scale):

Hurricane Category	Storm Surge	Maximum Sustained Winds
Category 1	4-5' above normal	74-95 mph
Category 2	6-8' above normal	96-110 mph
Category 3	9-12' above normal	111-130 mph
Category 4	13-18' above normal	131-155 mph
Category 5	over 18' above normal	over 155 mph

8.5.0 B Hazard Areas Mapped

The **Hazard Areas, 1996** map provides an instant visual assessment of those parts of the Town of Carolina Beach which are susceptible to various forms of hazardous events. The map shows four distinct hazardous areas within the planning jurisdiction of the Town. The first, and most expansive, are lands in the 100 year flood plain, including all properties east of Myrtle Grove Sound and the Atlantic Intracoastal Waterway, a significant area around Carolina Lake, all shoreline properties on the west side of Myrtle Grove Sound and a substantial amount of property on the east side of the Cape Fear River.

A second mapped hazard area is the area of *velocity flooding*, as determined from *flood insurance rate maps*. This is the part of Carolina Beach along the entire length of the community's oceanfront that would be subject to wave-action-type flooding during a major storm event.

A third natural hazard area is around Carolina Beach Inlet and has been circled only generally on the map due to the relative unpredictability of the extent to which hazardous conditions may exist around an ocean inlet.

Finally, the fourth mapped hazard area is not related to natural events at all, but rather is related to the Sunny Point Military Terminal on the west side of the Cape Fear River. The buffer area owned and controlled by the U.S. Army comprises perhaps 20-25 percent of the total land area within the Town's corporate limits and extraterritorial planning jurisdiction.

8.5.0 C Existing Development at Risk

Each of the four hazard areas described in the paragraph above were placed as an overlay on the existing land use map of the town. In accordance with CAMA guidelines, this allows for a relatively convenient visual assessment of the degree to which different parts of the developed community are at risk. Based on this composite map, it may be concluded that the majority of all developed sites in the town would be subject to flooding in a 100 year storm event. Further, given the relative development density and value of real estate located closest to the beach, an estimated 75 percent of the total real estate value at Carolina Beach would be subject to some form of flooding during a major storm event. The

key to minimizing damage and risk during a major storm event then becomes that of enforcing building codes and flood plan regulations that cause structures to be elevated above flood level. Recent experience with Hurricane Fran clearly demonstrated that those properties properly elevated above the flood level suffered fewer property losses from the storm.

8.5.0 Storm Hazard Mitigation/Post-Disaster Recovery, & Evacuation Policies and Plans

The Town shall continually seek to establish procedures and take actions to reduce the potential for the loss of life and property damage prior to a storm event, and to provide a framework for orderly reconstruction in the aftermath of a hurricane or other significant damaging event.

8.5.1 Storm Hazard Mitigation Policies

8.5.1 A Storm Effect Mitigation

In the case of severe storms, conditions exist which pose a serious threat to life and property at Carolina Beach . Accordingly, the Town has adopted a Flood Plain ordinance which benefits storm hazard mitigation. Carolina Beach is an active participant in the National Flood Insurance Program and is supportive of its hazard mitigation elements. The Town enforces the FEMA Criteria for minimum structure elevation in both the "A" and "V" zones as identified in the National Flood Insurance Program.

8.5.1 A Storm Effect Mitigation

(1) High Winds: The Town supports enforcement of the NC State Building Code. The Town will continue to enforce the State Building Code on wind resistant construction with design standards of from 120 to 150 mph wind loads.

(2) Storm Surge: The Town supports and is a participant with the State in administering the development standards of the CAMA Ocean Hazard Area of Environmental Concern (AEC). These standards help ensure that structures particularly susceptible to storm surge (e.g. first row) are set back from the ocean a distance based on the average annual erosion rate at that location.

(3) Flooding: The Town is an active participant in the National Flood Insurance Program and is supportive of its hazard mitigation elements. The Town shall continue to seek improvements in development standards which would result in lower insurance premiums for Town property owners. The Town also supports proper enforcement of State and Federal wetlands development permit processes in areas potentially susceptible to flooding.

(4) Wave Action and Shoreline Erosion: The Town is supportive of the CAMA development permit process for estuarine shoreline areas and the requisite development standards which encourage both shoreline stabilization and facilitation of proper drainage.

8.5.1 B Discouragement of Hazardous Development

The Town strictly follows the CAMA development guidelines and has used land use tools, such as zoning, to discourage development in hazardous locations.

8.5.1 B Discouragement of Hazardous Development

(1) In reviewing development proposals, the Town shall act in concert with CAMA standards which discourage or prohibit development in hazardous locations.

(2) The Town shall conduct a public education and information sharing program approximately once per year with the goal of making the town more resistant to the forces of a storm. This will include a public

outreach program to educate the public as to storm resistant building design and construction standards, as well as the Town's policies on evacuation, reentry, restoration of services and reconstruction.

(3) The Town will periodically conduct studies to analyze both the feasibility and benefits of revising local development controls to lessen the effects of storm damage. Included shall be an examination of the Town's floodplain management and building standards which could have the effect of reducing flood insurance rates for Town property owners.

Section 8.5.1 C Public Land Acquisition

Due to the multiple street ends providing public access to both the beach and sound, there is not a pressing need for the Town to acquire significant additional properties for public access to the water. However, all access ways are in need of additional land for parking nearby.

Also, with major damage to the old Town Hall suffered during hurricane Fran, the Town is currently in need of appropriate space for buildings to serve the police and fire departments. At the same time, the Town will likely be in the business of disposing of the old Town Hall site in the near future. For these reasons, the Town must remain open to opportunities for selective property acquisitions on a case by case basis-particularly involving sites for buildings.

Also, with an on-going need to provide for expanded water systems serving proposed annexation areas, the Town must be attentive to potential well sites and a site for a future elevated water tank on the south side of town.

Finally, with growing demands for active recreation fields, the Town must keep an eye out for a potential active recreation park site serving the south area of town, should it become annexed.

8.5.1 C Public Land Acquisition

(1) The Town supports advanced planning for property acquisition in areas of *extreme* and *high* hazards, where such acquisition serves a useful public purpose, such as for public access to the beach, where such access is needed. In evaluating potential property purchases, the Town shall take into consideration rates of erosion or other factors which could have a bearing on the longevity and ultimate usefulness of the property for public use.

(2) The Town shall investigate outside funding sources for land acquisition and shall encourage gifts and donations for tax credits, as a mitigative measure for future storm events. To provide a proactive approach, priority areas for acquisition shall be identified in advance of storm events.

Section 8.5.1 D Evacuation

With the recent experience of Hurricanes Bertha and Fran during 1996, the Town has learned much about improving coordination in its evacuation efforts with the county. This is especially important in terms of a reentry plan for residents and property owners following a major destructive storm event.

8.5.1 D Evacuation

The Town, in cooperation with County and State officials, shall periodically evaluate the impact of continued growth on existing transportation facilities with regard to evacuation routes and times. Actions to meet needed transportation improvements shall be taken well in advance of need.

8.5.2 Post Disaster Reconstruction Policies

8.5.2 A Emergency Management Plan

The Town of Carolina Beach coordinates disaster related activities with New Hanover County. Coordination focuses primarily on return access, debris pick up, and County Health Inspections. One important goal of the Town is to better educate residents and property owners regarding the Town's evacuation and re-entry policies, so as to avoid some of the misunderstandings which occurred during hurricanes Bertha and Fran.

8.5.2 A Emergency Management Plan and Near Term Response

The Town shall prepare and annually update an Emergency Management and Operations Plan, in concert with County and State emergency management officials, and with input from Town residents. The plan shall encompass pre-storm and immediate post storm activities and policies of the Town, including policies on evacuation and reentry. Distribution of a "Citizen's Guide" to important elements of the plan shall occur on a year round basis at Town Hall, with heightened education about the policies of the plan occurring at the beginning of each hurricane season.

8.5.2 B Local Reconstruction Policies

The Town of Carolina Beach has, as one of its top priorities, the establishment of a clearly articulated Emergency Management and Operations Plan for use before, during, and after a major storm event. Included in this Plan shall be the establishment of mutual aid agreements for assistance in the areas of clean up, damage assessment and reconstruction activities.

8.5.2 B Local Post Disaster Reconstruction Policies

Redevelopment in the most hazardous areas will be discouraged. Structures and sites which were destroyed by 50% or more of their value and which did not conform to the Town's building regulations, zoning ordinances, and other storm hazard mitigation policies shall be redeveloped according to current standards. In some instances, this may mean relocation of construction or no reconstruction at all. Structures and sites suffering damages at less than 50% of their value shall be allowed to be restored to their original condition prior to the storm.

The Town shall create and have on hand a Municipal Facilities Master Plan for the reconstruction of public buildings and facilities. The plan shall address functional as well as aesthetic considerations.

8.5.2 C Recovery Task Force

Immediately following a storm event, the Town shall first assess the extent of the structural damage to determine a further course of action. Depending on the extent of damage caused by the event, various personnel will be involved in land use decision-making. Those who may be involved include:

1. Mayor and Town Council
2. Town Manager
3. Public Works Director
4. Town Planner
5. Fire Chief
6. Police Chief
7. Representative from CP&L
8. CAMA Officials
9. Representative from NCDOT
10. Other

8.5.2 C Recovery Task Force

The Town shall have a predetermined Recovery Task Force to orchestrate the Town's recovery activities following a major storm event. The composition and duties of the Task Force shall be specified in the Town's Emergency Management and Operations Plan.

8.5.2 D Staging Schedule for Reconstruction and Repair

The staging schedule for the re-establishment of essential services and the reconstruction and repair of properties damaged during a storm event, will depend on the severity of the storm and the damage inflicted. The Town will be working to restore essential services related to the public health safety and welfare first. Properties suffering minor damage will have building permits issued as expeditiously as possible. Properties suffering major damage will be allowed to implement temporary protective measures to protect their property from further damage, or to correct a public safety problem.

8.5.2 D Staging Schedule For Reconstruction and Repair

(1) To deal with the large number of requests for permits after a major storm, the Town shall employ a "building permit triage" for orderly issuance of building permits. Criteria for the order of issuance shall be developed in advance, with the need for modification acknowledged based upon the specific circumstances being faced.

(2) The Town shall also develop a planned sequence for the restoration of public utilities and services, with allowance for adjustment to deal with circumstances at hand.

8.5.2 E Public Infrastructure Repairs and Replacement

As a part of the Town's on-going infrastructure planning activities, the Town shall maintain assessments of current infrastructure usage and need for expansion, repair or replacement. Then, following a major storm event, damage to existing public infrastructure will be evaluated as to potential opportunities for expansion or replacement, in keeping with capital improvement planning and repair needs.

8.5.2 E Public Infrastructure Repairs/ Replacement

The Town supports underground installation, replacement and storm proofing of public and private utilities and infrastructure. The Town shall also encourage the use of appropriate wind resistant traffic signals as may be available for new installation and replacement by NC DOT and private individuals.

9. Land Classification

9.1 Purpose of Land Classification and Relationship to Policies

The CAMA Land Use Planning Guidelines require that local governments in the coastal area classify various parts of their planning jurisdictions in accordance with the desired density and character of development for each area of their community. 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. Unlike zoning, however, which has the force of law, land classification is merely a tool to help implement policies and is not, in the strict sense of the term, a regulatory mechanism.

The State's land classification system has several suggested categories. For example, the **Developed** class is intended for areas that are already urban in nature. The **Urban Transition** class is intended for areas that are expected to become urban within the next decade. The **Rural** class is intended for areas that are not expected to become urban within the next decade—and so forth. In the case of Carolina Beach, however, the incorporated area, (excluding marshes, the beach strand, and public trust waters) is largely urban in nature. In other words, most of the area is either already developed or platted for development, and is currently receiving the full range of urban services, including particularly, centralized water and sewer. According to CAMA Guidelines, therefore, most of the developable area of Carolina Beach qualifies for inclusion in the **Developed** class, with the balance of the area—i.e. marshes, the beach strand and public trust waters—qualifying for the **Conservation** class.

Designating nearly all of the land area of the Town into a single land class, however, defeats the purpose of providing policy guidance to the Town for different parts of the community. For this reason, this plan subdivides the **Developed** class into several sub-categories. These sub-categories correspond to neighborhood planning areas within the Town with distinct development characteristics or common attributes. Policy positions can then be included in each of these neighborhood sub-classifications to help the Town maintain the distinguishable neighborhood qualities unique to each area.

9.2 The Land Classification System at Carolina Beach

The purpose of the land classification system for the Town of Carolina Beach, therefore, is to identify areas of *similar character and association* for which custom-tailored development policies may be drafted and implemented. For example, the Main Residential area has a development character quite different from the development character of the North End. To employ the same development policies for each of these areas would be inappropriate, eventually resulting in the total loss of the unique character of each of these areas. In other words, as development and redevelopment occurs at Carolina Beach, it should be designed in context of the neighborhood planning area in which it is located.

This section describes the several "neighborhood planning areas" at Carolina Beach. Ten of eleven neighborhood planning areas fall into the broad classification of **Developed** under the State guidelines for planning in the coastal area. The eleventh has been placed in the **Urban Transition** class. For each neighborhood, a *Description Of Area Character* is presented, followed immediately by a statement of *Policy Emphasis* to be employed by the Town in making development decisions for that area.

9.3 The Land Classification Map

The land classification map for Carolina Beach is provided at the back of this document. The general location of each land class (neighborhood planning area) in the town is also provided as a part of each area description below.

9.4 Land Classification Areas

• *Developed Neighborhood Areas*

9.4.1 The St. Joseph/Spencer-Farlow Area

Description of Area Character

This area is located at the north end of town, just to the left after crossing the Snow's Cut bridge. The area is bordered generally by US 421 on the west, Snow's Cut on the north, Myrtle Grove Sound to the east and the Federal Point Shopping Center/Amusement/Commercial area to the south. This is one of the more recent areas of the beach to develop, with most construction here occurring during the 1980's and 1990's.

Land uses in the area consist of a mixture of single family homes, townhouses, and water oriented condominiums in planned residential developments. This part of town also contains some extensive areas of freshwater wetlands to the interior of the area. Zoning here is mostly RA-7, RA-6A and MB-1. There is also an RA-20 zoning district along a portion of the Snow's Cut frontage closest to the bridge. Single family lot sizes are predominantly in the 7,000 square foot range.

Ongoing development interests in this area are creating conflicts between existing residential neighborhoods and newer multi-family developments coming in at the water's edge. These conflicts are related primarily to traffic generated and parking demand created by the newly proposed multi-family developments and their associated marina facilities. Streets in the area are not in a grid iron pattern, so traffic entering or leaving the area tends to concentrate on just a few streets. There are no sidewalks in the area and no services nearby. Therefore, the area tends to be automobile oriented.

Street and development patterns in the area have not allowed for public access to the sound or Snow's Cut. There is, however, a well used State Wildlife boat ramp at the Northeast corner of the area, providing boat access to Snow's Cut, the Atlantic Intracoastal Waterway and the mouth of Myrtle Grove Sound. The new marina facilities associated with the recent proposals for multi-family development are quite large by Carolina Beach standards. (100+ boat slips each).

Policy Emphasis:

The policy emphasis of this plan is to protect the viability of the existing residential neighborhoods in this part of town, while allowing for reasonable development and redevelopment of other properties in the area. A primary focus of the Town's growth management efforts will be on controlling the nature and intensity of new multi-family/marina developments so that they are compatible with the existing character and use of the area. Particular attention shall be paid to traffic generation, cut through traffic, and parking demands related to new developments. Areas of freshwater wetlands shall also be conserved for the valuable functions they serve in filtering urban runoff and reducing flooding problems.

9.4.2 The Post Office Area

Description of Area Character

This area is located at the north end of town, immediately to the right after coming over the Snow's Cut bridge. The area is bounded by Carolina Beach State Park to the west, Snow's Cut to the north, US 421 to the east, and Dow Road to the south. Development in this area is largely non-residential in nature, although there are a few single family homes in the area, and one sizable trailer park.

Land uses in the area include the post office, the Federal Point Medical Center, a pawn shop/TV repair service business, an automobile garage, the American Legion Post, a welding shop and boat storage. As such, this area provides an important service function to town residents by accommodating intensive commercial services that would not be appropriate within most other parts of town.

The zoning pattern reinforces existing development patterns in the area. Most of the area is zoned B-3 (Highway Business), but with a pocket of RA-5T for the trailer park, and another area of RA-6A adjacent to Snows Cut.

A major point of interest in the coming years will be the redesign of the US 421/Dow Road intersection. Improvements here will redirect through traffic away from US 421 (Lake Park Boulevard through town) and onto Dow Road along the western margin of the community.

Regardless of improvements at the Dow Road intersection, all traffic to and from Carolina Beach (excluding ferry traffic) must pass by the Post Office Area. This area, therefore, serves as the gateway for all of Pleasure Island. Because of this, the Town has an interest in the safe and efficient traffic movement through the area and in the appearance of developments adjacent to the US 421 corridor.

Policy Emphasis:

The policy emphasis of this plan will be on working proactively with area property owners to address land development and gateway appearance issues. For its part, the Town has installed a number of streetscape improvements along this portion of US 421, including landscaping and decorative street lighting. Future developments will be reviewed particularly for roadway appearance, attractive signage, and landscaping. The Town will also work cooperatively with the State Department of Transportation on traffic management issues and the ultimate reconfiguration of the Dow Road intersection.

9.4.3 The US 421 Commercial Area

Description of Area Character

This, the largest commercial area of the Town of Carolina Beach, is located immediately adjacent to both sides of US 421, about one mile after crossing over the Snows Cut bridge. The Federal Point Shopping Center anchors the area, and is surrounded by outdoor amusements and a variety of retail establishments.

Commercial establishments in this area tend to be large in scale , with ample parking. Businesses include a grocery store, drug store, hardware store, and a number of beach oriented retail stores. These uses are supported by the area's designation in the B-3 Zoning District (Highway Business).

Also included in this area is the Town Hall complex and recreation center on the east side of US 421. Eventually, it is expected that the Fire and Police Department operations will also be relocated to the municipal complex in this area.

While the Post Office area serves as the initial "gateway" to the town, the US 421 Commercial Area makes up much of the "entryway corridor" into town. This corridor has many of the characteristics associated with a typical commercial strip found in many cities: large, pole mounted signs, overhead power lines, billboards, numerous driveway cuts, extensive areas in asphalt parking lots, and little natural vegetation or greenery. As such, the area does little to enhance Carolina Beach as an "attractive resort community with small town charm".

Policy Emphasis:

The policy emphasis of this plan will be on working to mitigate the adverse visual affects of the strip development concentrated in this area. This may include improvements in area signage and landscaping, the addition of sidewalks to encourage pedestrian movement, and a close monitoring of additional driveway cuts onto US 421. These improvements might be carried out through an entryway corridor plan, prepared in cooperation with area property owners, or through changes in the Town's sign ordinance, landscaping standards, and zoning ordinance, plus a billboard abatement plan.

9.4.4 The Mixed Use Area Near the Central Business District

Description of Area Character

The Mixed Use Area of Carolina Beach lies between the Central Business District/Boardwalk Area on the east and the Main Residential area of Carolina Beach to the west. Its borders can be generally defined by Lake Park Boulevard on the east, Fourth Street on the west, Carolina Lake to the south, and Goldsboro Avenue to the north. As its name implies, this area serves as an area of mixed land uses between the intensive, commercial, central part of town and the quiet residential areas reaching back toward Dow Road.

This strategically located area is one of the most diverse, mixed use sub areas of Carolina Beach, having a good range of services close at hand. The area is characterized by a mixture of single family, duplex and multi-family residential development, as well as a variety of office, institutional and commercial uses. This area also includes many of the town's cultural institutions and gathering places including, for example, the Town's community building, senior center, library, the Mason's building, and several restaurants. Carolina Beach Lake provides a definitive southern limit to the area. There are ongoing efforts at the lake to upgrade the park-like setting of the lake with a walkway around the entire perimeter.

Zoning in the area includes primarily B-1 (Central District) and RA-6, with two small areas of RA-6A.That portion of the area from Lake Park Boulevard west to Third Street and north of Carolina Beach Lake is zoned B-1 and is undergoing pressure for conversion of residential uses into commercial properties. While the area around Carolina Beach Lake is currently zoned to allow for duplexes (RA-6), the current real estate market has created a demand for single family development in this area.

Lot sizes average 5,000 to 6,000 square feet. Many of those located in the B-1 District immediately adjacent to the downtown have been combined, however, for commercial development.

Streets and avenues are arranged in a traditional grid iron street pattern, allowing for excellent pedestrian circulation. The presence of a large number of convenient services, combined with sidewalks on nearly all of the streets in the area, create an "small village" atmosphere, well suited for pedestrians. In fact, this part of Carolina Beach is perhaps the most pedestrian oriented of any part of the beach, except the boardwalk area itself. Some streets, including Harper, Cape Fear and Raleigh, have on-street parking which is "up for grabs" by overnight visitors and day visitors alike.

In contrast to the large, automobile oriented commercial developments associated with the Federal Point Shopping Center area, most commercial establishments in this part of Carolina Beach are smaller in scale and exhibit a balance between pedestrian and automobile orientation.

Many of the single family residential beach cottages in this area are quite old and some are in various stages of disrepair. Even so, many have historic interest due to their age and character.

Policy Emphasis:

The policy emphasis of this plan is on retaining the modest scale of most of the structures in the Mixed Use Area, as well as its pedestrian oriented nature. Large scale commercial uses and parking lots, which would detract from the pedestrian oriented, small village nature of the area, shall not be permitted. While the current mixture of single family residential, multi-family residential, and commercial uses is considered appropriate for this area, careful monitoring will be required to see that pressures for multi-family and commercial development do not get out of balance with the livability of the area. As an alternative to commercial and multi-family development, this area may be an appropriate location for small scale office and institutional uses. This is especially true for that portion of the area between Third and Fourth Streets which must serve as a true transition between the more commercial area adjacent to Lake Park Boulevard and the more solidly residential area west of Fourth Street.

9.4.5 The Main Residential Area

Description of Area Character

The Main Residential area of Carolina Beach extends westward from Fourth Street on the east to Dow Road on the west and generally from the Dow Road intersection with US 421 on the north to the southern town limits (currently at Carolina Sands Drive). In addition the residential area between Second and Fourth Streets south of Carolina Lake is also included in the Main Residential Area. The area is almost entirely single family residential in character, with a few community and institutional uses located in the area. These community and institutional uses include Carolina Beach Elementary School, several churches, a fire station, a rest home, and Mike Chapel Park.

While most of the original lots in the area are 50 by 125 feet (6,250 square feet), the majority of the area is zoned RA-12. This requires the combination of two lots to meet the 12,000 square foot minimum lot size. A smaller portion of the area is RA-5 and RA-6 allowing for single family residences and duplexes on 5,000 and 6,000 square foot lots. The newest part of the Main Residential area, Carolina Sands, is zoned RA-5B and calls for single family residential uses on 5,000 square foot lots. In contrast with the RA-5 District, the RA-5B excludes duplexes.

This area has been developing over a long period of time, beginning in the 1940's and continuing to the present time. Over the years, residential home square footages have ranged from 1,400 square feet up to, and exceeding, 3,000 square feet. Because land elevations in this area are relatively good (above the floodplain) there is no need to place structures on stilts or pilings. For this reason, residences tend to take on a traditional neighborhood appearance—not of a beach style.

Streets are continuous in the area and in a grid iron pattern. While on-street parking is not permitted in the area, visitors to the area are accustomed to parking in the street right-of-way adjacent to their host property owners. Because there are few convenient commercial services in the area, residents are not inclined to walk to services and sidewalks are present on only an estimated ten to fifteen percent of all blocks.

Policy Emphasis:

The policy emphasis of this plan is to protect the viability of this area for single family residences with an appropriate mix of community and institutional uses. Duplexes on small (5000 to 6000 square foot) lots shall be discouraged in this area through appropriate zoning amendments. Opportunities for greater pedestrian and bicycle movement from this area to services located in and around the Central Business District should be encouraged. The Town can facilitate this objective by the addition of sidewalks in the area as Town capital improvement budgets allow.

9.4.6 The North End

Description of Area Character

The North End of Carolina Beach consists of a small area of streets extending landward from the North Beach "peninsula", beginning at the point of intersection of Periwinkle Lane and Canal Drive. Currently, the North End is receiving considerable attention and new investment. The area consists of an older section of single family homes and a newer section which is partly single family and partly multi-family. (In this case "older" refers primarily to when the streets were first platted.)

This area was recently rezoned to RA-6B (single family only), with lots sizes averaging slightly over 6,000 square feet. Average home sizes in the area started out at perhaps 1,200 square feet originally, but have increased over the years to an average approaching 3000 square feet today.

The streets in the older section, (named after the states of Delaware, Florida, Georgia, Virginia and Maryland), are in a modified grid pattern. This allows for good pedestrian circulation throughout the neighborhood.

The newer section, known as "Spinnaker Pointe" or "Oceana", is currently under development. These properties were also recently rezoned to RA-6B. When built out, however, this newer area will consist of a mixture of single family and previously approved multi-family structures. Newly constructed single family homes here are some of the largest in town and the four 18-unit multi-family buildings are each three stories in height.

Streets in the Spinnaker Pointe project area are private and curvilinear, in keeping with the contemporary style of development here. There is no on street parking anywhere in the North End area and no sidewalks. Even so, pedestrians enjoy walking through the area due to the quiet nature of the streets.

The North End is one of the most water oriented areas at Carolina Beach, as evidenced by numerous private docks associated with lots fronting on Myrtle Grove Sound. In addition, the Spinnaker Pointe development has its own private marina, consisting of 80 large boat slips. The Spinnaker Point Marina area is zoned MB-1, which allows marina based businesses.
Despite the area's water orientation, public access to the sound is quite limited. While three of the area's streets (Delaware, Maryland and the "Unnamed" Street) have public right-of-ways to the sound at their street ends, the lack of on-street parking generally precludes opportunities for public use of these unimproved access ways.

Policy Emphasis:

The policy emphasis of this plan is for the older section of the North End to continue as a single family residential area. Incremental improvements and investments in single family homes in this area shall be encouraged. Multi-family development, whether by new development or by increases in development intensity or scale at existing locations, shall not be permitted. With the possible exception of the MB-1 commercial district at the marina, the Spinnaker Pointe area shall be allowed to continue to develop in accordance with the plan as approved by the Town, and as permitted by the zoning ordinance.

9.4.7 North Beach

Description of Area Character

This planning area is a peninsula bounded by Myrtle Grove Sound on the west and the Atlantic Ocean on the east. Area termination points north and south are the Town limits and Pelican Lane (near the marina), respectively. (Note: This area does not include the North End Neighborhood (Florida,

Georgia, Virginia Avenues, plus Spinnaker Pointe) which is addressed separately. Nor does it include the undeveloped, northern end of Carolina Beach from the corporate limits north to the Carolina Beach Inlet. This area is not suited environmentally for development and is intended for ultimate use as a Town park and open space area.)

Two north-south running streets extend the length of the North Beach: Canal Drive along the sound side and Carolina Beach Avenue North along the ocean side. Due to its exposure to both the sound and the ocean, this area has perhaps the largest concentration of tourist oriented "residential" of anywhere at Carolina Beach. Single family residential structures have tended to locate along Canal Drive while more intensive multi-family development has oriented itself along Carolina Beach Avenue North, closer to the ocean. Unlike the Main Residential area of Carolina Beach, in which structures tend to be traditional low profile, and owner-occupied, the North Beach area has structures which are built high off the ground and are renter occupied.

Originally, the sound side (west side) of Canal Drive was deed-restricted against development. Over time, however, these deed restrictions were ignored and the sound side portions of the lots fronting on Canal Drive were sold off for single family development. As a result, views to Myrtle Grove sound from Canal Drive were blocked along much of the street. Currently, there is strong incentive to convert these sound side lots from single family residential use to more intensive multifamily development.

Many residents point to the multi-family developments along Carolina Beach Avenue North as the type of development that the Town should avoid in the future. These so-called "six packs" were built 45 to 50 feet in height during the early 1980's—before a building height of 35 feet was established. In some instances, there are 8 to 16 units on a single ocean front lot. Parking under these structures is often configured in a "three deep" arrangement, which is inconvenient at best and non-functional at worst. Nearly all of the North Beach area is zoned RA-6A, with the exception of the hotel area near the marina and boardwalk, which is zoned T-1 (Tourist). After the "six pack" building boom of the early 1980's, development densities in the RA-6A District were scaled back to 4 units per 6,000 square foot lot.

Traffic congestion in the area is quite severe, with traffic counts on Canal Drive (2 lanes) being second only to Lake Park Boulevard (5 lanes). Due to heavy traffic volumes and narrow rights of way, no on-street parking is permitted in this area. Parking, in general, is at a premium. Proposals have been presented in the past to convert cross streets in the North Beach area to one way streets on an alternating basis, thereby allowing for on-street parking in the area.

The original grid iron street pattern in the area created good opportunities for sound and ocean front access. Currently, there are fifteen ocean front access walkovers at the east end of streets in the area and twelve unimproved sound front access points at the west end of various streets. While private docks are abundant along the entire length of Canal Drive on Myrtle Grove sound, there are no major marinas on this side of the sound.

Flooding along Canal Drive is an on-going problem which has received considerable attention in this area. Beach erosion is also a concern from Periwinkle Lane North.

Policy Emphasis:

The policy emphasis of this plan is to allow for the continued use of each land parcel as currently built upon or as approved for development. To keep traffic and parking problems from escalating further, no additional multi-family development, (beyond that which has already been approved) is to be permitted in the area, whether by new development or by increases in the development intensity or scale of existing projects. Conversion of single family homes and duplexes to multi-family housing is to be specifically discouraged. This may require rezoning of appropriate single family/duplex areas to exclude multi-family development. It may also require re-examining the extent of the T-1 (Tourist-oriented) zoning district to limit further increases in development intensity in this, the most congested

part of Carolina Beach. In the event of major storm damage to ocean front structures in this area, the Town would prefer to see a higher quality of development with no increases in density and improvements in off-street parking for each residential unit.

9.4.8 The Marina Area

Description of Area Character

The Marina Area is located at the southernmost end of Myrtle Grove Sound. The current Marina Area/Boat Basin was first dredged in the 1930's. Like the Boardwalk Area, the marina at Carolina Beach has become an historic and traditional public gathering place and unique point of focus within the community. Charter boat services and cruise boats, and all of the dockside activity associated with them have become part of the unique character and personality of Carolina Beach.

Current issues in the marina area are as varied as the types of individuals who use the facility. There is a need, for example, to better service "snowbirds"—boaters in transit headed south to Florida or returning North. At present, these potential buyers of goods and services are not coming ashore at Carolina Beach due to the lack of transient docking, onshore transportation services and near shore commercial establishments. In keeping with this need the Town would like to look into creating transient mooring buoys in the marina area. However, current CAMA standards require that a *water use plan* be developed before mooring opportunities can be established.

A closely related issue is the pending loss of the last remaining fuel dock in the Myrtle Grove Sound. Once this area has been redeveloped as proposed, the current fuel dock will be replaced by a private marina associated with an onshore residential development.

As with other coastal communities, the use of jet skis in the Myrtle Sound area has become a problem in terms of boating safety, noise and environmental damage. Solutions have ranged from no action, to enforcement of proper use by a harbor patrol, to an outright ban within certain designated areas at Carolina Beach.

Policy Emphasis:

The policy emphasis of this plan is on establishing a long-term vision and management plan for Myrtle Grove Sound. This plan would include recommendations for harbor management, maintenance dredging, boating safety and patrolling, shoreside access, transient moorings and other issues as they arise. It is recommended that this plan be developed under the auspices of a *water use plan* in accordance with the guidelines of the Coastal Area Management Act program. Included in this plan would also be proposals for improvements to sound side access ways at all public street ends.

9.4.9 The Boardwalk Area and Central Business District

Description of Area Character

The Carolina Beach Boardwalk Area and Central Business District are the historic town center and entertainment core of Carolina Beach. The area extends generally from the Marina on the north to Hamlet Avenue on the south, and from the back of lots fronting on Lake Park Boulevard on the west to the beach strand on the east. The area is best discussed in two parts: the Boardwalk Area proper and the surrounding Central Business District.

As might be expected, the heart of the old Boardwalk Area is dominated by food and beverage, amusements and retail sales. Structures in the Boardwalk Area tend to be one to two stories in height and are small in scale. In many respects, the area is a throwback to earlier times with a predominant 1940's architectural style reminiscent of beach resort communities of that era. Building conditions in

the Boardwalk Area vary from well kept to significantly deteriorating. Absentee ownership of buildings runs at about 80 percent. Unfortunately, owners not investing in their structures work to the detriment of those who are investing and do work to keep things up. Recent years have seen investments on the part of the Town of Carolina Beach in the Boardwalk Area. Improvements made by the Town have included a new elevated boardwalk and streetscape improvements in the Boardwalk Area. The new boardwalk structure, located just behind and above the frontal dune, has restored the opportunity for visitors to once again view the ocean—a view that was lost when the protective dune system was established in the 1960's.

The Central Business District, which generally surrounds the Boardwalk Area, has traditionally been less intensively tourist oriented, but is becoming more so. Lake Park Boulevard has a mixture of retail uses, lodging, restaurants and offices serving local resident and tourist needs. In keeping with improvements made at the Boardwalk Area, the Town has been working to extend streetscape improvements to Lake Park Boulevard as well. When completed, these improvements will include planting islands and landscape materials to soften the appearance of the street and make street crossing distances shorter and safer for pedestrians.

Zoning in the area is comprised of the A-1 (Amusement District) specifically for the boardwalk area, the B-1 (Central Business District) for the area surrounding, and the T-1 (Tourist District), for the oceanfront hotel areas north and south of the Boardwalk. While the Boardwalk Area and Central Business District sustain the most concentrated levels of use of anywhere at the beach, the tight, interconnected network of streets, sidewalks, on-street and off-street parking areas is quite effective in absorbing high levels of vehicular and pedestrian traffic.

Policy Emphasis:

The policy emphasis of this plan is to achieve two objectives: (1) Reestablish the family-oriented market niche of the Boardwalk Area, and (2) Create a common architectural theme and sense of unity to the Boardwalk Area and surrounding business areas, including especially, the Marina.

The first objective is to firmly reestablish the boardwalk area as a family attraction. Currently, instead of projecting a clear image to the family market, the Boardwalk Area presents a split image, part adult and part family. By returning the Boardwalk Area to a family-oriented market niche, it is hoped that the Boardwalk Area can regain its economic potential. One opportunity to do this is through the future sale and reuse of the old Town Hall complex and Police Station. This site should undergo adaptive reuse or, if necessary, redeveloped with a use that supports the economic health of the boardwalk area. (As discussed in the paragraph below, it should also be in keeping with the scale and character of development in the area.)

The second objective is to create a common architectural theme and sense of unity between the Boardwalk Area and surrounding business areas, including the Marina. Implementation of the architectural theme will require cooperation form area property owners and businesses. For its part, the Town will continue to install streetscape enhancements within the Boardwalk Area itself, and between the Boardwalk Area and surrounding areas. In particular, the area between the end of Woody Hewett and the beginning of Canal Drive needs to have a sense of connectedness to the pedestrian. Assisting in this continuous connection will be the addition of landscaping, street lighting and continuous sidewalk improvements. Also helpful will be informational signage, including for example, kiosks with mounted locator maps. At the same time, the Town may want to revisit the potential closing of Cape Fear boulevard east of Lake Park Boulevard during some parts of the tourist year.

Consistent with both of the above objectives, the Town will not support nor allow proposals which would displace the historic, pedestrian-oriented heart of its community with large-scale enterprises and automobile oriented establishments (whether commercial or residential). To do so, would destroy that which is unique to Carolina Beach alone on the North Carolina coast.

9.4.10 The South End

Description of Area Character

The South End begins where the Boardwalk Area ends at Hamlet Avenue. The South End then extends all the way to the southern limit of the Town's extraterritorial jurisdiction (ETJ). From east to west the South End area is quite narrow, extending only from the rear of lots fronting on the west side of Lake Park Boulevard to the beach strand on the east. In some respects, the South End is comprised of two quite different areas with distinctly different development patterns. The first area, extending from Carolina Sands Avenue north to the Boardwalk Area, is less intensively developed. Zoning in this part of the South End is in three parallel strips from west to east beginning with B-3 on the west side of Lake Park Boulevard, T-1 on the east side of Lake Park Boulevard, and RA-5A along the ocean front.

The single family residences in this part of the beach tend to be traditional beach cottages owned by long standing residents. This is an area of good high ground, allowing ground level residential structures to have survived several hurricane events. Structures here tend to be one story on stilts or two stories on the ground. Many of the older beach homes, especially those that are not up on stilts, do not have sufficient parking and on-street parking is not allowed in the area. Some have speculated that the presence of the T-1 district in this area has inhibited redevelopment of the first generation beach cottages that persist in this area.

The second part of the South End begins where Carolina Beach Avenue South stops and continues on to the southern limit of the Town's planning jurisdiction. This area is zoned in two parallel strips from west to east: B-3 on the west side of Lake Park Boulevard and RA-5A along the ocean front. Some have stated that the B-3 zoning district on the west side of Lake Park Boulevard may have had the effect of preserving the oceanfront residential area across Lake Park Boulevard.

The RA-5A along the ocean front is almost entirely in intensive condominium type development. These developments include Sea Colony, Pelican Watch, Salty Hammocks and Atlantic Towers. The three high rises in this area are approximately ten stories in height. One is oriented toward transients and is made up of efficiency units while the other two are more mixed in their market niche. Lot sizes, originally platted at 5,000 square feet, were combined to make larger parcels for the development of these high rises. The high rises have adequate parking underneath them.

There are approximately eleven beach access points in the area, with from three to six parking spaces per access. Some of the underutilized properties in the B-3 district on the west side of Lake Park Boulevard may have potential for off-street parking for day visitors. This area includes one or more old gas stations, which if "cleared" of any underground storage tank problems, could serve well for this use.

Policy Emphasis:

The policy emphasis of this plan is to allow for the retention and development of traditional single family beach cottages at a scale compatible with the original homes, modest lot sizes and narrow street rights- of-way in the area. The avoidance of single family "mini castles" packed onto small lots will also help avoid fire safety problems related to fire spreading quickly from one large structure to the next. Building heights of two to no more than three stores (total, from ground level) shall be considered appropriate in this area. Multi-family development shall not be permitted in the northern part of the South End. No additional high rise development, whether by new development or by increases in the development intensity or scale at existing locations, shall be allowed. Development of commercially zoned properties along Lake Park Boulevard should be oriented toward community and neighborhood services. Consideration should be given to rezoning that portion of the area currently zoned T-1 to a uniform RA-5A zoning designation. This may act to encourage healthy reinvestment in the area.

• *Urban Transition Neighborhood Areas*

9.4.11 Wilmington/Hanby Beach

Description of Area Character

This area is an unincorporated area just south of the current Town limits. The area generally extends from Carolina Sands Drive on the north to the limits of the Town's extra territorial jurisdiction at Alabama Avenue on the south. Despite the name given here, this area does not include the corresponding beachfront area, referred to elsewhere in this document as the South End. Due to its unique characteristics, the South End beach front will be addressed as a separate planning area.

From a land planning standpoint, the physical layout of the streets in this area are similar in form and scale to the Main Residential area of Carolina Beach. Platted lots are 5,000 square feet on a grid iron street system. Also, like the Main Residential area, this area also has good ground elevation. Therefore, most homes have been built or placed at ground level rather than elevated on stilts.

In contrast to the Main Residential area, however, the Wilmington/Hanby Beach area has been zoned RA-5T, permitting manufactured housing (mobile homes) on 5,000 square foot lots. A survey of land uses in this area revealed that perhaps 75 percent of all developed lots in the Wilmington/Hanby Beach area are occupied by manufactured homes. Most undeveloped portions of the area are heavily wooded, in maritime forest. Some areas are comprised of freshwater wetlands.

While there is no on-street parking permitted in the area, it is not enforced. A lack of convenient services nearby, combined with light vehicular traffic on area streets, would not appear to call for sidewalks in the area in the near future.

This area has been slated for annexation by the Town of Carolina Beach. Currently, development is at a standstill due to the lack of municipal water and sewer service and severe septic tank limitations. To prepare for annexation, the Town has established a capital reserve account for the purposes of providing municipal services to this area. The Town contributes to the special capital reserve account each year. However, annexation action has been tabled until service needs and infrastructure repairs within the current town limits have been addressed.

Policy Emphasis:

The Town will continue to plan ahead for the future annexation of this area. In keeping with this objective, the Town shall continue to annually set aside funds necessary to complete the installation of municipal water, sewer and other services upon annexation of the area. Over the long term, the Town may consider a rezoning of the area for an eventual transition from a predominance of manufactured housing to a predominance of traditional single family (site built) development. This should be done in a manner which does not penalize current property owners or residents, but rather allows for the transition to occur as properties are sold and redeveloped over time. As the area develops, strong measures should be taken to retain maritime forest and wetland areas.

• *Conservation Areas*

Purpose

The purpose of the Conservation class is to provide for the effective long-term management and protection of significant limited or irreplaceable areas. Management of these areas is needed due to the natural, cultural, recreational, scenic or natural productive values of both local and more than local concern.

Description of Area Character

Within the planning jurisdiction of the Town of Carolina Beach, the Conservation class includes all **estuarine system** and **ocean hazard AEC's** (Areas of Environmental Concern) as associated with the Atlantic Ocean, the intracoastal waterway, (including Snow's Cut), Myrtle Grove Sound and the various channels and marshes surrounding Carolina Beach Lake. Also included in this classification are all State and Federally controlled lands associated with Carolina Beach State Park and the Buffer Zone for the Sunny Point Military Ocean Terminal .

Policy Emphasis:

The policy emphasis of this plan for Conservation areas shall be to protect the natural integrity and functioning of these areas, as well as in providing open space and visual relief. Approved uses shall be in accordance with CAMA General Use Standards, with priority given to direct and indirect public access having a minimal impact on the natural functioning of these systems. The Town shall also maintain an on-going concern for the preservation of views and vistas to these areas, by carefully controlling development along the water's edge which would serve to block or wall off the public from these valuable scenic and recreational resources. (Also see specific policy statements for specific areas within the Conservation Classification, e.g. **8.1.4 J Carolina Beach Lake, 8.1.4 K Sunny Point Buffer Zone, 8.1.4 L Carolina Beach State Park, 8.1.4 M Snow's Cut (AIWW) Right of Way and Spoil Area** etc.)

10. Intergovernmental Coordination

10.1 Uses of the Land Use Plan

The Carolina Beach Land Use Plan, including the policy statements and the land classification map, will serve to coordinate numerous policies, standards, regulations, and other governmental activities at the local, State and Federal levels. Such coordination is achieved in three ways:

1. State and Federal government agencies are required to review local land use plans when considering any actions or activities under their jurisdiction. Their actions are to be consistent, whenever possible, with the intent of the local land use plan.

2. The policies and land classification system described in the land use plan provide a basis for planning and budgeting for the provision of public facilities and services such as water and sewer systems, roads and schools.

3. The land use plan can serve as a coordinating instrument in helping to bring together the various regulatory policies and decisions of the local government into one document.

At Carolina Beach, all three categories of coordination were employed during development of the plan, and will continue to be employed until the next plan update is prepared in approximately five years. As such, the information contained in the plan serves as a benchmark for the condition of the Town in 1996, and a baseline from which to measure change over time.

10.2 Coordination With Other Governmental Jurisdictions

The preparation of the Carolina Beach Land Use Plan and Policies has proceeded in a manner which recognizes the growth issues and planning activities of other local government jurisdictions, as well as State and Federal agencies. In preparing the plan, the policies and land classification designations of the Wilmington-New Hanover CAMA Land Use Plan for the nearby Masonboro Sound area were reviewed. In addition, The Town has been actively engaged in certain joint local government issues specifically relevant to the land use plan throughout its development. These issues have included, for example, joint meetings to address the NC DOT Transportation Improvement Program, the jet ski issue, and storm-related emergency evacuation and re-entry, among others. Consideration was also given to the joint Carolina Beach-Kure Beach Thoroughfare Plan, prepared in 1992.

State and local representatives involved in population projections, marine fisheries, water quality monitoring, and local zoning were also consulted. Federal authorities in charge of wetlands identification, channel maintenance, and flood insurance were contacted. Further, within Town government, representatives of the following local government functions were consulted and involved in plan preparation: Town Administration, Fire Protection, Police, Parks and Recreation, Planning, and Public Works.

11. Public Participation Plan and Process

11.1 Public Participation Plan

Introduction

Since its inception, North Carolina's Coastal Area Management Act Program has placed a high level of emphasis on public participation in the development of local land use plans and policies. The intent is to insure that the resulting plan and policies reflect, as closely as possible, the will of the people in the community.

Meaningful public involvement was an important element in preparing an updated land use plan for the Town of Carolina Beach. For the public involvement program to be effective, two key factors were included:

1) public education and
2) public input.

The most effective format for public involvement includes this two-way communication between citizens and local officials.

The public involvement strategy employed for the Carolina Beach Land Use Plan provided numerous opportunities for effective communication. First and foremost was the appointment of the Town Planning Board as the Steering Committee for the Plan. The Planning Board is appointed by the Town Council and represents various interests and geographic areas of the community.

The Planning Board had an active, leadership role throughout the preparation of the Land Use Plan. The Committee's role was particularly critical during the formulation of the Land Use Policies and the Land Classification Map. In this capacity, the Planning Board offered local perspectives, providing input on the accuracy of information gathered, and feedback on the policies as they developed. All Planning Board meetings were open to the public and several, jointly hosted with the Town Council, were designed specifically to garner public input in an organized, constructive fashion.

The following is a summary of program phases and key meetings for public involvement in the preparation of the Town of Carolina Beach Land Use Plan:

11.2 Public Involvement Process

1. Strategy Development and Public Participation Plan

The first priority in carrying out the public participation strategy for the Land Use Plan was to meet with key local officials to discuss and receive approval of the planning process for citizen involvement. During this phase, the planning consultant, the Town Staff, the Planning Board and the Town Council each had a constructive role in preparing, reviewing, and approving the proposed planning and public involvement strategy. Also, State concerns, suggestions, and requirements for the planning process were conveyed to the Town staff and officials during a special presentation made by a representative of the Division of Coastal Management.

2. Issue Identification by the Public (Town-Wide Meeting No. 1)

Issue identification for the Land Use Plan consisted of a major Town meeting held at Carolina Beach Elementary School. Efforts were made to schedule the meeting date so as to obtain public exposure and media attention. The meeting was jointly hosted by the Planning Board and the Town Council. Special

meeting announcements were prepared and efforts were made to distribute them within the community. Announcements were also sent to local news media.

The purpose of this meeting was to provide the public with the opportunity to make their concerns known about growth and development issues facing the Town. The intent was to accomplish this task as early as possible in the planning process, so that these concerns might be recorded and used as a foundation for the preparation of the Plan.

The specific involvement technique used to solicit public input was a modified nominal group process using index cards and display sheets. Following the identification of issues, the relative priority of each issue was identified by a simple voting process. After the meeting was completed, all issues were typed up exactly as recorded and sorted into policy categories consistent, to the extent possible, with subject areas compatible with the CAMA guidelines. The complete listing and ranking of all issues as identified at the meeting was then presented to the Planning Board for discussion and review. This written tabulation of growth issues was also made available for public information and review.

3. Discussion of Public Input and Growth Factors

Based in part on the issues identified during Phases 1 and 2 above, and in keeping with the data collection and analysis requirements of the CAMA land use planning guidelines, a growth factors analysis was conducted for discussion by the Planning Board. To complete this task, the Planning Board reviewed and discussed a variety of growth issues facing the Town. As a result of the review, additional research was conducted to address specific comments and points felt to be in need of clarification.

4. Policy Development Work Sessions with Planning Board

With the results of the initial public input in hand, and with the major findings of the Growth Factors Analysis complete, the consulting planner, working closely with the Town planning staff and Planning Board, prepared a draft set of land use policies. The format for reviewing the draft policies involved several lengthy work sessions designed to give the Planning Board the opportunity to review the Town's existing policies and to compare them to the set of proposed policies. These work sessions were beneficial in identifying draft policies most in need of modification, deletion or addition. Based on the direction received during these work sessions, the consulting planner then prepared a revised set of draft Polices for public review.

5. Public Open House on Draft Policies and Land Classification System (Town-Wide Meeting No. 2)

Once a set of draft land use policies were in place, the Planning Board co-hosted, with the Town Council, an open public meeting at the Carolina Beach Recreation Center to receive public input and comment on the work to date. To facilitate efficient and equitable input from the public, the draft policies were enlarged on poster sized sheets and arranged on the walls of the meeting room in a "walk-around questionnaire" format. The public was then invited to circulate around the room expressing their level of agreement or disagreement with each policy statement as well as being able to provide additional written comments on the sheets. Also, Planning Board members were positioned around the room at the various stations to allow for informal discussions regarding the various policies, or to clarify technical terms or issues. This meeting was well attended and quite productive.

6. Joint Meeting Between Planning Board and Town Council to Discuss Draft Policies and Public Comments Received

A joint work session on the draft policies and land classification system was held to provide the opportunity for the Planning Board and Town Council to meet in a round table discussion. The purpose of the meeting was not to formally adopt the plan, but rather to seek consensus as to the adequacy of the

policies for formal public review, and generally, for submission to the CAMA program staff. While this meeting was also open to the public, its primary intent was to allow the two boards to concentrate their time and attention on the draft policies, rather than on receiving additional public input at this time.

7. Completion of Draft Land Use Plan for Public Review

After the joint work session on the draft plan was completed, appropriate revisions to the policies were made in accordance with directives received from the two boards during the round table discussion. Also, explanatory narrative was prepared as background for each policy section of the plan, and incorporated into a complete draft of plan, combining all sections prepared to date. Also included in this draft was the Implementation Actions section. Unlike the Town's previous land use plans, however, this plan section was prepared as a separate element, allowing this section to be updated on an annual basis without altering the balance of the plan. A formal public meeting (courtesy hearing) was then scheduled by the Town Council to accept public comment on the full plan.

8. Public Comment Meeting /Follow-up Review Session (Town-Wide Meeting No. 3)

A formal public meeting (courtesy hearing) was then scheduled by the Town Council for December 10, 1996 to accept public comment on the full plan. Notification for the meeting included an announcement printed in the newspaper of general circulation as well as regular notification through the public meetings notification process. All comments received at the meeting, whether favorable, neutral or negative, were noted for the record and for further action as appropriate. Once public comments were accepted and recorded, the Town Council provided direction as to those changes that would be appropriate before sending the draft plan on to the State for review. Plan revisions were then completed in accordance with directives received.

9. State Review and Comment/ Prepare Revisions As Appropriate

Following additional revisions to the plan in accordance with directives received from the Planning Board and Town Council, the plan was sent to the State CAMA program staff for review and comment in mid-December, 1996. Comments were received from the State in mid-February, 1997. The consulting planner then prepared suggested revisions to the Plan for review by the Planning Board. The Planning Board approved the changes at a meeting held on February 27, 1997.

The Town Council of Carolina Beach, at a special meeting on March 24, 1997, then reviewed and approved the revisions as authorized by the Planning Board, and suggested additional changes. The Town Council then met on April 8, 1997, approved the changes as made, and set a date for a formal public hearing on the land use plan, as required, no less than 30 days hence. The public hearing was set for May 13, 1997.

10. Town Council Adoption of Plan (Town-Wide Meeting No. 4/Public Hearing)

The Town Council held a formal public hearing on May 13, 1997 to present the plan for a final time for public review and comment. Notice of the meeting was in accordance with requirements for public hearings for the local adoption of CAMA Land Use Plans, as well as the Town's normal protocol. Hearing no comments from the public requiring changes to the plan, the Town Council then formally adopted the plan as submitted for the public hearing. The plan was then submitted to the Coastal Resources Commission for certification by that body.

11. Coastal Resources Commission Certification

The officially adopted Town of Carolina Beach Land Use Plan was submitted to the North Carolina Coastal Resources Commission for certification by that body at their regular meeting on May 29, 1997.

11.3 Summary of Meetings Held During Planning Process

The following phases and meetings correspond to the phases of the public involvement process described above.

1. Strategy Development/ Public Participation Plan

1/4/96	Planning Board	Town Hall	Discuss CAMA land use planning
1/16/96	Planning Board	Town Hall	Discuss upcoming Town Meeting

2. Issue Identification by the Public (Town-Wide Meeting No. 1)

1/17/96	Plng Brd /Twn Council	C.B. Elem School	Town Meeting to identify issues

3. Discussion of Public Input and Growth Factors

2/22/96	Planning Board	Town Hall	Review of Citizen Input Overview of Plan
2/26/96	Town Staff	Town Hall	Monitoring/Progress meeting with State representative
3/27/96	Planning Board	Town Hall	Review of Growth Factors Analysis Discuss Land Classification

4. Policy Development Work Sessions with Planning Board

6/7/96	Town Staff	Town Hall	Monitoring/Progress meeting with State representative
7/24/96	Planning Board	Town Hall	Review Draft Policies Review Neighborhoods
7/31/96	Planning Board	Town Hall	Review Draft Policies Review Neighborhoods
8/14/96	Planning Board	Town Hall	Review Draft Policies Review Neighborhoods

5. Public Open House on Draft Policies and Land Classification System (Town-Wide Meeting No. 2)

8/21/96	Plng Brd/Twn Council	C.B. Rec. Center	Town Meeting to Review Policies

6. Joint Meeting Between Planning Board and Town Council to Discuss Draft Policies and Public Comments Received

10/24/96	Plng Brd/Twn Council	Town Hall	Joint Meeting to Review Draft Policies and Public Input on Policies

7. Completion of Draft Land Use Plan for Public Review

No public meetings; writing and editing completed during this time.

8. Public Comment Meeting /Follow-up Review Session (Town-Wide Meeting No. 3)

12/10/96	Town Council	Town Hall	Public courtesy hearing to receive public input on the completed draft plan; submit preliminary plan to State for comment

9. Review of State Comments Received and Revisions Made

2/27/97	Planning Board	Town Hall	Review comments and revisions to the plan; approve changes; forward to Town Council
3/24/97	Town Council	Town Hall	Review comments and revisions to Plan; suggest changes

10. Public Hearing (Town-Wide Meeting No. 4/ Town Council Adoption of Plan)

4/8/97	Town Council	Town Hall	Approve completed changes; set date for formal public hearing
5/13/97	Town Council	Town Hall	Public hearing by the Town Council to receive public comments. Adopted the land use plan.

11. Coastal Resources Commission Certification

5/29/97	Coastal Resources Commission	Regular meeting to certify the Plan

12. Appendices

12.1 Evaluation of Effectiveness of Previous Land Use Plan

While the previous land use plan contained much detailed information about existing conditions in the Town , its effectiveness as an instrument of local government policy was limited. Three specific shortcomings of that plan, and measures taken in this land use plan update to correct those deficiencies are outlined as follows:

Plan Deficiency:
• **The policy section of the Town's previous land use plan had few discrete policy statements.** Rather, this section consisted of a running narrative within which the reader may or may not have found statements which reflect the Town's official position on a given issue

Corrective action taken for this plan update:
For each policy area, a discrete policy statement consisting of no more than one or two sentences has been developed to clearly state the Town's position on that issue. Further, each policy statement has been assigned a unique policy reference number so that specific policies can be easily referenced in evaluating development proposals, rezoning petitions, etc. brought before the Planning Board and the Town Council.

Plan Deficiency:
• **The Town's previous land use plan had implementation actions scattered throughout the document.** Implementation actions are a fundamental requirement of the Coastal Area Management Act (CAMA) guidelines for land use plans. Implementation actions provide the Town with an agreed upon strategy for carrying out the Policies. As such, it is important that the Plan's implementation actions be organized in such a way so as to assess the Town's effectiveness in carrying out implementation actions.

Corrective action taken for this plan update:
A new section of the land use plan has been created which brings together in one place all suggested implementation actions designed to carry out the policies. Rather than scattering these actions throughout the text of the Policies, this section provides an appropriate means of clearly organizing all potential actions for convenient review and use. A further benefit of this approach is that the action section may be updated on a regular basis (e.g. annually in conjunction with the Town's budget process) without changing the policy portion of the plan. If the document is maintained in a three ring binder for frequent users of the plan, the previous year's action agenda may be simply removed and a new section inserted. This approach should make monitoring of the plan's implementation easier as well.

Plan Deficiency:
• **The format of the previous land use plan's land classification system offered limited policy guidance.** The Land Classification Map prepared for the last land use plan was quite general. Essentially, it conformed to the general land classes of the CAMA guidelines. As such, it is best suited to a County-wide setting, where broader policy considerations may be involved.

Corrective action taken for this plan update:
For the 1996 land use plan, the Land Classification Map has been restructured to differentiate between the various unique neighborhoods in the Town that have similar design, function, age, and/or character. Policy positions were then formulated and included in the Land Use Plan to help the Town maintain the distinguishable neighborhood qualities unique to each of these neighborhood areas. These policy positions, in turn, provide consistent guidance to Town Officials in applying the rules of the Town's zoning ordinance to specific developments.

12.2 Sources and Locations of Additional Information

To find out more about various aspects of land use and development at Carolina Beach, the interested citizen is invited to visit the Town offices where a variety of studies, plans, maps, aerial photographs and booklets are maintained on file.

12.3 Action Agenda For the Carolina Beach Land Use Plan

Introduction to the Action Agenda

The Action Agenda of the Carolina Beach Land Use Plan is provided to identify specific implementation actions in furtherance of the Town's development policies. (For a complete listing of the full policy statements associated with each issue, see **Section 1 Executive Summary** or **Section 8 Policies**) These actions are normally intended to be accomplished within the five year planning period between adoption of this plan and the next land use plan update (scheduled for 2001).

Implementation actions are designed to suggest possible courses of action available to the Town to carry out the Policies. In some instances, a single implementation action may be listed in support of more than one policy. In other instances, where the Town is already implementing a policy , an on-going program of implementation may be mentioned. In still others, a particular policy may not warrant or require a specific implementation action to be effective.

The suggested actions are not all-inclusive nor are they binding; additional actions may be added and others removed as conditions change. In fact, it is suggested that this summary of policies and implementation actions be reviewed on an annual basis during development of the Town's work program and budget approval process. In this manner, the effectiveness of the policies and implementation actions can be better evaluated. Further, by making this Action Agenda a separate section of the plan (as opposed to scattering the implementation actions throughout the text of the plan), these actions can be updated and re-inserted into the document on a regular basis.

Policy Area	Implementation Action(s)
OVERALL COMMUNITY VISION	
Policy 8.0 General Vision Policy for Next Ten Years	**Action 8.0** The Town staff, Planning Board, and Town Council shall employ the policies contained in this land use plan on a routine basis in evaluating building proposals and other matters concerning growth and development.
RESOURCE PROTECTION POLICIES	
Policy 8.1.0 Basic Policy Statement Regarding Resource Protection	See specific Implementation Actions listed below as they pertain to specific policy issues.

Policy 8.1.1 Constraints Caused By Soil Limitations and Flood Prone Areas

Action 8.1.1 (1) The Town shall study the issue of impervious surfaces related to new construction and redevelopment with an eye toward minimizing paved surfaces which would increase runoff onto adjacent properties or into estuarine waters.

Action 8.1.1 (2) Recognizing the critical role of the National Flood insurance Program in protecting private property and lives at Carolina Beach, the Town shall continue to strictly enforce ordinance provisions which bring structures into compliance with the Town's flood plain protection standards.

Policy 8.1.2 Areas Of Environmental Concern

Action 8.1.2 The Town shall continue to administer the CAMA Minor Permit Program in accordance with CAMA standards for Areas of Environmental Concern.

Policy 8.1.2 A Coastal Wetlands

Policy 8.1.2 B Estuarine Waters

Policy 8.1.2 C Public Trust Areas

Action 8.1.2 C (1) The Town shall develop a *water use and harbor management plan* to address the competing interests for use of public trust waters at Carolina Beach.

Action 8.1.2 C (2) The Town shall continue to participate on the special local government committee appointed to address the management and proper regulation of jet skis and similar personal watercraft.

Action 8.1.2 C (3) The Town shall continue to enforce the building limitations of the Town pierhead line.

Policy 8.1.2 D Estuarine Shorelines

Policy 8.1.2 E Ocean Hazard Areas

Policy 8.1.4 A Freshwater Wetlands

Policy 8.1.4 B Maritime Forests, Tree Cover, and Landscaping	**Action 8.1.4 B (1)** The Town shall work with the New Hanover County Agricultural Extension Service and utility companies to reduce tree trimming damage. **Action 8.1.4 B (2)** The Town shall investigate participation in the Tree City USA program. **Action 8.1.4 B (3)** The Town shall continue to enforce and improve upon the Town Landscape Ordinance, adopted in 1992.
Policy 8.1.4 C Outstanding Resource Water Areas	
Policy 8.1.4 D Shellfishing Waters	
Policy 8.1.4 E Water Supply Areas and Other Waters with Special Values	**Action 8.1.4 E** The Town shall undertake an organized program to evaluate, plan and implement on-going improvements and repairs to the Town's water supply system, while also exploring alternative sources of water.
Policy 8.1.4 F Cultural and Historic Resources	**Action 8.1.4 F** The Town shall continue to support the work of the Federal Point Historic Preservation Society in its efforts to preserve historic structures and sites south of Snow's Cut.
8.1.4 G Man-Made Hazards	
8.1.4 H Myrtle Grove Sound and Cape Fear River	**Action 8.1.4 H** The Town shall study the issue of impervious surfaces related to new construction and redevelopment with an eye toward minimizing paved surfaces which would increase runoff onto adjacent properties or into estuarine waters.
Policy 8.1.4 I North End Natural Area	**Action 8.1.4 I** The Town shall continue to support restrictions on vehicular traffic to the ocean side of the dune line in the North End Natural Area.

Policy 8.1.4 J Carolina Beach Lake

Action 8.1.4 J The Town shall continue to support the activities of the Coastal Land Trust in seeking tax deductible donations of property adjacent to the lake for permanently dedicated public open space.

Policy 8.1.4 K Sunny Point Buffer Zone

Action 8.1.4 K (1) The Town shall continue to work cooperatively with the U.S. Department of the Army to limit land use activities within the Sunny Point Military Ocean Terminal Buffer Area.

Action 8.1.4 K (2) The Town shall work cooperatively with the U.S. Department of the Army and the Town of Kure Beach to prohibit the use of off-road vehicles and illegal dumping within the Sunny Point Military Ocean Terminal Buffer Area.

Policy 8.1.4 L Carolina Beach State Park

Action 8.1.4 L The Town shall work cooperatively with the State of North Carolina in the long term management and use of Carolina Beach State Park.

Policy 8.1.4 M Snow's Cut (AIWW) Right of Way and Spoil Area

Action 8.1.4 M The Town shall continue to work cooperatively with the U.S. Army Corps of Engineers regarding the long term management and use of the Snow's Cut spoil deposition easement of the Atlantic Intracoastal Waterway (AIWW).

Policy 8.1.5 Protection Of Potable Water Supply

Action 8.1.5 The Town shall undertake an organized program to evaluate, plan and implement on-going improvements and repairs to the Town's water supply system, while also exploring alternative sources of water.

Policy 8.1.6 Package Sewage Treatment Plants

Policy 8.1.7 Storm Water Runoff

Action 8.1.7 The Town shall continue to implement its development review program: "Permit for Removal of Vegetation, Increased Impervious Area, or Placement of Fill Soil or Other Materials", employing the 10-year storm as the standard for on-site retention of stormwater runoff.

Policy 8.1.8 A Marinas

Action 8.1.8 A As part of its *water use and harbor management plan* (See Action 8.1.2 c (1)), the Town shall address the location, size, and operation of wet slip marinas.

Policy 8.1.8 B Floating Home Development

Action 8.1.8 B As part of its *water use and harbor management plan* (See Action 8.1.2 c (1)), and through its general zoning powers, the Town shall enforce policies which prohibit floating homes from occupying limited public trust water areas.

Policy 8.1.8 C Moorings and Mooring Fields

Action 8.1.8 C As part of its *water use and harbor management plan* (See Action 8.1.2 c (1)), the Town shall address the location and design of moorings and mooring fields.

Policy 8.1.8 D Dry Stack Storage

Action 8.1.8 D As part of its *water use and harbor management plan* (See Action 8.1.2 c (1)), and through its general zoning powers, the Town shall enforce policies which prohibit additional dry stack storage facilities.

Policy 8.1.8 E Commercial Fishing Dockage

Action 8.1.8 E As part of its *water use and harbor management plan* the Town shall address the location and operation of commercial fishing dockage.

Policy 8.1.9 Industrial Impacts On Fragile Areas

Policy 8.1.10 Development Of Sound and Estuarine System Islands

Policy 8.1.11 Development Within Areas That Might Be Susceptible To Sea Level Rise

Policy 8.1.12 Upland Excavation For Marina Basins

Policy 8.1.13 Marsh Damage From Bulkhead Installation

Policy 8.1.14 Water Quality Problems and Management Measures

Action 8.1.14 The Town shall continue to enforce existing stormwater retention standards in its reviews of new developments. (See Action 8.1.7)

RESOURCE PRODUCTION AND MANAGEMENT POLICIES

Policy 8.2.0 Basic Policy Statement Regarding Resource Production and Management

Action 8.2.0 The Town shall request a meeting with state water quality monitoring officials to receive an update on (1) water quality conditions in waters surrounding Carolina Beach, (2) monitoring programs,. and to identify significant water quality issues.

Policy 8.2.1 Productive Agricultural Lands

Policy 8.2.2 Commercial Forest Lands

Policy 8.2.3 Mineral Production Areas—Existing and Potential

Policy 8.2.4 Fisheries Resources (Commercial and Recreational)

Action 8.2.4 The Town shall, through proclamation and public awareness, assist in promoting the annual Big Sweep clean-up.

Policy 8.2.5 Off Road Vehicles

Action 8.2.5 Actions to enforce the use or prohibition of off-road vehicles in the Sunny Point Military Terminal Buffer Area, the north end of Carolina Beach, and the beach strand, generally, shall continue to be supported.

Policy 8.2.6 Development Impacts

Action 8.2.6 The Town shall conduct a review of its development standards to identify and prevent potential adverse impacts on natural and scenic resources at Carolina Beach.

ECONOMIC AND COMMUNITY DEVELOPMENT POLICIES

Policy 8.3.0 Basic Policy Statement Regarding Economic & Community Growth & Development

Policy 8.3.0 A Growth of Town's Jurisdiction

Action 8.3.0 A The Town shall continue to budget for the eventual extension of municipal services to the Wilmington and Hanby Beach Areas.

Policy 8.3.0 B Building Height	**Action 8.3.0 B** The Town shall undertake ordinance revisions to clarify building height measurements and standards as desired in various zoning districts within the community.
Policy 8.3.1 Industries Desired and Local Assets Desirable to Such Industries	
Policy 8.3.2 Provision of Services to Development, Generally	**Action 8.3.2 (1)** The Town shall review and update fees associated with water and sewer extensions and hook-ups.
	Action 8.3.2 (2) The Town shall approve of new developments only in conjunction with an understanding of adequate facilities to serve that new development.
Policy 8.3.2 A Potable Water Supply	**Action 8.3.2 A** The Town shall continue to repair, upgrade and enhance the existing water supply system, and shall explore alternatives for supplementing the existing system.
Policy 8.3.2 B Wastewater Treatment and Disposal	**Action 8.3.2 B** Planned expansions of the Town's sewage treatment plant and repairs to older sewage collection lines shall continue to be a top priority action item for the next five years.
Policy 8.3.2 C Solid Waste Disposal	**Action 8.3.2 C** The Town shall explore the feasibility of increasing its recycling capabilities for residential and commercial customers.
Policy 8.3.3 Urban Growth Pattern Desired	**Action 8.3.3** The Town shall implement those plans, including the Boardwalk Area Redevelopment Plan, and the Town Bikeway Plan, which seek to reinforce the pedestrian scaled, family-oriented community.

Policy 8.3.4 Types of Residential Development Desired

Action 8.3.4 (1) The Town shall not approve of developments which would create a disproportionate share of multi-family housing units at Carolina Beach relative to the rate of on-going additions of single family units.

Action 8.3.4 (2) The Town shall explore the feasibility of amending the zoning ordinance to reduce allowable development densities in the community, including particularly, the RA-6A and RA-5A districts.

Policy 8.3.5 Types of Commercial Development Desired

Action 8.3.5 The Town shall amend the zoning ordinance and signage standards to encourage tasteful entryway corridor development along north Lake Park Blvd. and appropriate pedestrian-scaled development in the central business district, boardwalk and marina area.

Policy 8.3.6 Redevelopment, Including Relocation of Threatened Structures

Action 8.3.6 The Town shall continue to enforce provisions of the State minimum housing code to require owners of delinquent structures to make appropriate repairs.

Policy 8.3.7 Commitment to State and Federal Programs

Policy 8.3.8 A Assistance to Channel Maintenance, Including Interstate Waterways

Action 8.3.8 A The Town shall continue to work cooperatively with the U.S. Army Corps of Engineers regarding the long term management and use of the Snow's Cut spoil deposition easement of the Atlantic Intracoastal Waterway (AIWW).

Policy 8.3.8 B Beach Maintenance

Action 8.3.8 B (1) The Town shall, as part of its capital improvement planning process, budget appropriate funds necessary to support on-going beach renourishment at Carolina Beach

Action 8.3.8 B (2) The Town shall support the on-going use of room tax revenues with priority for beach renourishment.

Policy 8.3.9 Energy Facility Siting and Development

Policy 8.3.10 Tourism

Action 8.3.10 The Town shall continue to work in partnership with the local Chamber of Commerce to promote quality tourism at Carolina Beach.

Policy 8.3.11 Public Beach and Waterfront Access

Action 8.3.11 (1) The Town shall continue to seek State and Federal funding to provide for enhanced beach and sound-side water accessways to the general public.

Action 8.3.11 (2) The Town shall review its development regulations to discourage development forms which would act to wall off views and access to the water.

Policy 8.3.12 Parks and Recreation

Policy 8.3.13 Boardwalk Area

Action 8.3.13 The Town shall encourage and assist boardwalk area property owners and merchants in the cost effective and attractive redevelopment of the traditional boardwalk area of Carolina Beach.

Policy 8.3.14 Marina/Boat Basin

Action 8.3.14 The Town shall explore the feasibility of establishing a Town Council appointed marina authority over the operation and management of the marina/boat basin.

Policy 8.3.15 State Port Facilities

Policy 8.3.16 A Highway Improvements

Action 8.3.16 A The Town shall continue to work with the NCDOT on a program to encourage the passage of through traffic around Carolina Beach and the enhanced movement of non-motorized traffic within Carolina Beach.

Policy 8.3.16 B Street System Planning

Action 8.3.16 B The Town shall revisit the street system plan prepared in 1995, with the objective of seeking to implement those portions upon which consensus can be developed.

Policy 8.3.16 C Bikeways

Action 8.3.16 C The Town shall continue to work with the NCDOT on a program to achieve the development of a system of bikeways at Carolina Beach.

Policy 8.3.16 D Parking

Action 8.3.16 D The Town shall undertake a study to evaluate the desirability of establishing a "parking schedule" which matches parking demand by time of year, day of week and time of day.

Policy 8.3.16 E Dow Road Intersection

Action 8.3.16 E The Town shall continue to work with the NCDOT on expediting improvements to traffic flow at the Dow Road intersection.

Policy 8.3.17 A Scenic Vistas and Views

Action 8.3.17 A The Town shall review its development regulations to discourage development forms which would act to wall off views of the water.

Policy 8.3.17 B Neighborhood Character and Preservation

Action 8.3.17 B The Town will undertake a program of neighborhood planning to encourage the preservation of neighborhoods of unique character.

Policy 8.3.17 C Historic Preservation

Action 8.3.17 C The Town shall continue to support the efforts of the Federal Point Historic Preservation Society in its efforts to preserve historic structures and sites south of Snow's Cut.

CONTINUING PUBLIC PARTICIPATION POLICIES

Policy 8.4.0 Basic Policy Statement Regarding Continuing Public Participation

Policy 8.4.1 Land Use Plan Update Process

Policy 8.4.2 On-going Public Participation

Policy 8.4.3 Neighborhood Planning

Action 8.4.3 The Town will undertake a program of neighborhood planning to encourage the preservation of neighborhoods of unique character.

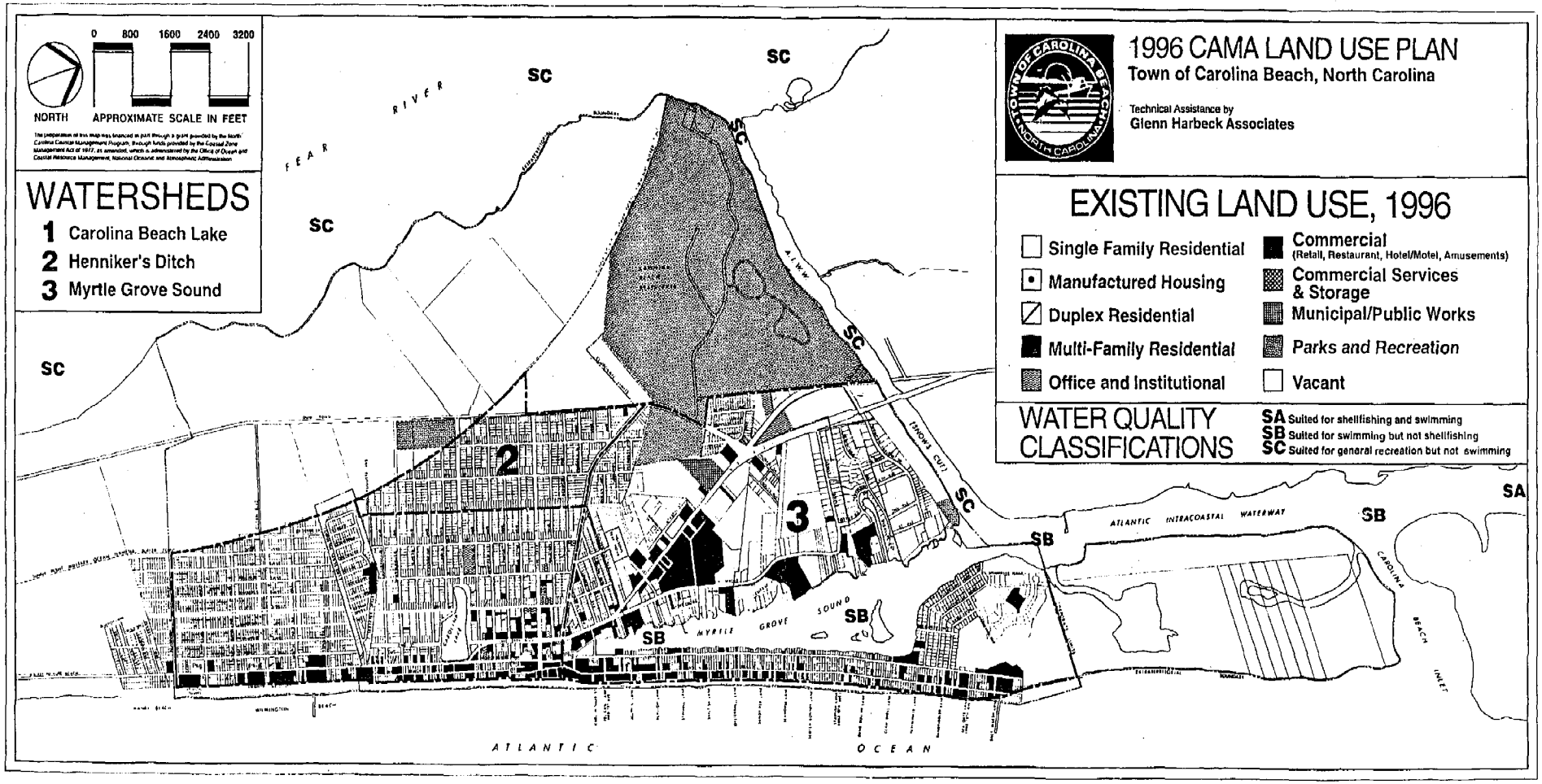
STORM HAZARD MITIGATION/POST-DISASTER RECOVERY, AND EVACUATION POLICIES AND PLANS

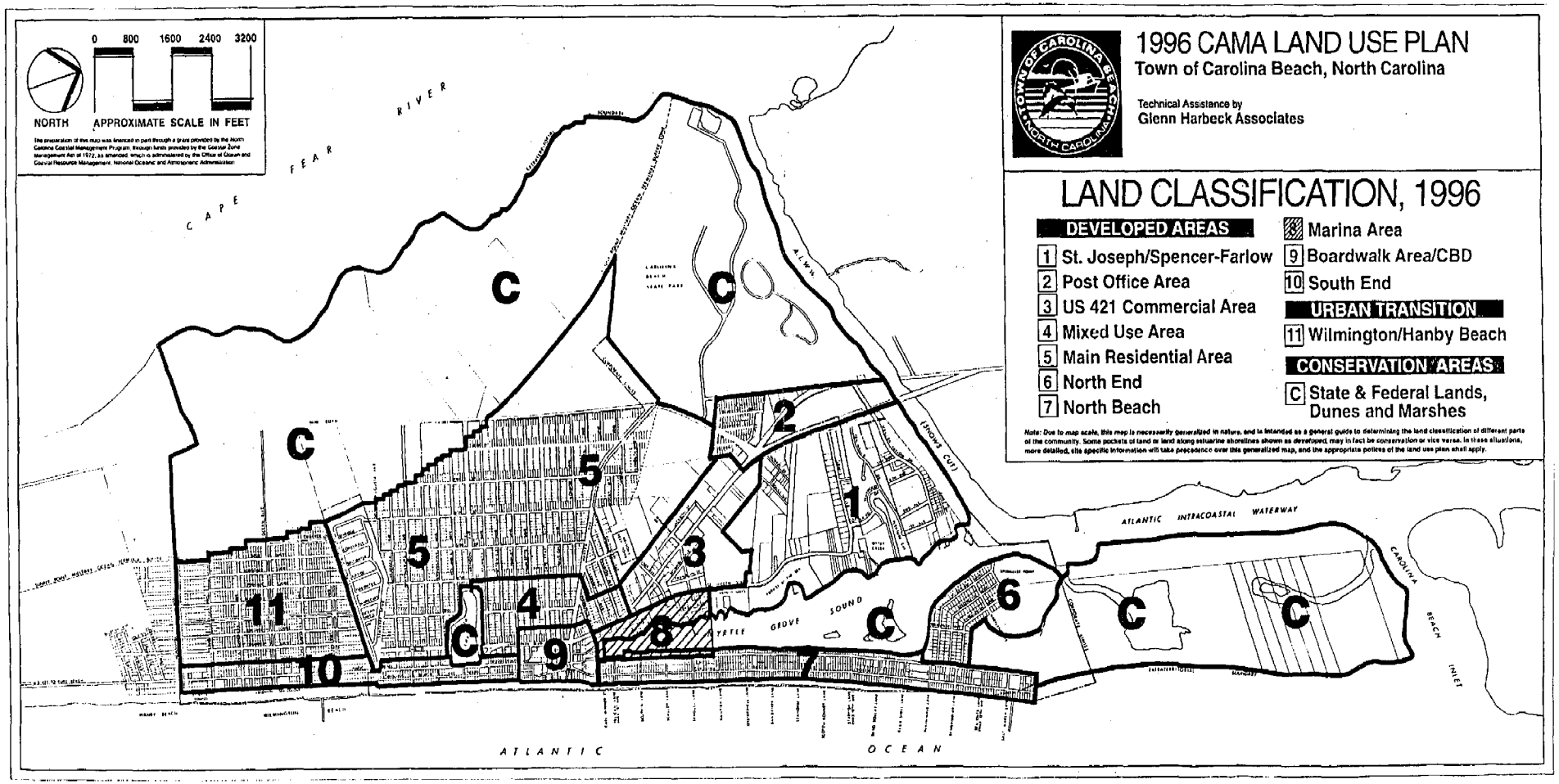
Policy 8.5.0 Basic Policy Statement Regarding Storm Hazard Mitigation/Post-Disaster Recovery, and Evacuation Policies and Plans

Action 8.5.0 The Town shall continue to evaluate lessons learned from hurricanes Bertha and Fran, as well as other storms, to determine refinements in emergency management plans and procedures.

Storm Hazard Mitigation Policies

Policy 8.5.1 A Storm Effect Mitigation	**Action 8.5.1 A** Recognizing the critical role of the National Flood insurance Program in protecting private property and lives at Carolina Beach, the Town shall continue to strictly enforce ordinance provisions which bring structures into compliance with the Town's flood plain protection standards.
Policy 8.5.1 B. Discouragement of Hazardous Development	(See Implementation Action 8.5.1 A above)
Policy 8.5.1 C. Public Land Acquisition	
Policy 8.5.1 D. Evacuation	(See Implementation Action 8.5.0 above)
Post Disaster Reconstruction Policies	
Policy 8.5.2 A. Emergency Management Plan	(See Implementation Action 8.5.0 above)
Policy 8.5.2 B. Local Reconstruction Policies	(See Implementation Action 8.5.0 above)
Policy 8.5.2 C. Recovery Task Force	(See Implementation Action 8.5.0 above)
Policy 8.5.2 D. Staging Schedule for Reconstruction and Repair	**Action 8.5.2 D.** The Town shall work with New Hanover County in establishing a mutual assistance program with several other communities in North Carolina for building inspection operations.
Policy 8.5.2 E. Public Infrastructure Repairs and Replacement	**Action 8.5.2 E.** The Town shall continue to inventory all damage to capital items after hurricanes Bertha and Fran and include needed repairs and replacement in a capital improvement plan.


1996 CAMA LAND USE PLAN
Town of Carolina Beach, North Carolina
Technical Assistance by
Glenn Harbeck Associates
EXISTING LAND USE, 1996
Single Family Residential
Manufactured Housing
Duplex Residential
Multi-Family Residential
Office and Institutional
Commercial
(Retail, Restaurant, Hotel/Motel, Amusements)
Commercial Services & Storage
Municipal/Public Works
Parks and Recreation
Vacant
WATER QUALITY CLASSIFICATIONS
SA Suited for shellfishing and swimming
SB Suited for swimming but not shellfishing
SC Suited for general recreation but not swimming
WATERSHEDS
1 Carolina Beach Lake
2 Henniker's Ditch
3 Myrtle Grove Sound
NORTH
0 800 1600 2400 3200
APPROXIMATE SCALE IN FEET
FEAR RIVER
SC
SB
SA
A.I.W.W.
(SNOWS CUT)
ATLANTIC INTRACOASTAL WATERWAY
MYRTLE GROVE SOUND
CAROLINA BEACH INLET
ATLANTIC OCEAN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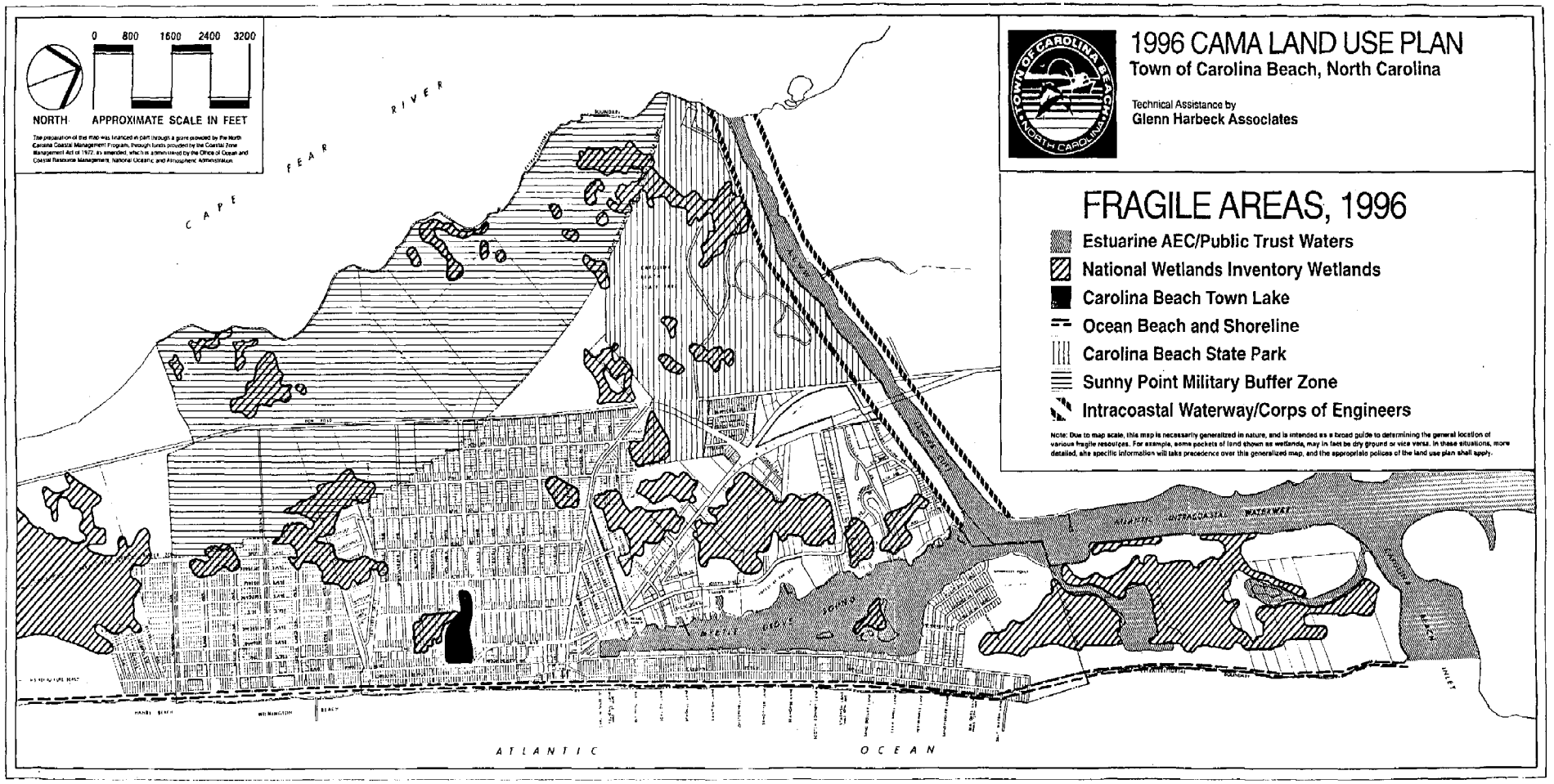
NORTH
APPROXIMATE SCALE IN FEET
The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.
1996 CAMA LAND USE PLAN
Town of Carolina Beach, North Carolina
Technical Assistance by
Glenn Harbeck Associates
LAND CLASSIFICATION, 1996
DEVELOPED AREAS
1 St. Joseph/Spencer-Farlow
2 Post Office Area
3 US 421 Commercial Area
4 Mixed Use Area
5 Main Residential Area
6 North End
7 North Beach
8 Marina Area
9 Boardwalk Area/CBD
10 South End
URBAN TRANSITION
11 Wilmington/Hanby Beach
CONSERVATION AREAS
C State & Federal Lands, Dunes and Marshes
Note: Due to map scale, this map is necessarily generalized in nature, and is intended as a general guide to determining the land classification of different parts of the community. Some pockets of land or land along estuarine shorelines shown as developed, may in fact be conservation or vice versa. In these situations, more detailed, site specific information will take precedence over this generalized map, and the appropriate policies of the land use plan shall apply.
CAPE FEAR RIVER
ATLANTIC INTRACOASTAL WATERWAY
TYRTLE GROVE SOUND
CAROLINA BEACH INLET
ATLANTIC OCEAN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NORTH
APPROXIMATE SCALE IN FEET
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CAPE FEAR RIVER
1996 CAMA LAND USE PLAN
Town of Carolina Beach, North Carolina
Technical Assistance by
Glenn Harbeck Associates
FRAGILE AREAS, 1996
Estuarine AEC/Public Trust Waters
National Wetlands Inventory Wetlands
Carolina Beach Town Lake
Ocean Beach and Shoreline
Carolina Beach State Park
Sunny Point Military Buffer Zone
Intracoastal Waterway/Corps of Engineers
Note: Due to map scale, this map is necessarily generalized in nature, and is intended as a broad guide to determining the general location of various fragile resources. For example, some pockets of land shown as wetlands, may in fact be dry ground or vice versa. In these situations, more detailed, site specific information will take precedence over this generalized map, and the appropriate policies of the land use plan shall apply.
INTRACOASTAL WATERWAY
ATLANTIC OCEAN

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