
TOWN OF INDIAN BEACH

CAMA CORE LAND USE PLAN

EXECUTIVE SUMMARY



Adopted by the Indian Beach Board of Commissioners: September 12, 2007
Certified by the Coastal Resources Commission: _____

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EXECUTIVE SUMMARY

1. PREFACE

This plan is intended to fulfill the Coastal Area Management Act (CAMA) requirements for the preparation of a Core CAMA Land Use Plan. This plan is organized to adhere to the 15A NCAC 7B requirements. This is a Core Land Use Plan which is defined as follows:

Core Plan: This plan addresses all of the plan elements in Rule .0702 of Section 7B (Elements of CAMA Core and Advanced Core Land Use Plans) in a complete and thorough manner. These are summarized as follows: (1) Organization of the Plan, (2) Community Concerns and Aspirations, (3) Analysis of Existing and Emerging Conditions with the jurisdiction, and (4) Plan for the Future. This type of plan is the standard CAMA Land Use Plan required for all 20 coastal counties.

In addition to the CAMA requirements, there are other reasons to plan. Indian Beach has a great deal of influence on the way in which the town develops. The buildings, facilities, and improvements provided by Indian Beach affect the daily lives of its citizens, give form to the town, and stimulate or retard the development of privately-owned land. In addition, the workings of the real estate market help determine the uses of private land, but these uses are regulated by Indian Beach. The town has an opportunity to coordinate the overall pattern of physical development.

Indian Beach is inescapably involved in questions of physical development. At almost every meeting of the Board of Commissioners, development decisions must be made concerning rezoning, street improvements, sites for public buildings, and so on. Indian Beach — and particularly the legislative body made up of lay citizens — needs some technical guidance in making these physical development decisions. Indian Beach needs an instrument that establishes long-range, general policies for the physical development of the community in a coordinated, unified manner, and which can be continually referred to in deciding upon the development issues that come up every week. The comprehensive plan is such an instrument.

Once this plan is adopted, the town must realize that the plan is not the end of the process. Indian Beach must continuously work at accomplishing plan implementation and establishing an effective planning program. The town must view the preparation of this document as the first step in a continually evolving process.

2. INTRODUCTION

This Fiscal Year 2004/2005 - 2005/2006 Core CAMA Land Use Plan is prepared in accordance with the requirements of the North Carolina Coastal Area Management Act (CAMA). Specifically, this document complies with Subchapter 7B, "CAMA Land Use Planning Requirements," of the North Carolina Administrative Code, as amended, August 1, 2002.

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

In general, 7B requires that a plan include analysis of existing and emerging conditions, a plan for the future including specific land use/development goals/policies, and tools for managing development. The management tools must specify the actions which the Town of Indian Beach will take to ensure implementation of this plan. Please refer to Section 10. Policies and Implementing Actions. This section specifically states actions which will be taken by the Town of Indian Beach Board of Commissioners to accomplish implementation of this plan.

At the beginning of the preparation of this document, the Town of Indian Beach adopted a Citizen Participation Plan which is intended to ensure that all interested citizens have an opportunity to participate in the development of this plan through both oral and written comments.

Following adoption of the plan by the Indian Beach Board of Commissioners, it was submitted to the CRC for certification. Certification of the plan was achieved on _____, 2007.

3. INDIAN BEACH COMMUNITY VISION

The Town of Indian Beach will maintain its resort residential character in an effort to continue serving as a desirable tourist destination for individuals throughout North Carolina. This focus will provide residences and businesses with improved public services. Significant efforts will be made to preserve the natural environment in and around Indian Beach through ongoing beach renourishment efforts and municipal stormwater runoff controls. The town recognizes the significant impact that seasonal tourism has on Indian Beach, as well as the region, and will work with other communities along Bogue Banks to ensure that a coordinated effort is made to establish a stable future for both the economy and natural environment. Indian Beach views itself as a safe, clean, and friendly community and will maintain this

image through provision of quality public services and logical development controls, that will balance economic development with environmental protection.

4. KEY ISSUES/DOMINANT GROWTH-RELATED ISSUES

In compliance with the 15A NCAC 7B requirements and the town's Citizen Participation Plan, Indian Beach conducted a town-wide meeting on October 13, 2004. This meeting was held to solicit input from town residents, as well as the Land Use Plan Committee, regarding key issues and concerns in the community. The meeting was advertised twice in the Carteret County News-Times, and flyers were distributed and placed in key locations throughout town. The input received at this meeting will serve as a tool for guiding the development of policy statement and implementing actions discussed later in this document. The following list of key issues is a direct result of the input received at the October 13th meeting. Additionally, a separate survey was sent to a sampling of absentee property owners.

RANK	ISSUE	SCORE
1	Traffic on 58	9*
2	Oppose 3 rd bridge in Indian Beach	9*
3	Maintain quality EMS service	8
4	Solution to beach erosion	6
5	Storm water runoff	5*
6	Improve public estuarine access	5*
7	Need central sewer service	3*
8	Beach vehicular traffic	3*
9	Address upland marinas	1
10	Improve inter-governmental cooperation	0

*Indicates a tie score.

5. POPULATION SUMMARY

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

Table 1: Town of Indian Beach and Carteret County
Population Growth by Municipality and County

Municipality	1970	1980	1990	2000	'70-'80	'80-'90	'90-'00	Overall '70-'00
Indian Beach	0	154	153	95	154.0%	-0.6%	-37.9%	95.0%
Carteret County	31,603	41,192	52,553	59,379	103.6%	27.6%	13.0%	193.5%

Source: US Census Bureau.

Table 2: Town of Indian Beach
Seasonal Population, 2000

Housing Type	Number of Units	Persons Per Unit	Seasonal Population
Public Access Parking Spaces	138	4.00	552
Private Seasonal Housing Units	1,199	5.00	5,995
Total			6,547
Permanent Population	95		
Peak Seasonal Population	6,547		
Total Peak Population	6,642		

Source: Holland Consulting Planners, Inc.

Table 3: Town of Indian Beach
Population Projections, 2000-2025

Population	2000	2010	2015	2020	2025	% Change
Permanent Population	95	119	131	145	159	67.4%
Peak Seasonal Population	6,547	7,555	7,782	8,015	8,255	26.0%
Total Peak Population	6,642	7,674	7,913	8,160	8,414	26.7%

Source: US Census Bureau, NC Office of State Planning, and Holland Consulting Planners, Inc.

The following provides a summary of the significant demographic factors:

- ❖ The year 2000 population for Indian Beach according to the US Census Bureau was 95.
- ❖ The peak seasonal population for Indian Beach was 6,547.
- ❖ Approximately ninety-six percent (95.8%) of the Indian Beach population is Caucasian.
- ❖ Approximately thirty-six percent (35.8%) of the town's population is age 65 or older.
- ❖ Over ninety percent (91.5%) of Indian Beach's citizens have a high school diploma.

6. HOUSING SUMMARY

- ❖ Approximately ninety-nine percent (99.3%) of all residential structures within Indian Beach are considered to be for seasonal, recreational, or occasional use.
- ❖ A majority of the residential structures within Indian Beach (66.1%) were constructed between the years 1980 and 1989.
- ❖ There are no residences within the town lacking adequate kitchen or plumbing facilities.
- ❖ Approximately 67% of all housing units within Indian Beach are comprised of mobile homes.

7. EMPLOYMENT AND ECONOMY

- ❖ The mean income for Indian Beach residents is \$50,950.
- ❖ According the 2000 US Census, only 35 individuals age 16 and over are reported to be in the labor force.
- ❖ The highest paying industry in which Indian Beach residents are employed is education, health, and social services which has an average weekly wage of \$631 in Carteret County.
- ❖ The average commuting time for Indian Beach residents is 20.7 minutes.

8. ENVIRONMENTAL CONDITIONS

A. *White Oak River Basin*

The White Oak River Basinwide Water Quality Plan was adopted by the Division of Water Quality (DWQ) in 1997 and updated in November 2001 as well as 2007. The following are the goals of DWQ's basinwide program:

- ❖ Identify water quality problems and restore full use to impaired waters;
- ❖ Identify and protect high value resource waters;
- ❖ Protect unimpaired waters while allowing for reasonable economic growth;
- ❖ Develop appropriate management strategies to protect and restore water quality;
- ❖ Assure equitable distribution of waste assimilative capacity for dischargers; and
- ❖ Improve public awareness and involvement in the management of the state's surface waters.

As existing and future land uses are considered within Indian Beach, these goals should be kept in mind. Within the White Oak River Basin, Indian Beach is located entirely within subbasin 03-05-03. It should be noted that there is currently a designated outstanding resource water immediately adjacent to the Indian Beach planning jurisdiction. This waterbody includes the entire western portion of Bogue Sound.

The White Oak River Basin lies entirely within the southern coastal plain. The basin includes four separate river systems: the New River and its tributaries in the southwestern section; the White Oak River and its tributaries; the Newport River and its tributaries; and the North River in the eastern section. The basin also includes Bogue and Core Sounds. The corporate limits of Indian Beach is bordered to the north by Bogue Sound. The White Oak River Basin encompasses all or portions of four counties and sixteen municipalities. Table 4 provides population information for these areas within the White Oak River Basin. This information was provided by the NC Division of Water Quality from the update to the White Oak River Basinwide Water Quality Plan.

Table 4. White Oak River Basin
Population Distribution

Area in the White Oak River Basin	1990 Population	2000 Population	% Change
Carteret County	52,407	59,383	13.3%
Atlantic Beach	1,938	1,781	-8.1%
Beaufort	3,808	3,771	-1.0%
Bogue	351	590	68.1%
Cape Carteret	1,013	1,214	19.8%
Cedar Point	628	929	47.9%
Emerald Isle	2,434	3,488	43.3%
Indian Beach	153	95	-37.9%
Morehead City	6,046	7,691	27.2%
Newport	2,516	3,349	33.1%
Peletier	304	487	60.2%
Pine Knoll Shores	1,360	1,524	12.1%
Craven County	81,812	91,523	11.9%
Jones County	9,361	10,419	11.3%
Maysville	892	1,002	12.3%
Onslow County	149,838	150,355	0.3%
Jacksonville	30,398	66,715	119.5%

Area in the White Oak River Basin	1990 Population	2000 Population	% Change
North Topsail Beach	947	843	-11.0%
Richlands	996	928	-6.8%
Swansboro	1,165	1,459	25.2%

Source: NC Department of Water Quality White Oak River Basinwide Water Quality Plan.

The following table provides a summary of registered animal operations within White Oak River subbasin 03-05-03. It should be noted that the only registered animal operations within this subbasin consist of swine production. Additionally, none of these facilities are located in close proximity to Indian Beach or Bogue Banks. These facilities are centrally located within the mainland portion of Carteret County.

Table 5. Indian Beach
Registered Animal Operations

Subbasin	Swine*		
	No. of Facilities	No. of Animals	Total Steady State Live Weight**
03-05-03	2	951	542,655

*There are no other registered animal operations located within subbasin 03-05-03.

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

Source: NC Division of Water Quality White Oak River Basinwide Water Quality Plan.

B. Subbasin 03-05-03 (Hydrologic Unit 03020106)

Most federal government agencies, including the US Geological Survey (USGS) and the US Natural Resources Conservation Service (NRCS), use a system of defining watersheds that is different from that used by the Division of Water Quality (DWQ) and many other state agencies in North Carolina. Under the federal system, the White Oak River Basin is made up of two hydrologic areas referred to as hydrologic units. One of these units includes the entire White Oak River Basin, except the New River watershed area, which is assigned to the other unit. Each hydrologic unit is defined by an 8-digit number. DWQ has a two-tiered system in which the state is subdivided into 17 river basins with each basin further subdivided into subbasins. Table 6 compares the two systems. The White Oak River Basin is subdivided by DWQ into five subbasins.

Table 6. Hydrologic Subdivisions in the White Oak River Basin

Watershed Name and Major Tributaries	USGS 8-digit Hydrologic Units	DWQ Subbasin 6-digit Codes
New River	03030001	03-05-02
Bogue-Core Sounds	03020106	03-05-01
White Oak River		03-05-01
Newport River		03-05-03
North River		03-05-04
Jarrett Bay and Nelson Bay		03-05-04
Core Sound and Back Sound		03-05-05

Sources: NC Division of Water Quality White Oak Basinwide Water Quality Management Plan, and US Geological Survey.

Water quality within subbasin 03-05-03 is generally good. The Division of Marine Fisheries has classified waters in this subbasin to have Fair to Good commercial fisheries value. Oyster production is considered fair and clam production is good. Some problems do exist within the subbasin, which can mainly be attributed to increased development along Bogue Banks, as well as the northern shore of the Bogue Sound. Subbasin 03-05-03 lies in the center of Carteret County, extending from the U.S. Forest Service's Croatan National Forest to the Town of Beaufort and the Beaufort Inlet. Most of this subbasin is comprised of the estuarine waters of Bogue and Core sounds. The only source of surface freshwater throughout the subbasin is the Newport River.

Most of the development within the subbasin is occurring within Morehead City, Atlantic Beach, Beaufort, Newport, and Bogue Banks. There are eight individual NPDES wastewater discharge permits in this subbasin with a total permitted flow of 4.75 MGD. The Town of Morehead City WWTP has the largest of these permits with a total permitted flow of 2.5 MGD and discharges into Calico Creek. The following table summarizes the characteristics of subbasin 03-05-03.

Table 7. Characteristics of Subbasin 03-05-03

Land and Water Area (sq. miles):	
Total Area	228
Land Area	168
Water Area	60
Land Cover (%):	
Forest/Wetland	59%
Surface Water	26%
Urban	4%
Cultivated Crop	6.5%
Pasture/Managed Herbaceous	4%

Monitored Stream Statistics:

Aquatic Life:

Total Streams	15.1 mi/5,788.1 ac
Total Supported	5,847.9 mi
Total Impaired	140.2 ac
Total Not Rated	15.1 mi

Recreation:

Total Streams	11.2 mi/17,912.9 ac
Total Supported	11.2 mi/17,764.7 ac
Total Impaired	8.0 ac
Total Not Rated	140.2 mi

Shellfish Harvesting:

Total Streams	5.2 mi/23,867.4 ac
Total Supported	19,357.1 mi
Total Impaired	5.2 mi/14,510.3 ac

Source: NC Division of Water Quality White Oak River Basinwide Water Quality Plan.

Indian Beach lies within the Division of Environmental Health's Growing Area E-2. Of the six rated areas within the E-2 growing area, only one is approved for Shellfish Harvesting. Four of the areas are prohibited for Shellfish Harvesting and one area is Conditionally Approved - Closed. The stressors in those areas not opened for shellfish harvesting are fecal coliform bacteria. The following table provides information regarding these areas.

Table 8. Use Support Assessment Summary Growing Area E-2

AU Number	Classification	Aquatic Life Rating	Recreation Rating	Shellfish Harvesting Rating	Stressors
20-36-(8.5)b1	SA HQW	No data	No data	Supporting	
Approved area immediately adjacent to Salter Path prohibited area					
20-36-(8.5)b2	SA HQW	No data	Supporting	Impaired	Fecal coliform bacteria
DEH prohibited area adjacent to Salter Path on sound side of outer banks					
20-36-(8.5)c1	SA HQW	Supporting	Supporting	Impaired	Fecal coliform bacteria
DEH Conditionally Approved Closed area near Jumping Run Creek					
20-36-(8.5)c2	SA HQW	No data	No data	Impaired	Fecal coliform bacteria
DEH Conditionally Approved Closed area near Jumping Run Creek					
20-36-(8.5)d	SA HQW	No data	No data	Impaired	Fecal coliform bacteria
DEH closed area in unnamed bay approximately 2500 meters east of line across Bogue Sound from the southwest side of mouth of Gales Creek to Rock Point					
20-36-(8.5)e	SA HQW	No data	No data	Impaired	Fecal coliform bacteria
DEH closed area in unnamed bay approximately 3500 meters east of line across Bogue Sound from the southwest side of mouth of Gales Creek to Rock Point					

Source: NC Division of Water Quality White Oak River Basin Water Quality Management Plan.

9. ANALYSIS OF LAND USE AND DEVELOPMENT

A. Introduction

(1) Existing Land Use Map

In order to address future development within the Town of Indian Beach it is necessary to establish a snapshot of what is currently developed within the town's jurisdiction. Conducting a detailed land use survey allows for a review of existing land use patterns. This survey will assist in identifying land use patterns and trends that exist within the town's planning jurisdiction. In the case of Indian Beach this process will serve two main purposes: identifying key conflicts in land use and addressing the issue of build out and the time frame within which this may occur. This review will provide a solid foundation for decisions about future land use and policy development.

A detailed land use survey of Indian Beach was conducted for the entire planning jurisdiction of Indian Beach. This survey was completed through the use of aerial photography and on-site windshield surveys. The existing land use map was then submitted to the Land Use Planning Committee for review to address any errors that exist. Land use within Indian Beach was broken into the following land use categories: common area, commercial, multi-family, mobile home park, office and institutional, single-family residential, utility, and vacant. A large number of modular homes and recreational vehicles are located within Indian Beach.

Common areas have been given a separate land use because there is quite a bit of acreage within the town that is dedicated to parking, recreation, and beach access for housing developments. This includes not only three large multi-family complexes within town, but also the planned development district located in the eastern portion of town.

Table 9 provides an overview of existing land use within Indian Beach based on the land use categories listed above. All data regarding land use acreage have been provided for the town's total jurisdiction as well as for the eastern and western portions of town.

Table 9: Town of Indian Beach
Existing Land Use

Land Use	West Indian Beach		East Indian Beach		Indian Beach Total		
	Acreage	% of Total	Acreage	% of Total	Acreage	% of Total	Parcel Count
Common Area	24.5	11.8%	19.4	16.2%	43.9	10.7%	17
Commercial	8.8	4.2%	0.0	0.0%	8.8	2.7%	6
Multi-Family	56.8	27.2%	1.2	1.0%	58.8	20.4%	492

Land Use	<u>West Indian Beach</u>		<u>East Indian Beach</u>		<u>Indian Beach Total</u>		
	Acreage	% of Total	Acreage	% of Total	Acreage	% of Total	Parcel Count
Mobile Home Park	70.6	33.8%	0.0	0.0%	70.6	21.5%	107
Office and Institutional	0.9	0.5%	0.0	0.0%	0.9	0.3%	4
Single-Family Residential	16.1	7.7%	40.0	33.4%	56.1	17.1%	95
Utility	0.0	0.0%	6.2	5.2%	6.2	1.9%	3
Vacant	30.9	14.8%	52.9	44.2%	83.8	25.5%	110
Total	208.6	100.0%	119.7	100.0%	328.3	100.0%	834

Source: Carteret County GIS and Holland Consulting Planners, Inc.

(2) Land Use Conflicts

Land use conflicts often exist within a town's planning jurisdiction resulting from a variety of circumstances. Issues leading to land use conflicts can result from a lack of proper land use controls, demand for increased development, and development of land not suited for a particular land use. The rate of development within Indian Beach has been very rapid dating back to the early 1980's. Because of this demand several problems have arisen with respect to land use. These issues can be summarized as follows:

Encroachment of residential and urban type uses into forested areas. The maritime forest areas within Indian Beach have diminished over the years to make way for the increased residential and multi-family developments that now exist. The forest areas cannot be replaced; however, measures can be taken to account for the impact on water quality that this development has had. Increased development over the past twenty years is having a profound impact on water quality within Bogue Sound.

Residential Development within Flood Hazard Areas. Indian Beach lies on a barrier island and is extremely vulnerable to coastal flooding associated with tropical storm events. As with other barrier island communities this fact has not slowed development. Indian Beach is somewhat unique in that approximately 67% of the town's housing stock is comprised of manufactured homes. Additionally, there are four large campgrounds located within the town's jurisdiction that house year round units, primarily consisting of travel trailers. The town recognizes the need to address this issue, and will discuss this issue further in the policy development portion of the plan. The town aims to ensure the safety of all property within the town's jurisdiction including the manufactured housing which comprises a substantial portion of the town's seasonal housing stock. All manufactured and stick built structures are subject to requirements outlined in the town's Flood Damage Prevention Ordinance, as well as the North Carolina State Building Code. Development should also take into account policies outlined in the town's Hazard Mitigation Plan.

High density development in areas with soils having severe septic tank limitations. There is currently no central sewer system serving the municipalities along Bogue Banks. Sewage treatment within Indian Beach is primarily handled either through individual septic tank systems or package treatment plants. Use of these facilities is a concern for the town. The reliance on package treatment plants for multi-family developments is a concern for the town. This issue has been an impediment to new construction and redevelopment within the town's jurisdiction. This issue was identified as a key concern for the town to address in the context of this document. Because all soils within the town's jurisdiction are considered unsuitable for septic tank installation, this has been a topic of debate for all municipalities along Bogue Banks for many years. It is an issue that will be discussed in more detail within the community facilities portion of this plan.

(3) Land Use Trends

The Town of Indian Beach is primarily a seasonal destination. This is evidenced by the demographic information presented earlier in the plan. The town has experienced extremely rapid growth dating back to 1980. Between the years of 1980 and 1994, approximately 85% of the town's housing structures were developed. There is very little land still available within Indian Beach for development. All land that does remain undeveloped has already been platted. Out of the town's total tax parcel inventory, approximately 13% (110 parcels) remain vacant. Of the 113 remaining vacant parcels, 105 are located within the Sea Isle Plantation Planned Development District. This area is a planned subdivision that consists entirely of stick built single-family homes. A majority of the lots that remain vacant have been sold and will eventually be developed as additional single-family homes. It is anticipated that some portions of this development will remain as open space.

Of the remaining eight vacant lots scattered throughout the town's jurisdiction, four are platted oceanfront lots. These lots will be developed as single-family homes. There is also one small lot located on the north side of Salter Path Road toward the western end of the town's corporate limits, which is also zoned for single-family residential development. Two large undeveloped parcels are located on the northern side of Salter Path Road in the western end of Indian Beach. This property is approximately 26 acres in size, and is zoned as a Planned Development District. The town expects this property to eventually be developed as either a single-family or multi-family residential development.

The only other vacant parcel within the town's jurisdiction is an abandoned commercial site on the northern side of Salter Path Road. This property is zoned as commercial, and the lot size will not permit much flexibility in the use of this property. The town will eventually face the issue of redevelopment with respect to some of the manufactured home parks within the town's jurisdiction. The effects of this redevelopment have already had a substantial impact on the town. Redevelopment has resulted in the acquisition and closure of all public campgrounds located within Indian Beach. These campgrounds are now being converted to multi-family condominium units. At this time, construction on these sites is not

underway; however, developers are pre-selling units, and it is anticipated that construction will begin within the next year. Redevelopment of these campground properties will have a significant impact on the character of Indian Beach. Historically, Indian Beach has existed as a sleepy coastal town catering to seasonal and second home owners. A majority of these second homes have historically been either mobile homes or recreational vehicles on leased campground sites. The town will now consist of large scale multi-family residential towers housing hundreds of condo units. Issues related to redevelopment will be discussed further in the Future Demands section of the plan.

Indian Beach has never been home to many commercial operations. A majority of the commercial facilities serving residents and visitors within Indian Beach are located in either Atlantic Beach, Emerald Isle, or Salter Path. There are a few commercial operations within Indian Beach; however, these properties are slowly being acquired for redevelopment as well. Construction of multi-family housing is permitted within the town's general business district, and therefore no rezoning request is required for redevelopment as these properties are acquired. The redevelopment of commercial operations within Indian Beach is not considered a concern. The town will continue to rely on the retail establishments within Atlantic Beach, Emerald Isle, and Salter Path.

B. Historical, Cultural, and Scenic Areas

There are several Protected Lands and state-defined Natural Heritage areas that fall within the planning jurisdiction of Indian Beach. These areas have been thoroughly discussed in the Natural Systems Analysis portion of the CAMA Core Land Use Plan, beginning on page 21. All fragile areas are discussed and maps detailing the locations of these areas are provided.

C. Estimates of Future Land Demands

Developing a land use demand forecast for the Town of Indian Beach is a very difficult task. There are only two undeveloped parcels within the town's jurisdiction that have not been platted for a particular type of development. These two parcels lying on the northern side of Salter Path Road, as discussed earlier have been zoned as a planned development district. This will result in some form of residential development. What is not clear is the density that will result from this development. All of the remaining vacant land within the town will be developed as single-family residential with the exception of one commercial property north of Salter Path Road, which may also be developed for residential use.

Peak seasonal population estimates have been established within the context of this plan. In order to establish a general estimate of how much residential development will be required to accommodate the seasonal population increase, these estimates will be utilized. Land use demand estimates for the permanent population will not be established because the housing stock currently within Indian Beach will be adequate to support this population for many years. The unique issue present in a community

such as Indian Beach is that the seasonal population will increase in relation to development. If 300 condominium units are constructed, the town's peak population will likely increase in response to this development. There is no methodology available to foresee how rapidly this development will occur. Because of this fact, estimates of land use demand will be based on estimated seasonal population growth.

Based on the estimates established on page 21 of this document, the peak seasonal population of Indian Beach in the year 2000 was 8,330 persons. This figure was then used to calculate a figure for acres needed per person. The total residential acres were divided by this peak population estimate to establish an acres per person estimate of 0.3 acres. This estimate of 0.3 persons per acre was then used to calculate the residential acreage demand needed to accommodate the increase in peak seasonal population through the year 2025. The results of these estimates are provided in Table 10. Based on these estimates through the year 2025, 69 acres of the town's 83.8 vacant acres should be developed as residential to accommodate the estimated increase in seasonal population.

Table 10: Town of Indian Beach
Estimate of Land Use Demand

	2000 - 2010	2010 - 2020	2020 - 2025	Total
Peak seasonal population growth	1,262	578	461	N/A
Residential acres per person required	0.03	0.03	0.03	N/A
Total residential acres required	37.9	17.3	13.8	69

Source: Holland Consulting Planners, Inc.

10. LAND USE/DEVELOPMENT GOALS AND IMPLEMENTING ACTIONS

A. *Introduction*

The purpose of the Coastal Resources Commission (CRC) management topics are to ensure that CAMA Land Use Plans support the goals of CAMA, to define the CRC's expectations for the land use planning process, and to give the CRC a substantive basis for review and certification of CAMA Land Use Plans. Each of the following management topics (Public Access, Land Use Compatibility, Infrastructure Carrying Capacity, Transportation, Natural Hazard Areas, Water Quality, and Local Areas of Concern) include three components: a management goal, a statement of the CRC's planning objective, and requirements for the CAMA Land Use Plan. These policies apply to the entire town. The local concerns which should be addressed in this plan are identified on page 6. These concerns and issues were utilized to develop the goals and objectives which are included in this plan. Additionally, the survey results obtained through the absentee property owner questionnaires will also be taken into account. Most of the policies and implementing actions are continuing activities. In most situations, specific timelines are not applicable.

Those policies/implementing actions which are not continuing activities will be address during Fiscal Years 2006-2008. The policies and implementing actions frequently utilize the following words: should, continue, encourage, enhance, identify, implement, maintain, prevent, promote, protect, provide, strengthen, support, work. Please note: Policies and Implementing Actions are numbered consecutively throughout this document with the letter "P" denoting a policy and the letter "I" denoting an implementing action.

B. Impact of CAMA Land Use Plan Policies on Management Topics

The development of this land use plan has relied in some part on the CAMA-prescribed existing land suitability analysis. Reliance on this map is based in large part on the intent that this document is supportive of the CAMA regulations for protection of AEC's (15A NCAC 7H). This analysis was performed to identify pockets of land that are particularly poorly suited for development with respect to environmentally sensitive areas.

This plan is intended to support the town vision statement which was developed during this land use planning process. No negative impacts are anticipated by the implementation of the goals, objectives, and policies which are included in this plan. Note: It is intended that all policies are consistent with (do not exceed) applicable State and Federal requirements when State and Federal requirements apply.

C. Public Access

- (1) Management Goal: The town will maximize public access to the beaches and the public trust waters bordering its primary corporate limits.
- (2) Planning Objective: The town will develop comprehensive policies that provide beach and public trust water access opportunities for the public along the shoreline and estuarine areas within the planning jurisdiction.
- (3) Land Use Plan Requirements: The following are the town's policies/ implementing actions for waterfront access. All policies are continuing activities.

Policies:

- P.1 The town supports the Carteret County Chamber of Commerce and the Crystal Coast Tourism Development Authority's recreational related developments that protect and preserve the natural environment while promoting the town as a tourist destination.

- P.2 The town will work towards the establishment of estuarine public access points. It supports the private and public development of waterfront access through private funds and grant monies.
- P.3 The town supports providing shoreline access for persons with disabilities and will work to modify existing access sites to be ADA compliance through grant funding.
- P.4 The town supports the frequency of shoreline access as defined by 15A NCAC 7M, Section .0300, Shorefront Access Policies, as well as those guidelines outlined and enforced by the US Army Corps of Engineers Section 903 Program.
- P.5 The town supports state/federal funding of piers for crabbing, fishing, and public boat access, as well as other facilities to serve the public at beach and estuarine access sites. The town will aim to utilize this funding during the planning period.
- P.6 The town supports the development of estuarine access areas to ensure adequate shoreline access within all areas of the town. The town supports expansion of its public access program where economically feasible.

Implementing Actions:

- I.1 The town will pursue funding under the North Carolina CAMA Shoreline Access funding program as deemed necessary(15A NCAC 7M, Section .0300, Shorefront Access Policies). *Schedule: Fiscal Year 2008-2009/2009-2010.*
- I.2 The town will pursue private donations of easements or property to be utilized for beach and estuarine access. In light of the recent redevelopment efforts the town will work with developers, and where feasible, establish public access areas in areas where new multi-family developments are being constructed. *Schedule: Continuing Activity.*
- I.3 The town will cooperate with state and federal agencies as well as private interest to secure estuarine access areas, including Bogue Sound, to ensure adequate shoreline access within all areas of the town. *Schedule: Fiscal Year 2008-2009/2009-2010.*
- I.4 The town will continue to work with the Carteret County Shore Protection Office to ensure that all requirements related to public access are met, so as not to

jeopardize the town's ability to apply for and acquire beach renourishment funding from state or federal agencies. *Schedule: Fiscal Years 2007-2012.*

- I.5 The town will make it a priority to identify a site where it will be feasible to provide public estuarine access within the town's corporate limits. *Schedule: Fiscal Year 2008-2009/2009-2010.*

D. *Land Use Compatibility*

- (1) Management Goal: The town will ensure that development and use of resources or preservation of land minimize direct and secondary environmental impacts; avoid risks to public health, safety, and welfare; and are consistent with the capability of the land based on considerations of interactions of natural and manmade features.
- (2) Planning Objectives:
- i. The town will adopt and apply local development policies that balance protection of natural resources and fragile areas with continued growth and development.
 - ii. The town's policies will provide clear direction to assist local decision making and consistency findings for zoning, divisions of land, and public and private projects.
- (3) Land Use Plan Requirements: The following are the town's policies/ implementing actions for land use compatibility.

Policies - Residential:

- P.7 The town supports discouraging the re-zoning of existing residentially-developed or zoned areas to a non-residential classification in an effort to maintain the predominant residential character of the town. Any rezoning activity should consider all alternatives that will maintain the resort type housing development that exists throughout the town's jurisdiction.
- P.8 The town supports structurally sound and aesthetically pleasing development that will be in keeping with other single- and multi-family developments in town. Quality development will serve to increase property values and increase public safety throughout Indian Beach.

- P.9 The town supports wooded buffers along thoroughfares adjacent to multi-family residential developments, where feasible.
- P.10 The town supports providing adequate conservation/open space buffers between areas designated for residential development as indicated on the future land use map and any adjacent non-residential land use, including commercial and utility areas.
- P.11 The town supports all covenants established by all Property Owners Associations (POA) throughout its planning jurisdiction. Proposals for development or redevelopment should not only comply with town land development policies and ordinances, but should also abide by all restrictions established under a given property's respective POA restrictive covenants.
- P.12 The town supports redevelopment of all properties within Indian Beach at building heights and densities as outlined in the Future Land Use section of this plan.

Implementing Actions - Residential:

- I.6 All re-zoning and subdivision approvals will consider the future land use and land suitability maps and analyses which are included in this plan. *Schedule: Fiscal Years 2007-2011.*
- I.7 The town will permit residential development to occur in response to market needs provided that the following criteria are met:
- (1) Due respect is offered to all aspects of the environment.
 - (2) If deficient community facilities and services are identified, the town will address this issue through increasing its police and fire services.
 - (3) Additional residential development should concurrently involve planning for improvements to community facilities and services (police/fire/administration).
 - (4) Residential development is consistent with other town policies and the land use map as contained in this plan update (see Future Land Use map discussion).

This implementing action will be enforced through the town zoning and subdivision ordinances. The town will review its current ordinances to ensure consistency with the future land use map. *Schedule: Fiscal Year 2007-2008.*

- I.8 The town will consider revisions to the zoning ordinance to ensure that as residential redevelopment occurs, developers are required to minimize impacts on adjacent properties from stormwater runoff, surface drainage, and sediment transfer. *Schedule: Fiscal Years 2007-2009.*
- I.9 The town will regulate through its zoning and subdivision ordinance the development of conflicting land uses in areas where non-residential development is permitted. This development should be restricted to areas currently designated on the town's zoning map, as well as the multi-family/mixed use parcels outlined on the Future Land Use Map included in this plan. *Schedule: Fiscal Years 2007-2011.*
- I.10 The town will review its subdivision and zoning ordinances to ensure implementation of policies P.9 and P.10. *Schedule: Fiscal Years 2007-2009.*

Policies - Commercial & Industrial:

- P.13 The town opposes the establishment of any industrial operations within its planning jurisdiction.
- P.14 The town supports the existing commercial operations within town and views these establishments as an important part of the town; however, the town feels that these establishments will ultimately be redeveloped to multi-family/mixed use as indicated on the future land use map.
- P.15 The town opposes the establishment of private or public solid waste collection sites or transfer stations within its corporate limits. This applies to all multi-family developments, as well as campgrounds and mobile home parks.
- P.16 Commercial operations which are noxious by reason of the emission of smoke, dust, glare, noise, odor, and vibrations should not be located within Indian Beach. This will be addressed through implementation of the future land use map included in this plan.

Implementing Actions - Commercial:

- I.11 The town will enforce its zoning regulations and rely on state permitting agencies to ensure that all multi-family/mixed use development will have minimal impacts on environmental conditions (water quality and wetlands) and adjacent properties. *Schedule: Fiscal Years 2007-2011.*
- I.12 When reviewing all multi-family/mixed use development proposals that require a zoning change and/or board approval, the town will aim to ensure that development or redevelopment occurs in a fashion that is in harmony with the resort residential character of Indian Beach. *Schedule: Continuing Activity*
- I.13 The town will review its zoning and subdivision ordinances to ensure compliance with policies P.13, P.15, and P.16. *Schedule: Fiscal Year 2007-2009.*

Policies - Conservation:

- P.17 Except as otherwise permitted in this plan, residential, multi-family/mixed use, and office/institutional development should not be supported in natural heritage areas, conservation areas, or coastal wetlands. Residential and commercial development which meets 15A NCAC 7H (complies with state and federal environmental regulations) use standards will be allowed in estuarine shoreline, estuarine water, and public trust areas.
- P.18 The town supports the efforts of the North Carolina Department of Environment and Natural Resources (NCDENR) and the Carteret County Health Department in regulating development throughout Indian Beach. Indian Beach will continue to rely on these agencies to ensure that development within environmentally sensitive areas occurs in a manner that will minimize adverse impacts on the environment. Additionally, the town will rely on these agencies for permitting and oversight of septic tank and package treatment facilities.
- P.19 The town aims to maintain its character as a resort residential community. Although not reflected on the future land use map, it is anticipated that some commercial development will occur in conjunction with large scale multi-family development. To support this growth, the plan speaks to a multi-family/mixed use district for historic commercial areas.

- P.20 The town will support efforts to actively seek, through grant funding or private donation, additional properties to be utilized for public beach and estuarine access.

Implementing Actions - Conservation:

- I.14 Protect the town's fragile areas from inappropriate, unplanned, or poorly planned development through the following:
- By implementing the Town Zoning Ordinance, limit land uses in the vicinity of natural heritage areas, and designated conservation areas to compatible land uses. *Schedule: Continuing Activity.*
 - The town will coordinate all housing code enforcement/ redevelopment projects/public works projects with NCDENR and the Carteret County Health Department, to ensure that this development takes place in a manner that will minimize adverse impacts on the environment. This coordination should focus on the proper development and implementation of adequate stormwater and wastewater treatment facilities. *Schedule: Fiscal Years 2007-2009.*
 - The town will research alternatives to the establishment of comprehensive stormwater management regulations. These will be established under the universal stormwater management program (USMP) if addressed. *Schedule: Continuing Activity.*
- I.15 The town will review its zoning and subdivision ordinances to ensure compliance with policies P.18 and P.19. This review will involve a discussion of ways that the town can reduce pollutants from runoff in light of current redevelopment efforts. *Schedule: Fiscal Year 2009-2010.*

Policies - Stormwater Control:

- P.21 The town supports reducing soil erosion, runoff, and sedimentation to minimize the adverse effects on surface and subsurface water quality, as well as impacting adjoining property owners, as well as adjacent waterbodies. The town will consider revising its development regulations to further address the impacts of construction site runoff to private property.

- P.22 The town supports the enforcement of all controls and regulations, specifically design standards, tie-down requirements, construction and installation standards, elevation requirements, flood-proofing, CAMA regulations, and FEMA regulations, deemed necessary by the Board of Commissioners to mitigate the risks of lives and property caused by severe storms and hurricanes.
- P.23 The Town of Indian Beach recognizes comments that were made to the CRC by DWQ regarding coastal stormwater rules. DWQ concluded that its current coastal stormwater rules have not been adequately effective towards addressing water quality impacts to public trust waters. Additionally, DWQ's review of scientific studies resulted in a determination that local governments' simply deferring to state and federal rules to address water quality issues still results in impaired local water quality based on the following conclusions:
- ❖ Areas with impervious surfaces of 10% or greater can be linked to local stream degradation.
 - ❖ Biological diversity has been shown to drop when impervious surfaces increased beyond 10-15%.
 - ❖ Stream stability is affected when impervious surfaces approach 10% in an area.
 - ❖ Estuaries generally degrade with impervious surfaces of 10% or greater.
 - ❖ Sensitive fish species loss increases after about 12% impervious surface.

Therefore, the Town of Indian Beach supports reducing impervious surface areas for existing and proposed developments.

Implementing Actions - Stormwater Control:

- I.16 The town will continue to coordinate all development with the NCDENR Stormwater Management Division on redevelopment projects of five acres or greater, where onsite stormwater management facilities will be required. *Schedule: Fiscal Years 2007-2011.*
- I.17 The town will consider drafting and adopting a local stormwater control ordinance that will apply to all future development and redevelopment within town. This ordinance will address both construction site and past construction site runoff control for all development under five acres. *Schedule: Fiscal Year 2007-2008.*

- I.18 The town supports ongoing planning and capital improvement efforts to address the drainage problem associated with flooding from tropical storm events, if it is determined that these improvements are required to protect the citizens and real property of Indian Beach. *Schedule: Fiscal Year 2009-2010.*
- I.19 The town will continue to seek grant funding from state and federal agencies for assistance in funding capital improvement projects that will aid the town in alleviating flooding and storm drainage problems which exist throughout the town. *Schedule: Fiscal Year 2008-2010.*

E. *Infrastructure Carrying Capacity*

- (1) Management Goal: The town will ensure that public infrastructure systems are appropriately sized, located, and managed so the quality and productivity of AECs and other fragile areas are protected or restored. It is acknowledged that to achieve the infrastructure carrying capacity goals, policies, and implementing actions, some utility lines may have to extend through environmentally sensitive areas.
- (2) Planning Objective: The town will establish level of service policies and criteria for infrastructure consistent with the projections of future land needs.
- (3) Land Use Plan Requirements: The following are the town's policies for infrastructure carrying capacity. All policies are continuing activities.

Policies:

- P.24 The town supports providing adequate community services and facilities which meet the needs of the town's citizens and businesses.
- P.25 The town supports the provision of sufficient water and sewer service to promote continued growth and to alleviate public health problems created by the absence of public water service and sewer facilities in the town. The town will continue to work with the Carteret County Health Department to ensure proper and adequate provision of sewer. Additionally, the town will continue to work with Carolina Water Service and Bogue Banks Water Association to ensure that the town's water supply is adequate to support redevelopment.
- P.26 The town supports the extension of water services from existing systems and encourages the use of central systems for new developments whether residential,

multi-family/mixed use, or institutional in nature. It also supports the continued public provision of solid waste disposal, law enforcement, and county educational services.

- P.27 The town will rely on this land use plan and development ordinances to regulate development and may amend or modify regulations to encourage the use of modern septic tank technologies on developments that do not require the development of a package treatment plant.
- P.28 The town supports the installation and use of properly permitted septic tank and package treatment systems with enforcement and oversight by the Carteret County Health Department. Installation of these systems should comply with county, state, and local regulations regarding lot sizes and waste disposal system placement.
- P.29 The town supports the provision of public recreational facilities and areas and will pursue grant funds and private donations for public open space and recreation facilities.
- P.30 The town supports the development of package treatment plants to support multi-family developments that are being constructed throughout the town's jurisdiction. These facilities should be in compliance with all county and state regulations, and should each have a full-time operator to oversee the plant's day-to-day operation.

Implementing Actions:

- I.20 The town will consult the future land use map when considering new public facilities and private multi-family/mixed use development. *Schedule: Continuing Activity.*
- I.21 The town will rely on the NCDENR and the Carteret County Department of Environmental Health to oversee the proper operation, management, and maintenance of all wastewater treatment facilities (package plants and septic systems) within the town. *Schedule: Annually - as permitting is required.*
- I.22 The town will continue to rely on Carolina Water and Bogue Banks Water for the provision of water service throughout Indian Beach. The town will monitor the availability of water to ensure that the Castle Hayne Aquifer continues to yield the

volume of water necessary to support the redevelopment within the town's jurisdiction. *Schedule: Annually.*

- I.23 The town will continue to provide sufficient emergency management personnel and facilities to adequately serve the projected population growth. If it is determined that the current Fire/EMS services provided to the town are not sufficient, alternative methods of providing these services will be explored. One of the potential solutions to this problem may be the merging of the Indian Beach and Pine Knoll Shores Fire/EMS Departments. *Schedule: Fiscal Year 2007-2011 (to be reviewed annually).*
- I.24 The town will coordinate the development of recreational facilities with all applicable property owner's associations in order to maximize the potential quality, access, and use of these facilities. *Schedule: Fiscal Year 2007-2011.*

F. *Transportation*

- (1) Management Goal: The town will achieve safe, efficient, reliable, environmentally-sound, and economically feasible transportation within the town.
- (2) Planning Objective: The town will provide a safe and efficient transportation network throughout the town's planning jurisdiction.
- (3) Land Use Plan Requirements: The following are the town's transportation policies/implementing actions.

Policies:

- P.31 The town supports interconnected street systems for single-family, multi-family residential and mixed use development.
- P.32 The town supports limited access from development along all roadways to provide safe ingress and egress.
- P.33 The town supports maintaining an effective signage and addressing system for all right-of-ways including private drives and access streets.
- P.34 The town opposes the construction of a third bridge accessing Bogue Banks from Morehead City. The plans for this third bridge have the thoroughfare entering

the Island in the vicinity of Indian Beach. This will have substantial adverse impacts on the town's existing transportation and parking problems.

Implementing Actions:

- I.25 The town will review and update its subdivision ordinance to ensure compliance with policies P.30 and P.31. *Schedule: Fiscal Year 2008-2009.*
- I.26 The town will consider revising its requirements for parking as outlined in the town's zoning ordinance to ensure that as redevelopment occurs adequate parking is available to support the substantial increase in housing units. *Schedule: Fiscal Year 2007-2009.*
- I.27 The town will continue to rely on the North Carolina Department of Transportation for the maintenance of all public right-of-ways. *Schedule: Continuing Activity.*

G. *Natural Hazard Areas*

- (1) Management Goal: The town will conserve and maintain shorelines, floodplains, and other coastal features for their natural storm protection functions and their natural resources giving recognition to public health, safety, and welfare issues.
- (2) Planning Objective: The town will develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, flooding, or sea level rise.
- (3) Land Use Plan Requirements: The following are the town's policies/ implementing actions for natural hazard areas. All policies are continuing activities.

Policies:

- P.35 The town supports the installation of properly engineered and permitted bulkheads.

- P.36 The town supports the US Army Corps of Engineers' regulations, the applicable guidelines of the Coastal Area Management Act, and the use of local land use ordinances to regulate development within or immediately adjacent to freshwater swamps, marshes, and 404 wetlands.
- P.37 The town supports relocation of structures endangered by erosion, if the relocated structure will be in compliance with all applicable policies and regulations.
- P.38 The town recognizes the uncertainties associated with sea level rise. The rate of rise is difficult to predict. Thus, it is difficult to establish policies to deal with the effects of sea level rise. The town supports cooperation with local, state, and federal efforts to inform the public of the anticipated effects of sea level rise.
- P.39 The town supports hazard mitigation planning. Refer to the hazard mitigation plan section of this document on page 142. Additionally, refer to Appendix IV which outlines all locally adopted hazard mitigation policies.
- P.40 The town supports the land use densities that are specified within the Future Land Use section of this plan. Through implementation of this land use plan, these densities will minimize damage from natural hazards and support the hazard mitigation plan.
- P.41 The town supports the efforts of the US Army Corps of Engineers in providing beach renourishment funding through the Section 933 project. The town will continue to meet the requirements of this program through the provision of adequate public access.
- P.42 The town recognizes the significance of protecting the primary dune line along oceanfront portions of the town's planning jurisdiction. The town supports continued efforts to protect these dunes through a proactive dune stabilization and protection program.
- P.43 The town supports the current redevelopment efforts taking place through Indian Beach. This redevelopment will result in the removal of unstable mobile homes and travel trailers to be replaced with multi-family structures. This will result in a much more stable built environment for the town.

- P.44 The town will continue to support the efforts of the Carteret County Shore Protection Office.
- P.45 The Town of Indian Beach supports all efforts of the Carteret County Emergency Management office to implement the County's Emergency Operations Plan.

Implementing Actions:

- I.28 The town will rely on the Carteret County Inspections Office to monitor development proposals for compliance with Section 404 of the Clean Water Act and will continue to enforce local land use ordinances to regulate development within or adjacent to freshwater swamps, marshes, and 404 wetlands. *Schedule: As permitting is required.*
- I.29 In the event of a natural disaster the town permits redevelopment of previously developed areas, provided all applicable policies, regulations, and ordinances are complied with. Redevelopment, including infrastructure, should be designed to withstand natural hazards. *Schedule: Fiscal Year 2007-2011.*
- I.30 The town will enforce the density controls per the future land use map in potential redevelopment areas to control growth intensity. *Schedule: Continuing Activity.*
- I.31 In response to possible sea level rise, the town will review all local building and land use related ordinances and consider establishing setback standards, density controls, bulkhead restrictions, buffer vegetation protection requirements, and building designs which will facilitate the movement of structures. *Schedule: Review Annually.*
- I.32 The town will utilize the future land use maps to control development. These maps are coordinated with the land suitability map and existing infrastructure maps. *Schedule: Continuing Activity.*
- I.33 The town will continue to work with the Carteret County Shore Protection office on the development and implementation of a long-range beach renourishment plan. *Schedule: Continuing Activity.*

- I.34 The town will continue to monitor the stability of the dune system throughout town, and if necessary will take measures to ensure the protection of this system.
Schedule: Review Annually.

H. Water Quality

- (1) Management Goal: The town will maintain, protect, and where possible enhance water quality in all coastal wetlands, rivers, streams, and estuaries. This should include a means of addressing the complex problems of planning for increased development and economic growth while protecting and/or restoring the quality and intended uses of the basin's surface waters.
- (2) Planning Objective: The town will adopt policies for surface waters within the town to help ensure that water quality is maintained if not impaired and improved if impaired.
- (3) Land Use Plan Requirements: The following provides the town's policies/ implementing actions on water quality.

Policies:

- P.46 The town supports the guidelines of the Coastal Area Management Act, the efforts and programs of the North Carolina Department of Environment and Natural Resources, Division of Coastal Management, and the Coastal Resources Commission to protect the coastal wetlands, estuarine waters, estuarine shorelines, and public trust waters of the town.
- P.47 The town supports commercial and recreational fishing in its waters and will cooperate with other local governments and state and federal agencies to control pollution of these waters and to improve conditions so that commercial and recreational fisheries will not be depleted. It also supports the preservation of nursery and habitat areas.
- P.48 The town opposes the disposal of any toxic wastes, as defined by the US Environmental Protection Agency's Listing of Hazardous Substances and Priority Pollutants (developed pursuant to the Clean Water Act of 1977), within its planning jurisdiction.
- P.49 The town recognizes the value of water quality maintenance to the protection of fragile areas and to the provision of clean water for recreational purposes and

supports the control of stormwater runoff to aid in the preservation of water quality. The town will support existing state regulations relating to stormwater runoff resulting from development (Stormwater Disposal Policy 15 NCAC 2H.001-.1003).

- P.50 The town supports regulation of underground storage tanks in order to protect its groundwater resources.
- P.51 The town supports the policy that all State of North Carolina projects should be designed to limit to the extent possible stormwater runoff into coastal waters.
- P.52 The town supports implementation of the 2007 White Oak River Basin Water Quality Management Plan.
- P.53 The town supports protection of those waters known to be of the highest quality or supporting biological communities of special importance, especially the Outstanding Resource Waters (ORW) located off of Rock Point along the northern estuarine shoreline of Indian Beach.
- P.54 The town supports management of problem pollutants, particularly biological oxygen demand and nutrients, in order to correct existing water quality problems and to ensure protection of those waters currently supporting their uses. This effort should focus on residential development adjacent to Bogue Banks.
- P.55 The town opposes the installation of package treatment plants and septic tanks or discharge of waste in any areas classified as coastal wetlands, freshwater wetlands (404), or natural heritage areas. This policy does not apply to constructed wetlands.
- P.56 The town supports the following actions by the General Assembly and the Governor:
- Sufficient state funding should be appropriated to initiate a program of incentives grants to address pollution of our rivers from both point sources and nonpoint sources.
 - An ongoing source of state funding should be developed to provide continuous support for an incentives grant program.

- The decision-making process for the award of incentives grants should involve river basin organizations representing local governments and other interest groups in the review of all applications for state funding.
- The ongoing effort of the Department of Environment and Natural Resources to develop administrative rules implementing the White Oak River Basin Management Strategy should continue to involve local government officials in the development, review, and refinement of the proposal.

P.57 The town does not support the location of floating homes within its jurisdiction.

P.58 The town supports the following goals of the NC Coastal Habitat Protection Program (CHPP):

- Document the ecological role and function of aquatic habitats for coastal fisheries.
- Provide status and trends information on the quality and quantity of coastal fish habitat.
- Describe and document threats to coastal fish habitat, including threats from both human activities and natural events.
- Describe the current rules concerning each habitat.
- Identify management needs.
- Develop options for management action using the above information.

P.59 Indian Beach supports addressing the following issues related to the White Oak River Basin:

Long-term Growth Management

- Wastewater management (non-discharge, regionalization, ocean outfall).
- Urban stormwater runoff/water quality.
- Role of local land use planning.

Shellfish Water Closures

- Increases in number of acres closed.
- Examine link between growth and closures.
- Opportunities for restoration and prevention.

Nutrients/Toxic Dinoflagellate

- Reduction in nitrogen and phosphorous levels.

- P.60 The Town of Indian Beach supports addressing shellfish water closures and the reduction of nitrogen, phosphorous, and copper levels.

Implementing Actions:

- I.35 The town will comply with CAMA and NC Division of Environmental Management stormwater runoff regulations, and by coordinating local development activities involving chemical storage or underground storage tank installation/abandonment with the town Emergency Management personnel and the Groundwater Section of the North Carolina Division of Environmental Management. The town will plan for an adequate long-range water supply. In the planning process, the town will cooperate with all regional counties to protect water resources. *Schedule: Continuing Activity.*
- I.36 The town will enforce its zoning and subdivision regulations to aid in protecting sensitive shoreline areas. It will rely on state and federal agencies to promote and protect the Bogue Sound, as well as other nursery and habitat areas adjacent to the town. *Schedule: Fiscal Year 2007-2011.*
- I.37 The town will rely on the technical requirements and state program approval for underground storage tanks (40 CFR, Parts 280 and 281), and any subsequent state regulations concerning underground storage tanks adopted during the planning period. Where necessary, the town will require the removal of environmentally hazardous USTs. *Schedule: Continuing Activity.*
- I.38 The town will continuously enforce, through the development and zoning permit process, all current regulations of the NC State Building Code and North Carolina Division of Health Services relating to building construction and septic tank installation/replacement in areas with soils restrictions. *Schedule: As permitting is required.*
- I.39 The town will implement the following actions through local ordinances to improve water quality (Note: these actions are especially significant in areas adjacent to Outstanding Resource Waters off the estuarine shoreline of Indian Beach):
- Use watershed-based land use planning
 - Minimize impervious cover in site design
 - Limit erosion during construction

- Maintain coastal growth measures
- Restoration of impaired waters
- Reduction of nutrients in the town waters.

The town will achieve this through the potential adoption of a stormwater management ordinance. *Schedule: Fiscal Year 2008-2009.*

I.40 Preservation of wetlands is important to the protection/improvement of water quality in the town. The following will be implemented:

- Coordinate all development review with the appropriate office of the US Army Corps of Engineers and the Soil Conservation Service. *Schedule: As permitting is required.*
- Require that wetland areas be surveyed and delineated on all preliminary and final subdivision plats. *Schedule: As permitting is required.*
- Encourage cluster development in order to protect sensitive natural areas. *Schedule: Fiscal Year 2007-2009, revised zoning and subdivision ordinances.*

I.41 The town will continue to work with NCDENR and the Carteret County Health Department to ensure that sound wastewater treatment facilities are installed and maintained in a manner that will minimize impacts on adjacent waterbodies. *Schedule: As permitting is required.*

I. *Local Areas of Concern*

- (1) Management Goal: The town will integrate local concerns with the overall goals of CAMA in the context of land use planning.
- (2) Planning Objective: The town will identify and address local concerns and issues, such as cultural and historic areas, scenic areas, economic development, or general health and human services needs.
- (3) Land Use Plan Requirements: The following provides the town's policies/implementing actions on local areas of concern. All policies are continuing activities.

Policies - Economic Development:

- P.61 Tourism is important to the town and will be supported by the town.
- P.62 The town will encourage both residential and multi-family/mixed use development in an effort to provide a resort community that will facilitate the immediate needs of visitors, as well as permanent citizens.

Implementing Actions - Economic Development:

- I.42 The town will continue to support the activities of the North Carolina Division of Travel and Tourism and the Crystal Coast Tourism Development Authority; specifically, the monitoring of tourism-related industry, efforts to promote tourism-related commercial activity, and efforts to enhance and provide shoreline resources. *Schedule: Continuing Activity.*
- I.43 The town will continue to support the activities of the Carteret County Economic Development Commission. *Schedule: Continuing Activity.*
- I.44 The town will support projects that will increase public access to shoreline areas, both estuarine and oceanfront. *Schedule: Fiscal Years 2007-2008/2009-2010.*

Policies - General Health and Human Services Needs:

- P.63 The town supports the continued public provision of solid waste disposal, law enforcement, and educational services to all citizens of the town.
- P.64 In an effort to improve health conditions, the town supports the following water and sewer policies:
- The town is aware that inappropriate land uses near well fields increase the possibility of well contamination. Land uses near groundwater sources are regulated by the North Carolina Division of Environmental Management through NCAC Subchapter 2L and Subchapter 2C. The town recognizes the importance of protecting potable water supplies, and therefore supports the enforcement of these regulations.

- The town supports all efforts to secure available state and federal funding for the construction and/or expansion of public and private water/sewer systems.
- The town supports the construction of water systems with adequate line sizes to ensure adequate water pressure and fire protection.

Implementing Actions - General Health and Human Services Needs:

I.45 Floodplain regulation is a concern in the town. To accomplish protection of public health and service needs, the town will:

- Continue to enforce the flood hazard reduction provisions of the Town Land Development Ordinances. *Schedule: Continuing Activity.*
- Prohibit the installation of underground storage tanks in the 100-year floodplain. *Schedule: Continuing Activity.*
- Zone for open space, recreational, low to moderate density residential, or other low-intensity uses within the floodplain. This will require a review of current land development regulations. *Schedule: Fiscal Year 2007-2009.*

I.46 The town will provide sufficient emergency services to all residents. The town will implement the following:

- Require that all necessary infrastructure firefighting capability/capacity be provided in new multi-family/mixed use development. *Schedule: Continuing Activity.*
- Continue to maintain an effective signage and addressing system for all streets, roads, and highways. *Schedule: Continuing Activity.*

Implementing Actions - Funding Options:

I.47 The town will continue to support state and federal programs that are deemed necessary, cost-effective, and within the administrative and fiscal capabilities of the town. *Schedule: Continuing Activity.* These include:

- Emergency Medical Services
- Coastal Area Management Act, including shoreline access funds
- Economic Development Administration Funds
- Federal Emergency Management Program
- MEDICAID
- Crisis Intervention

- I.48 The town will selectively support state and federal programs related to the town. The town, through its boards and committees, will monitor state and federal programs and regulations. It will use opportunities as they are presented to voice support for or to disagree with programs and regulations that are proposed by state and federal agencies. *Schedule: Continuing Activity.*
- I.49 The town officials will continue to work with the Army Corps of Engineers and any other state and federal agencies to ensure continued dredging and maintenance of channels and rivers as needed to keep these facilities open to navigation. These efforts shall comply with applicable state and federal regulations. Providing borrow or spoil areas and provision of easements for work will be determined on case-by-case basis. The town encourages spoil material being placed on those areas where beach renourishment efforts are necessary. Channel maintenance has major economic significance and is worthy of state and federal funding. *Schedule: Review options annually.*