Town of Wrightsville Beach Phase I Report on Land Use and Future Development

Final Report

Prepared for the Town of Wrightsville Beach
Land Use Plan Steering Committee by

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Town of Wrightsville Beach
CAMA Land Use Plan Update

2003 to 2005

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Acronyms Used In the Report

AEC	Areas of Environmental Concern
CAMA	Coastal Area Management Act
CFCC	Cape Fear Community College
COE	Corps of Engineers, United States
CRAC	Coastal Resource Advisory Committee
CRC	Coastal Resource Commission
CRS	Community Rating System
CZMA	Coastal Zone Management Act
DCM	Division of Coastal Management
DENR	Department of Environment and Natural Resources
DWR	Division of Water Resources
DWQ	Division of Water Quality
EMS	Emergency Medical Service
EMT	Emergency Medical Technician
ETJ	Extraterritorial Jurisdiction
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
HQW	High Quality Waters
ICW	Intracoastal Waterway
LPO	Local Permit Officer
LSA	Land Suitability Analysis
LUP	Land Use Plan
LUPSC	Land Use Plan Steering Committee
MG	Million Gallons
MGD	Millions of Gallons per Day
MHWL	Mean High Water Line
MLWL	Mean Low Water Line
MS4	Municipal Separate Storm Sewer System
NC	North Carolina
NCAC	North Carolina Annotated Code
NCDOT	North Carolina Department of Transportation
NFIP	National Flood Insurance Program
NPDES	National Pollutant Discharge Elimination System
NSW	Nutrient Sensitive Waters
ORW	Outstanding Resource Water
OSDS	Onsite Sewage Disposal System
PL	Public Law
SW	Swamp Waters
UNCW	University of North Carolina at Wilmington
U.S.	United States
WTA	Wilmington Transit Authority

Vision Statement

We, the residents, businesses and property owners of the Town of Wrightsville Beach, shall maintain and enhance our community as one of the finest family oriented beach communities in the United States. This requires due diligence and working to retain our small town, family friendly character while preserving and where possible enhancing the quality of the natural and man-made environment. It is essential that we maintain the quality of life that makes Wrightsville Beach a community that is a desirable place for visitors and residents alike.

Section I

Introduction

Coastal areas of the United States have experienced tremendous population growth and development since the 1960s. In response, the United States Congress passed the 1972 Coastal Zone Management Act (CZMA), as amended. The State of North Carolina established itself as a leader amongst the states by enacting the 1974 Coastal Area Management Act (CAMA). The overall objective of CAMA is to insure the orderly balanced use and preservation of our coastal resources on behalf of the people of North Carolina and the nation (NC PL 113-102A b4). Of particular importance, the Act:

- Defined North Carolina's Coastal Area to include its twenty coastal counties.
- Created the Coastal Resource Commission (CRC), a fifteen member body appointed by the Governor to create policy and pass rules governing development activity in the Coastal Area
- Created the Coastal Resource Advisory Council (CRAC), a forty-five member advisory body that advises the CRC and works as a liaison between the CRC and local governments.
- Created the Division of Coastal Management (DCM), the division that carries out the policies of the CRC and CAMA.

An essential feature of CAMA is the requirement that each coastal county prepares a land use plan that is updated every five years. The Town of Wrightsville Beach has long recognized the benefit of land use planning and choose to create its own land use plan rather than be folded into New Hanover County's plan.

The Town of Wrightsville Beach realized early on the benefits of land use planning. At nearly every Board of Aldermen and Planning Board meeting, decisions are made concerning zoning, variances, location of buildings, and allocation of funds for projects. Wrightsville Beach's Land Use Plan provides guidance to local decision-makers to achieve the long-term vision for the community as articulated in previous plans. This allows local decision makers to be proactive rather than reactive and helps maintain Wrightsville Beach as one of the finest family oriented beaches on the East Coast of the United States. Wrightsville Beach has prepared a series of Land Use Plans over the past four decades:

- 1976 Wrightsville Beach Land Use Plan
- 1980 Wrightsville Beach Land Use Plan
- 1985 Wrightsville Beach Land Use Plan

- 1990 Wrightsville Beach Land Use Plan
- 1996 Wrightsville Beach Land Use Plan

Each version of the Land Use Plan continues to be a valuable source of information and provides policy direction to the Town concerning future development.

This Land Use Plan (LUP) update will result in its sixth land use plan. It encompasses all geographic areas in the community and its extraterritorial jurisdiction (ETJ). It also considers issues pertaining to future land use and development and natural resource protection. The plan is long range in nature and looks beyond current issues to address potential future land use and environmental issues over the next 10 to 15 years.

This report, *The Town of Wrightsville Beach Phase I Report on Land Use and Future Development,* was prepared in accordance with newly promulgated guidance by DCM entitled *Technical Manual for Land Use Planning.* The objective of this report is to analyze data on the economy, population, land use, land suitability, and natural systems of Wrightsville Beach. The effort also involved updating the Town's Geographic Information System (GIS) and developing a series of maps contained in Appendix A. Finally, this report analyzes the policies contained in Wrightsville Beach's *1996 CAMA Land Use Plan* in light of the Division of Coastal Management's new guidance on preparation of local land use plans and the data contained in this report. This analysis is presented in a series of tables contained in Appendix B. Appendix C contains the environmental composite and land suitability analysis maps required pursuant to DCM's new land use planning guidelines.

Organization of the Report

This report is organized into a series of sections. Section II addresses the community's aspirations and concerns. This section also identifies existing and emerging conditions and summarizes the issues discussed at a public workshop held November 15, 2003. Section III focuses on describing the Town of Wrightsville Beach's population, housing, and economy to identify trends that potentially influence land use or impact natural resources. This section also presents a profile of the community and its key demographic characteristics as well as estimates of its projected year round and seasonal populations. Section IV contains the natural systems analysis. It describes the Areas of Environmental Concern (AECs) found within and adjacent to Wrightsville Beach. The section also describes other important natural features and flood zones. Section V analyzes existing land use and development. It also includes a description of the state and local regulatory requirements pertaining to development activities within Wrightsville Beach. Section VI analyzes the community facilities and Town services to identify issues to be considered when revising the Land Use Plan's policies and recommendations. Section VII examines the Town's infrastructure carrying capacity and its adequacy to serve the year round population and the influx of summer residents and visitors. Section VIII contains a land suitability analysis required by DCM. Finally, Section IX summarizes the analysis of existing policies and identifies actions taken since the last land use plan. It also identifies the implementation status and constraints. A detailed version of the policy analysis is contained in Appendix B.

Section II

Community Aspirations & Concerns

This section of the land use plan identifies the community's aspiration and concerns. This process took place in three steps. First, a series of existing and emerging conditions were identified by examining a wide range of data sources including:

- Examining the 1996 Land Use Plan;
- Examining the 2002 Surface Water Use Plan;
- Examining the National Pollutant Discharge Elimination System (NPDES) Phase II Comprehensive Storm Water Management Report;
- Reviewing survey data from the 2002 loop survey;
- Reviewing survey data from the beach strand surveys in 2002 and 2003;
- Discussions with Town staff;
- Input from the public; and,
- Analysis of data contained in subsequent sections of this report.

The product of this analysis was the identification of a series of existing and emerging conditions warranting further investigation during Phase II of the planning process. These conditions can be categorized into 4 broad categories

- Population Housing and Economy
- Water Quality and Environmental Conditions
- Infrastructure Carrying Capacity
- Public Access

Each of the conditions described in Table 2.1 has the potential to influence future land use and development decisions and could impact other environmental and quality of life concerns.

Second, a public workshop was held November 15, 2003. After a short presentation, the public was broken into a series of breakout groups with members of the land use plan steering committee and Town staff. The goal of the breakout sessions was to identify issues, concerns, and problems that the land use plan update should address. The breakout groups also discussed community aspirations and the vision for the community. Participants were then given the opportunity to rank the issues that were most important by placing stars next to the issue. When participants entered the workshop they were also given an index card and asked to identify problems and what aspects of the community they wanted o preserve.

Table 2.1 Existing and Emerging Conditions

Population, Housing, & Economy	▪ Permanent population remaining steady ▪ More seasonal property owners ▪ New owners/residents believed to be more affluent ▪ Limited lots for new development ▪ Re-zoning of commercial to residential properties ▪ Increasing property values ▪ Increasing redevelopment ▪ Building Out of Lots to maximum FAR ▪ Increasing housing size ▪ Loss of commercial business on the beach ▪ No heavy industry at Wrightsville Beach ▪ Small tourists oriented businesses are seen as appropriate for Wrightsville Beach ▪ Visual pollution, lack of visual access to water and buildings that look out of place at Wrightsville Beach
Water Quality & Environmental Conditions	▪ Preserve dunes in order to protect from storm damage ▪ Litter on beaches and roads ▪ Need to maintain/improve water quality
Infrastructure Carrying Capacity	▪ Heavy Traffic congestion in summer months ▪ Not enough parking spaces for the number of day trippers during the summer months ▪ Little or no mass transportation ▪ Need to encourage more pedestrian traffic. ▪ No bike paths
Public Access	▪ Need to maintain visual access to water. ▪ Plentiful public accesses ▪ Need more restrooms ▪ More walkovers desired in order to protect dunes and aid in access ▪ User conflicts in ICW (e.g., boaters, kayakers, jet skis, wake boards, etc.) ▪ No wake zones not enforced ▪ Congested waters in ICW ▪ User conflict on beach front surfers, swimmers, kite surfers etc. ▪ Congestion at boat ramp

Third, the results of the public workshop and the complete list of issues identified by the public was posted on the town's website and made available for further comment. Over the next few months, the Land Use Plan Steering Committee (LUPSC) used this list as the starting point for identifying the key issues addressed by the LUP update. The product of these discussions is the list of planning issues and concerns to be addressed in the land use plan update [Table 2.2]. This list of issues will continue to be revised and updated throughout the planning process.

Table 2.2: Planning Issues and Concerns

Land Development	▪ Determining the appropriate density of development on the Island. ▪ Maintaining the current balance of residential and commercial development ▪ Improving or enhancing the existing commercial district. ▪ Determining if the current height/floor area restrictions (FAR) are adequate. ▪ Improving the application and enforcement of ordinances ▪ Communicating the requirements of ordinances and other town decisions to the public.
Infrastructure Carrying Capacity	▪ Improving traffic flow on the Island, particularly during summer months. ▪ Examining residential, commercial, and visitor parking restrictions. ▪ Lack of mass transportation. ▪ Building bike paths and otherwise encouraging more pedestrian traffic.
Public Access	▪ Improving or maintaining visual access to the beach. ▪ Maintaining adequate facilities and services for beach goers. ▪ Reducing user conflicts along the beach. ▪ Reducing user conflicts on the ICW. ▪ Improving the management of the boat ramp.
Natural Hazards	▪ Protecting and preserving current building setbacks and restrictions to prevent further encroachment. ▪ Continuing to protect dunes and preserve their ability to minimize potential storm damage.
Water Quality & Natural Resources	▪ Protecting and preserving water quality

Section III

Population, Housing, & Economy

Introduction

The Town of Wrightsville Beach is widely recognized as one of the finest family oriented beach towns on the East Coast of the United States. The mix of residential and resort development, the quality of the natural and man-made environment, and the beautiful sandy beaches, clear water, and small town atmosphere create a high quality of life for residents and visitors alike. This section of the report identifies important community characteristics and demographic trends that warrant consideration when formulating policies and recommendations for the LUP update. The analysis draws primarily on data drawn from the 2000 Census, Wrightsville Beach land use records, and other regional data sources. In the discussion that follows, comparisons are drawn with New Hanover County and other barrier beach communities summarized in Table 3.1 to help interpret these data.

Permanent Population Estimates

The population of a municipality with a large influx of seasonal residents requires a careful analysis of the population because there are many distinct categories of residents including:

- Property owners and non property owners
- Residents and non residents
- Registered voters and non registered voters
- Business owners and non business owners

The Division of Coastal Management (DCM) guidelines require input from all groups of potentially affected residents and members of the public. This section of the Phase I report focuses on the population and demographic characteristics of the year-round population of Wrightsville Beach. Because the Bureau of the Census and other state agencies collects these data, there is much more precision in these data than there is in the seasonal population estimates presented later in this section of the report.

The North Carolina State Data Center identifies the 2001 estimated year-round population of Wrightsville Beach as 2,604 persons [Table 3.2]. According to the U.S. Department of Commerce, Bureau of the Census, the 2000 population was 2,593 persons. The municipality

Table 3.1: Comparison of Population Characteristic of Selected North Carolina Beach Communities

Local Government	Median Age	Percent Housing Units occupied all year	Percent in Labor Force16 & Over	Median House-hold Income	Median Family Income	Per Capita Income	Percent of Total Housing in 1-unit detached	Median value of Owner Occupied Housing
Southern Shores	51.4	49.2 %	51.3 %	$61,676	$68,250	$35,933	97.4 %	$221,500
Kitty Hawk	40.6	48.3 %	69.9 %	$42,813	$48,656	$22,960	67.8 %	$144,600
Kill Devil Hills	36.7	48.8 %	76.6 %	$39,712	$44,681	$20,679	82.9 %	$104,500
Nags Head	42.7	27.4 %	67.0 %	$53,095	$61,302	$30,157	83.3 %	$143,900
Atlantic Beach	48.7	20.5 %	63.3 %	$38,312	$52,411	$31,339	30.8 %	$207,800
Pine Knoll Shores	61.8	37.9 %	36.8 %	$53,800	$60,662	$34,618	47.7 %	$220,500
Indian Beach	58.8	4.1 %	52.7 %	$47,250	$45,250	$25,826	2.7 %	$625,000
Emerald Isle	50.1	27.3 %	54.3 %	$53,274	$60,257	$31,316	58.7 %	$200,000
North Topsail Beach	45.1	21.6 %	64.4 %	$45,982	$53,125	$33,972	25.7 %	$137,500
Surf City	48.1	26.7 %	61.7 %	$40,521	$48,654	$25,242	55.6 %	$177,100
Topsail Beach	55.6	21.9 %	53.7 %	$55,750	$64,167	$35,838	81.1 %	$281,300
Wrightsville Beach	**37.1**	**41.8 %**	**65.6 %**	**$55,903**	**$71,641**	**$36,575**	**31.3 %**	**$480,600**
Carolina Beach	43.6	56.2 %	68.0 %	$37,662	$44,882	$24,128	42.8 %	$156,000
Kure Beach	50.5	46.3 %	56.7 %	$47,143	$55,875	$26,759	61.2 %	$188,300
Bald Head Island	56.3	14.7 %	39.9 %	$62,083	$56,964	$45,585	87.5 %	$525,000
Caswell Beach	59.9	32.7 %	56.1 %	$57,083	$63,750	$41,731	43.7 %	$242,300
Oak Island	49.2	46.2 %	48.8 %	$40,496	$48,775	$23,964	83.5 %	$119,400
Holden Beach	55.4	18.4 %	49.6 %	$59,583	$70,000	$36,113	84.7 %	$247,300
Ocean Isle Beach	53.4	8.3 %	37.8 %	$67,639	$65,625	$42,605	69.3 %	$340,700
Sunset Beach	60.2	30.5 %	58.5 %	$47,356	$57,019	36,181	51.8 %	$219,600
New Hanover County	36.3	85.6 %	66.5 %	$40,172	$50,861	$23,123	60.7 %	$135,600
North Carolina	35.3	88.9 %	65.7 %	$39,1984	$46,335	$20,307	64.4 %	$108,300
NC Beach Municipal Average.	50.26	31.44 %	56.75 %	$50,356	$57,065	$32,118	59.47 %	$249,145
Wrightsville Beach Rank	**2nd lowest**	**7th highest**	**5th highest**	**6th highest**	**1st highest**	**4th highest**	**3rd lowest**	**3rd highest**

grew during this one year time period (2000 to 2001), at an annual rate of 0.4 percent while New Hanover County increased at a rate of 2 percent during the same period. During the 2000 to 2001 time period Wrightsville Beach's population remained constant at 1.6 percent county's overall population.

The permanent population of Wrightsville Beach in 1990 was estimated to be 2,937 persons. The 10-year growth rate from 1990 to 2000 was –11.7 percent. The growth for the 11-year period was –11.3 percent. Annualized this is equal to a loss of 1 percent of Wrightsville Beach's permanent population per year. The important conclusion to be drawn from these data is that the population of the Town of Wrightsville Beach is currently declining.

Table 3.2: Population

Year	Wrightsville Beach	Percent of County Pop.	New Hanover County
1960	723	1.0%	71,742
1970	1,701	2.0%	82,996
1980	2,786	2.7%	102,779
1990	2,937	2.4%	120,284
2000	2,593	1.6%	160,327
2001*	2,604	1.6%	163,682

Source: United States Census of Population and Housing 1970 to 2000
*NC State Data Center Municipal Population Estimate 2001

Year Round Population Trends

Figures 3.1 and 3.2 examine population growth in Wrightsville Beach and New Hanover County from 1960 to 2000. It is readily apparent that while New Hanover County's population continues to increase steadily, Wrightsville Beach's greatest period of growth was from 1960 to 1980. It then leveled off as the acreage of land available for development declined. Over the last decade, Wrightsville Beach's population has declined.

Table 3.3 shows that from 1960 to1980, Wrightsville Beach's growth rate was faster than New Hanover County and has since declined dramatically. For example, during the 1990 to 2000 period the population of Wrightsville Beach declined by 11.7 percent while New Hanover County increased by 33.3 percent during the same period. To further put this in context, Wrightsville Beach's 11.3 percent population decrease was the 4th greatest loss of population of the 21 barrier island beach municipalities in North Carolina.

The cause of these trends was the unprecedented building boom in New Hanover County triggered in part by the completion of I-40 and the lack of substantial land area available for new development in Wrightsville Beach. The decrease in population from 1990 to 2000 in Wrightsville Beach is also due to other factors including redevelopment and the increase in seasonal homes. For example, the number of seasonal homes increased by 182 percent from 603 seasonal homes in 1990 to 1,100 in 2000. Additional factors contributing to the declining population are:

- Redevelopment-conversion of quadraplexes and triplex structures to larger duplexes and single-family homes;
- The sale of single-family homes occupied by year round residents to owner's who are using them for seasonal purposes; and,
- Redevelopment of smaller single-family homes to larger homes used for seasonal purposes.

Evidence suggests these trends will persist over the next 5 to 10 years and Wrightsville Beach is not expected to experience any significant population growth. Although, given

Figure 3.1: Population Growth in Wrightsville Beach (1960 – 2000)

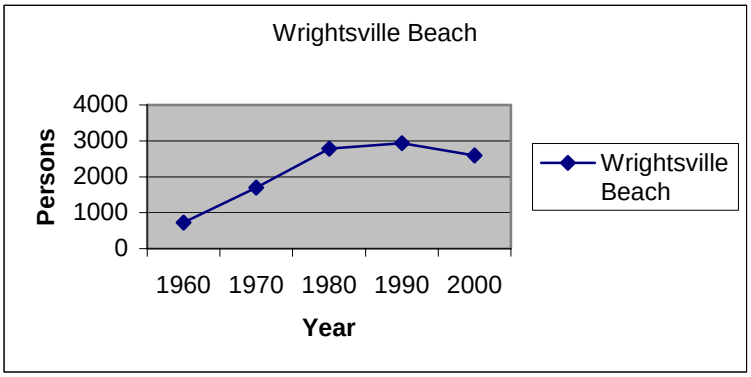

Figure 3.2: Population Growth in New Hanover County (1960 – 2000)

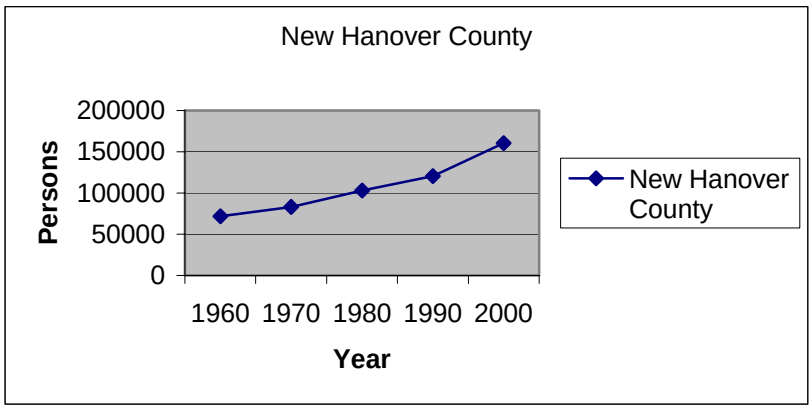

Table 3.3: Percent Population Growth (1960 – 2000)

Decade	Wrightsville Beach	Absolute Increase	Percent Growth	New Hanover County	Absolute Increase	Percent Growth
1960-1970	1,701	978	135.3 %	82,996	11,254	15.7 %
1970-1980	2,786	1085	63.8 %	102,779	19,783	23.8 %
1980-1990	2,937	151	5.4 %	120,284	17,505	17.0 %
1990-2000	2,593	-344	-11.7 %	160,327	40,043	33.3 %
2000-2001*	2,604	11	0.4 %	163,682	3,355	2.1 %

Source: United States Census of Population and Housing 1970 to 2000
*NC State Data Center Municipal Population Estimate 2001

Table 3.4: Population Growth in North Carolina Coastal Communities (1990 - 2001)

Municipality	1990 Population	2001 Population	Percent Growth 1990 - 2001	Percent Growth (Avg. Yearly 90-01)
Sunset Beach	311	1,849	494 %	44.9 %
Ocean Isle Beach	523	441	(15.6 %)	(1.4 %)
Holden Beach	626	819	30.8 %	2.8 %
Oak Island	4,550	6,898	51.6 %	4.6 %
Caswell Beach	175	392	124 %	11.2 %
Bald Head Island	78	184	135 %	12.2 %
Kure Beach	619	1,573	154 %	14 %
Carolina Beach	3,630	5,225	43.9 %	3.9 %
Wrightsville Beach	**2,937**	**2,604**	**(11.3 %)**	**(1 %)**
Topsail Beach	346	481	39 %	3.5 %
Surf City	970	1,423	46.7 %	4.2 %
North Topsail Beach	947	833	(12 %)	(1 %)
Emerald Isle	2,434	3,538	45.3 %	4.1 %
Indian Beach	153	93	(39.2 %)	(3.6 %)
Pine Knoll Shores	1,360	1,529	12.4 %	1.1 %
Atlantic Beach	1,938	1,777	(8.3 %)	(.75 %)
Nags Head	1,838	2,801	52.3 %	4.7 %
Kill Devil Hills	4,238	6,122	44.4 %	4 .0 %
Kitty Hawk	1,937	2,991	54.4 %	4.9 %
Southern Shores	1,447	2,201	52.1 %	4.7 %
Duck	0	459	N/A	N/A

Source: Land Use Plan (Phase I) Surf City 2003

recent development projects in the surrounding areas (e.g., Mayfair), vehicular traffic is likely to increase.

Permanent Population Projections

When preparing a land use plan, it is useful to include a projection of future population so that local decision makers can plan for growth. Typically, population projections for beach communities are presented as an extrapolation from the overall countywide growth trends and historic patterns over the past several decades. This estimation technique would assume that Wrightsville Beach's permanent population would continue to hold steady at around 1.6 percent of New Hanover County's total. Unfortunately, this technique would provide an unrealistic estimate of Wrightsville Beach's population due to the development trends described in this section of the report. Given the lack of developable land and existing height and density restrictions, there is no reason to believe that Wrightsville Beach's population will grow in any significant way over the next 5 to 10 years. Instead, the population is likely to increase or decrease slightly as the ratio of full time to seasonal residents varies. If the current trend towards seasonal housing continues, the population is likely to continue its decline. If the trend reverses itself, the population might increase slightly to around 3,000 but these increases are likely to have a negligible affect on the town's infrastructure or services.

Table 3.5: Persons by Age (1990 – 2000)

Age Group	Wrightsville Beach 1990	Percent Total	Wrightsville Beach 2000	Percent Total	New Hanover County 1990	Percent Total	New Hanover County 2000	Percent Total
0-4	59	2.0 %	78	3.0 %	7,434	6.2 %	9,177	5.7 %
5 to 17	257	8.8 %	152	5.9%	19,880	16.5 %	24,415	15.2 %
18 to 24	551	18.8 %	436	16.8 %	15,000	12.5 %	19,249	12.0 %
25-44	1,107	37.7 %	882	34.0 %	39,155	32.6 %	48,838	30.5 %
45-64	621	21.1 %	657	25.3 %	23,749	19.7 %	38,061	23.7 %
65+	342	11.6 %	388	15.0 %	15,066	12.5 %	20,567	12.8 %
Total	2,937	100.0 %	2,593	100.0 %	120,284	100.0 %	160,307	100.0 %

Source: United States Census Population and Housing 1990 and 2000

Key Population Demographics

In order to better understand the population of Wrightsville Beach, it is informative to examine several of the key population, economic, and housing demographics and compare these with New Hanover County and other NC barrier beach communities [Table 3.1].

Age of the Population

The *median age* of residents of the Town of Wrightsville Beach is 37.1 years. This is comparably young among NC beach communities. In fact, of the 20 barrier beach communities, Wrightsville Beach has the 2nd lowest median age. The low median age may be explained, in part, by its proximity to Cape Fear Community College (CFCC) and the University of North Carolina at Wilmington (UNCW). The barrier beach municipality with the highest median age is Pine Knoll Shores (61.8) and the lowest is Kill Devil Hills (36.7). While younger than other barrier beach communities, the median age is slightly older than the median age in New Hanover County (36.3).

In both 1990 and 2000, on a percentage basis, Wrightsville Beach had fewer school age children than New Hanover County [Table 3.5]. This may be due to the high cost of housing on Wrightsville Beach and the economics of young families. In both 1990 and 2000, there were higher percentages of young adults aged 18 to 24. This may be due to the attractiveness of Wrightsville Beach to college students and young single professionals. In 1990 and 2000, the age groups ranging from 25 to 64 on a percentage basis were more prevalent in Wrightsville Beach than in New Hanover County. In 1990, the percentage of people aged 65 and over in New Hanover County was slightly larger than the percentage in Wrightsville Beach. However, in 2000 the percentage of those 65 and over in Wrightsville Beach was larger than New Hanover County [Table 3.5]. However, while Wrightsville Beach is a young community when compared to other barrier beach communities, it appears to be experiencing a slight aging of its overall population.

Table 3.6: Racial Composition (1990 – 2000)

Race	Wrightsville Beach 1990	Percent Total	Wrightsville Beach 2000	Percent Total	New Hanover County 1990	Percent Total	New Hanover County 2000	Percent Total
Total	2,937	100.0 %	2,593	100.0 %	120,284	100.0 %	160,327	100.0 %
White	2,788	94.9 %	2,544	98.1 %	95,020	79.0 %	128,098	79.0 %
Black	9	0.3 %	7	0.3 %	24,038	20.0 %	27,203	20.0 %
Other	0	0.0 %	42	1.6 %	1,226	1.0 %	5,006	1.0 %

Source: NC State Data Center Municipal Population-Race 1990 and 2000

Table 3.7: Educational Attainment for Persons 25 and Over (2000)

Education Completed	Wrightsville Beach (2000)	Percent Total	New Hanover County (2000)	Percent Total
Less than 9th Grade	15	0.7 %	3,818	3.5 %
9-12 no Diploma	10	0.5 %	10,938	10.2 %
HS Graduate	277	13.5 %	26,327	24.5 %
College, No Degree	378	18.4 %	24,767	23.0 %
Associates Degree	124	6.0 %	8,481	7.9 %
Bachelors Degree	923	44.8 %	23,985	22.3 %
Graduate or Professional Degree	332	16.1 %	9,355	8.7 %
Total	2,059	100.0 %	107,671	100.0 %

Source: United States Census of Population and Housing 2000

Racial Composition

Table 3.6 demonstrates that less than 2 percent of Wrightsville Beach's population is non-white and 0.3 percent is black. This stands in contrast to New Hanover County where 21 percent of the population is non-white and 20 percent is black. Comparing the 1990 and 2000 racial compositions, Wrightsville beach has become slightly more diverse, but still lags far behind New Hanover County [Table 3.6].

Educational Attainment

Residents of Wrightsville Beach are generally better educated than residents in New Hanover County [Table 3.7]. Approximately 99.9 percent of all adults in Wrightsville Beach are high school graduates compared to 86 percent in New Hanover County. Sixty percent of residents have a bachelor's degree or additional advanced degrees compared to only 31 percent in the County.

Table 3.8: Percent Change in the Housing Stock (1990 - 2000)

Housing Units	Wrightsville Beach 1990	Wrightsville Beach 2000	Percent Change	New Hanover County 1990	New Hanover County 2000	Percent Change
Total, All Housing Units	2,413	3,097	28.3 %	57,076	79,616	39.4 %
Total All Single Family Units	1,110	1,283	15.6 %	36,102	52,910	46.5 %
Detached	826	968	17.2 %	33,587	48,320	43.9 %
Attached (Townhouse)	284	315	9.8 %	2,515	4,590	82.5 %
Multi-Family	1,222	1,797	47.1 %	15,683	21,766	38.9 %
2 units per structure	504	720	30.0 %	3,289	4,097	24.6 %
3 to 9 units per structure	352	483	37.2 %	6,957	8,994	29.3 %
10 or more units per structure	366	594	62.3 %	5,437	8,675	10.9 %
Mobile Homes	57	17	-70 %	4,831	4,891	59.6 %
Other	24	0	-	460	49	-838 %

Source: United States Census of Population and Housing 1990 and 2000

Table 3.9: Percent of Housing Stock (1990 – 2000)

	Wrightsville Beach 1990	Percent Total	Wrightsville Beach 2000	Percent Total	New Hanover County 1990	Percent Total	New Hanover County 2000	Percent Total
Total, All Housing Units	2,413	100.0 %	3,097	100.0 %	57,076	100.0 %	79,616	100.0 %
Total All Single Family Units	1,110	46.0 %	1,283	41.4 %	36,102	63.3 %	52,910	66.5 %
Detached	826	34.2 %	968	31.3 %	33,587	58.8 %	48,320	60.7 %
Attached (Townhouse)	284	11.8 %	315	10.2 %	2,515	4.4 %	4,590	5.8 %
Multi-Family	1,222	50.6 %	1,797	58.0 %	15,683	27.5 %	21,766	27.3 %
2 units/structure	504	20.9 %	720	23.2 %	3,289	5.8 %	4,097	5.1 %
3 to 9 units/structure	352	14.6 %	483	15.6 %	6,957	12.2 %	8,994	11.3 %
10 or more units/structure	366	15.2 %	594	19.2 %	5,437	9.5 %	8,675	10.9 %
Mobile Homes	57	2.4 %	17	0.5 %	4,831	8.5 %	4,891	6.1 %
Other	24	1.0 %	0	0.0 %	460	0.8 %	49	0.1 %

Source: United States Census of Population and Housing 1990 and 2000

Housing Stock

Tables 3.8 and 3.9 look at changes in the housing stock in Wrightsville Beach and New Hanover County from 1990 to 2000. It is important to note that due to formatting in census data, some small areas of mainland New Hanover County are included in the figures for Wrightsville Beach. This explains the presence of mobile homes in these statistics even though there are no mobile homes within the Town's corporate limits.

Table 3.10: Age of Structures in Wrightsville Beach

Year Structure Built	Number	Percent
1999 to March 2000	32	1.0 %
1995 to 1998	135	4.4 %
1990 to 1994	434	14.0 %
1980 to 1989	802	25.9 %
1970 to 1979	671	21.7 %
1960 to 1969	313	10.1 %
1940 to 1959	567	18.3 %
1939 or earlier	143	4.6 %
Total	3,097	100 %

Source: United States Census of Population and Housing 2000 and Permit Records
Wrightsville Beach Planning and Parks

Compared to New Hanover County (27.3 percent), a larger percentage of the housing stock on Wrightsville Beach is multi-family development (50.6 percent) [Table 3.9]. The number of single-family homes in New Hanover County increased by 46.5 percent from 1990 to 2000 while it increased only 15.6 percent in Wrightsville Beach [Table 3.8]. These differences are likely to become even more pronounced during the next ten-year period due to the rapid development in New Hanover County and the dwindling supply of vacant lots available for development in Wrightsville Beach. There are approximately 47 undeveloped lots suitable for development left in Wrightsville Beach.

Within the Town of Wrightsville Beach, a relatively small percentage (31.3 percent) of the total housing is in *single-family unit/detached housing*. This is the 3rd lowest percentage of any NC barrier beach community. Although the U.S. census reports that 17 mobile homes are found in Wrightsville Beach, they are actually located in Wrightsville Beach's extra territorial jurisdiction. Therefore, there are no manufactured or mobile homes within the Town limits. The NC barrier beach with the highest percentage of single family/detached homes is Southern Shores (97.4 percent). The lowest percentage of single-family homes is in Indian Beach (2.7 percent) and the 2nd second lowest is Atlantic Beach (30.8 percent). In New Hanover County, 60.7 percent of housing is in single family/detached units while in NC it is 64.4 percent.

Duplexes accounted for 23.2 percent of all housing units in Wrightsville Beach in 2000 compared to only 5.1 percent in the County. The percentage of duplexes in Wrightsville Beach increased slightly from 20.9 to 23.2 percent from 1990 to 2000 while the percentage of duplexes in the County decreased from 5.8 to 5.1 percent. The number of duplexes at Wrightsville Beach increased by 30 percent from 1990 to 2000 while the number of duplexes in the County increased by 24.6 percent over the same period of time.

Housing units with 3 or more units per structure accounted for 29.8 percent of housing in 1990. The percentage increased slightly to 34.8 percent in 2000. Comparatively, the same type of units increased slightly during this period in New Hanover County to 22.2 percent.

Table 3.11: Percent of Owner vs. Renter Occupied Housing (1990 – 2000)

Housing Units	Wrightsville Beach 1990	Percent Total	Wrightsville Beach 2000	Percent Total	New Hanover County 1990	Percent Total	New Hanover County 2000	Percent Total
Total Housing Units	2,413	100.0 %	3,097	100.0 %	57,706	100.0 %	79,616	100.0 %
Occupied	1,401	58.1 %	1,295	41.8 %	48,139	41.8 %	68,183	85.6 %
Owner Occupied	715	29.6 %	712	23.0 %	30,193	23.0 %	44,109	55.4 %
Renter Occupied	686	28.4 %	582	18.8 %	17,946	18.8 %	24,074	30.2 %
Vacant	1,012	41.9 %	1,802	58.2 %	8,937	15.5 %	11,443	14.4 %

Source: 2000 Census of Population and Housing

Table 3.12: Percent Change in Owner vs. Renter Occupied Housing (1990 – 2000)

Housing Units	Wrightsville Beach 1990	Wrightsville Beach 2000	Percent Change	New Hanover County 1990	New Hanover County 2000	Percent Change
Total All Housing Units	2,413	3,097	28.3 %	57,706	79,616	39.5 %
Occupied	1,401	1,295	-7.6 %	48,139	68,183	41.6 %
Owner Occupied	715	712	-0.4 %	30,193	44,109	46.1 %
Renter Occupied	686	582	-15.2 %	17,946	24,074	34.1 %
Vacant	1,012	1,802	78.1 %	8,937	11,443	28.0 %

Source: United States Census of Population and Housing 2000

The number of housing units with 3 or more units per structure increased by 42 percent in the County from 1990 to 2000 while the same units increased by 50 percent in Wrightsville Beach.

Age of Structures: The last inventory of housing age in Wrightsville Beach was during the 2000 U.S. Census. Only 19.4 percent of housing in Wrightsville Beach has been built since 1990. This may be attributed to the fact that there are few developable lots left on Wrightsville Beach. Most future development is expected to be redevelopment rather than new development.

Occupancy: In Wrightsville Beach, 41.8 percent of the total *housing units were occupied year round*. An occupied unit is defined as a unit where a person or group of persons is living at the time the Census is conducted. The occupants must have no other normal place of residence for the unit to be counted as occupied. Similarly, if the occupants are only temporarily absent (i.e., on vacation) the unit is counted as occupied. Wrightsville Beach has 7th highest occupancy rate among NC barrier beach communities. The highest percentage is Carolina Beach (56.2 percent) while the lowest is Bald Head Island (14.7 percent). This statistic characterizes Wrightsville Beach as a mixed resort and residential community, with

Table 3.13: Vacant and Seasonal Housing (1990 – 2000)

Housing Units	Wrightsville Beach 1990	Percent Total	Wrightsville Beach 2000	Percent Total	New Hanover County 1990	Percent Total	New Hanover County 2000	Percent Total
Total of All Housing units	2,413	100 %	3,097	100 %	57,076	100.0 %	79,616	100 %
Vacant	1,012	41.9 %	1,802	58.2 %	8,937	15.7 %	11,443	14.4 %
Seasonal, recreational & occasional use	603	25.0 %	1,118	36.1 %	3,345	5.9 %	4,387	5.5 %
All other vacant	409	16.9 %	684	22.1 %	5,593	9.8 %	7,056	8.9 %

Source: United States Census of Population and Housing 1990 and 2000
*Seasonal: held for occupation during summer
*Occasional Use: Unoccupied but not for rent or for sale

Table 3.14: Percent Change in Vacant and Seasonal Housing (1990 – 2000)

Housing Units	Wrightsville Beach 1990	Wrightsville Beach 2000	Percent Change	New Hanover County 1990	New Hanover County 2000	Percent Change
Total of All Housing units	2,413	3,097	28.3 %	57,076	79,616	39.5 %
Vacant	1,012	1,802	78.1 %	8,937	11,443	28.0 %
Seasonal, Recreational & Occasional Use	603	1,118	85.4 %	3,345	4,387	31.2 %
All other Vacant	409	684	67.2 %	5,593	7,056	26.2 %

Source: 1990 and 2000 Census of Population and Housing

population spiking during summer months and approximately half of the housing standing empty during the winter months. By way of contrast, in North Carolina the percentage of housing units occupied year round is 88.9 percent. In New Hanover County the figure is 85.6 percent.

In Wrightsville Beach, owner occupied housing accounted for 29.6 percent of all units in 1990 and 23.0 percent in 2000 [Table 3.11]. As shown in Table 3.12, the number of occupied units in Wrightsville Beach actually decreased by 7.6 percent from 1990 to 2000 while it increased by 41.6 percent in the county. From 1990 to 2000, the number of owner occupied units also decreased slightly (-0.4 percent) while during the same period the County's owner occupied units increased by 46.1 percent. Renters occupied 28.4 percent of all housing at Wrightsville beach in 1990 and 18.8 percent in 2000. During this same period, renter occupied housing decreased by 15.2 percent at Wrightsville Beach, while in the County renter occupied housing increased by 34.1 percent. The high cost of living and the growth of seasonal, recreational, and occasional housing units helps explain the low occupancy rate. The increased home values and other aforementioned trends in the housing

Table 3.15: Building Permits Issued (2000 – 2003)

Type of Building	2000 (April to December)	2001	2002	2003	Total
Single Family	9	4	7	6	26
Manufactured Home	0	0	0	0	0
Commercial	0	0	0	0	0
Duplex	0	2	3	1	6
Demolish and Rebuild	4	3	8	3	18
Total	13	9	18	10	50

Source: Wrightsville Beach Planning and Inspections Yearly Reports 2000 to 2003

market may also work to decrease the number of properties that are rented on a year round basis in Wrightsville Beach.

Vacant and Seasonal Housing: Given the large influx of seasonal residents, it is useful to understand the vacant and seasonal housing available on Wrightsville Beach. As indicated in Tables 3.13, 41.9 percent of all housing at Wrightsville Beach was vacant in 1990. Of this, 25 percent was for seasonal, recreational or occasional use, which is defined as vacant but not for rent or sale. In 2000, the percentage of vacant housing increased to 58.2 percent with 36.1 percent used for seasonal, recreational or occasional purposes. This translates into an 85.4 percent increase in the housing used for seasonal, recreational or occasional purposes during the 1990 to 2000 time frame. During the same period, there was only a 28.3 percent increase in housing units [Table 3.14].

The vacancy rates are obviously much higher in Wrightsville Beach due to the large number of seasonal properties and the influx of seasonal residents, many of whom rent properties for some period of time. For example, New Hanover County as a whole had a very low rate of vacancy during this time period. In 1990, 15.7 percent of all units were vacant, with 5.9 percent being used for recreational purposes. In 2000, 14.4 percent of all housing was vacant in New Hanover County with 5.5 percent being used for recreational purposes [Table 3.13]. However, the vacancy rate for non-seasonal housing in Wrightsville Beach is much higher than in the county as a whole and has increased at more than twice the pace of the county vacancy rate. This reflects the increase in rental units available in Wrightsville Beach.

Development and Redevelopment Activity: Another important trend is the redevelopment of existing parcels now that there are few vacant lots available for development. Table 3.15 reports on the building permits issued from April 2000 until the end of 2003. Of the 50 newly erected structures, 18 were built on lots where the previous structure was destroyed or removed in order for construction to occur. Table 3.16 looks at all development and redevelopment activity from 2000 to 2003. A similar pattern emerges with a significant amount of redevelopment activity. During this 3-year period, 31 new residential structures were built; 28 (or 90 percent) of which were single-family homes and 3 were duplexes. During this same period, 23 projects demolished and rebuilt either a single-family or duplex structure and 10 sites were demolished and await reconstruction [Table 3.16]. Of the 23

Table 3.16: Development and Redevelopment Activity (2000 – 2003)

Type of Development	2000	2001	2002	2003	Total
New Single Family	11	4	7	6	28
New Duplex	0	2	0	1	3
Demolish And Rebuild Commercial	1	0	0	0	1
Demolish and Rebuild Single Family	1	2	3	2	8
Demolish and Rebuild Duplex	1	1	4	0	6
Demolish Single Family Rebuild Duplex	4	0	0	1	5
Demolish Duplex Rebuild Single Family	0	0	1	0	1
Demolish Multifamily rebuild Duplex	2	0	0	0	2
Demolished Not Rebuilt	5	2	1	2	10
Modifications	243	265	225	226	959

Source: Wrightsville Beach Planning and Inspections Yearly Reports 2000 to 2003

structures classified as redevelopment, 15 (65 percent) remained at their current use level. Five lots (22 percent) increased usage by converting from a single-family development to a duplex. Three lots (13 percent) decreased usage by converting from either multi-family development to duplexes or to single-family homes.

Housing Value

One measure of a community's vitality is the value of its housing stock. Since Wrightsville Beach is a barrier beach community, it is not surprising to find that the value of owner occupied units is generally much higher at Wrightsville Beach than in the County. Over 47.3 percent of owner occupied housing at Wrightsville Beach is valued at $500,000 or greater. In comparison, only 4.1 percent of housing is valued above $500,000 in New Hanover County. Not surprisingly, the cost of rent is also much higher at Wrightsville Beach than in the County. In Wrightsville Beach, 80.8 percent of rent is above $750 while in New Hanover County only 42.4 percent of rent is above $750.

The *median value of owner occupied housing* in the Town of Wrightsville Beach is $480,600. This is the 3rd highest value amongst NC barrier beach communities. The NC Barrier Island Beach municipal average is $249,145. By way of contrast, New Hanover County's median value of owner occupied housing is $135,600 while in North Carolina it is $108,300. The highest median value for owner occupied housing is at Indian Beach ($625,000). The 2nd highest is at Bald Head Island ($525,000). The lowest median value of owner occupied housing is in Kill Devil Hills ($104,500).

Table 3.17: Housing Value For Owner Occupied Housing Units (2000)

Values	Wrightsville Beach 2000	Percent Total	New Hanover County 2000	Percent Total
Less Than $50,000	0	0.0 %	966	2.6 %
50-99,000	22	4.3 %	9,017	24.0 %
100-149,999	14	2.7 %	11,783	31.4 %
150-199,999	23	4.5 %	6,916	18.4 %
200-299,999	74	14.4 %	4,633	12.3 %
300-499,999	138	26.8 %	2,647	7.1 %
500,000-999,9999	201	39.1 %	1,251	3.3 %
1,000,000+	42	8.2 %	304	0.8 %
Total	514	100.0 %	37,517	100.0 %

Source: United States Census of Population and Housing 2000

Table 3.18: Contract Rent for Renter Occupied Housing Units (2000)

Contract/Rent	Wrightsville Beach 2000	Percent Total	New Hanover County 2000	Percent Total
Gross Rent				
Less than $200	0	0.0 %	1,516	6.3 %
$200-$299	0	0.0 %	1,011	4.2 %
$300-$499	13	2.2 %	3,829	15.9 %
$500-$749	77	12.7 %	9,454	39.3 %
$750-$999	236	39.1 %	5,329	22.2 %
$1,000-$1,499	183	30.3 %	1,755	7.3 %
$1,500 or more	69	11.4 %	306	12.9 %
No Cash Rent	26	4.3 %	841	3.5 %
Total	604	100.0 %	24,041	100.0 %

Source: United States Census of Population and Housing 2000

Income

Given the value of its housing stock, it should not be surprising to find that Wrightsville Beach is an affluent community with approximately 53.8 percent of the population making more than $50,000 per year. The U.S. Bureau of the Census gathered the latest information on the income in Wrightsville Beach in 2000 but the income information was gathered from the previous year. Consequently, the latest information available is for the calendar year 1999 [Table 3.19 & 3.20.]

The *median household income* in Wrightsville Beach is $55,903 making it the 6th highest amongst NC barrier beach communities. This is substantially higher than New Hanover County ($40,172). The highest median household income among NC barrier beach

Table 3.19: Income (1999)

Income Range	Number	Percent
Less than $10,000	73	5.5 %
$10,000 to $14,999	25	1.9 %
$15,000 to $24,999	132	9.9 %
$25,000 to $34,999	198	14.8 %
$35,000 to $49,999	190	14.2 %
$50,000 to $74,999	298	22.3 %
$75,000 to $99,999	171	12.8 %
$100,000 to $149,999	68	11.5 %
$150,000 to $199,999	28	2.1 %
$200,000 or more	153	5.1 %

Source: United States Census Population and Housing 2000

Table 3.20: Median Incomes (1999)

Wrightsville Beach Income	1989	1999	Percent Growth
Median Income Households	$35,455	$55,903	57.7 %
Median Income Families	$46,789	$71,641	53.1 %
Per Capita Income	$29,722	$36,575	23.1 %

Source: North Carolina State Data Center Municipal Data 1989 and 1999

communities is in Ocean Isle ($67,639) and the lowest is found in Carolina Beach ($37,662). The *median family income* in Wrightsville Beach ($71,641) is the highest of all NC barrier beach communities and is substantially higher than New Hanover County ($50,861) and North Carolina ($46,335). By way of contrast, the lowest median family income is in Kill Devil Hills ($44,681).

The *per capita income* in Wrightsville Beach is $36,575, making it the 4th highest among NC barrier beach communities. This is substantially higher than New Hanover County ($23,123) and North Carolina ($20,307). The highest per capita income among NC barrier beach communities is at Bald Head Island ($45,585) while the lowest is Kill Devil Hills ($20,679).

The important conclusion to draw from these data is that regardless of how you measure income in Wrightsville Beach, the trends over the last decade are towards a growth in income with median household income rising by 57.5 percent, median family income increasing by 53.1 percent, and per capita rising 23.1 percent.

Table 3.21: Poverty Status

Poverty Status 1999	Wrightsville Beach (Number)	Wrightsville Beach	New Hanover County	North Carolina
Families	12	2.0 %	8.3 %	9.0 %
Families with related children under 18	12	7.1 %	13.6 %	13.3 %
Families with related children under 5	0	0 %	15.6 %	16.5 %
Families with female householder with no husband present	12	20 %	18 %	27.4 %
With related children under 18	12	40 %	38.6 %	34.3 %
With related children under 5	0	0 %	51.2 %	45.9 %
Individuals	255	9.5 %	13.1 %	12.3 5
18 years and over	233	9.5 %	12.2 %	11.0 %
65 years and over	9	2.2 %	9 %	13.2 %

Source: United States Census of Population and Housing 2000

Low and Fixed Income Populations

Given the high rent and home values, it should not be surprising to learn that there is very little of what the U.S. government refers to as "poverty" in Wrightsville Beach. However, because the Census includes areas within Wrightsville Beach's ETJ, there are 12 households or 2 percent of the population defined as living in poverty. The average amount of public assistance income for this population was $4,200. By way of contrast, in Wrightsville Beach there are 249 households earning in excess of $100,000, approximately 20 percent of all households. Moreover, the percentage of persons living in poverty in Wrightsville Beach (2.0 percent) is lower than the percentages found in the state (9.0 percent) and New Hanover County (8.3%).

The number of households in Wrightsville Beach reporting Social Security income is 310 with the median social security income per household was $12,509. The number of Wrightsville Beach households reporting retirement income was 179 with a mean retirement income of $28,427. By way of contrast, North Carolina's mean retirement income was $16,831. Thus, there is a significant population of retired individuals, many of which may be on fixed incomes. However, these retirees are more affluent than those found elsewhere in the county or state.

Table 3.22: Employment Status

Wrightsville Beach Employment Status	Number	Percent
Population 16 years of age and over	2,514	100 %
In Labor Force	1,648	65.6 %
Civilian Labor Force	1,609	64 %
Employed	1,577	62.7 %
Unemployed	32	1.3 %
Armed Forces	39	1.6 %

Source: United States Census of Population and Housing

Table 3.23: Wrightsville Beach Occupation

Occupation	Number	Wrightsville Beach Percentage	New Hanover County Percentage
Management, Professional, and related	624	39.6 %	34.5 %
Service	287	18.2 %	16.5 %
Sales and Office	428	27.1 %	27.0 %
Farming, Fishing, and Forestry	0	0.0 %	0.2 %
Construction, Extraction, and maintenance	159	10.1 %	10.7 %
Production, Transportation, and material moving	79	5 %	11.1 %

Source: United States Census of Population and Housing 2000

Local Economy

A vibrant economy is essential to assure a community's continuing prosperity. Wrightsville Beach is a mixed community with almost 50 percent of housing occupied year round. During the summer months, the Wrightsville Beach population more than doubles as tourists and vacationers as well as summer residents flood the island. Accordingly, Wrightsville Beach is dominated by a service-based economy. No traditional industry is found on the island. Many of the year round residents work in the New Hanover County area. Approximately 85.7 percent of all persons employed who live in Wrightsville Beach drive to work alone while 5.1 percent car pool. Many of the service jobs related to tourism on Wrightsville Beach are occupied by non-Wrightsville Beach residents seeking temporary employment during summer months or by local students from area high schools and colleges (e.g., CFCC, UNCW).

Table 3.24: Employed Persons 16 and Over (2000)

Industry	Wrightsville Beach 2000	Percent Total	New Hanover County 2000	Percent Total
Agriculture Forestry fishing hunting and mining	0	0.0 %	369	0.5 %
Construction	151	9.6 %	8,130	10.0 %
Manufacturing	65	4.1 %	8,001	9.8 %
Wholesale Trade	70	4.4 %	2,480	3.1 %
Retail Trade	153	9.7 %	11,407	14.0 %
Transportation, Warehousing and Utilities	36	2.3 %	3,349	4.1 %
Information	54	3.4 %	2,013	2.5 %
Finance, Real Estate, Rental and Leasing	174	11.0 %	5,060	6.2 %
Professional scientific, management, administrative, and waste management services	229	14.5 %	7,693	9.5 %
Educational Health and Social Services	255	16.2 %	16,202	19.9 %
Arts, Entertainment, Recreation, Accommodation and Food Services	304	19.3 %	8,761	10.8 %
Other Services (Except Public Administration)	60	3.8 %	4,408	5.4 %
Public Administration	26	1.6 %	3,365	4.1 %
Total Employed Persons 16+	1,577	100.0 %	81,238	100.0 %

Source: United States Census of Population and Housing 2000

Employment

The *percentage of persons in the labor force* (16 and over) at Wrightsville Beach is 65.6 percent making Wrightsville Beach the 5th highest among NC barrier beaches [Table 3.22]. This is likely due to the younger median age in Wrightsville Beach. This is also comparable to the percentage of persons in New Hanover County in the workforce (66.5 percent). It is also similar to the percentage of the total North Carolina population in the work force (65.7 percent). Examining Table 3.23, it appears that slightly more Wrightsville Beach residents work in the sectors of management, professional and related occupations, and service occupations than is found in New Hanover County. This is likely due to the well-educated population and the Island's reliance on service-oriented business establishments.

Table 3.24 summarizes employment patterns of permanent residents in Wrightsville Beach 16 and over. Employment patterns are similar to those found in New Hanover County. However, a few differences deserve attention. Manufacturing employs only 4.1 percent of Wrightsville Beach residents but almost 10 percent of New Hanover County residents. Finance and real estate employ 11 percent of Wrightsville Beach residents and 6.2 percent of the New Hanover County. Professional, scientific, management, administrative and waste management industries employ 14.5 percent of residents of Wrightsville Beach but only 9.5 percent of the County. The larger number of residents employed in finance, real estate and professional industries also reflect its more educated population and higher median income. Approximately one-fifth of Wrightsville Beach residents are employed by arts, entertainment, recreation, accommodation, or food services, compared with 10.8 percent of

Table 3.25: Wrightsville Beach Class of Worker

Class of Worker	Number	Wrightsville Beach 2000 (Percent)	New Hanover County 2000 (Percent)
Private Wage and Salary	1255	79.6 %	77.5 %
Government	128	8.1 %	14.2 %
Self-employed	194	12.3 %	8.0 %
Unpaid Family	0	0.0 %	0.4 %

Source: United States Census Population and Housing 2000

Table 3.26: Unemployment

Area Unemployment Rates - 2003	October 2003	3 months prior	6 months prior	12 months prior
New Hanover County	4.7%	5.4%	5.1%	6.1%
Pender County	6.1%	7.6%	7.2%	8.5%
Brunswick County	4.6%	5.9%	6.2%	6.2%
North Carolina*	6.2%	6.5%	6.2%	6.6%

Source: North Carolina Employment and Security Commission Labor Market Information Division
*North Carolina Percentages begin in November not October

the County. This can be explained by it being a tourism destination and its younger age structure. There are slightly more private wage and salary workers and self-employed workers in Wrightsville Beach than in New Hanover County [Table 3.25].

Unemployment

Unemployment tends to be a lagging indicator in that it follows the business cycle. Overall, unemployment rates generally declined between October 2002 and October 2003. New Hanover County has the lowest unemployment rates in the region and these rates are generally below those found at the state level.

Retail Sales

Another measure of a community's economic vitality is its retail sales. According to Wilmington Industry, with the exception of Brunswick County, retail sales decreased in 2001 (most recent data available). They rose 1.1 percent in Brunswick County to $844.1 million. They fell 2.9 percent in Pender County to $236.1 million. Sales in New Hanover County fell 3.4 percent to 3.2 billion. Statewide, sales fell 4.6 percent to 126.7 billion. The 2001

Table 3.27: Tourism Revenues in New Hanover County($ Millions)

Year	$Millions
1990	$153.23
1991	$172.04
1992	$172.46
1993	$185.93
1994	$202.84
1995	$220.91
1996	$235.07
1997	$242.26
1998	$257.41
1999	$294.08
2000	$309.77
2001	$300.75
2002	$302.59

changes compare to growth rates of 13 percent in Brunswick County, 9.7 percent in New Hanover County, and 1.3 percent in Pender County and 5.8 percent in the state. The sales data is somewhat older than the unemployment data, which indicates a growing rather than a shrinking economy.

Summary of Community Economic Activity

Wrightsville Beach's economy generally reflects the trends that occur in New Hanover County and the larger tri-county region. Therefore, it is expected that as the regional economy improves, so will Wrightsville Beach's. Wrightsville Beach is also heavily dependent on the tourism industry. In general, if this industry is doing well, the Town's economy is doing well. Thus, the local economy is affected by larger statewide and national fluctuations in the economy that influence tourism. However, as noted in Table 3.27, the growth in county tourism revenue has flattened out. The same trend appears to hold on the Island and may be due to the limited season and the limited number of hotel rooms. Moreover, as described in Section IV, the local economy can also be influenced by events outside of human control (e.g., weather, hurricanes).

Future Population Estimates

Given the large influx of summer tourists and the corresponding impacts on the Town's infrastructure, services, and natural resources, it is important to have good estimates of the seasonal population. The following distinctions are useful to consider:

- ***Permanent population***: year round residents who declare Wrightsville Beach as their primary residence on their census form and other government documents. This includes people who both own and rent residential property on a year round basis.

Table 3.28: Wrightsville Beach Motels & Number of Rooms

Name of Hotel	# of Units
Blockade Runner	150
Carolina Temple Apartments	16
Harbor Inn	20
Holiday Inn Sunspree	184
Ocean View Motel	40
One South Lumina	21
Sandpeddler Motel and Suites	21
Shell Island Motel and Suites	160
Silver Gull Motel	32
Station One, Inc	104
Summer Sands Motel Suites	32
The Surf Suites	45
The Glenn	25
Waterway Lodge	42
Total	892

Source: http://www.cape-fear.nc.us/

- ***Seasonal population***: people who are temporary residents of Wrightsville Beach who either rent or own property but declare another location as their primary residence. This includes people who own or rent property and reside at Wrightsville Beach for the summer season or perhaps visit only on weekends. It also includes the additional population occupying housing units rented on a weekly or monthly basis. Given the transitory nature of this population, it is likely to vary over the course of the summer and during any given week with lower numbers on weekdays and higher numbers on weekend days.

Related to seasonal population is the *peak seasonal population*. This figure is the largest and is the combination of the permanent and seasonal residents plus the additional visitors, guests, and tourists that visit the Island during a peak summer *weekend day* rather than a typical weekday.

While it is important for planning purposes to know these numbers, they are difficult to estimate with any precision and require making assumptions based upon experience and an understanding of the underlying population demographics, seasonal tourism industry, and the habits of beach goers. In making these estimates, it is also important to use a variety of techniques whenever possible to help evaluate the reasonableness of the assumptions used by any one technique.

One of the most frequently used techniques is to simply base the estimate on the number of housing units by determining what a typical occupancy rate might be and how many people per housing unit occupy a unit on average. According to the 2000 Census and the number of building permits issued for residential construction issued between 2000 and 2003 as determined by the Wrightsville Beach Department of Planning and Parks, there were

Table 3.29: High and Low Seasonal Population Estimates

	Low[1]		High[2]	
Housing Units	**Persons/unit**	**Total**	**Persons/unit**	**Total**
Permanently Occupied Housing (1,308)	2.27	2,969	3.02	3,950
Seasonal or Recreational Housing (1,130)	4.5	4,322	6.5	6,978
Vacant Housing (692)	4.5	2,336	6.5	4,273
Hotel/Motel Rooms (892)	2.5	2,007	3.5	3,122
Total		11,634		18,323

[1]For the low estimate, the following assumptions were used to calculate the total number of persons: .25 guests per permanent housing unit on average; 85% occupancy rate for seasonal recreational housing; 75% occupancy rate for vacant housing; and 90% occupancy rate for hotel rooms.
[2]For the high estimate, the following assumptions were used to calculate the total number of persons: 1 guest per permanent housing unit on average; 95% occupancy rate for seasonal recreational housing; 95% occupancy for vacant housing; and, 100% occupancy rate for hotel rooms.

approximately 3,130 housing units in Wrightsville Beach in 2003. If we assume the same occupancy rate for 2003 as the U.S. Bureau of Census found in 2000 (41.8 percent), there are 1,308 housing units occupied by permanent residents in 2003. This equates to an average of 2.02 persons per unit. Using the same methodology, there were 1,130 seasonal and recreational housing units, and vacant housing accounted for additional 692 units. For the purposes of this analysis, vacant housing is treated similar to seasonal and recreational housing in terms of the assumptions made about the number of persons per unit, however, slightly different occupancy rates are used in the calculations. There are also 892 hotel rooms [Table 3.28].

Table 3.29 summarizes the seasonal population projections and it includes both a high and a low estimate. The high estimates use many of the standard estimates of the number of persons per unit used by other barrier beach communities, however, only a 95 percent occupancy rate was used in calculating seasonal and vacant housing [See Table 3.29]. Since the assumptions made in other barrier beach communities may be unrealistic given the higher rental costs and home values in Wrightsville Beach, a low estimate was also calculated using more conservative estimates of the average number of people per unit and occupancy rates.

The high and low estimates make several assumptions. First, to account for occasional visitors staying with year round residents, the high estimate assumes that there is an additional person per unit (3.02). The low estimate drops this estimate to .25 persons per unit (2.27). In both cases, a 100 percent occupancy rate is assumed. Second, the high estimate uses the standard number used for the number of occupants in a vacation cottage (6.5 persons per unit) and assumes a 95 percent occupancy rate for seasonal and vacant housing units. The low estimate drops the average number of people per unit to 4.5 per unit and assumes an 85 percent occupancy rate for seasonal housing and a 75 percent occupancy rate for vacant housing. Finally, the high estimate uses the standard number of 3.5 persons per hotel/motel unit with a 100 percent occupancy rate. The low estimate assumes only 2.5 per hotel/motel

unit and a 90 percent occupancy rate. The calculations are fairly simple and involve using the following equations:

(# units) X (Occupancy rate) X (# of people per unit) = # of people

These calculations produce a high estimate of 18,323 and a low estimate of 11,634 people with a mid-range estimate of around 14,979. Thus, while the high estimates may typify a peak summer weekend (e.g., July 4th), the low estimate may better reflect an average summer weekend. In either case, these numbers reflect the population on weekends as compared to a weekday where the number of people per unit and the occupancy rates will be substantially lower.

These figures do not include people who may travel to the island during the day. This additional strain on the Town's infrastructure is difficult to estimate. However, data from the Wrightsville Beach 2003 Survey of Beachgoers provide information that allows us to make some informed assumptions about these travel behaviors. The average carload of people traveling to the beach is unlikely to be much larger than 4 people and is probably closer to 3 people. The typical length of stay at the beach is about 5 hours. Since people tend to arrive at the beach after 11 AM, only a limited turnover in the spaces is likely to occur by beachgoers. People also travel to the Island for shopping and to frequent restaurants.

It is hard to estimate these numbers with any precision because you run the risk of double counting since some of these people have already been counted in the estimates of the seasonal population. What is known is that there are 1,792 public parking spaces on the Island, 1,479 of which are located on Wrightsville Island and are used by beachgoers. If we assume an average of 3 people per car and that all of the spaces turn over 1.5 times, 6,700 people may travel to the beach by automobile in any given weekend day. There are an additional 313 spaces on Harbor Island. It is unclear what the use pattern is for these spaces although at least some of these spaces may accommodate people traveling to Harbor Island for shopping or food. It is also probable that some number of people visit the Island during the evening hours for shopping and food.

Alternative Ways of Estimating Peak Population

It is also useful to look at other ways of estimating peak population. Given its geographic configuration with only one entry point at the Heide Trask Bridge over the ICW, it might be possible to estimate changes in seasonal population by looking at changes in the traffic counts at the bridge. Traffic counts were obtained for January 7 through January 13 and July 27 through August 1. The lowest total traffic count observed was 17,963 on January 10, 2003 (Friday). This included 8,892 cars leaving the island and 9,071 entering the island. By way of comparison, the average daily traffic leading across the bridge to Wrightsville Beach in 2003 was 22,000. This does not reflect any seasonal fluctuation, only the overall yearly average. This typifies the average amount of traffic generated by year round residents an businesses operating on Wrightsville Beach on a year round basis.

During the July 27-August 1 counts the highest total count observed was 44,785 on July 27, 2003 (Sunday). This included 21,902 cars entering the Island and 22,883 exiting the Island. Subtracting the total trips observed in January, 26,822 additional car trips were observed on the Island in the summer compared to the winter. This indicates that there is 2.5 times more traffic over the bridge during the summer compared to the winter. If one assumes that the travel patterns of year round residents are similar to seasonal residents, this might suggest an average summer population of around 6,492. However, since the summer traffic counts include people visiting the beach, this likely overestimates the average seasonal population.

It is also possible to estimate seasonal population by comparing town service delivery over the course of the year by comparing water consumption and wastewater discharges during summer and winter months using the figures provided later in Section VII. The lowest month for average daily use of water is January with 557,000 gallons. The highest month for average daily use is July with 1.621 million gallons. Approximately 40 percent of this increased water use is for irrigation purposes (648,400 gallons), which reduces the volume to 972,600 gallons. Accordingly, average daily water use is 1.75 times greater during summer months. If we assume that water use patterns among seasonal residents during summer months are similar to permanent residents in winter months, then the average seasonal population would be approximately 4,547.

In terms of average daily wastewater discharges, the lowest month is January with an average daily discharge of 406,000 gallons. The highest month is July with an average daily discharge of 892,000 gallons. Accordingly, wastewater discharges are 2.2 times higher in the summer than in the winter. Assuming that seasonal residents use their toilets in a manner similar to year round permanent residents, then the average seasonal population would be approximately 5,721.

Using these alternative estimation techniques, the average seasonal population appears to be somewhere between 4,547 and 5,721. Since the water consumption and wastewater numbers are based on average daily use, it is important to remember that the population for five weekdays could be much lower than the two weekend days. Using the following algebraic formula, it is possible to estimate various peak seasonal populations based on different assumptions about the summer weekday populations:

$$2x + 5y = 5{,}721 \text{ X } 7$$
$$2x = 40{,}047 - 5y$$
$$x = 20{,}024 - 5/2y$$

Where
x = population on a weekend day
y = population on a weekday

Using this formula, a population of 4,000 on a summer weekday equates to 10,024 on a weekend day. A population of 3,500 on a summer weekday would equate to 11,275 on a weekend day. These estimates are similar to the lower estimates of the peak seasonal population described in the previous section.

Section IV

Natural Systems

Introduction

Protecting and enhancing Wrightsville Beach's natural systems is critical to the quality of life of residents and visitors. Previous land use plans demonstrate a strong commitment to preserving the beautiful and abundant natural resources of the Town. Accordingly, any residential, commercial, or other development activities permitted by the Town of Wrightsville Beach shall be compatible with current regulations, development patterns, Areas of Environmental Concern (AEC), wetlands requirements, soil suitability, and must take measures to mitigate any potential environmental degradation. This section of the land use plan describes and analyzes the natural features and environmental conditions within the jurisdiction of the Town of Wrightsville Beach.

One of the basic purposes of the North Carolina's Coastal Area Management Act (CAMA) is to establish a management program capable of rational and coordinated management of coastal resources. Development of local land use plans and the designation and regulation of AECs provide the foundation for North Carolina's coastal resource management program. In combination, these mechanisms allow state and local governments to preserve and enhance the state's coastal resources. State guidelines have been adopted to ensure uniformity and consistency in land use plans and in the regulation of AECs, however, local governments have a lot of flexibility when developing polices and taking actions to protect them. Accordingly, an important component of this Phase I report is to identify those AECs present within the Town of Wrightsville Beach's jurisdiction.

Areas of Environmental Concern

The *State Guidelines for Area of Environmental Concern* (15A NCAC 7H, or regulations governing development for AECs) require that local land use plans give special attention to the protection of appropriate AECs. CAMA charges the Coastal Resources Commission (CRC) with the responsibility for identifying the areas—water and land—in which uncontrolled or incompatible development might result in irreversible damage. CAMA further instructs the CRC to determine what development activities are appropriate in such areas, and local governments are required to give special attention to these areas when developing its land use plan. An AEC is an area of natural importance designated by the CRC. An AEC may be easily destroyed by erosion or flooding. It may also have

environmental, social, economic or aesthetic values worthy of protection. AECs have also been designated to protect them from uncontrolled development that causes irreversible damage to property, public health, or the environment.

To limit detrimental impacts on AECs, CAMA establish a permitting program. The intent of the permitting program is not to stop development, but rather to ensure the compatibility of development with continued productivity and value of critical land, waters and natural resources. Responsibility for the permitting program is shared between the CRC and local governments. Local governments permit "Minor" development activities, while "Major" development activities require permits from the CRC (DCM personnel are the staff representatives of the CRC). This permitting process is discussed in Section V.

The CRC established four categories of AECs:

- Estuarine and Ocean Systems
- Ocean Hazard Systems
- Public Water Supplies
- Natural and Cultural Resource Areas

Two categories of AECs are not present within the Town of Wrightsville Beach's jurisdiction, public water supplies and natural and cultural resources areas. The two categories found within Town's jurisdiction are *Estuarine and Ocean Systems*, and *Ocean Hazard Systems*. As a result, shoreline erosion is an important issue for residents in the Town of Wrightsville Beach. According to a study conducted by the NC Division of Coastal Management, the long-term average annual erosion rate within the Town of Wrightsville Beach is 2 feet per year.

Estuarine and Ocean System

The *estuarine and ocean system AEC* is a broad category that includes the Town's sounds, marshes, and the surrounding shorelines. The system includes the following components:

- Estuarine waters;
- Estuarine shorelines;
- Coastal wetlands; and,
- Public trust areas.

Estuarine Water: Estuarine waters include all waters of the Atlantic Ocean with the boundary of North Carolina and all waters of the bays, sounds, rivers, and tributaries seaward of the dividing line between coastal fishing waters and inland fishing waters (*GS 113A-113(b)(2)*). Wrightsville Beach's estuarine waters include the Intracoastal Waterway (ICW), Masonboro Sound, Mott's Channel, Lee's Cut, and Bank's Channel. Estuaries are extremely productive natural systems [See AEC Coastal Wetlands and Estuarine Waters Map in Appendix A]. Masonboro Sound, located adjacent to the Town's ETJ, was also nominated as an outstanding resource water (ORW) by the state.

Estuarine waters in and around Wrightsville Beach provide important habitat for a diverse range of shellfish, birds and other forms of marine wildlife. Important habitat features of an estuarine system include its mud and sand flats, eel grass beds, salt marshes, submerged vegetation flats, clam and oyster beds. They provide nursery areas and serve as habitat for a variety of marine and benthic species. Generally speaking, development activities which are water dependent and require water access and cannot function elsewhere such as simple access structures, structures to prevent erosion, boat docks, marinas, wharves and mooring piling may be allowed within this AEC.

Estuarine Shoreline: The estuarine shoreline is the non-ocean shoreline, extending from the normal high water level or normal water level along the estuarine waters, estuaries, sounds, bays, fresh and brackish waters, and public areas (15NCAC 7H.0209). For non-Outstanding Resource Waters, the estuarine shoreline is defined as 75-feet landward from mean high water line (MHWL) [See AEC Coastal Wetlands and Estuarine Waters Map in Appendix A]. For ORW waters the distance is 575 feet, however, there are no ORW waters within Wrightsville Beach. CAMA permits control development within the shoreline areas. Generally, development in this area may not weaken natural barriers to erosion, must have limited hard surfaces, and must take steps to prevent pollution of the estuary by sedimentation and runoff.

Coastal Wetlands: The U.S. Army Corps of Engineers (COE) defines wetlands as those areas inundated and saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands have significant values that support the unique lifestyle and quality of life enjoyed by Wrightsville Beach residents and visitors. These values include:

- ***Water Storage***: wetlands are able to store heavy rain, surface runoff, and flood waters, and thereby reduce downstream flooding
- ***Shoreline Stabilization***: ground cover and roots of wetland plants help hold soils in place and prevent sedimentation and nutrient transport
- ***Water Quality***: wetlands plants can enhance water quality by removing pollutants from surface water runoff
- ***Wildlife and Aquatic Habitat***: the variety of plants, hydrologic and soil conditions associated with wetlands provide abundant food and cover for animal populations and support a number of endangered species and other rare plants and animals.
- ***Recreation and Education***: the rich array of plants and animals supported by wetlands provide significant consumptive and non-consumptive use values such as hunting, fishing, bird watching, kayaking, etc.

CAMA defines coastal wetlands as any salt marsh or other marsh subject to regular or occasional flooding by tides and contains some, but not necessarily all of the following marsh plant species: Cord Grass, Black Needlebrush, Glasswort, Salt Grass, Sea Lavender, Bulrush, Saw Grass, Cat-tail, Salt Meadow Grass, Salt Reed Glass. This definition does not

include flooding by tides associated with hurricanes, tropical storms, or severe weather events (15A NCAC 07H.0206).

According to mapping developed by the DCM, Wrightsville Beach has coastal wetlands of the brackish saltwater variety. There are 114 acres of Wetlands within Town limits, of which 112 acres are coastal wetlands or salt water marsh. Therefore, coastal wetlands comprise 8.5 percent of the land area within Wrightsville Beach. There are also 1,114 acres of coastal wetlands in the ETJ [See AEC Coastal Wetlands and Estuarine Waters Map in Appendix A]. Coastal wetlands are considered to be unsuitable for all development activities and other land uses that alter their natural functions.

Public Trust Areas: Public trust areas include coastal waters and the submerged tidal lands below the MHWL. The water and submerged tidal lands are held in trust for the public to use through such activities as fishing, swimming, and boating. These areas will often overlap with estuarine waters, but they also include many inland fishing waters. As general guidance, the following lands and waters are considered to be public trust areas:

- All waters of the Atlantic Ocean and the lands underneath, from the MHWL seaward to the state's official boundary three miles offshore;
- All tidally influenced waters below and associated submerged lands below the MHWL;
- All navigable natural water bodies and the lands underneath from the normal high water line seaward (Navigable waters include anything you can float a canoe in). This does not include privately owned lakes where the public doesn't have access rights;
- All water in artificially created water bodies that have significant public fishing resources and are accessible to the public from other waters; and,
- All waters in artificially created water bodies where the public has acquired rights by prescription, custom, usage, dedication or any other means (CAMA Handbook for development in coastal North Carolina).

Accordingly, the Town or Wrightsville Beach's public trust waters include all estuarine waters, their tributaries, and the Atlantic Ocean.

Since the submerged tidal waters are held in trust for the public, the state's policy is to ensure that the public is able to maintain access to these waters. Accordingly, development, structures, and land uses that interfere with public's rights to access and use of these waters is inconsistent with state policy. Conversely, navigation channels, piers, marinas, and bulkheads to control erosion are examples of uses that are frequently considered to enhance the public's use of these public trust areas.

An issue of growing concern in Wrightsville Beach is the growth in user conflicts associated with uses of public trust waters, particularly conflicts associated with jet skis and other personal watercraft. Concerns have been raised regarding the tendencies of jet skiers to operate watercraft in a reckless and dangerous manner. Other concerns relate to their operation in marshes and other shallow estuarine waters, where damage to the marsh occurs

and where waterfowl is disturbed. In 2002, the Town of Wrightsville Beach developed a *Surface Water Use Plan.* This plan identified user conflicts on public trust waters and recommended actions to remedy user conflicts. Many of these recommended actions will be included in the LUP update.

A second issue concerns the trend towards lengthy piers extending out into the Town's estuarine waters, particularly at the North End of the Island. Prime waterfront sites with deep water close to shore have become developed. As a result, remaining water front sites have been building longer piers to reach water of adequate depth for boat dockage. This results in unsightly and environmentally damaging piers extending out into coastal marsh. While State regulations require that piers shall not block stream channels, the effect in many instances has been to inhibit the movement of watercraft in the shallow water estuary. This is particularly evident at low tide when navigation is limited to pockets of open water. In some cases, the presence of these long piers can prevent boats from navigating the affected water body. Thus, the Town's policy reserves the right to be more restrictive that the State's standard where the public's right to access is being compromised by construction of long piers. No pier may be constructed which extends beyond this line. This issue was also addressed in the *2002 Surface Water Use Plan.*

Ocean Hazard System

Ocean Hazard AECs are areas where potential erosion and the adverse impact of sand, wind, and water make uncontrolled or incompatible development unreasonable and hazardous to life and property. The Ocean Hazard category at Wrightsville Beach includes 4 areas:

- Ocean erodible area
- High hazard flood area
- Inlet hazard area
- Unvegetated beach area

Development and land use in each area require a major CAMA development permit. All components of the ocean hazard AEC are shown or labeled on the AEC and Fragile Areas Map in Appendix A. However, the map is for planning purposes only and careful on-site investigation is required for any development or construction in or adjacent to an ocean hazard AEC.

Ocean Erodible Area: Ocean erodible areas are located along the beach strand where there is significant risk of excessive beach erosion and significant shoreline fluctuation due to natural processes such as hurricanes and tropical storms (15 NCAC 07H.0304). There are 205 acres of oceanfront property on Wrightsville Beach. The seaward boundary of this area is the mean low water line (MLWL). The landward boundary is described as follows:

- 120 feet or 60 times the annual erosion rate landward of the first line of stable vegetation or for Wrightsville Beach the vegetation line established in the 1980 photos this is called the recession line; or

- A distance landward of the recession line described in (1) above to the recession line that would be generated by a storm having a 1-percent chance of being equaled or exceeded in any given year (i.e., 100-year storm event).

The ocean erodible area is defined on a lot-by-lot basis due to the significant variation in the first line of stable vegetation and the most restrictive method for determining the setback distance and the recession line is always used (15 NCAC 7H.0304). This line is not to be confused with the 1939 Property Line or other buffer or setback lines established by the State or the Town of Wrightsville Beach. Each line has a distinct regulatory purpose.

What Is The 1939 Property Line? If you own ocean front property in Wrightsville Beach located between Masonboro Inlet and Heron Street, you should be aware of the existence of the 1939 Property Line and its impact on your property. The 1939 Property Line was created by an Act of the North Carolina General Assembly in 1939 in connection with a beach renourishment project at Wrightsville Beach. The effect of this Act was to grant ownership of the property lying east or seaward of the 1939 Property Line to the Town of Wrightsville Beach. Ownership of the property lying west or landward of the 1939 Property Line remained with the adjoining property owner. The 1939 Act also required the Town to prepare a survey of the property line and record the survey in the New Hanover County Register of Deeds. Such a map was prepared and recorded in 1939 and can be found in Map Book 3 at page 71 in the Office of the New Hanover County Register of Deeds.

The existence of this property line affects the property between Masonboro Inlet and Heron Street in one of two ways. First, the 1939 property line is a *property line* and therefore establishes the easternmost or seaward boundary of your property even though some older deeds for lots adjacent to the Atlantic Ocean incorrectly include in their legal description that the property extends to the MHWL. Second, the 1939 Property Line established a property line from which any structure connected on the property must be setback. The required setback is controlled by the Town's zoning ordinances (Chapter 155 in the Town of Wrightsville Beach Code of Ordinances). Other setback requirements imposed by CAMA also apply to any structure built on the property. The most restrictive setback is always applied to mitigate potential storm damage and protect public health and safety.

High Hazard Flood Area: The ocean hazard system AEC also covers lands subject to flooding, high waves, and heavy water currents during a major storm. The *high hazard flood area* is defined as the area subject to high velocity waters including but not limited to hurricane washover in a storm having a one percent chance of being equaled or exceeded in any given year. This area is identified as coastal flood with velocity hazard or "V zones" on Federal Flood Insurance Rate Maps. "V zones" are determined by an engineering analysis of expected flood levels during a storm, expected wave and current patterns, and the existing topography of the land. The high hazard flood area is land expected to experience washover and high velocity waters during a 100-year storm event. This AEC often overlaps with the ocean erodible and inlet hazard AECs. The interior of Wrightsville Island, Harbor Island, and the sound are in the "A zone". A zones are subject to flooding and washover, but not wave action during a 100-year storm event. The entire Town of Wrightsville Beach lies

within the 100-year flood zone [See the Flood Zone Map in Appendix A]. Development in A and V zones is subject to the same setbacks described in the ocean erodible areas.

Inlet Hazard Area: The inlet hazard area AEC covers the land adjacent to Mason's Inlet, located at the North End of Wrightsville Island. The *Inlet Hazard Area* extends inland a sufficient distance to encompass the area where the state reasonably expects the inlet to migrate in the future (15 NCAC 7H .0304). Masonboro inlet, located at the southern end of the Island is not designated as an inlet hazard area because it is stabilized with a jetty preventing its migration. Development within the inlet hazard area on the North End must comply with three key use standards: (1) it must comply with setbacks for the ocean hazard area found in the preceding section; (2) the density for commercial and residential structures is limited to no more than 3 units per acre; and, (3) only residential structures of 4 units or less or commercial structures less than 5,000 square feet or less are allowed [See AEC and Fragile Areas Map in Appendix A].

Unvegetated Beach Area: The final ocean hazard system AEC is the unvegetated beach area. This is defined as land within the ocean hazard system where no stable natural vegetation is present. This area is subject to rapid and unpredictable landform change from wind and wave action.

Soil Characteristics

Three soil types are located within the jurisdictional boundaries of Wrightsville Beach. *Newhan Fine Sand* consists of gently slopping excessively drained sands located mostly on dunes, beaches and along coastal waterways. Almost the entire barrier island portion of Wrightsville Beach including the developed area abutting Banks Channel consists of Newhan Fine Sand. *Tidal marsh soils* are found in the tidal flood plains between coastal sand dunes and the ocean and upland areas of the mainland. Soils are often covered by smooth cordgrass, but further inland may be covered with black needlebrush. Tidal marsh soils are poorly drained, generally have slopes of zero to two percent, and primarily serve as natural habitat for birds and other wildlife. A large part of the area within Wrightsville Beach's jurisdiction, including the area between Banks Channel and the ICW, excluding Harbor Island, is classified as tidal marsh. Generally tidal marsh has limited suitability for development. *Urban land soils* exist in areas where the original soil profiles have been cut, filled, graded, paved or otherwise changed so that the original soil types (mostly dry, poorly drained sands) are substantially altered or destroyed. The entire developed portion of Harbor Island is classified as urban land soil.

All three soil types found on Wrightsville Beach have limited development potential for onsite sewage disposal systems (OSDS) due to poor filtration or being wet with poor filter. However, these soil conditions are of limited importance because Wrightsville Beach is served by a central sewer system.

In the ETJ, most soils belong to the *Murville-Seagate-Leon Association*. These soils range from very poorly drained to somewhat poorly drained and have a fine sand to sand surface

layer. Subsoil is composed of fine sand, sand, sandy loam, or clay loam. *Johnston, Lynwood and Murville soils* in the Wrightsville Sound Area are subject to frequent flooding and wetness. Each site should be inspected before construction to determine site-specific building constraints on subsurface and surface features. The *Soil Survey of New Hanover County* published by the U.S. Department of Agriculture Soil Conservation Service (1977) provides further information on the capabilities and characteristics of the soil types, their location and extent.

Water Quality

Surface waters should contain a balanced amount of nutrients and has normal fluctuations in salinity and temperature. It should also have plenty of oxygen and little suspended sediment so that marine life can breathe and receive enough sunlight to grow. Monitoring changes in North Carolina's water quality is important. Data collected helps scientists evaluate changing water quality conditions. Factors affecting water quality include:

- ***Nutrients***: While essential for plants and animals, they can be harmful if there is an overabundance;
- ***Sediments***: Can cloud the water and hamper the growth or even kill aquatic plants;
- ***Water temperature***: Changes in normal water temperatures can affects when animal and plants feed, reproduce, and migrate;
- ***Salinity***: Changes in salinity can adversely affect a wide range of marine life
- ***Dissolved oxygen***: is essential for animals living within the estuary. Reduced levels of dissolved oxygen (e.g., due to an algae bloom or eutrophic conditions) can adversely affect marine life.
- ***Contaminants and other pollutants***: There are a variety of other contaminants and pollutants that can adversely affect the growth, survival, and reproduction of marine and benthic organisms.

As a strategy for the management of North Carolina's waters, DENR's Division of Water Quality (DWQ) assigns classifications to water bodies. The primary classifications are:

- ***SC*** : unacceptable quality
- ***SB***: suitable for marine fish, shellfish, and wildlife habitat. Not suitable for commercial shellfish harvesting. Suitable for swimming, fishing, recreation and all other legitimate uses including navigation.
- ***SA***: suitable for marine fish, shellfish and wildlife habitat, shell fish harvesting for direct human consumption, recreation and all other legitimate uses including navigation.

Additional water quality classifications include:

- ***High Quality Waters (HQW)***: Waters are ranked as high quality based on biological, chemical or physical characteristics through division monitoring or special studies.
- ***Outstanding Resource Waters (ORW)***: Unique and special surface waters of the state that are of exceptional state or national ecological or recreational significance that require special protection to retain existing uses
- ***Swamp Waters (SW)***: waters that are located so as to generally have low velocities.
- ***Nutrient Sensitive Waters (NSW)***: waters that experience or are subject to excessive bloom of microscopic or macroscopic vegetation.

These designations highlight important characteristics of water bodies that should be protected through local land use plans.

The water quality within the planning jurisdiction of the Town of Wrightsville Beach is generally good but needs improvement. There are no areas within the jurisdiction of Wrightsville Beach known to have chronic waste treatment malfunctions. This is due to the centralized sewage treatment system. The system has no chronic malfunctions and operates within its NPDES permit conditions. However, since their original classification in 1981, some waters have degraded from SA to SB due primarily to nonpoint sources pollution. Consequently, most inland waters in and adjacent to Wrightsville Beach are now permanently closed to shellfishing [See Closed Shellfishing Areas Map in Appendix A]. Since the Island is nearly built out, additional development is unlikely to significantly increase these water quality problems. However, continued development within the Howe Creek, Bradley Creek, and Hewlett Creek watersheds will impact water quality unless actions are taken to minimize nonpoint source pollution in these watersheds [See Table 4.1].

The highest quality waters are located in Masonboro sound area in the Town's Extra-Jurisdictional Territory (ETJ). These waters were nominated by DNER's DWQ as outstanding resource water (ORW) [See DWQ High Quality and Outstanding Resource Waters Map in Appendix A]. This designation is given to the most pristine and productive waters in North Carolina. At the northern and southern ends of the Town's jurisdiction, water quality is classified SA making it suitable for swimming, fishing and shellfishing. However, many of these waters are closed to shellfishing due to high fecal coliform counts in water quality samples [See Closed Shellfishing Areas Map in Appendix A]. Areas near Harbor Island are generally classified SB meaning that they are suitable for swimming and fishing but not shellfishing. Generally, water quality is better at the Northern and Southern ends due to circulation and flushing patterns. Conversely, water quality in the central part of the island is worse due to the prevalence of stormwater outfalls, circulation patterns, and its proximity to Bradley Creek [See AEC Coastal Wetlands and Estuarine Waters Map in Appendix A].

Table 4.1 Receiving Streams Adjacent to Wrightsville Beach

Receiving Stream Name	Stream Segment	Water Quality Classification	Use Support Rating	Water Quality Issues
Howe Creek	From source to Intracoastal Waterway including tributaries	SA, ORW	Fully Supported	Waters are classified as SA but are subject to closure for shell-fishing activities based on Division of Marine Fisheries classification. Bacterial pollution from stormwater runoff is the primary water quality problem.
Intracoastal Waterway	From the western mouth of Howe Creek to the SW mouth of Shinn Creek, exclusive of the Wrightsville Beach Recreational Area	SA, HQW	Partially Supporting	Waters are classified as SA but subject to closure for shell-fishing activities based on Division of Marine Fisheries classification. Bacterial pollution from stormwater runoff is the primary water quality problem along with Marinas.
Bradley Creek	From source to Intracoastal Waterway including tributaries	SC, HQW	Partially Supporting	Waters are classified, as SC. Fecal Coliform is the primary water quality problem.
Hewlett Creek	From source to Intracoastal Waterway including tributaries	SA, HQW	Fully Supported	Waters are classified as SA but are subject to closure for shell-fishing based on Division of Marine Fisheries classification. Bacterial pollution from stormwater runoff is the primary water quality problem.
Wrightsville Recreation Area (including Lees Cut, Motts Channel and portion of Banks Channel	Any waters within a line beginning at a point on the mainland along the Intracoastal Waterway 1400 feet North of the U.S. Hwy. 74-76 bridge extending directly across the Waterway to the northern edge of Lees Cut, thence along the northern edge of Lees Cut to the end of the Cut crossing the Cut in a northeasterly Direction to a point on Wrightsville Beach 1900 feet northeast of the U.S. Hwy. 74 bridge, thence along The western shoreline of Wrightsville Beach to a point 4000 feet Southwest of the U.S. Hwy. 76 bridge, thence in a northwesterly direction across Banks Channel and mud flats to a point on the eastern side of the Intracoastal Waterway across from the southern edge of Bradley Creek, thence along the eastern side of the waterway to a point 1750 feet Northeast of Channel Marker #128, thence directly across the waterway in a easterly direction to Money Point and along the western edge of the Intracoastal Waterway in a northeasterly direction to the point of beginning.	SB	Partially Supporting	Waters are classified as SB. Urban Runoff and Marinas are the primary reasons for the water quality problem.

Table 4.1 Receiving Streams Adjacent to Wrightsville Beach (Cont.)

Receiving Stream Name	Stream Segment	Water Quality Classification	Use Support Rating	Water Quality Issues
Banks Channel	Entire Channel south of the Wrightsville Recreation Area	SA; HQW	Partially Supporting	Waters are classified as SA but are subject to closure for shellfishing based on Division of Marine Fisheries classification. Bacterial pollution from stormwater runoff is the primary water quality problem along with Marinas.

Source: Wrightsville Beach, NPDES Phase II Comprehensive Stormwater Management Program Report (Wrightsville Beach, NC: Town of Wrightsville Beach, 2003)

Shellfishing & Primary Nursery Areas

Salt marshes and estuaries along the North Carolina coast serve as nursery grounds for 90 percent of fish species. North Carolina was the first state to protect these fragile ecosystems. The nursery system in North Carolina contains 3 categories:

- Primary nursery areas;
- Secondary nursery areas; and,
- Special secondary nursery areas.

Only one category, *primary nursery areas* are found within the Town of Wrightsville Beach [See Fish Nursery Areas Map in Appendix A]. Primary nursery areas are generally located in the upper portions of creeks and bays. These areas are usually shallow with soft muddy bottoms and are surrounded by marshes and wetlands. Low salinity levels and abundance of food make these areas ideal for young fish and shellfish. To protect juveniles, many commercial fishing activities are prohibited in primary nursery areas including the use of trawl nets, seine nets, dredges, or any mechanical devices used to harvest clams and oysters. Violators face substantial penalties. There are approximately 18 acres of primary nursery area within Wrightsville Beach's corporate limits and 1,100 acres within the ETJ. This is significant. In North Carolina, 80,144 acres are designated as primary nursery areas. Thus, approximately 1.4 percent of NC's primary nursery areas are located with Wrightsville Beach's planning jurisdiction.

Secondary nursery areas are located in the lower portions of creek and bays. Young fish and shellfish (primarily blue crabs and shrimp) move into these waters as they grow and develop. Trawling is not allowed in secondary nursery areas. There are 35,502 acres of secondary nursery areas in North Carolina, none of which are located in Wrightsville Beach. *Special secondary nursery areas* are located adjacent to secondary nursery areas but are closer to open waters of sounds and the ocean. When juvenile species are abundant, these waters are closed to trawling for a majority of the year. In North Carolina, 31,362 acres are designated as special secondary nursery areas.

Table 4.2: Parcels Located in the Flood Zone

Zone	Parcels (lots) that Intersect Flood Zone	Parcels (lots) with Structures (%)
AE	3,148	95.0
VE	22	13.6

Source: Wrightsville Beach GIS

Flood Hazard Areas

The 100-year flood plain is the accepted benchmark for defining flood hazard areas. All of Wrightsville Beach East of the ICW lies within the 100-year flood plain [See Special Flood Hazard Zones and the Flood Zones Maps in Appendix A]. The flood plain in Wrightsville Beach is mapped in two classifications:

- ***AE zones***: Areas where there is a 1 percent chance of a hundred year flood event;
- ***VE zones***: Areas where there is a 1 percent chance of a hundred year flood event.

The interior of the outer island, Harbor Island, and the sound are in the A zone, subject to washover and flooding. This constitutes about 3,148 parcels, 95 percent of which have structures. Development in these areas is subject to the same setbacks described in the ocean erodible area. However, the setback is doubled for multi-family residential and non-residential structures of more than 5,000 square feet. "V zones" are determined by an engineering analysis of expected flood levels during a storm, expected wave and current patterns, and the existing topography of the land. Generally development is discouraged in these areas because the land is subject to flooding high waves and heavy water currents during a major storm. There are approximately 22 parcels located within the VE zone on Wrightsville beach, 13.6 percent of which have structures.

FEMA Flood Insurance

According to the Federal Emergency Management Agency (FEMA) there are 4,406,664 flood insurance policies in force. Flood insurance is available in 19,859 participating communities nationwide. The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premiums are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance. For CRS participating communities, flood insurance premiums are discounted in increments of 5 percent. A class 1 community receives a 45 percent premium discount while a Class 9 community gets a 5 percent discount (a Class 10 is not participating in the CRS and receives no discount).

Table 4.3: Flood Insurance Policies

	Number of Policies	Insurance in Force
Wrightsville Beach	2,598	$484,878,600
North Carolina	101,216	$16,090,301,300

http://www.fema.gov/nfip/10110212.shtm

Table 4.4: Loss Statistics for Wrightsville Beach and New Hanover County, North Carolina (1978 - 2002)

	Total Losses	Total Payment
Wrightsville Beach	3,067	$45,410,981.55
Wilmington	187	$2,667,193.21
New Hanover County	2,304	$36,087,363.27
North Carolina	47,956	$554,004,322.40

http://www.fema.gov/nfip/10400212.shtm#37

The CRS classifications for local communities are based on 18 creditable activities, organized under four categories: (i) public information; (ii) mapping and regulations; (iii) flood damage reduction; and, (iv) flood preparedness. There are 994 communities receiving flood insurance premium discounts based on their implementation of local mitigation, outreach, and educational activities that go beyond minimum NFIP requirements. While premium discounts are one benefits of participating in the CRS, the real benefit is that these activities help save lives and reduce property damage. Wrightsville Beach's CRS rating is the best in the state. As of October 2003, its CRS rating was a Class 5 indicating excellent community mitigation efforts. As a result, Wrightsville Beach residents receive a 25 percent discount in their flood insurance premiums.

Storm Surge Areas

Since Wrightsville Beach is located entirely within the 100-year floodplain, it is particularly vulnerable to storm surges and corresponding erosion, wave action, flooding, high winds, and beach washover associated with hurricanes. Storm surge is water pushed toward the shore by the force of winds swirling around the hurricane or low-pressure meteorological system. The advancing surge combines with the normal tides to create the hurricane storm tide otherwise known as the storm surge. As a result, the MHWL can rise by 15 feet or more. The rise in water level causes severe flooding in coastal areas, particularly when a storm surge coincides with high tide. Wind and wave action is then superimposed on this storm surge water level.

Wind is a major determinant in the classification of a hurricane. Any tropical storm with sustained winds of 74 mph is classified as a hurricane. Hurricanes are judged by their power according to the Saffir-simpson scale. This measure of the power of a hurricane classifies

Table 4.5: Approximate Impact of Various Storm Levels (Acres Impacted)

Storm Level	Additional Land Impacted (Acres)	Total Land Impacted (Acres)
1-2	877.59 acres	877.59
3	19.47 acres	897.06
4-5	8.98 acres	906.04

Source: Wrightsville Beach GIS

hurricanes according to a sliding scale from 1 to 5 (with category 5 storms as the most severe). The speed and strength of the storm is important in determining the impact of the storm surge. Waves and currents associated with the storm surge may cause extensive damage. Water weighs approximately 1,700 pounds per cubic yard; periods of prolonged wave action can demolish any structure not specifically designed to withstand such forces. Table 4.5 shows the acreage of land impacted by storm surge for a fast moving hurricane at various storm levels. The areas subject to storm surges are depicted graphically on the Storm Surge and Hurricane Storm Surge Inundation Maps in Appendix A.

Non-coastal Wetlands

Within the planning jurisdiction of the Town of Wrightsville Beach there are also 1.6 acres of non-coastal wetlands located in the corporate limits, and 25 acres in its ETJ. These non-coastal wetlands are classified as exceptional significance, not high potential risk. There are also 4 acres of non-coastal wetlands classified as beneficial, not high potential risk that are located within the ETJ [See NC CREWS Exceptional, Substantial and Beneficial Map in Appendix A]

Water Supply and Wellhead Protection Areas

There are no surface water supply waters or watersheds in the vicinity of Wrightsville Beach. Well water in the region is drawn from the Cretaceous Aquifer, which lies 190 to 1,100 feet below the land surface. Water is often brackish at this depth. This water supply is of considerable size, and the Town wells draw primarily from the Pee Dee Formation. Overall, mineral levels are low but iron levels are often high. The aquifer receives recharge from infiltration through the overlying sediments and from upland recharge areas in the west. Overlying the aquifer is a limestone and unconsolidated sandy layer some 130 feet thick, the Castle Hayne aquifer. Water here is abundant and often rich in iron and hydrogen sulfide. Above the tertiary system aquifer (0 to 60 feet) lies the Post Miocene, Yorktown and surficial aquifers of predominantly sands and clay. Water in these aquifers is low in mineral content, rich in iron, and often salty near the coast. Care and consideration must be taken not to over tax the water supply; excessive pumping and depletion of the fresh water will likely result in salt water intrusion in the aquifer on the island and even the mainland.

Environmentally Fragile Areas

Fragile areas are defined as sensitive areas that are easily destroyed by inappropriate or poorly planned development. Fragile areas include: AECs; coastal wetlands; non-coastal wetlands; sand dunes; ocean beaches and shorelines; estuarine waters; estuarine shorelines; public trust waters; complex natural areas; prime wildlife habitats; areas that sustain remnant species; areas with unique geologic formations; natural areas identified by the North Carolina Natural Heritage Program; and archeological and historical resources as well as other sensitive areas not currently protected under existing rules. Given its location, almost all of Wrightsville Beach is located within or adjacent to fragile areas. Many of these areas have previously been discussed. This section describes natural heritage areas and the areas containing endangered species.

Natural Heritage Areas

The North Carolina Natural Heritage Program inventories, catalogues, and facilitates protection of the rarest and most outstanding elements of the natural diversity of our state. This includes plants and animals that are rare, or natural communities that merit special consideration as land use decisions are made. The information generated by this program supports informed evaluations of the trade-offs between biological diversity and development projects before plans are finalized. The information also facilitates the establishment of priorities for protecting North Carolina's most significant natural areas.

There are no significant natural heritage areas identified within the planning jurisdiction of Wrightsville Beach. However, Masonboro Island, located adjacent to the south end of Wrightsville Beach is a Natural Heritage Area [See the Significant Natural Heritage Areas Map in Appendix A].

Areas Containing Endangered Species

Endangered species describe plant or animal species in danger of extinction within the foreseeable future throughout a significant portion of its range. The term "threatened species" is used when a plant or animal is deemed likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Areas that contain, or are likely to contain, endangered species in the Town of Wrightsville Beach include the dry sand areas of the oceanfront beach, dunes, and the marshes along the estuarine shoreline. Endangered animals identified on Wrightsville Beach include various types of birds including the piping plover, a variety of sea turtles, and other transitory wildlife. In order to help preserve endangered wildlife, turtle nesting areas are marked each year in order to protect the nests. The North end of Wrightsville Beach is also designated as a bird sanctuary. It is important to keep in close contact with state and local agencies charged with protecting

endangered species and sightings of rare and endangered plants and animals should be reported.

Composite Map of Environmental Conditions

The Environmental Composite Map contained in Appendix C shows the extent and overlap of the environmental and natural features described in this section. Using the limitations and opportunities that features have to guide development decisions, the map shows the location of the following three categories of land:

- ***Class I***: Land containing only minimal hazards and limitations that my be addressed by commonly accepted land planning and development practices
- ***Class II***: Land Containing development hazards and limitations that may be addressed by methods such as restrictions on types of land Uses; special site planning; or the provision of public services
- ***Class III***: Land containing serious hazards for development or lands where the impact of development may cause serious damage to functions of natural systems.

Only class I lands are located in the ETJ while much of the developed land area contained within the corporate limits of the Town of Wrightsville Beach is Class II. Class III lands constitute many of the AECs.

Section V

Land Use and Development

Introduction

The Town of Wrightsville Beach developed in a manner similar to that of other North Carolina barrier beach communities of similar size. There is an accessible commercial area in the center of Town, and the remainder of the community is stretched out to the north and the south in a linear grid with residential development occurring on relatively small lots. Wrightsville Beach remains a relatively small community with a large influx of summer visitors. Accordingly, land use conflicts are limited primarily to issues related to the influx of tourists (e.g., traffic, litter, lighting and noise). The amount of commercial activity in the Town remains limited and there are no industrial or manufacturing uses.

The Town of Wrightsville Beach has experienced little development pressure in recent years and is approaching a completely built out stage of development. In the last 3 ½ years only 50 permits for new construction were issued, 16 of which involved demolishing an existing structure and redeveloping the lot. The trend towards redevelopment is expected to increase in the coming years since there is little vacant land available for new development. Redevelopment activity appears to consist primarily of the construction of larger single-family residences and conversion of multi-family development to larger duplexes. Similarly, little commercial development is anticipated unless it involves redevelopment of existing commercial parcels. Within the ETJ, development and growth are expected at a much faster pace. It is expected that several of the large tracts of vacant land on the mainland will be developed within the next 5 years.

Accordingly, there is a need for the Town's Board of Aldermen, Planning Board, and citizens to develop a consensus about the direction that future growth and redevelopment should take. This section of the report describes the current land use in the Town of Wrightsville Beach and the regulations and permit process used to regulate land development. This information provides the foundation used to develop policies and recommendations for the land use plan update.

Table 5.1: Land Usage in Wrightsville Beach (2004)

	Acres	Percent Total	Acres per person
Residential	283.7	47.9	0.108
Commercial	69.7	11.8	0.027
Recreational	46.4	7.8	0.017
Office and Institutional	44.3	7.5	0.017
Utilities and Transportation	16.5	2.8	0.006
Undeveloped	130.9	22.1	0.050
Industrial	0.7	0.1	0.000
Total	592.2	100	0.227

Source: GIS Town of Wrightsville Beach Planning and Parks

* Land Use Percentages were calculated using GIS to sum parcel areas based on land use codes. This information exists as part of the New Hanover County Land Records Information.

Existing Land Use

The total land area within the Town of Wrightsville Beach municipal boundary is 1,326.31 acres. Within the Town of Wrightsville Beach there are 1,920 separate parcels of land (i.e., lots). The number of total parcels in any type of land use is 1,739. The number of acres in the parcels being used is 460. There are 139 lots over 1 acre in the Town of Wrightsville Beach. There are approximately 47 vacant lots within the Town.

Table 5.1 shows various categories of existing land use within the Town of Wrightsville Beach. This information is displayed graphically on the Existing Land Use Map located in Appendix A. The largest categories of developed land are residential (47.9 percent), commercial (11.8 percent), and recreational (7.8 percent). Approximately, 22.1 percent of the land area is undeveloped, but much of this land area consists of wetlands or other AECs. The following sections provide a narrative description of the Town of Wrightsville Beach and its diverse neighborhoods.

Neighborhood Characteristics

One of the unique features of Wrightsville Beach that adds to its quality of life is the presence of its many neighborhoods.

Central Beach Area: The central beach area extends from Stone Street on the south to Mallard Street on the north. This centrally located area is one of the most self-contained sub-areas of Wrightsville Beach, having a good range of services close at hand. While the area is characterized by a predominance of traditional single family and duplex cottages, it also contains the Town's traditional central business district, a church, and Johnnie Mercer's

Fishing Pier. Residential lot sizes are some of the smallest in the town. Most of the residential structures are three stories or less in height and are characterized by functional porches fronting on the street. Building materials tend to be wood and asbestos. While single family and duplex cottages are the predominant form of land use there are a few examples of multi-family accommodations, particularly near the traditional central business district and Johnnie Mercer's Pier. These districts are compact in nature and individual businesses are generally small in scale.

The central beach area is one of the most pedestrian friendly sections of the beach with heavy foot traffic on sidewalks and considerable on-street bicycling. Off-street parking is limited while on street parking is heavily used. Public access to the shoreline is plentiful with all east-west running streets providing access to the beach. The town also retains right-of-way easements at the west end of the streets where they intersect with banks channel. The water quality of sound-side public trust waters in Banks Channel adjacent to the Central Beach area is classified SB. There is a noticeable lack of tall sailboats in this section of banks channel due to the two low-level bridges to the south and north that frame the area.

North End: The north end extends from Mallard Street on the south to Mason's Inlet on the north. The north end is one of the "newest" parts of Town, developed in the 1970's and 1980's. The area is characterized by medium to large single family homes on relatively large lots. There are also a high number of multi-family residential units in large scale, high density structures. With the exception of two motels developments (Holiday Inn and Shell Island Resort), there are no commercial uses in this part of town. Building materials are wood, stucco, and concrete construction. Building heights tend to be two or three stories for single-family units and four or more for multi-family residential units. In recent years, the area has witnessed the introduction of several four story single-family homes. These taller residential structures are still in the minority.

While bicyclists may be seen traveling to the north end, this area is not pedestrian oriented. Unlike the balance of the barrier island, public access is limited to designated special purpose parking lots with no opportunity for on-street parking and only a few public access ways associated with street ends. Off street parking associated with each residential unit is adequate.

The sound side public trust waters are classified as SA, however, navigable water is quite limited, with the predominance of the sound side estuarine system consumed by coastal marshes. The predominance of marshes and limited navigable water caused a few private piers to be constructed great distances into the marsh. Such lengthy piers raised concerns about aesthetics, environmental impacts on the marsh ecosystem, and serve as potential obstructions to navigation. The length of these piers is now restricted.

The Parmele Area: The Parmele area consists of a small peninsula of streets extending landward from the point of intersection of Parmele Blvd and Lumina Avenue. Single family and duplex residential structures characterize this area. At the far end of Parmele Boulevard, the Town maintains its Public Works complex. Lot sizes in this area are generally larger than those found in the central beach area, but smaller than those found at the north end.

Buildings are typically two or three stories in height. Homes in this area tend to maximize their building envelopes from side lot line to side lot line, creating a solid wall of houses along the water's edge.

This area contains a higher percentage of permanent residents than anywhere on the barrier island. There is no on street parking and due to its configuration as a peninsula there is no through traffic. The waters adjacent to the Parmele area are classified as SA.

The Waynick Boulevard-South Lumina Area: The Waynick Boulevard-South Lumina Area extends along both sides of Waynick Boulevard and South Lumina Avenue from Stone Street on the north to the point where Waynick ultimately turns at Sunset Street to the south. The Surf Motel at the intersection of Sunset and South Lumina is included in this area. The area is characterized by a predominance of single family and duplex homes mixed with a fair number of multi-family and hotel accommodations. Buildings tend to be a mixture of traditional beach cottages and modern large-scale residences.

Lots tend to be somewhat larger than the central beach area. Most lot owners on the East Side of Waynick have property ownership across the Boulevard, on the West Side, adjacent to banks channel. As a result, there are a large number of docks and piers along Waynick Boulevard associated with homes located on the East Side. Adding to the emphasis of boating in this section of the Outer Island, is the presence of two boating/yacht clubs.

Large volumes of automobile traffic and metered parallel parking spaces characterize Waynick Boulevard itself. While Waynick Boulevard is not pedestrian oriented, the abundance of on street parallel parking here brings many pedestrians to the area. South Lumina, on the other hand is a quiet street in this part of Town and is well-used by pedestrians. Despite its relatively high traffic volumes, Waynick Boulevard is a popular route for bicyclists due to the continuous view from the Boulevard to the sound.

Compared to the central beach area, there are fewer than half as many public access points (street ends) to the beach in this section of the Outer Island. The result is a quiet beach strand relative to the central beach area. Due to its exposure to Banks Channel along the entire length of Waynick Boulevard, this area has a strong emphasis on boating. Pier head lengths along this section are well established due to the heavy use of Banks Channel area by recreational and commercial boaters alike. Water quality on the sound side public trust water is classified as SB.

The South End: The south end extends from the turn in Waynick Boulevard at Sunset Street to the north to Masonboro Inlet on the south. The area has been developed predominantly for single-family uses. Lot sizes tend to be quite small except along the oceanfront and are comparable in size to those in the central beach area. There are also more empty lots here than in other areas of the outer island. Older homes in this area tend to be quite small and are consistent with the small size of the originally platted lots. Recently, there has been a noticeable trend towards dramatically taller (4 stories total height from the ground) residential structures in this part of the outer island. The recent construction has been out of scale with the modest size of the originally platted lots.

This is one of the few areas on the outer island where streets run both east-west and north-south in a grid pattern. The street system grid is not continuous, however, with interruptions from one block to the next. Right-of-ways can be quite narrow, further contributing to the intimate scale of development at this end of the beach. Public access ways to the beach are available at several locations. However, primarily homeowners and renters use them because there is little parking for visitors. While there are public right of way easements to Banks Channel at the western end of the each street in the area, the lack of parking limits their use. Water quality in the sound area adjacent to the South End varies from SA near Masonboro Inlet to SB in Banks Channel.

Old Harbor Island: Old Harbor Island is the portion of Harbor Island generally east of the intersection of Island Drive and Causeway Drive. This area is characterized by a predominance of small to medium scale single-family residential homes under a canopy of tree-lined streets. This area has a very cohesive neighborhood feeling, with a large number of permanent residents. The area's commercial uses are clustered at the west end of the bridge to the outer island. The town's only public school, Wrightsville Beach Elementary, is located in this area at the north end of Coral Drive.

Lot sizes tend to be quite small and many homes consist of traditional ground level construction, one to two stories in total height. Recently, the area has witnessed the redevelopment of several modest homes with significantly larger residential structures. While it is recognized that redevelopment may eventually increase the average height and size of structures, recent construction has been substantially larger and out of character with the surrounding neighborhoods.

The configuration of streets and compact scale of the neighborhood lends itself well to pedestrian movement and lack of traffic. Sidewalks are present throughout much of the area and speed bumps work to slow automobiles/traffic. There are a large number of private piers and docks along the entire length of the shoreline. The water quality of Mott's Channel and Banks Channel is classified as SB.

Pelican Drive, Lees Cut, Channel Walk, and Lookout Harbor: This area is the portion of Harbor Island generally north of West Salisbury Street joining Lees Cut plus Lookout Harbor and the adjacent commercial area near the west end of the Salisbury Street Bridge. Most of the area was developed in the 1970's and consists of a mixture of single family and duplex homes along Pelican Drive and multi-family residential elsewhere.

Pelican Drive consists of a single row of single family and duplex homes situated between West Salisbury Street on the south and Lees Cut to the north. Until recently, all homes along Pelican Drive were two stories in height and similar in scale, age and architectural character. Recently, some homes have increased to three stories or more in height. Channel Walk and Lees Cut are two multi-family developments located on the north side of West Salisbury Street as it approaches the drawbridge. These two and three-story units have their own recreational amenities and function independently from one another. Lookout Harbor and several commercial and office uses anchor the east and west end of Salisbury Street just

before the bridge crosses over Banks Channel to the outer island. The multi-family units at Lookout Harbor are each greater than three stories in height.

The entire area has good proximity to the Town's recreational facilities and the pedestrian "loop" around the central portion of Harbor Island. According to wildlife authorities, the public boat ramp on the north side of the drawbridge adjacent to the ICW is the most heavily used launching facility in southeastern North Carolina. The water quality classification of Lees Cut is SA.

Causeway Drive/ Marina Area: This area of Harbor Island extends from the ICW on the west along the south side of Causeway Drive to the intersection with Island Drive. A mixture of residential, marine, retail, and service establishments characterizes this area. Residential uses range from single-family homes to multi-family residential units and high rise condominiums located in Seapath Towers. The mixture of marine service and retail uses provides indirect public access to Mott's Channel and the ICW. This area generally has the largest concentration of commercial uses on the island. Traffic congestion and turning movements at the Keel Street intersection hamper street access to the commercial area south of the drawbridge. Any future development in this area will need to take this into consideration.

The relatively narrow adjoining channels are some of the most intensely used coastal waters in the State of North Carolina. The number and density of boat slips, both wet and dry, is very high. The density of boat slips, combined with a large number of marine services and water-oriented restaurants on both sides of the ICW, make the waters popular with recreational boaters and boating traffic is especially heavy on summer weekends. Water quality in Mott's Channel and the ICW south of the drawbridge is classified as SB.

Town Government and Parks Area: The core of Harbor Island is a triangle shaped area of land and wetland. This centrally located property accommodates most Town government facilities, and provides recreational facilities and open space.

Mainland/Wrightsville Sound Area: The mainland/Wrightsville Sound area consists of those land areas transected by three principle roads in the area approaching the ICW drawbridge: Airlie Road, Wrightsville Avenue and Eastwood Road. The Town's interest in this area is related primarily to ground water supplies, traffic management, and gateway appearance issues. This area also provides an important service function to Town residents by accommodating large scale or intense commercial and retail service functions that would not be appropriate for the Town proper.

Conservation Areas: There are also a wide range of conservation areas located in the Town of Wrightsville Beach. The purpose of the conservation land use classification 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 value of both local and more than local concern.

Historic, Cultural, and Scenic Areas: The Town of Wrightsville Beach incorporated in 1899. Its Historic Landmark Committee is charged with recognizing properties that represent different eras of Wrightsville Beach's development. Currently, 10 properties are recognized as historic landmarks on Wrightsville Beach. The goal of these designations is to help preserve the historic nature of the community.

Projection of Future Land Needs

When preparing a land use plan it is often useful to consider how much land is likely to be needed to accommodate future development. Unfortunately, given that Wrightsville Beach has little vacant undeveloped land and that annexations by the City of Wilmington prevent further expansion, there is little developable land left to satisfy future demand. Moreover, as noted in Section III of this report, the declining population and lack of significant population growth reflects the lack of any new developable land. Accordingly, future development pressure should increasingly focus on the redevelopment of existing residential and commercial development. However, current size and density restrictions will serve to limit the extent of these redevelopment efforts.

Regulation of Land Development

All land development activities in Wrightsville Beach are subject to a wide range of state and local permits. The following sections summarize Wrightsville Beach's regulatory requirements as well as those that apply pursuant to CAMA.

Wrightsville Beach's Land Development Regulations

The Town of Wrightsville Beach, like other municipalities in the state, has been granted general statutory authority by the North Carolina General Statutes to enact necessary ordinances designed to protect and promote the health, safety and the general welfare of its citizens. Local plans and policies are enforced through ordinances adopted by the Board of Aldermen, which is granted this authority by the Charter ratified March 6, 1899 (Now revised and consolidated as adopted July 11, 1989). Below is a listing of Town Ordinances and enforcement provisions related to land use and development, which are also applicable to the satellite annexation areas in the Wrightsville Sound area.

Wrightsville Beach Zoning Code: The zoning ordinance is the most prominent land development regulatory tool used by the Town of Wrightsville Beach. The ordinance was originally adopted in 1972. The ordinance regulates location and height of buildings, establishes minimum building lot sizes, and establishes districts in which uses related to residential, commercial, and institutional uses are either allowed or prohibited.

Table 5.2: Dimensional Table of Conforming Uses

Zoning	Lot Area	Lot Width	Lot Depth	Front Setbacks	Rear Setbacks	Side Setbacks	Corner Setbacks	Height
R-1	8,000'	70'		15'	15'	15'	15'	40'
R-1 Non. Res.	24,000'	200'		15'	15'	15'	15'	40'
R-2	8,000'	70'		15'	15'	15'	15'	40'
R-2 Cond.	8,000' [1]	100'		15'	15'	15' [2]	15'	40'
C-1 [3]				0'	0'	0' [4]		40'
C-1 Addtl. Cond.	10,000'	100'	100'	0'	0'	0' [4]		40'
C-2 [3]		50'		15'	7.5'	7.5'	7.5'	40'
C-2 Cond. [3, 5]	10,000'	50'		15'	7.5'	7.5'	7.5'	40'
C-3 [3]		50'		15'	7.5'	7.5'		40'
C-3 Addtl. Cond.	10,000'	100'		30'	20'	20'		40'
C-4		100'		30'	20'	20'		96'
C-4 Cond. [5, 6]	10,000'	100'	100'	30'	20'	20'		96'
C-5 [7]	10,000'	100'		30'	20'	10' [8]		40' [9]
P-C	24,000'	150'		15'	7.5'	7.5'		40'
G-1	5,000'	50'		7.5'	7.5'	7.5'		40'
P-1 Conserv.								
S-1 Shore Zone								

[1]"Minimum lot area for single family and duplex units is 8,000'. Each residential unit in excess of two required 4,356 square feet of lot area."

[2]"Side yard setback shall increase by 15' for each additional 50' of property frontage. Where residential units have rear exits into side yards, the yards shall be increased in width 2' for each unit having such exits."

[3]"Maximum density of apartments or residential buildings is 20 units per gross acre. Maximum density for hotels, motels and motor courts is 44 units per gross acre."

[4]"In cases where a side yard is provided, it shall be at least 7.5' in width, except a side yard that borders on a public thoroughfare."

[5]"A parking lot, as a conditional use, shall not be subject to this dimension standard."

[6]"Maximum density of apartments or residential buildings shall be 30 per acre. Density for hotels, motels and motor courts shall be 44 per acre."

[7]"Maximum density for hotels and motels shall be 36 units per acre."

[8]"Where property adjoins a residential district, the side yard shall be 20'."

[9]"Building height shall be measured as the average elevation of the proposed finished grade at the front of the structure to the highest point of the coping of a flat roof; to the ridge line of a mansard roof; or to the ridge of a gable, hip or gambrel roof."

Currently the town has 11 zoning districts:

- Two residential (R-1, and R-2);
- A private club district;
- Five commercial districts (C 1 through C 5);
- A public and semi-public district;
- A shore zone district for the beach front area; and,
- A conservation district that restricts all uses except for piers and marinas.

In addition to the uses allowed within each district, certain conditional uses are permitted on a case-by-case review process. Further information on setbacks, and minimum lot size within each district is summarized in Tables 5.2 and 5.3 and is displayed graphically in the Zoning Map contained in Appendix A.

Table 5.3: Dimensional Table of Non Conforming Uses

Zoning	Lot Area	Lot Width	Lot Depth	Front Setbacks	Rear Setbacks	Side Setbacks	Corner Setbacks	Height
R-1				15'	7.5'	7.5'		40'
R-2	4,000' [1]			15'	7.5'	7.5'		40'

[1]"Minimum lot area for a duplex shall be 4,000 square feet."

Subdivision Regulations: Wrightsville Beach's subdivision regulations regulate the conversion of raw land into building sites. These regulations establish design standards for provision of certain facilities and infrastructure such as streets, water, sewer service, and drainage facilities. Given the limited amount of undeveloped land remaining at Wrightsville Beach, subdivision regulations have limited applicability.

Minimum Housing Standard: This ordinance lays out standards that must be met for buildings to be fit for human habitation. It determines if a house is habitable by determining if a situation is dangerous and injurious to the health, safety, and welfare of the people in the town. Conditions considered include: general, dilapidation; defects increasing the hazards of fire, accidents or other calamities; lack of ventilation, light or sanitary facilities; and other conditions rendering such dwellings unsafe, unsanitary, dangerous, or detrimental to the welfare of the residents of the town. Due to Wrightsville Beach's proximity to the Ocean, the ordinance also sets forth erection, alteration, or repair procedures that are more stringent than in other areas that not be subject to these hazards.

Pierhead Line Ordinance: This set of regulations defines how far a pier can extend out into the water. If a conflict exists between the NC Code and the Wrightsville Beach Town Code, the more restrictive regulation prevails. The NC Annotated Code (NCAC) T15: 7H.1205 (g) states "The line of division of areas riparian access shall be established by drawing a line along the channel or deep water in front of the property, then drawing a line perpendicular to the line of the channel so that it intersects with the shore at the point the upland property line meets the water's edge."

Building Code: The Town of Wrightsville Beach has an active building inspections program and enforces the NC State Building Code along with additional provisions found in Chapter 151 of the Town Code of Ordinances. Volume No. 5 of the Fire Prevention Code is enforced through the fire department. In order to ensure that all structures comply with the aforementioned code, the building inspection program performs a series of inspections prior to development, during construction, and periodically after development has occurred.

Flood Plain and Damage Prevention Ordinance: This ordinance provides development and construction criteria designed to mitigate potential flood losses. Provisions of this ordinance meet and exceed FEMA requirements.

Additional New Hanover County Regulations Affecting the Wrightsville Sound Area: In the Wrightsville Sound Area, New Hanover County and Wilmington Zoning Ordinances including those pertaining to subdivisions and sedimentation and erosion control also apply.

CAMA Requirements

The Coastal Area Management Act (CAMA) requires permits for development in Areas of Environmental Concern (AEC). *Major permits* are necessary for activities that require other state or federal permits, for projects that cover more than 20 acres, or for construction covering more than 60,000 square feet. Ten state and four federal agencies review applications for major permits before a decision is made. *General permits* are used for routine projects that usually pose little or no threat to the environment. *Minor permits* are required for projects, such as single-family houses, that don't require major permits or general permits. The local permit officer (LPO) has the power to issue minor CAMA permits, and approve permit exemptions. Under CAMA regulations, a minor permit is to be issued within 25 days once a complete application is in hand. If the project is simple, the review process often is much shorter.

You must obtain a CAMA permit for your project if it meets *all* of the following conditions:

- It is in one of the 20 counties covered by CAMA.
- It is considered "development" under CAMA.
- It is in, or it affects, an AEC established by the CRC.
- It doesn't qualify for an exemption.

CAMA defines *development* as: "any activity in a duly designated area of environmental concern . . . involving, requiring or consisting of the construction or enlargement of a structure; excavation; dredging; filling; dumping; removal of clay, silt, sand, gravel or minerals; bulkheading; driving of pilings; clearing or alteration of land as an adjunct of construction; alteration or removal of sand dunes; alteration of the shore, bank or bottom of the Atlantic Ocean or any sound, bay, river, creek, stream, lake or canal (NCGS 113A-103(5)(a))."

As general guidance, you are probably in an AEC if your project is:

- In, or on the shore of, navigable waters within the 20 CAMA counties;
- On a marsh or wetland;
- Within 75 feet of the normal high water line along an estuarine shoreline;
- Near the ocean beach;
- Within an ocean high hazard flood area;
- Near an inlet;
- Within 30 feet of the normal high water level of areas designated as inland fishing waters by the NC Marine Fisheries Commission and the NC Wildlife Resources Commission;
- Near a public water supply;
- Within 575 feet of an ORW defined by the Environmental Management Commission.

However, Section 103(5)(b) of CAMA exempts the following activities from permit requirements:

- Road maintenance within a public right-of-way;
- Utility maintenance on projects that already have CAMA permits;
- Energy facilities covered by other laws or NC Utilities Commission rules;
- Agricultural or forestry production that doesn't involve the excavation or filling of estuarine or navigable waters or coastal wetlands (Note: these activities are not exempt from permitting requirements under the state's Dredge and Fill Law.);
- Emergency maintenance and repairs when life and property are in danger; and,
- The construction of an accessory building usually found with an existing structure, if no filling of estuarine or navigable waters or coastal wetlands is involved.

In addition, the CRC defines certain types of minor maintenance and improvement work that do not require a CAMA permit. However, you must receive an exemption certificate before you perform this work (15A NCAC 7K). The following categories of work may qualify for an exemption:

- Additions and modifications to simple structures;
- Shoreline stabilization;
- Maintenance and expansion of existing projects;
- Emergency maintenance and repairs;
- Single-family residences;
- Accessory uses;
- Structural maintenance and repair;

From 2000 to 2003 it is estimated that Wrightsville Beach's LPO issued 154 minor permits, 20 general permits, 120 exemptions, and identified 16 CAMA violations.

Permitting Process

If construction will result in a significant modification of a structure, increase the size of the structure, or if new development occurs the following permits may be required:

- ***Zoning Permit***: Site plan and description of work to be done shall accompany a Zoning Compliance Application;
- ***CAMA Permit***: If the property is located within the 420' Ocean Hazard AEC or the 75' Estuarine AEC then a CAMA permit shall be required; and,
- ***Building Permit***: For all construction activities.

If there is no expansion in the size of an existing structure due to development, all that is required is a building permit. Construction of fences, driveways, signs and businesses require zoning permits. They also require a CAMA permit if located in an AEC.

After an individual applies for the requisite permits, the development code administrator determines whether the project is permitted by the zoning ordinance and complies with existing regulations pertaining to such things as setbacks, FAR, height, parking, flood zone regulations, and other applicable requirements. When a proposed project is located within an AEC, the LPO reviews the project to assure that it is consistent with CAMA regulations and the land use plan's policies. Of particular concern are CAMA's requirements for buffer zones and erosion setbacks for small and large structures.

After the CAMA review, the building code enforcement officer reviews plans for compliance with building code and floodplain regulations for residential structures. If a commercial project is reviewed, building plan review includes building, flood plain, electrical, plumbing, HVAC and accessibility review to assure that all NC Building Code Regulations are met. A permit is issued only if it meets the aforementioned requirements. A majority of the time, there are meetings with the contractor, owners and architects before a permit is issued. Different fees are charged for building, plumbing, zoning, impact fees, pilings, water, and sewer. The building permit fee is based on cost of work material and labor. The other fees are a set amount.

The zoning code administrator/LPO performs a series of inspections prior to work commencing and after completion of exterior work or work taking place in or near AEC. The inspections performed by zoning code administrator/LPO include:

- Zoning for driveways, fences, buildings, and violations. Inspections are performed prior to work and after completion.
- CAMA inspections are performed before and after applications are submitted and again at the completion of the project.
- Assists the building inspector on various inspections.

The building code administrator also performs a series of inspections. After a building permit is issued, the first inspection is the foundation or piling inspection. At this inspection, Piling length and height of first finished floor are reviewed during this inspection to assure that flood requirements and setbacks are met. A survey is needed at this inspection. The second inspection is a sheeting inspection, which is followed by a framing inspection. The latter is done when the other trades (plumbing, electrical, etc) have passed their inspections. The next inspection is the insulation inspection. The last inspection is the final inspection. When the all trades have successfully passed inspection and final inspection has been performed to assure that all building regulations have been met, a certificate of occupancy is issued. There can be other types of inspections as well (e.g., rafter tie, decks, steps)

Many zoning and CAMA violations are identified via citizen complaints. Others are identified staff. Once a violation is reported, a site visit is performed to locate the violation and take pictures. A letter is then sent informing the property owner of the violation and the means of correcting the violation. When building code violation is identified, a stop work order is posted until a permit is issued. If a violation is found during construction, corrective actions must be taken for work to proceed.

Section VI

Community Facilities & Town Services

Introduction

The Town of Wrightsville Beach has a Council-Manager form of government. The Board of Aldermen consists of a Mayor and four Aldermen elected at large every four years with staggered terms. The Mayor is elected for a 2-year term. The Board of Aldermen is the governing body of the Town with the Mayor as a voting member and presiding officer. The Town manager is appointed by the Board of Aldermen and administers the daily operations of the Town as well as being responsible for implementing and explaining the policies of the Board of Aldermen.

The Town provides a full range of services. These services include fire protection, police protection, sanitation, construction and maintenance of streets and infrastructure, beach rescue, first responder/defibrillator medical service, and parks and recreation. The Town also provides water and wastewater services. The existing structure of government at Wrightsville Beach is performing the necessary functions well and there are no anticipated changes in the size or scope of the local government. The following sections analyze community facilities and town services in order to identify potential issues warranting consideration in the land use plan update.

General Administration

The General Administration Department is located in Town Hall and is responsible for a variety of services including preparation of agendas, correspondence and reports for the Mayor and Board of Aldermen; preparation and oversight of the annual budget; preparation of financial reports; investment of Town funds; preparation and processing of utility bills; and payments; and processing of accounts payable. This department is also responsible for maintaining financial and historical records for the Town and personnel records for Town employees.

Fire Protection & Emergency Medical Services

The Town's municipal fire department provides fire protection and emergency medical services within Wrightsville Beach corporate limits, including the annexed areas. The mission of the Wrightsville Beach Fire Department is to enhance the quality of life in Wrightsville Beach through fire prevention, fire suppression, emergency medical services (EMS) and protection from dangerous conditions created by man or nature. The Town's Public Protection (ISO) Classification is 4. The Fire Department also coordinates the Town's disaster preparedness & response activities. Beginning with the 2004 summer season, the Fire Department will assume responsibility for the Town's ocean rescue lifeguard program.

The Wrightsville Beach Fire Department is headquartered at 10 Seawater Lane, within the municipal complex located on Harbor Island. Eleven career firemen and approximately 30 volunteers staff the Fire Department. Eight of the volunteers live in the fire station under the Department's intern program. The Fire Department's equipment inventory includes the following apparatus.

- ***Pumper/Aerial Ladder***: 1996 model; 1500 g.p.m. pump; 300 gallon water tank; 75' aerial ladder with 1000 g.p.m. master stream nozzle; ground ladders; supply & attack hose
- ***Pumper***: 1988 model; 1250 g.p.m. pump; 500 gallon water tank; ground ladders; supply & attack hose
- ***Pumper***: 1983 model; 1250 g.p.m. pump; 500 gallon water tank; 50' telescoping boom with 1000 g.p.m. master stream nozzle; ground ladders; supply & attack hose
- ***EMS Squad***: 1994 model; four wheel drive with basic life support equipment

On-site facilities include a fire training structure, a ladder-training tower, and a drafting tank.

Once dispatched by the County's 911 center, the Fire Department's response time within Town limits is normally less than 4 minutes. During the summer months, however, responses can be delayed due to heavy traffic conditions. To assure that sufficient resources are available to respond to structural fire alarms, the Town maintains an automatic mutual aid agreement with Seagate Volunteer Fire Department. Due to Seagate's annexation by the City of Wilmington, this mutual aid agreement must be renegotiated. Additional mutual aid resources are available from other New Hanover County fire departments on request. The Fire Department also provides mutual aid resources when requested by other New Hanover County fire departments.

The Fire Department's emergency medical program is an integral part of the New Hanover Regional EMS system. Fire Department personnel provide immediate emergency medical technician (EMT) level care as "first responders" while New Hanover Regional Paramedics provide advanced life support and patient transport capability.

Fire Department resources are adequate to meet present needs. However, replacement of aging fire apparatus and fire station facilities must be considered within the 5-year planning horizon. The current trend toward construction of larger residential structures may also strain available firefighting manpower and water supplies. In order to maintain or improve its Class 4 rating, the Town must continually evaluate the adequacy of its firefighting resources relative to growth in the community.

Police Department

The Police Department is located at 321 Causeway Drive in the Municipal Complex on Harbor Island. The Police Department's staff presently consists of 22 sworn officers, 4 desk officers, and one administrative assistant for a total of 27 full-time employees. During the summer, one part-time police officer is hired to patrol the beach strand. A reserve force consisting of five reserve police officers, all of which are volunteers, augments the Police Department on a year round basis.

The Police Department offers law enforcement services ranging from investigative services to patrol of residential and commercial property. The Police Department also maintains a radio communications dispatch center and communications with the drawbridge. The Police Department has ten patrol vehicles (marked and unmarked) and a parking meter mechanics truck. The Police Department presently has an emergency response time of less than three minutes and a non-emergency response time of five minutes.

Future demand for services is expected to increase. The Police Department will need to increase personnel staffing and equipment to meet the ever-increasing demands for services and increasing workloads. These demands can be attributed to the completion of Interstate 40, the large influx of summer visitors, the growth of the area's student population and the tri-county area's population increase.

Department of Planning and Parks

The Department of Planning and Parks was created in 2003. The department has a unique organizational structure that combines the services offered by traditional parks and recreation with those of planning and inspections. The department is committed to enhancing the quality of life of residents and visitors. The department achieves this goal by consistently enforcing all federal, state, and local regulations pertaining to land use and development, offering leisure activities of an active and passive nature, and developing, beautifying, conserving, and maintaining the parks and other public areas of Wrightsville Beach.

Division of Planning and Inspections

The Division of Planning and Inspections reviews all development activities within Wrightsville Beach Town limits. Planning and Inspections enforces local building and zoning codes, the international building code, minimum housing standards, and CAMA's local permit program. Staff available for assistance includes the Planning and Parks Department Director, Building Code Administrator, Development Code Administrator, and Administrative Assistant. There is also a LPO who assists with CAMA permits. Staff is available to assist with the permitting process and answer questions. The Division of Planning and Inspections also provides staff support to the Planning Board, a 7-member board with the following powers and duties:

- To make careful studies of present conditions and the probable future development of the town and its environs. Such studies may include but are not limited to land use surveys; population studies; economic base studies; schools, parks, and recreation studies; traffic studies; and urban renewal studies.
- To formulate and maintain a comprehensive plan of the town and its environs for the purpose of achieving a coordinated, adjusted, and harmonious development of the municipality which would promote, in accordance with present and future needs, the safety, morals, order, convenience, prosperity, and general welfare of its citizens; efficiency and economy in the process of development; convenience of traffic; safety from fire and other dangers; adequate light and air; healthful and convenient distribution of population; provision of adequate open spaces; good civic design and arrangement; wise and efficient expenditures of public funds; adequate provision for public utilities; and other matters pertaining to public requirements. The comprehensive plan shall consist of a number of parts which may include but not be limited to the following: a land use plan, a major thoroughfare plan, a utilities plan, a plan for economic development, a recreation plan, a school plan, and a community facilities plan.
- To suggest revisions from time to time to the existing zoning ordinances and to make other recommendations as the Planning Board deems appropriate from time to time to the Board of Aldermen regarding zoning ordinances.
- To suggest revisions from time to time to the existing subdivision regulations and to make other recommendations as the Planning Board deems appropriate from time to time to the Board of Aldermen regarding subdivision ordinances.
- To review and make recommendations to the Board of Aldermen upon the extent, location, and design of all public structures and facilities; on the acquisition and disposal of public properties; on the opening, abandonment, widening, extension, narrowing, or other change to streets and other public ways; and on the construction, extension, expansion, or abandonment of utilities, whether publicly or privately owned. However, in the absence of a recommendation from the Planning Board after the expiration of 30 days from the date on which the question has been submitted in writing to the Board, the Board of Aldermen may if it deems wise, take final action.

- To submit, in April of each year, to the Board of Aldermen, a report of its activities, for the preceding year.
- The Planning Board is authorized to appoint committees made up in whole or in part of citizens of the town who are not members of the Planning Board. Provided, however, that the creation of the committees and the appointments thereto shall be subject to the prior approval of the Board of Aldermen

Division of Parks and Recreation

The Division of Parks and Recreation provides a variety of facilities and services that contribute significantly toward the community's quality of life. The Division of Parks and Recreation is staffed by a program supervisor, a parks and maintenance supervisor, a maintenance crew chief, an administrative assistant and a variety of part time and contracted employees. A Parks and Recreation Advisory Committee serves as the advisory body for the Division of Parks and Recreation. The Committee suggests policies to the Planning and Parks Department, the Planning and Parks Director, and the Board of Aldermen. The Committee also serves as a liaison between the local decision makers and the citizens of Wrightsville Beach. The Committee consults with and advises the Department, the Director, and the Board in matters affecting recreation policies, programs, personnel, finances, and the acquisition and disposal of lands and properties related to the total community recreation program, and to its long-range, projected program for recreation.

Programs and activities provided year-round by the Division of Parks and Recreation include: adopt a beach access; senior aerobics; pilates; yoga; tennis lessons; sand wheel chairs; tone and stretch classes; shag lessons; and after school programs. Seasonal programs vary from year to year and generally include: softball; basketball; flag football; various summer camps; surf lessons; and a variety of special events designed to attract both residents and visitors.

In addition to maintaining a variety of beach access facilities, the Wrightsville Beach Parks and Recreation Department operates one 13-acre park, and five mini-parks. The mini-parks range in size from .5 to.85 of an acre and are located on both Harbor Island and the barrier island. Generally, the outdoor facilities are adequate to handle the residential population of Wrightsville Beach. Day visitors also come from surrounding areas to visit the 13-acre park. These facilities are summarized below and are displayed graphically on the Public Access and Recreation Map contained in Appendix A.

- ***Public Access Sites***: There are 44 public access points on the Island that range from simple walkways to handicap accessible dune walkover structures. Some of the access sites include public parking and shower and changing facilities.
- ***Wrightsville Beach Park***: 13 Acre park with tennis courts/backwall, sand volleyball courts, basketball court, shuffleboard courts, horseshoes, one softball field, soccer/football fields, jogging/fitness trail, tot lot, playground area and equipment, overlook deck and picnic shelter with grills, 104 car parking lot, public restroom.

- ***Fran Russ Recreation Center***: Adjacent to the park area and Town Hall, this building provides indoor areas for recreation programs including yoga, aerobics, shag, pilates, tone and stretch, and after school programs, as well as serving as a room for community meetings and events. This facility includes a fully equipped kitchen
- ***Lees Nature Park***: .5 Acre nature oriented park for plant and bird identification.
- ***Greensboro Street Park***: .8 acre park with playground equipment
- ***Wynn Plaza***: .85 acre park on Banks Channel provides "transient" dockage, a gazebo, and waterfront walkways
- ***South Channel Drive Park***: .5 acre park on Banks Channel for water oriented activities
- ***Island Drive Park***: .5 acre park with benches for passive atmosphere
- ***Causeway Park***: .5 acre park with benches located at the street under the bridge
- ***Wings Plaza***: Landscaped area with benches for passive uses, located in the downtown across from Wynn Plaza.
- ***Kayak Trail***

While these facilities are suitable to meet present needs, facilities are heavily utilized. There are many facility additions and improvements that could greatly help to improve the quality of life at Wrightsville Beach. Possible improvements include:

- ***Addition to the Frances L. Russ Recreation Center***: it would greatly enhance the Parks and Recreation program. In 2000, the Number 2 Fire Station, once used for indoor recreational programs, was removed from the Recreation Department. Currently all available indoor programmable space is used. Addition would also provide additional public meeting space.
- ***An additional soccer field***: it would alleviate crowding during warm months and provide for additional programming space. The existing soccer field is used year round due to lack of indoor space, league demand and general public demand.
- ***Addition of lights to the tennis courts and softball fields***: this would allow the thriving tennis and softball programs Wrightsville Beach to expand operating hours and meet current public demand.
- ***An additional picnic shelter***: This would help relieve the overcrowding of the current shelter in warm summer months.

While no significant additions to park acreage are anticipated through 2013, there will be continued demand to make better use of existing facilities and to add additional facilities at existing sites.

6.1: School Capacity and Enrollment

School	Fall 2003 enrollment	Capacity w/o mobile homes	Capacity w/mobile homes
Wrightsville Beach Elementary	237	161	245
MCS Noble	729	696	780
John T. Hoggard	1678	1465	1717

Source: New Hanover County Department of Education

Public Works Department

The Public Works Department provides a vast array of services to the citizens of Wrightsville Beach. These services include water and wastewater treatment, solid waste collection, vehicle and equipment maintenance, and street and infrastructure maintenance. Work is organized and accomplished by the use of a computerized work order system. When there is an area in Wrightsville Beach needing attention, Public Works submits a work order request to have the work done. Public Works also relies on Wrightsville Beach residents and visitors to help notify about problem areas around town. These tasks are accomplished through the five divisions of the Public Works department and are described in more detail in Section VII examining the infrastructure carrying capacity.

Schools

While increases in the number of school-aged children at Wrightsville Beach has been small at best, the New Hanover County School System has experienced an explosion in its student population. As a result, nearly all schools are at or over capacity. Wrightsville Beach elementary serves grades k-5 and it is the only school in the Town. It is also approaching capacity even with the addition of mobile classrooms. The most recent capacities and enrollments of New Hanover County Schools serving the Town of Wrightsville Beach are shown in Table 6.1. In addition to the public school system, other educational facilities in New Hanover County include several private schools (primary, secondary, and special education), the University of North Carolina at Wilmington, and Cape Fear Community College.

Section VII

Infrastructure Carrying Capacity

Introduction

Another important consideration in developing a land use plan for any barrier beach community is ensuring that the infrastructure's carrying capacity is adequate to serve the population and the influx of seasonal residents and visitors frequenting the Island. Since the Town of Wrightsville Beach is approaching a built out status and is unlikely to see significant growth or development, its infrastructure appears to be adequate to handle projected population increases and the influx of seasonal residents and visitors. The following sections review important aspects of Wrightsville Beach's infrastructure and some of the services provided by its Public Works Department.

Public and Private Water Supply Systems

At present, the Town of Wrightsville Beach's municipal water system provides service to all areas of the Town east of the Intracoastal Waterway, and to the satellite annexation areas at Wrightsville Sound west of the waterway. The number of connections is included in Table 7.1. Facilities located east of the waterway include two elevated storage tanks. One is located near the north end and the other is at the south end of the Island and the elevated tanks have capacities of 300,000 and 200,000 gallons, respectively. The Town also has two water treatment centers (No 1 on Harbor Island near Town Hall and No 2 at Allens Lane on the mainland at Wrightsville Sound) that have ground storage with a total capacity of 0.5 million gallons. The Town has a total of 11 active water supply wells. One is inactive at this time [See Table 7.2].

In the ETJ, Wrightsville Beach, City of Wilmington, and private industrial wells provide service. The City of Wilmington has a 24-inch finished water trunk main running along Eastwood Road (U.S. 74) but its service is limited to Landfall (a planned unit development) and associated commercial development. Wilmington's water supply wells are located to the west of Wrightsville Sound. An 8-inch trunk main serves the central portion of the mainland segment of the planning area. The Town has two water supply wells in service in the Wrightsville Sound Area that are connected to the Water Treatment No. 2 at Allen's Lane and to the water mains serving serve the ETJ.

Table 7.1: Water Connections

Type of Connection	Number of connections	Percent Use
Residential	2,214	0.713
Commercial	227	0.261
Industrial	2	0.006
Institutional	1	0.001

Source: Wrightsville Beach Public Works
Note: Due to the ETJ, the number of connections does not match the number of housing units noted in previous tables

Table 7.2: Well Field Capacity (Gallons Per Minute)

Well	Well Field Location	Set Production Capacity	Capacity
1	1701 N Lumina	230 GPM	230 GPM
2	2399 N Lumina	195GPM	195 GPM
3	399 N Lumina	200 GPM	200 GPM
4	275 Waynick	205 GPM	205 GPM
5	435 Causeway	186GPM	186 GPM
6	7 Marina	210 GPM	210 GPM
7	301 Pelican	115 GPM	115 GPM
8	201 W Salisbury	250 GPM	250 GPM
9	14 Crobett	0 GPM	0 GPM
11	2001 Allen's Lane	130 GPM	130 GPM
12	1729 Allen's Lane	170 GPM	170 GPM

Source: Wrightsville Beach Public Works

The Town's distribution system in the Wrightsville Sound Area connects the Town's mainland water treatment facility to annexation properties. The municipal distribution system consists of 12-inch, 10-inch and 8-inch mains with fire hydrants and valving serving all areas of the Town including the ETJ. A 14-inch sub aqueous waterline connection beneath the ICW gives the Town considerable flexibility of utilizing all 11 wells and combined elevated and ground storage of 2 million gallons both east and west of the ICW to meet its water supply needs. Waterlines are displayed graphically on the Infrastructure Map located in Appendix A.

Well water in the region is drawn from the Cretaceous Aquifer, which lies 190 to 1,100 feet below the land surface. The water supply is considered sizeable, and the Town wells draw primarily from the Pee Dee Formation. The aquifer receives recharge from infiltration through the overlying sediments and from upland recharge areas to the west. Overlying this aquifer is a limestone-sand unconsolidated sandy layer some 130 feet deep, the Castle Hayne Aquifer. Water is salty at this depth near the coast. Above the tertiary system aquifer (0 to 60 feet) lies the Post Miocene, Yorktown and surficial aquifers of predominantly sands and clay. Care and consideration must be taken in order not to overtax the water supply. Excessive pumping and depletion of fresh water may lead to salt water intrusion into the

Table 7.3: Average Daily Water Flows (1986 – 2003)

Year	Total Flow (Gallons)	Average Daily Flow
1986	291,493,900	798,613
1987	381,007,546	824,678
1988	301,435,500	823,594
1989	319,026,618	874,046
1990	361,557,568	990,569
1991	357,367,672	979,090
1992	347,947,000	950,675
1993	373,072,000	1,022,115
1994	353,586,000	968,729
1995	358,269,000	981,559
1996	324,718,319	889,639
1997	373,996,000	1,024,647
1998	344,680,000	944,329
1999	369,150,000	1,011,370
2000	352,510,000	965,781
2001	385,235,000	1,055,438
2002	369,502,164	1,012,335

Source: 2003 Wrightsville Beach Surface Water Supply Plan

Table 7.4: Average and Maximum Daily Water Use By Month (2002)

Month	Average Daily Use (Million Gallons)	Maximum Daily Use (Million Gallons)
January	0.557	0.692
February	0.575	0.678
March	0.692	1.073
April	0.963	1.781
May	1.264	1.934
June	1.444	1.776
July	1.621	2.007
August	1.486	2.000
September	1.133	1.463
October	0.972	1.475
November	0.749	0.985
December	0.699	0.793

Source: Wrightsville Beach Public Works

aquifer on the island and even the mainland. Units of government that provide public water either individually or together with other units of local government, are required to prepare a local water supply plan and submit the plan to the DENR's Division of Water Resources (DWR).

Water supply plans are useful because they analyze water use and project future demand. The last local water supply plan prepared for the Town of Wrightsville Beach was submitted to DENR on July 30, 2003. This plan reports on municipal water services for 2002. The

Table 7.5: Projected Service Area Demand for Water

Year	Total Demand	Average Daily Demand
2002	369,380,000	1,012,000
2010	377,775,000	1,035,000
2020	380,695,000	1,043,000
2030	384,345,000	1,053,000
2040	387,995,000	1,063,000

Source: 2003 Wrightsville Beach Surface Water Supply Plan

total water use reported for 2002 was 369.502 million gallons (MG). The average daily water use in 2002 was 1.012 MG [Table 7.3]. The largest average daily use and maximum daily use in Wrightsville Beach were in July 2002 at 1.621 million gallons per day (MGD) and 2.007 MGD, respectively [Table 7.4]. In a resort community such as Wrightsville Beach, the system flows are subject to unusual peaks that occur seasonally. Therefore, while it is not necessary or practical to meet the State criteria on peak days, the system must be able to handle those flows for short periods without running out of water. To accommodate these periods, good engineering practice dictates that the well field should be able to meet peak daily flow in 24 hours pumping time with the largest well out of service.

As demonstrated by Table 7.5, the water supply system is more than capable of meeting projected service area demand based on current population projections. The biggest long-term issue is whether the population growth in New Hanover County and its use of the same aquifer system could ultimately impact Wrightsville Beach's water supply.

Public and Private Wastewater Systems

There are no private wastewater systems operating within the Town of Wrightsville Beach. The Town of Wrightsville Beach connected with the City of Wilmington in 1983. Connection to the public sewer system is required for all residents and businesses within the Town. Given that the Town of Wrightsville Beach is nearly built out, the sewer system has adequate capacity to serve expected growth over the next 5 years. The Town's sewer system is displayed graphically on the Infrastructure Map located in Appendix A. Table 7.6 displays the average daily wastewater discharge in 2002. Table 7.7 displays the average daily wastewater flow from 1986 until 2003. It indicates that wastewater flows have declined modestly since 1999, which may be due in part to the slight population decline in recent years.

Table 7.6: Average Daily Wastewater Discharges (2002)

Month	Average Daily Discharge
January	0.406
February	0.438
March	0.548
April	0.572
May	0.651
June	0.843
July	0.892
August	0.863
September	0.820
October	0.724
November	0.575
December	0.508

Source: Wrightsville Beach Public Works

Table 7.7: Average Daily Wastewater Flow (1986 – 2003)

Year	Total Flow (Gallons)	Average Daily Flow (Gallons)
1986	256,855,000	703,712
1987	250,925,800	687,466
1988	233,950,000	639,208
1989	236,214,000	647,162
1990	291,136,000	797,633
1991	294,055,630	805,632
1992	276,110,840	754,401
1993	274,455,020	751,932
1994	248,472,860	680,748
1995	256,187,040	701,882
1996	238,307,400	652,897
1997	255,627,150	700,348
1998	247,720,000	678,685
1999	273,220,000	748,548
2000	261,790,000	717,233
2001	228,012,720	624,692
2002	238,119,472	652,382

Source: Wrightsville Beach Public Works

Table 7.8: Owner of Drainage Systems

Ownership	Percent	Total Feet	Total Outfalls
New Hanover County	<1 %	375 Ft	1
Private Systems	13.2 %	6,200 Ft	6
Town	42.5 %	20,052	34
NCDOT	42.7 %	20,055	48

Source: Wrightsville Beach, *NPDES Phase II Comprehensive Stormwater Management Program Report* (Wrightsville Beach, NC: Town of Wrightsville Beach, 2003)

Stormwater System

The stormwater system within the Town of Wrightsville Beach is a municipal separate storm sewer system (MS4). The MS4 consists of approximately 47,000 feet of piping system, manholes, and outfall pipes. There are approximately 500 feet of open ditch and 2,500 linear feet of sheet flow area. The stormdrains are displayed graphically on the Infrastructure Map located in Appendix A.

Harbor Island saw significant development changes in the late 1960's after its annexation by Wrightsville Beach. These changes included paving of roadways, installation of sewer systems, and installation of storm drainage systems. There were also improvements to the NCDOT highway systems of Hwy 74 and Hwy 76 that included storm drainage. The construction of the Federal Desalination Plant, which is located in what is now the Municipal Complex included storm drainage systems for those areas.

The construction of the North Carolina Department of Transportation (NCDOT) highway systems of U.S. Hwy 74, 76 and the N Lumina connector included the construction of storm drainage systems appropriate to those areas. During this time, portions of these systems have been extended to provide drainage for Town streets and some private entities. Some of the private entities include Station 1, Blockade Runner Hotel, Carolina Yacht Club, and the Coast Guard Station at the South end of Wrightsville Beach.

The last construction involving storm drainage occurred in the mid 1980's with the development of the northern part of the Shell Island area. As part of that development project, efforts were made to contain the stormwater on the properties developed through the use of French-drain systems. The most notable examples are Shell Island Resort, Duneridge, and the municipal parking lots at 2938 N Lumina and 2498 N Lumina. The Wrightsville Dunes development made use of brick pavers as a component of the driveway/parking areas to provide more pervious surface than would be typical with concrete or asphalt construction. Adjacent to, but on the opposite side of Hwy 74 at Duneridge, there is a sheet flow area of 700 feet. The border between the road surface and the sound has been left to natural growth in order to provide a buffer for the sound and to assist in the trapping of potential pollutants.

The ownership and drainage systems within the area of Wrightsville Beach are divided as shown in Table 8.7. New Hanover County and private systems are located on properties

other than Town or State land and do not have a recorded easements or maintenance contracts with the Town. The Town performs no maintenance on these systems. Maintenance activities are limited to Town Systems and routine non-construction maintenance on NCDOT systems. Routine non-construction maintenance includes street sweeping, leaf collection, video inspection, high-pressure water cleaning, and vacuum debris removal. In addition, Town systems also benefit from construction maintenance activities such as line repair, replacement, and catch basin repairs. Maintenance activities are triggered by one of two methods:

- Direct complaint
- Scheduled maintenance

The Town maintains a work order system that allows the scheduling of maintenance activities with variable intervals. These activities are scheduled monthly, bi-monthly, quarterly, semi-annually, and annually. Work orders document the issue and date, completion date, and total man-hours required for completions

Solid Waste Disposal and Recycling

The Town of Wrightsville Beach collects solid waste twice weekly from all residential units in its jurisdiction. Commercial waste is picked up as needed up to 7 days per week by the Town of Wrightsville Beach. There is no County trash collection system in the unincorporated County including Wrightsville Sound. Homeowners and businesses in this area contract private waste collection services. This arrangement is presently considered to be adequate and will continue for the foreseeable future. Solid waste is disposed of in the County incinerator or the county landfill. County facilities are adequate to meet current and future needs. The Town of Wrightsville Beach also operates a recycling center on Seawater Drive between the police and fire stations. The recycling center serves Wrightsville Beach residents and visitors.

Parking Facilities

With increasing numbers of visitors, there is a high demand for public parking spaces during summer months. However, according to Table 7.9 the number of marked spaces available for parking has decreased from about 2,137 marked spaces in 1990 to 1,762 marked spaces in 2002. This includes 560 spaces in public parking lots and 919 parking spaces on Wrightsville Island.

Table 7.9: Marked Parking Spaces

Location	1990	1995	2002
Parking Spaces in Lots Wrightsville Island	337	350	560
On Street Parking Wrightsville Island	1,373	1,306	919
Parking Spaces in Lots Harbor Island	104	104	148
On Street Parking Harbor Island	323	139	165
Total Marked Parking	2,137	1,899	1,792

Source: Wrightsville Beach Public Works Department

Transportation System

The U.S. 74-76 Bridge across the ICW is the only means of ingress or egress to the Town of Wrightsville Beach from the Mainland. The four-lane drawbridge connects into a 5-lane road (U.S. 76) that has a two-lane fork (U.S.-74 W Salisbury Street) intersecting with North Lumina. On the other end, the five-lane U.S. 76 (Causeway Drive) runs into Waynick Boulevard and Lumina across the Banks Channel Bridge at the center of Town. Waynick Boulevard, which is four lanes, is the major thoroughfare to the southern end of the beach. The road system is displayed graphically on the Transportation System Map located in Appendix A.

Wrightsville Beach (Heide Trask) Drawbridge

The Heide Trask drawbridge on U.S. Highways 74-76 is operated and maintained by the NCDOT. Since the summer of 1985, the Town has maintained radio communications with the drawbridge operator by placing a Town radio in the operator's control booth. The bridge operator also has direct radio contact with vessels using the ICW. The bridge is scheduled to open every hour on the hour between 7am and 7pm for recreational vessels. Commercial craft and government-operated vehicles can still pass through the bridge on demand as necessary.

The average opening of the drawbridge is 4 minutes per vessel. The bridge operator notifies Town Police any time the bridge will be open longer than normal. The County's emergency communications center also has contact with the bridge operator and notifies the operator when an ambulance is approaching the bridge. Police also notify the bridge operator when there is fire, police or a medical emergency that requires highway access across the bridge. Under these emergency circumstances, the bridge operator will not open the bridge until the emergency has been cleared.

Should the bridge become inoperable because of mechanical problems or other reasons, many beach-goers or resident travelers could find themselves stranded on the beach. Both Police and Fire Departments maintain radio contact with the bridge and can assist with minor repairs. In 2004, major maintenance was completed on the bridge. It is not expected that major repairs will become necessary in the near future. The fire department maintains an

Table 7.10: Estimated Peak Traffic Volumes (1990 – 2003)

Road	Estimated Peak Day Volume			Design Capacity	Peak Percent Use		
	1990	1996	2003		1990	1996	2003
ICW Bridge	45,030	52,000	44, 785	50,000	90.1	104.0	89.6
U.S. 74	14,315	20,800	17,914	35,000	40.9	59.4	51.2
U.S. 76	24,462	31,200	26,871	20,000	122.3	156.0	134.3
Waynick Blvd.	12,684	19,600	14,780	28,000	45.3	70.0	52.8

initial response plan, which in the case of a long-term break down implements a ferry service in conjunction with the NCDOT. If the bridge is ever disabled during a storm or during dangerous or threatening weather, a temporary ferry shuttle system would also be established using NCDOT supplied ferryboats. Ferries would be used to transfer cars and people across the ICW to the mainland. They would also be used to ferry emergency vehicles, school buses, and commercial traffic (e.g., food delivery trucks). To supplement the ferries, smaller State-owned boats would also be mobilized in order to remove people without vehicles.

Traffic Counts and Roadway Design Capacity

Like other facilities, roads are in highest demand during the summer months. Table 7.10 shows the estimated peak day traffic volumes for 1990, 1996 and 2003. Compared to the maximum design capacities, Waynick Blvd and U.S. 74 appear to have excess capacities. However, the ICW bridge approaches capacity on peak summer days. U.S. 76 is often over capacity on peak summer days.

It appears that the main thoroughfares have sufficient capacity to handle traffic during most periods through the year 2013. However, traffic congestion during certain peak periods will continue to occur, particularly during the summer months. The periodic congestion is likely to remain a fact of life for residents and visitors because there are no easy or inexpensive solutions to the problem given inherent limitations associated with the drawbridge. Nevertheless, further study of roadway, traffic, and parking issues is warranted.

Section VIII

Land Suitability Analysis

Introduction

One of the DCM requirements (NCAC 15A 7B. 0702 (5)) and its newly promulgated *Technical Manual for Land Use Planning* is to perform a land suitability analysis (LSA) using data disseminated by state agencies, New Hanover County, and information from Wrightsville Beach's GIS. The overall purpose of the analysis is to provide the Land Use Plan Steering Committee (LUPSC) with information on the best and least suited areas for development in order to guide the formation of policies and recommendations for managing future growth and development. The analysis is intended to apply to undeveloped land that may experience future development or land that has the potential for redevelopment.

Land Suitability Analysis

The LSA uses GIS applications and data from state and local sources to classify undeveloped land with a rating based on its suitability for development. The computer model divides the planning jurisdiction into 1-acre grid cells. Each grid cell is measured for suitability based on the totality of factors affecting the cell. Many factors on or adjacent to undeveloped land affect the degree to which it is suitable for development. For example, whether the site has access to water and sewer infrastructure (positive factor) or has coastal wetland located on the parcel (negative factor). Final ratings fall into one of four categories: least suitable for development; low suitability; medium suitability, and highly suited for development.

The first step of the analysis was to complete the mapping of the factors used in the LSA to display their extent and applicability within the jurisdiction. These factors are identified on various maps located in Appendix A. The next step is mandated by the state. The CRC and the DCM defined criteria in which the presence or proximity of a prescribed set of factors are determined to impact the suitability of land for development and automatically assigned a suitability ranking to factors based on the following criteria. Areas within:

- ***Beneficial Non-Coastal Wetlands*** have low suitability;
- ***Storm Surge Areas*** have low suitability;
- ***100-year Flood Zones*** have low suitability;
- ***HQW/ORW Watersheds*** have low suitability;
- 500 feet of a ***Significant Natural Heritage Areas*** have low suitability;

- A half-mile of ***Primary Roads*** have high suitability, within a half-mile to a mile have medium suitability, and areas greater than a mile outside of primary roads have low suitability;
- A half mile of ***Developed Land*** have high suitability, areas within a half-mile to a mile have medium suitability, and areas greater than one mile away from developed land have low suitability;
- A quarter-mile of ***Water Pipes*** have high suitability, areas within a quarter mile to half-mile of water pipes have medium suitability, and areas greater than a half-mile from water pipes have low suitability;
- A quarter-mile of ***Sewer Pipes*** have high suitability, areas within a quarter-mile to a half-mile have medium suitability, areas greater than a half-mile from water pipes have low suitability;
- ***Coastal Wetlands*** are *least* suitable;
- ***Exceptional and Substantial Non-Coastal Wetlands*** are *least* suitable;
- **Protected Lands** are *least* suitable; and,
- ***Estuaries Waters*** are *least* suitable.

For example, one criteria states that land within 500 feet of a wastewater treatment plant should receive a 'low' suitability ranking while land within a half mile or less of water infrastructure is 'highly' suited for development. The overall suitability rating score for each acre of undeveloped land will be the composite of the suitability ratings for each factor. In a sense, it is an *average* of all of the individual ratings.

The Town of Wrightsville Beach and its LUPSC also have an opportunity to provide input to the land suitability analysis by providing an importance weighting or ranking for each factor. Although the CRC and DCM decided on criteria that establish the suitability levels for each factor, the Town is allowed to decide on the relative importance of each factor in the overall analysis. This is done by ranking the factors as follows: 1 for important (lowest); 2 for very important; and 3 for highest importance (highest). The LUPSC followed the state's recommended guidelines with respect to the rankings.

Implications of the Land Suitability Analysis

The results of the Land Suitability Analysis are displayed graphically in Appendix C. Unfortunately, the results of the land suitability analysis have little practical affect for the Town and the LUPSC as it formulates policies and recommendations for future development. The results of the land suitability analysis are best used for evaluating sizable tracts of undeveloped land in larger municipalities or at the county level. The LSA also has problems when applied to long, thin barrier beach municipalities such as Wrightsville Beach due to the scale and dynamic nature of the data used. Most importantly, the Town of Wrightsville Beach is nearly built out and most of the estimated 47 vacant parcels are smaller than an acre in size or are in-fill lots suitable for development. Thus, the results have limited applicability with respect to guiding future development decisions. Nevertheless, the Land Suitability Map found in Appendix C is a useful planning tool that provides some indication of the areas within town limits that are best suited for land development.

Section IX

Policy Analysis

Introduction

The final section of this report analyzes the progress made during the last five years in implementing the policies and recommendations contained in Wrightsville Beach's 1996 Land Use Plan. It examines each policy and its corresponding recommended actions and evaluates the status of its implementation. It also looks at constraints or obstacles to implementation that exist. This analysis reveals that considerable progress has been made in the last five years. The following sections summarize some of the major findings from the policy analysis. The complete policy analysis is contained in Appendix B.

Public Access

The *1996 Land Use Plan* contains several policies and recommendation designed to protect and enhance public access to the shoreline and protect public trust areas. Implementation of these policies and recommendations has been excellent. Notable examples of accomplishments in this area include the development of the *2002 Surface Water Use Plan*. This planning process identified a variety of recommended actions that will be incorporated into the land use plan update. The oceanfront development standards adopted in 2003 and other town ordinances continue to protect public access to and along the ocean shoreline. Other ordinances have been adopted to protect direct and indirect access to the ICW and sound. One area where more progress could be made is through additional improvements to dune access points with additional facilities such as showers and bathroom facilities. However, these improvements have been limited due to financial constraints.

Land Development

Many of the policies and recommendations in the *1996 Land Use Plan* focused on issues related to land development and progress has been made in many areas. Policies discourage large increases in development and the population, neither of which occurred. Most development has been limited to residential and duplex structures. The Town has not increased its 40-foot building height limitation. Density maximums have been established along with minimum lot sizes, floor area ratios, and parking requirements that limit the size

and density of new structures. Scenic vistas and views were, for the most part, protected by applying the front, back, side yard, and oceanfront setbacks. Eight houses were designated as historic landmarks to preserve older structures on the Island. The Town continues to enforce its zoning ordinances and undertake actions designed to mitigate storm damage. Wrightsville Beach's current CRS rating of 5 is evidence of these successful efforts.

There were several areas where additional progress could be made in addressing policies and recommendations. The 1996 plan recommended that the town consider adopting a mixed-use ordinance. While there is mixed-use development on the Island, the ordinances do not specifically allow or facilitate this type of development or redevelopment. It continues to be an issue as evidenced by comments at the November 15, 2003 public workshop. The plan also recommended that the Town encourage and assist downtown property owners in the development of architectural design guidelines. While zoning, signage, and lighting ordinances provide guidance to business owners, no architectural guidelines were established. The plan also recommended that the Town undertake a program of neighborhood-based meetings on a rotating basis. While the Better Beach Task Force was created, neighborhood meetings have not occurred as recommended in the plan. Moreover, no neighborhood plans were established, although zoning ordinances do reflect some of the different neighborhood characteristics.

Infrastructure

The *1996 Land Use Plan* contains several policies and recommendations focused on infrastructure related issues. One of the policies was to initiate a traffic management program designed to achieve a balance between bicycle, pedestrian, and vehicular movement. While no formal program was created, planning for a bike path has been initiated and additional lighting was added to the 2.5-mile loop to improve public safety and encourage additional pedestrian use during evening hours. The Town has also talked with the Wilmington Transit Authority (WTA) about establishing a bus route. The Town reviewed various options for improving traffic flow at the Keel Street intersection but funding remains a constraint. Steps were taken to improve public parking and the management of the program was privatized resulting in enhanced revenues and improved enforcement. Zoning ordinances also require new development to have adequate parking.

Natural Systems

The *1996 Land Use Plan* contains a variety of policies and recommendations to address the issues raised in Section IV discussing the natural systems found in and adjacent to the Town of Wrightsville Beach. Considerable progress has been made in addressing many of the policies and recommendations. Two of the major accomplishments since the adoption of the *1996 Land Use Plan* was the adoption of the *2002 Surface Water Use Plan* and the *2003 National Pollutant Discharge Elimination System (NPDES) Phase II Comprehensive Stormwater Management Program Report* that address various policies and recommendations pertaining to water use and water quality, respectively. Both documents

extend many of the policies and recommendations contained in the *1996 Land Use Plan* and will be incorporated into the land use plan update. The Town also continues its efforts to preserve tree cover and improve other natural areas. While no permanent turtle nesting areas were designated, the non-profit organization Turtle Watch marks off and monitors nesting sites. The North End has also been designated as a bird sanctuary as a result of the project to relocate Mason's Inlet. The Town continues to limit marina expansion and the placement of permanent moorings.

The *1996 Land Use Plan* also contains several policies and recommendations targeted at mitigating storm damage and other hazards. Considerable progress has been made in this area. The Emergency Management and Operations Plan is updated annually and contains plans for a "building permit triage" program, Recovery Task Force, and a planned sequence for the restoration of public utilities and services to respond in post-storm situations.

Areas of Local Concern

There are also a variety of policies and recommendations best described as local areas of concern. Progress has been made in these areas as well. The Town regularly announces and promotes the "Big Sweep Clean Up". It continues to support measures to recycle and reduce the amount of solid waste generated annually. Further expansion of the ETJ has not occurred and Wilmington has now annexed all of the ETJ except for the 14 satellite commercial properties. The Town continues to support beach renourishment. A visitor's center is being developed and a new welcome sign has been installed. However, while the Town continues to support its parks and recreational facilities, there was no significant investment in new park and recreational facilities other than the creation of a new Kayak Trail.

Appendix A

Supporting GIS Maps

- AEC Coastal Wetland and Estuarine Waters Map
- AEC and Fragile Areas Map
- Closed Shellfishing Areas Map
- DWQ High Quality and Outstanding Resource Waters Map
- Fish Nursery Areas Map
- Special Flood Hazard Zones Map
- Flood Zone Map
- Storm Surge Map
- Hurricane Storm Surge Inundation Map
- NC CREWS Exceptional, Substantial, and Beneficial Map
- Significant Natural Heritage Areas Map
- Existing Land Use Map
- Zoning Map
- Public Access and Recreation Map
- Infrastructure Map
- Transportation System Map

Appendix B

Detailed Policy Analysis

Public Access

Current Policies-Public Access	Recommended Actions	Status/Constraints
Policy 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 strongly discouraged. Projects which would directly or indirectly block or impair existing navigational channels, increase shoreline erosion, deposit spoils below mean high water, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters shall be prohibited. (2) The Town shall seek to ensure the responsible use of jet skis and other similar "personal" watercraft within the public trust waters of Wrightsville Beach. Responsible use shall mean controlled, predictable movements similar to other powered watercraft while in navigation channels, marinas, and other regularly trafficked areas, and their prohibition in marshes and other shallow water estuaries, where damage to the resource is likely. (3) CAMA standards designed to limit the length of docks and piers as they project into public trust waters shall be considered the minimum standards, with the Town reserving the right to be more restrictive where public trust waters use and environmental protection issues warrant.	**Recommended Actions**: ▪ The Town shall develop a water use and harbor management plan to address the competing interests for the public trust waters at Wrightsville Beach. ▪ The Town shall continue to participate on the special government committee to address the management and proper regulation of jet skis and similar personal watercraft. ▪ The Town shall extend the Pierhead line to the north end of Wrightsville Beach.	**Status**: ▪ Surface Water Use Plan: Addresses the concerns of boaters and residents of Wrightsville Beach about the use of Public Trust Waters. No ordinances resulted. However, 2002 Surface Water Use Plan Recommendations will be incorporated into the LUP Update. ▪ No Harbor Management Plan was developed, however, the 2002 Surface Water Use Plan, and the 2003 Phase II NPDES Stormwater Plan address many of these issues. ▪ Ordinance 1267 1996, boats cannot be anchored past Pierhead line for more than 30 days in any 180 consecutive day period. ▪ The pierhead line extends to Parmele, but it was not extended further north. **Constraints**: Funding; NPDES is federally required.

Current Policies: Public Access	Recommended Actions	Status/Constraints
Policy 8.3.7 Commitment to State and Federal Programs The Town supports the State Coastal Area Management Act, the State's beach access program, State and Federal channel maintenance and inlet projects, beach renourishment, and bridge and road improvement programs.	**Recommended Actions**: ▪ No Actions Listed in 1996 LUP	**Status:** ▪ The Town through, the zoning code enforcement officer enforces the policies of CAMA. ▪ The Town through the building code enforcement officer enforces the NC State Building Code and the Minimum Housing Standards ▪ February 27, 2003 150.07 requiring BOA approval for dredging repealed due to heavy regulation by COE and NC DENR. **Constraints**: Not Applicable
Policy 8.3.11 A. Beach and Waterfront Access (1) Public pedestrian access is limited to designated dune crossover access areas. The Town, through its CAMA minor permit program, may also allow the construction of individual over-the-dune structures for access to the beach at private access points. The intent of this policy is to prevent destruction of the berm. (2) The Town shall continue to maintain and improve its existing public beach access facilities. (3) The Town will seek County and State funding assistance for waterfront and beach access projects and facilities. (4) To relieve congestion at the Wrightsville Beach boat ramp, the Town shall encourage City and County efforts to provide for boat ramp facilities on the mainland side of the Intracoastal Waterway.	**Recommended Actions**: ▪ The Town shall review the integrity of the existing dune system to determine necessity of dune walkovers/crossovers in preventing ocean water washovers	**Status**: ▪ Ocean Front Development Standards adopted in 2003. ▪ Ordinance 155.029 requires that Public access shall be provided in accordance with the recommendations of the town's land use plan and access plan or the present amount of public access and public parking as exists within the town now. If any recommendations are found to conflict, the system requiring the greatest quantity and quality of public access, including parking shall govern. ▪ Improved Access Number 2 at North End post 1996 **Constraints**: Many unimproved dune accesses already provided. Only 4 improved dune accesses (shower and bathroom facilities) currently exist. Funding is available through DENR for beach access; however, the Town has turned down two grants due to the requirement of matching funds.

Current Policies: Public Access	Recommended Actions	Status/Constraints
Policy 8.3.11 B. Soundside Waterfront Access The Town shall seek to protect the remaining lineal shoreline of public and commercial properties providing for direct and indirect public access to the soundside and ICW of Wrightsville Beach. Further exclusive residential development, which would further wall off the balance of the Town's residents and visitors from the water, shall be discouraged.	**Recommended Actions:** ▪ The Town shall review its development regulations to discourage development forms, which would act to wall off views of the water. ▪ The Town shall develop and implement an action plan to identify and protect public street ends for public access to the water. Such a plan may include, for example, the placement of tasteful signage at each street end noting that the street end is a public right of way for access to the water (whether such access is improved or not)	**Status:** ▪ CAMA LPO uses the 1996 LUP as a guide to recommend actions to the Planning Board and Board of Aldermen respectively. ▪ Signs identifying each Public Access were placed at the end of each Street. ▪ The FAR (Ordinance 1300-1998) limits the amount of land on a lot, which can be developed. ▪ Ordinance 1261 1995. "Provide Visual Buffering to enhance town Beautification" ▪ Ordinance 155.029 requires that Public Access shall be provided in accordance with the recommendations of the town's land use plan and access plan or the present amount of public access and public parking as exists within the town now. If any recommendations are found to conflict, the system requiring the greatest quantity and quality of public access, including parking shall govern. ▪ Wynn Plaza, public mooring and access located soundside has been developed since 1996. **Constraints**: Not Applicable

Land Development

Current Policies: Land Development	Recommended Actions	Status/Constraints
Policy 8.1.9 Industrial Impacts On Fragile Areas Industrial development of any kind is incompatible with the overall land use pattern, economy, and quality of life at Wrightsville Beach. Therefore, no impact on fragile areas is expected nor will it be allowed.	**Recommended Actions:** No actions listed in 1996 LUP	**Status**: ▪ The zoning ordinance does not designate industry as a permitted use. **Constraints**: Not Applicable
Policy 8.1.10 Development Of Sound And Estuarine System Islands All estuarine sound islands and spoil islands are subject to the conservation (P-1) provisions of the Town's zoning ordinance. The Town also supports all County and State efforts to preserve Masonboro Island.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ The zoning ordinance (Chapter 155) reflects this zoning. **Constraints**: Not Applicable

Current Policies: Land Development	Recommended Actions	Status/Constraints
Policy 8.1.11 Development Within Areas That Might Be Susceptible To Sea Level Rise The Town will encourage appropriate agencies of the State and Federal government to monitor research on sea level rise and its effect on coastal areas. The Town will consider any State and Federal policies formulated prior to amending its policies regarding sea level rise; specifically, development within areas up to 5 feet above sea level which may be susceptible to sea level rise, and the need to renourish the beach or relocate structures as necessary.	**Recommended Actions**: No actions listed in 1996 LUP	**Status**: ▪ Ordinance 1300-1998 defines base flood elevation as an elevation that is determined to be the highest level of flooding that, on average, is likely to occur once every hundred years. The elevation is shown of Federal Flood Insurance Rate Maps. **Constraints**: Not Applicable
Policy 8.1.12 Upland Excavation For Marina Basins The Town will discourage the expansion of existing marinas and the development of additional marinas, including upland marinas in excavated basins.	**Recommended Actions:** As part of its water use and harbor management plan, the Town shall address the issue of upland excavation for marina basins. Such development shall also be subject to zoning and site plan review in keeping with the intent of these policies.	**Status**: ▪ The CAMA LPO uses the 1996 Land Use Plan to evaluate proposed development and recommend action to the Planning Board and Board of Aldermen respectively. **Constraints**: Not Applicable
Policy 8.1.13 Marsh Damage From Bulkhead Installation The Town urges proper maintenance of existing bulkheads and seawalls for health, safety and aesthetic reasons. The Town shall not allow marshes or beach areas to be damaged by the installation of new bulkheads, groins or seawalls.	**Recommended Actions**: No Actions Listed in 1996 LUP	**Status**: ▪ New State Law Prohibits new Hard Stabilization **Constraints**: Not Applicable
Policy 8.2.0 Basic Policy Statement Regarding Resource Production and Management Wrightsville Beach is located in the midst of one of the most biologically productive ecosystems on earth—estuarine waters and marshes. The Town shall undertake no activity nor approve of any activity, which would seriously harm the long-term viability and productivity of this ecosystem.	**Recommended Actions**: No actions listed in 1996 LUP	**Status**: ▪ Zoning ordinances, building standards, the flood plain ordinances and the ocean front development standard reflect this policy. ▪ Within the conservation zone, designated as P-1 on the official zoning map, no lot or parcel of land may be developed for any purpose except commercial piers (where the P-1 zone adjoins a zone permitting a marina) and for private piers (where the P-1 zone adjoins a residential zone). ('72 Code, § 21-30A) (Ord., passed 5-15-72) **Constraints**: Not Applicable

Current Policies: Land Development	Recommended Actions	Status/Constraints
Policy 8.2.3 Mineral Production Areas—Existing and Potential Mineral production and extraction activities of any kind shall not be permitted within the planning jurisdiction of Wrightsville Beach.	**Recommended Actions**: No actions listed in 1996 LUP	**Status:** ▪ Zoning ordinances (Chapter 155) – Non-Permitted Use. **Constraints:** Not Applicable
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 Wrightsville Beach.	**Recommended Actions**: The Town shall conduct a review of its development standards to identify and prevent potential adverse impacts on natural and scenic resources at Wrightsville Beach.	**Status:** ▪ No formal review of development standards occurred ▪ Within the conservation zone, designated as P-1 on the official zoning map, no lot or parcel of land may be developed for any purpose except commercial piers (where the P-1 zone adjoins a zone permitting a marina) and for private piers (where the P-1 zone adjoins a residential zone). ('72 Code, § 21-30A) (Ord., passed 5-15-72). **Constraints:** Not Applicable
Policy 8.3.0 Basic Policy Statement Regarding Economic & Community Growth & Development Wrightsville Beach shall measure "progress" in terms of a continual refinement and enhancement of existing development forms and services. This shall be viewed in contrast with the undesirable wholesale displacement of existing development by larger, more intensive developments.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ Zoning ordinances (Chapter 155) generally do not prevent larger more intensive uses. ▪ The CAMA LPO uses the 1996 LUP to make recommendations on variances, re-zoning and conditional uses to the Planning Board and Board of Aldermen Respectively. **Constraints**: Not Applicable
Policy 8.3.14 B. Scenic Vistas and Views In recognition and appreciation of the scenic vistas and views of coastal waters, the Town shall discourage development forms (i.e. Wall to wall: or lengthy, continuous buildings and privacy walls) along estuarine and ocean shorelines which would block views to the water. The west side of Waynick Boulevard shall receive particular protection; i.e. The Town shall not permit structures in this area, other than customary docks, piers, and associated small see through gazebos.	**Recommended Actions:** The Town shall review its development regulations to discourage development forms, which would act to wall off views of the water.	**Status:** ▪ Front, back and side yard setbacks, the requirements for buffer areas and the FAR, all found in Chapter 155 of the Wrightsville Beach Code of Ordinances, help prevent the walling off of the water. **Constraints**: Not Applicable
Policy 8.3.0 B. Population Increases The Town shall discourage large incremental amounts of growth and development and large increases in population.	**Recommended Actions:** No Actions Listed in 1996 LUP	**Status**: ▪ Zoning ordinances (Chapter 155) limit the type of new development and redevelopment on Wrightsville Beach. ▪ Population had declined **Constraints**: Not Applicable

Current Policies: Land Development	Recommended Actions	Status/Constraints
Policy 8.3.0 C. Types of Development to be Encouraged The Town will encourage single family and duplex residences, appropriate neighborhood-oriented and local businesses, and parks and natural areas.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ Zoning ordinances Chapter 155 limit the types of development and redevelopment that can occur. ▪ Most development (1996-2001) was of a residential nature. No multiplexes were built. ▪ Zoning only allows duplexes and single family homes in residential areas. **Constraints**: Not Applicable
Policy 8.3.0 D. Density of Development The Town will consider reducing the maximum density limits of its zoning ordinance for future development and redevelopment. The Town will also consider maximum size limitations for multifamily and commercial structures.	**Recommended Actions:** The Town shall conduct an examination of its zoning ordinance to identify acceptable density and building sizes in each of the various zoning districts	**Status:** Zoning ordinance (Chapter 155) establishes the following: ▪ Maximum height established (40 ft), ▪ Density maximums established ▪ Minimum lot sizes for new development. ▪ FAR: the maximum amount of land developable on any given lot. **Constraints:** Not Applicable
Policy 8.3.0 F. Building Height The Town will not increase the Town's present building height limitation of, "not to exceed 40 feet." This maximum height may be reduced in neighborhoods where the prevailing building height of existing structures is less than 40 feet. Maximum building height shall be measured from the average ground plane of the lot, rather than from the nearest fire hydrant	**Recommended Actions**: The Town shall undertake ordinance revisions to clarify building height measurements and standards.	**Status:** ▪ Zoning ordinances Chapter 155 a maximum building height of 40 ft remains unchanged. **Constraints:** Not Applicable
Policy 8.3.1 Industries Desired and Local Assets Desirable to Such Industries "Industry" in the traditional manufacturing/ processing/ production sense will not be allowed at Wrightsville Beach.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ Zoning ordinances Chapter 155 - Not an allowed use. **Constraints:** Not Applicable
Policy 8.3.4 Types of Residential Development Desired The Town will not allow additional multi-family complexes and high-rise structures. Multi-unit complexes shall be limited to sites where they are presently located. New or expanded single family and duplex homes that are out of scale with other structures in their vicinity shall be discouraged.	**Recommended Actions:** The Town shall not approve rezoning, which would allow for additional multi-family complexes, high-rise structures, and motels at Wrightsville Beach. As part of the Town's neighborhood planning, the zoning ordinance shall be examined for possible amendments to encourage appropriate, compatible building forms.	**Status:** ▪ The zoning code enforcement officer uses this policy to make recommendations on re-zoning requests to the Board of Aldermen. It is at the Board's discretion to follow the policy. **Constraints**: Not Applicable

Current Policies: Land Development	Recommended Actions	Status/Constraints
Policy 8.3.5 Types of Commercial Development Desired (1) The Town will encourage commercial establishments providing basic goods and services to year round residents and visitors. Examples include appropriately scaled and designed grocery stores, drug stores, sit down restaurants, etc. (2) Architectural character and signage, which is not in keeping with a small town atmosphere, shall be strongly discouraged. (3) To preserve the economic viability of the community's commercial/retail/service base, the Town shall consider mixed-use ground floor commercial with upper floor residential on commercially zoned properties.	**Recommended Actions:** ▪ The Town shall amend the zoning ordinance to establish building size, height, mass, and setback standards, which support the existing development character of nearby properties. ▪ The Town shall not issue permits for project, which would allow for additional multi-family complexes, high-rise structures, and motels at Wrightsville Beach. Such development forms shall be permitted only on sites where they are presently located. ▪ The Town shall explore the desirability and feasibility of amending it zoning standards to allow for appropriate mixed use developments in keeping with the intent of policy 8.3.5(3)	**Status:** Zoning Ordinance (Chapter 155) establishes the following: ▪ Maximum height (40 ft), ▪ Density maximums ▪ Minimum lot sizes for new development. ▪ FAR: the maximum amount of land developable on any given lot. ▪ The zoning code enforcement officer and the building code enforcement officer, enforce the Code of Ordinances, CAMA regulations and the NC State Building Code. ▪ There is pre-existing mixed use, however the ordinances do not currently allow mixed-use development at Wrightsville Beach. **Constraints:** Not Applicable
Policy 8.3.6 Redevelopment, Including Relocation of Threatened Structures 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 current building standards and CAMA requirements are met.	**Recommended Actions** No actions listed in 1996 LUP	**Status**: ▪ The building and zoning code enforcement officers enforce this policy. **Constraints**: Not Applicable
Policy 8.3.8 C. Beach Hardening The Town adheres to current CAMA policies and regulations concerning beach erosion control. Structures, including but not limited to bulkheads, riprap, groins, or other similar features, which act to harden the shoreline along the beach, shall not be permitted. Beach renourishment, retreat, or other "non-hardening" measures shall be encouraged.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ The CAMA LPO assures that all projects meet current CAMA regulations. **Constraints**: Not Applicable

Current Policies: Land Development	Recommended Actions	Status/Constraints
Policy 8.3.8.D. Soundside Bulkheads The Town will encourage the appropriate construction and maintenance of estuarine bulkheads as necessary within the context of the CAMA regulations.	**Recommended Actions**: No actions listed in 1996 LUP	**Status:** ▪ The CAMA LPO assures that all projects meet current CAMA regulations. **Constraints**: Not Applicable
Policy 8.3.9 Energy Facility Sighting and Development The Town is opposed to offshore continental shelf drilling for oil and gas. The location of shore side OCS facilities at or adjacent to Wrightsville Beach would be inappropriate, is inconsistent with current zoning regulations, and would not be allowed within the Town's corporate limits.	**Recommended Actions:** No actions listed in 1996 LUP	**Status and Constraints:** Not Applicable
Policy 8.3.13 Downtown Area The Town supports the continuation of a commercial downtown area, to encourage a "village type" atmosphere with appropriate local community businesses.	**Recommended Actions:** The Town shall encourage and assist downtown property owners in the development of architectural design guidelines for the traditional downtown area of Wrightsville Beach.	**Status:** ▪ No architectural design guidelines have been established ▪ Sign ordinances and zoning ordinances, and lighting ordinances are used to assure appropriate development. **Constraints**: Not Applicable
Policy 8.3.14 A. Neighborhood Character and Preservation The Town encourages the improvement, preservation and enhancement of the Town's areas of unique character and neighborhoods.	**Recommended Actions:** The Town shall undertake a program of neighborhood based meetings on a rotating basis	**Status**: ▪ No neighborhood meetings have occurred. However, a series of committees including the Better Beach Committee, 1939 Building Line Committee, Land Use Plan Steering Committee, etc have been formed in order for resident to share their concerns. ▪ Zoning Ordinances (Chapter 155) are not established by neighborhood. However allowed uses in zones generally conform to neighborhood character. ▪ The Historic Landmark Commission, however, has designated approximately 8 houses over the last 8 years. **Constraints**: Not Applicable
Policy 8.3.14 C. Historic Preservation The Town shall encourage the regular maintenance and preservation of older historic structures where desired.	**Recommended Actions:** The Town shall continue to work with the Historic Landmark Commission in its efforts to preserve historic structures at Wrightsville Beach	**Status:** 8 Houses designated as historic landmarks from 1996 to 2003. **Constraints:** Not Applicable

Current Policies: Land Development	Recommended Actions	Status/Constraints
Policy 8.5.1 C. Advanced Planning For Land Acquisition (1)The Town supports advanced planning for acquisition of properties that are not suitable for development, where such acquisition serves a useful public purpose. Such public purpose may include, for example, public access to the beach or sound, where such access is needed. The Town shall not make poor investments, however, in properties, which are in danger of completely eroding, or where other liabilities could render them useless. (2)The Town shall investigate outside funding sources for land acquisition and shall encourage gifts and donations for tax credits, as a mitigate measure for future storm events. To provide a proactive approach, priority areas for acquisition shall be identified in advance of storm events. (3)Public acquisition of appropriate properties is also encouraged at the State and Federal level.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ No evidence of activities related to land acquisition or advanced planning for land acquisition. **Constraints**: Not Applicable
Policy 8.5.1 A. Storm Effect Mitigation (1) Standards For Construction In Flood Prone Areas. The Town shall require all new and substantially improved structures to meet Federal, State and local standards for construction in flood prone areas. (2) Flood Plain Ordinance The Town will only grant variances to the Flood Plain ordinance on rare occasions to individual properties that meet the findings set forth under FEMA Guidelines. (3) To help mitigate the effect of storm related hazards, the Town shall continue to work with the Federal, State and County governments on regular beach renourishment through a Shore and Hurricane Wave Protection Project.	**Recommended Actions**: Recognizing the critical role of the NFIP in protecting the lives and property at Wrightsville Beach, the Town shall continue to strictly enforce ordinance provisions, which bring structures into compliance with the Town's flood plain protection standards.	**Status:** ▪ The building code enforcement officer enforces the NC State Building Code, the Base Flood Elevation Ordinance, and the Flood Plain Ordinance. ▪ There are currently 2,598 Federal Flood insurance policies in force in Wrightsville Beach. ▪ Wrightsville Beach has a CRS rating as of October 2003 was a 5. **Constraints**: Not Applicable
Policy 8.5.1 B. Discouragement of Hazardous Development The Town shall use a variety of methods, including particularly, CAMA setback requirements and zoning, to discourage the development of property that can reasonably be foreseen as potentially hazardous.	**Recommended Actions:** See 8.5.1 A	**Status:** ▪ The zoning code enforcement officer, and the building code enforcement officer enforce CAMA regulations, ▪ They also enforce the Town's side and front yard setbacks, the base flood elevation, etc. **Constraints**: Not Applicable

Current Policies: Land Development	Recommended Actions	Status/Constraints
Policy 8.3.0 E. Building Standards, Generally The Town shall support refinements in building standards throughout the community to reflect the unique characteristics of different areas of Wrightsville Beach, including but not limited to: height, setbacks, lot coverage, and floor area ratios	**Recommended Actions:** As part of the Town's neighborhood planning effort, the Town shall conduct a survey and inventory of prevailing building heights, setbacks, lot coverage and other factors for the particular neighborhood under study. The purpose of this survey shall be to measure appropriate change in the neighborhood.	**Status:** ▪ Zoning Ordinances (Chapter 155) are not established by neighborhood. However allowed uses in zones generally conform to neighborhood character. ▪ No neighborhood planning occurred, however a height maximum (40') was established for the entire island. **Constraints**: Not applicable

Infrastructure

Current Policies: Infrastructure	Implementation Actions	Status/Constraints
Policy 8.3.14 D. Undergrounding of Utilities As opportunities and budgeting constraints allow, the Town will work with neighborhoods to put utilities underground.	**Recommended Actions:** The Town shall budget funds to match neighborhood efforts to place overhead utilities underground.	**Status:** ▪ No evidence has been found of this action. **Constraints**: Funding
Policy 8.3.15 A. Transportation Planning The Town shall undertake a traffic management program, which seeks to achieve a balance between pedestrian, bicycle and vehicular movement and safety.	**Recommended Actions**: The Town shall continue to work with NCDOT on a program to achieve a better balance between vehicular and non-vehicular movement at Wrightsville Beach.	**Status**: ▪ Planning for a bike path is currently under discussion, lighting has also been added to the 2.5-mile loop to encourage pedestrian traffic at night **Constraints**: Lack of developable land, funding.
Policy 8.3.15 B. Public Transportation The Town will consider proposals from private entities for establishing public transportation from Wrightsville Beach to the adjacent mainland areas.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ The Town has talked with WTA about establishing a bus route. **Constraints:** Not Applicable

Current Policies: Infrastructure	Implementation Actions	Status/Constraints
Policy 8.3.15 C. High Rise Bridge The Town does not support the construction of a high-rise and/or second bridge to the island.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ The Town has maintained the ICW Bridge in its current condition. Maintenance on the Bridge occurred in February 2004. **Constraints**: Not Applicable
Policy 8.3.15 E. Keel Street Intersection Ongoing efforts to correct operational deficiencies at the Keel Street intersection shall be supported.	**Recommended Actions:** The Town shall continue to work with NCDOT and the NC Wildlife Commission on improvements to traffic flows at the Keel Street Intersection.	**Status:** ▪ The Town has reviewed various options for improving the Keel Street Intersection. **Constraints:** Funding
Policy 8.3.15 F. Parking (1) The Town recognizes that on street parking is one of the most efficient forms of parking available at Wrightsville Beach. The Town shall avoid actions, which would further eliminate on-street parking, unless necessary for public safety purposes. (2) Large off street parking areas or structures are viewed as an exceptionally inefficient use of limited land resources. Where such uses are created, however, they shall be in keeping with the small town character, scale and design of Wrightsville Beach.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ More spaces have been metered since 1996. ▪ More ordinances have been passed limiting on street parking at various times since 1996. ▪ There are 1,792 marked parking spaces on Wrightsville Beach ▪ New development-redevelopment according to ordinance 155.060 is required to have parking on lot. **Constraints**: Not Applicable
Policy 8.3.16 The Wrightsville Sound Area The Town shall seek to establish and maintain an on-going joint planning effort with New Hanover County (or the City of Wilmington, upon annexation) for the Wrightsville Sound Area emphasizing input from the Town on issues of land use, community appearance, open space and traffic management for areas outside the Town's corporate limits.	**Recommended Actions:** The Town shall reinitiate a dialogue with New Hanover County and/or the City of Wilmington regarding the future development of the Wrightsville Sound and development standards for the Wrightsville Avenue and Eastwood Road travel corridors.	**Status:** ▪ City of Wilmington has annexed the entire Wrightsville Sound Area except for commercial satellites previously annexed by Wrightsville beach. **Constraints:** ▪ The City of Wilmington is in the process of removing the planning overlay so that they can control development in the Wrightsville Sound Area

Natural Systems

Current Policies: Natural Systems	Recommended Actions	Status/Constraints
Policy 8.1.2 D. Estuarine Shorelines Marina development or expansion is discouraged along estuarine shorelines. However, residential, recreational, research and educational, and commercial land uses are all appropriate types of use along the estuarine shoreline, provided that all standards of NCAC 15 Subchapter 7H relevant to estuarine shoreline AECs are met, and that the proposed use is consistent with policies set forth in this Plan.	**Recommended Actions:** As part of the water use and harbor management plan (8.1.2 c1) The Town shall address the issues of marina development, and expansion. Development along the estuarine shorelines shall be subject to zoning and site plan approval in accordance with the intent of these policies.	**Status:** ▪ No harbor management plan has been developed; however, the zoning ordinances address permitted uses in a variety of zones. ▪ No marina ordinance has been specifically adopted **Constraints**: Federal law requires NPDES Phase II.
Policy 8.1.2 Areas Of Environmental Concern The Town will support and enforce, through its CAMA Minor Permitting capacity, the State policies and permitted uses in the AEC's. Acceptable uses within the individual AEC's of the estuarine system shall be those, which require water, access and or cannot function elsewhere. Such uses shall be in accord with the general use standards for coastal wetlands, estuarine waters, and public trust areas as stated in 15A NCAC Subchapter 7H.	**Recommended Actions:** The Town shall continue to administer the CAMA minor permit program in accordance with CAMA standards for Areas of Environmental Concern	**Status:** ▪ Zoning ordinances and the CAMA LPO enforce this policy. **Constraints**: Not Applicable
Policy 8.1.3 Turtle Nesting Areas The Town shall avoid undertaking any activity or approving of any activity which would destroy remaining habitat for loggerhead turtle nesting.	**Recommended Actions:** The Town shall explore the feasibility of having one or more appropriate areas of the Town designated as a turtle nesting sanctuary.	**Status** ▪ No ordinances 1996-2003 specifically address this issue. ▪ A nonprofit organization-Turtle Watch marks off and monitors the turtle nests at Wrightsville Beach. There is a fine for disturbing the turtle nests. **Constraints**: Nesting locations change from year to year.
Policy 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 designation and preservation of all remaining coastal wetlands. Acceptable land uses may include utility easements, fishing piers, and docks. Examples of uses NOT permitted include restaurants, businesses, residences, apartments, motels, hotels, parking lots, private roads, and highways.	**Recommended Actions**: No actions listed in 1996 LUP	**Status** ▪ Within the conservation zone, designated as P-1 on the official zoning map, no lot or parcel of land may be developed for any purpose except commercial piers (where the P-1 zone adjoins a zone permitting a marina) and for private piers (where the P-1 zone adjoins a residential zone). ('72 Code, § 21-30A) (Ord., passed 5-15-72) **Constraints**: Not Applicable

Current Policies: Natural Systems	Recommended Actions	Status/Constraints
Policy 8.1.2 B. Estuarine Waters (1) Appropriate uses within estuarine waters may include simple access channels, structures that prevent erosion, navigational channels, and private boat docks, piers, and mooring pilings. Expansion or construction of new marinas is discouraged. Piers and docks for non-water dependent commercial uses are also discouraged. (2) Any development or activity, which will profoundly and adversely affect coastal and estuarine waters, will not be allowed. 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.	**Recommended Actions:** No actions listed in 1996 LUP	**Status**: ▪ The CAMA LPO/zoning code administrator enforces this policy. ▪ No marina development policy has been specifically adopted. ▪ The Phase II NPDES Report established method to reduce water pollution and stormwater run off. **Constraints**: Not Applicable
Policy 8.1.4 B. Maritime Forest and Tree Cover Tree cover at Wrightsville Beach, whether maritime or otherwise, is a highly valued asset. The Town encourages efforts to preserve existing tree cover in new development and redevelopment	**Recommended Actions:** ▪ The Town shall work with the New Hanover County Agricultural Extension service and utility companies to reduce tree-trimming damage. ▪ The Town shall investigate participation in the Tree City USA program.	**Status:** ▪ Parks maintenance has continuously updated and improved the natural areas on Wrightsville Beach. **Constraints**: Not Applicable
Policy 8.1.2 E. Ocean Hazard Areas of Environmental Concern (1) The Town supports State policies for ocean hazard areas as set forth in Chapter 15A, Subchapter 7H of the State CAMA regulations. Suitable land uses in ocean hazard areas include ocean shoreline erosion control activities and dune establishment and 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 15A: 7H. (2) The Town supports the policies and regulations of State and Federal permitting agencies concerning the development of ocean piers, and shall encourage the proper maintenance and safety of such piers.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ LPO enforces CAMA regulations, ▪ The flood plain ordinance established building standards, ▪ The zoning ordinance established permitted uses by zone. **Constraints:** Not Applicable

Current Policies: Natural Systems	Recommended Actions	Status/Constraints
Policy 8.5.1 D. Evacuation The Town's evacuation policies under a number of emergency situations shall be specified in the emergency operations plan of the Town. The plan shall be examined for possible revision or improvements on at least an annual basis.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ The emergency operations plan is updated annually. **Constraints**: Not Applicable
Policy 8.5.2 A. Emergency Management Plan The Town shall annually update its 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, debris pick up, and public health and safety issues.	**Recommended Actions**: No actions listed in 1996 LUP	**Status:** ▪ The emergency operations plan is updated annually. **Constraints:** Not Applicable
Policy 8.5.2 D. Post Storm Recovery (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.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ This information is found in the emergency operations plan **Constraints**: Not Applicable
Policy 8.5.2 E. Public Infrastructure Repairs and Replacement The Town of Wrightsville Beach will assess any damage to public infrastructure at the earliest time after the event. Damage which may affect life and safety issues will be corrected to the extent that hazards have been minimized. Long term repair or replacement will be prioritized based on resources available, impact on the integrity of the infrastructure, mitigation of future hazardous situations, and on-going capital improvement needs.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ This has occurred with all hurricane post 1996. **Constraints**: Not Applicable

Current Policies-Natural Systems	Recommended Actions	Status/Constraints
Policy 8.5.2.B. Building Permits The Town shall issue building permits as expeditiously as possible to property owners whose structures have received minor damage by the event. If a structure has been damaged by more than 50 percent, the property owner will have to rebuild or modify the structure to meet current development ordinances.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ Building permit triage was established after Hurricanes post 1996. **Constraints**: Not Applicable
Policy 8.5.2 C. Recovery Task Force Depending upon the degree of damage following a major storm event, the Town shall have on call a variety of public officials to serve as a Recovery Task Force to orchestrate the Town's recovery activities. The potential membership and duties of the Task Force shall be specified in the Town's Emergency Management and Operations Plan.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ The Town implements its emergency operations plan. **Constraints**: Not Applicable
Policy 8.1.4 C. Outstanding Resource Water Areas The Town supports and encourages the designation and preservation of Outstanding Resource Waters. The Town promotes surface water quality through its storm drainage and stormwater runoff policies.	**Recommended Actions**: No actions listed in 1996 LUP	**Status** ▪ The NPDES Phase II Report recommends various actions to reduce stormwater runoff and prevent water pollution, some of which have been implemented in new development. ▪ Stormwater Ordinance: All post-development runoff shall be limited to pre-development levels. In the alternative, stormwater detention/retention shall be designed for a storm greater than a ten-year storm. Hydrology calculations prepared by a licensed engineer are required indicating compliance with the requirements set forth herein prior to the issuance of a building permit. The standard used may be peak flow, volume or a combination of the two. **Constraints**: Not Applicable

Current Policies: Natural Systems	Implementation Actions	Status/Constraints
Policy 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.	**Recommended Actions**: No actions listed in 1996 LUP	**Status** ▪ The NPDES Phase II Report recommends various actions to reduce stormwater runoff and prevent water pollution, some of which have been implemented in new development. ▪ Stormwater Ordinance: All post-development runoff shall be limited to pre-development levels. In the alternative, stormwater detention/retention shall be designed for a storm greater than a ten-year storm. Hydrology calculations prepared by a licensed engineer are required indicating compliance with the requirements set forth herein prior to the issuance of a building permit. The standard used may be peak flow, volume or a combination of the two. **Constraints**: Not Applicable
Policy 8.1.4 E. Water Supply Areas and Other Waters with Special Values The Town encourages regional efforts to protect the water quality of the Castle Hayne aquifer and the Cape Fear River as sources of potable water.	**Recommended Actions:** No actions listed in 1996 LUP	**Status and Constraints**: Not Applicable
Policy 8.1.14 Water Quality Problems and Management Measures Designed to Address Them The Town shall continue to seek improved marina management, stormwater runoff and other development standards that will protect and enhance the water quality of the estuarine system.	**Recommended Actions:** No actions listed in 1996 LUP	**Status** ▪ NPDES Phase II includes implementation actions which will help eliminate stormwater discharge and educate the populace of Wrightsville Beach on current water quality ▪ The Town adopted the most recent Phase II Stormwater requirements. **Constraints**: Not Applicable
Policy 8.1.5 Protection of Potable Water Supply The Town's groundwater resources shall be conserved for longevity through proper management of its system of wells, and by the encouragement of water conservation practices, including measures that can be taken in construction of all new structures.	**Recommended Actions** No actions listed in 1996 LUP	**Status:** ▪ NPDES Phase II and the Public Works' Annual Water Report encourage water conservation and report on the State of Wrightsville Beach's Water Supply. **Constraints**: Not Applicable

Current Policies: Natural Systems	Recommended Actions	Status/Constraints
Policy 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.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ No variances have been permitted. **Constraints**: Not Applicable
Policy 8.1.7 Stormwater Runoff 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.	**Recommended Actions:** 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.	**Status:** ▪ The Stormwater Ordinance and NPDES Phase II address the problems with stormwater runoff. **Constraints:** Not Applicable
Policy 8.1.8 A. Marinas, Wet slips The Town will discourage the expansion and/or intensification of existing marinas and the development of additional marinas, including upland marinas in excavated basins.	**Recommended Actions:** As part of the water use and harbor management plan (8.1.2 c (1)), the Town shall address the location and operation of wet slip marinas.	**Status**: ▪ No harbor management plan adopted ▪ Phase II or Surface Water Plan do not specifically address issue ▪ Wet slip marinas are discouraged by zoning ordinance **Constraints**: NPDES Phase II required.
Policy 8.1.8 B. Floating Home Development Due to the limited amount of public trust waters surrounding Wrightsville Beach and the heavy use of those waters by the public, the Town shall not allow the effective "permanent consumption" of public trust waters by floating homes.	**Recommended Actions:** As part of it water use and harbor management plan (8.1.2 c (1)) The Town shall continue current policies which prohibit floating homes from occupying limited public trust surface water areas.	**Status:** ▪ Mooring in one spot for greater than 30 days is prohibited. **Constraints**: Not Applicable
Policy 8.1.8 C. Moorings and Mooring Fields Additional freestanding moorings of any kind shall not be allowed within the public trust waters of Wrightsville Beach.	**Recommended Actions:** As part of its water use and harbor management plan (8.1.2 c (1)), The Town shall address location and design of moorings and mooring fields.	**Status:** ▪ Wynn Plaza is the only public mooring, ▪ Other public moorings are discouraged by zoning and Surface Water use plan **Constraints**: No harbor management plan developed, however Surface Water Use Plan addresses some of these issues.

Current Policies: Natural Systems	Recommended Actions	Status/Constraints
Policy 8.1.8 D. Dry Stack Storage While dry storage of boats by individual owners is preferred over wet slip storage, the Town shall discourage the expansion and development of additional dry stack storage facilities.	**Recommended Actions**: As part of its water use and harbor Management plan (8.1.2 c (1)) the Town shall address the location and operation of dry stack storage facilities.	**Status:** ▪ Dry stack and wet slip facilities discouraged by zoning ordinances and surface water use plan. ▪ No harbor management plan developed, however Surface Water Use Plan addresses some of these issues. **Constraints**: None
Policy 8.1.8 E. Commercial Fishing Dockage Commercial fisheries vessel dockage at currently used commercial facilities along the soundside waterfront is acceptable.	**Recommended Actions:** As part of its water use and harbor management plan the Town shall address the size, location, and operation of vessels for hire, charter boats, and cruise ship dockage.	**Status:** ▪ Not addressed in Phase II or Surface Water Use ▪ Discouraged via zoning and lack of adequate facilities ▪ No harbor management plan developed, however Surface Water Use Plan addresses some of these issues. **Constraints**: None
Policy 8.3.8 A. Assistance to Channel Maintenance, Including Interstate Waterways The Town supports State and Federal channel and inlet maintenance projects. All dredging and stabilization operations must be performed so as to minimize any damage to fish and wildlife habitat	**Recommended Actions:** No Actions Listed in 1996 LUP	**Status:** ▪ On February 27, 2003, due to heavy regulation by the U.S. Army Corps of Engineers (COE) and DENR, ordinance 150.07 requiring BOA approval for dredging was repealed. **Constraints**: Not Applicable
Policy 8.1.8 F. Vessels for Hire, Charter Boats and Cruise Ship Dockage Vessels for hire and charter boats/cruise ships shall only be allowed in conjunction with existing marinas and shall not cause an expansion in the amount of surface water consumed or parking demand generated. Smaller charter and cruise ships shall be preferred over larger.	**Recommended Actions:** As part of it water use and harbor management plan the Town shall address the size, location, and operation of vessels for hire, charter boats, and cruise ship dockage.	**Status:** ▪ Not addressed in phase II or surface water use, ▪ Discouraged via zoning and lack of adequate facilities **Constraints**: No Harbor Management Plan developed

Current Policies: Natural Systems	Recommended Actions	Status/Constraints
Policy 8.2.4 Fisheries Resources (Commercial and Recreational) (1) The Town supports projects, which increase productivity of coastal and estuarine waters. Projects such as oyster reseeding programs and properly constructed artificial reef construction will be supported in the future. (3) The Town supports the NC Division of Marine Fisheries and the Division of Coastal Management in their development of regulations and policies, including those on trawling and gill netting in ocean and estuarine waters, activities in primary nursery areas (PNA's), and activities in outstanding resource waters (ORW's).	**Recommended Actions:** The Town shall through proclamation and pubic awareness, assist in promoting the annual Big Sweep clean up.	**Status** ▪ No evidence of coastal habitat protection plan program support, oyster reseeding or artificial reef development. **Constraints**: Not Applicable
Policy 8.3.2 B. Wastewater Treatment and Disposal All new developments are required to connect to the Town's central sewer system, which is connected, in turn, to the New Hanover County centralized sewer system. Package sewage treatment plants and septic systems are not allowed.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ This has been enforced **Constraints**: Not Applicable
Policy 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.	**Recommended Actions:** The Town shall continue to enhance the existing water supply system, and shall explore alternatives for supplementing the existing system.	**Status:** This has been enforced. **Constraints:** Not Applicable
Policy 8.3.2 Provision of Services to Development, Generally 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. 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.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ This has been enforced **Constraints**: Funding

Local Areas of Concern

Current Policies: Local Areas of Concern	Recommended Actions	Status/Constraints
Policy 8.2.4 Fisheries Resources (Commercial and Recreational) The Town supports the "Big Sweep" beach cleanup program and all other similar efforts to enhance the cleanliness of the natural environment.	**Recommended Actions:** The Town shall through proclamation and public awareness, assist in promoting the annual Big Sweep clean up.	**Status**: ▪ The Town announces Big sweep each year. **Constraints**: Not Applicable
Policy 8.2.5 Off Road Vehicles Off-road vehicles (with the exception of emergency vehicles) are not allowed outside public rights of way and private drives at Wrightsville Beach.	**Recommended Actions:** No actions listed in 1996 LUP	**Status**: ▪ Prohibited by ordinance **Constraints**: Not Applicable
Policy 8.3.0 A. Growth of Town's Jurisdiction Expansion of the Town's ETJ/or corporate limits on the mainland/Wrightsville Sound area shall not be supported.	**Recommended Actions**: No actions listed in 1996 LUP	**Status:** ▪ Wilmington has annexed all the ETJ except for the 14 satellite commercial properties of Wrightsville Beach. **Constraints**: Not Applicable
Policy 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.	**Recommended Actions**: The Town shall continue to monitor the recycling market to identify additional items for recycling.	**Status:** ▪ The Town maintains the recycling complex located adjacent to the police and fire departments. Recycled materials include plastic, cardboard, glass, aluminum and newspaper. **Constraints**: Not Applicable
Policy 8.3.8 B. Assistance to Beach Nourishment The Town supports the application and designation of the local room tax in accordance with its original intent, to provide a trust fund for beach renourishment projects. The Town does not support the use of the room tax to support tourism promotion and marketing efforts, given the fact that New Hanover County, its beaches and other attractions are well established as a tourism destination, and are generally thriving.	**Recommended Actions:** ▪ The Town shall, as part of its capital improvement planning process, budget appropriate funds necessary to support on-going beach renourishment at Wrightsville Beach. ▪ The Town shall support the reinstitution of the original 80/20 apportionment of room tax revenues with priority for beach renourishment.	**Status:** ▪ Wrightsville Beach has requested money from the Tourism Development Authority to support lifeguard services, beach strand survey costs, and a variety of other tourism related expenditures. **Constraints**: Not Applicable
Policy 8.3.10 Tourism The Town of Wrightsville Beach shall welcome visitors to the area with a quality tourist experience within a year round beach community. Factors related to this policy include public safety, an atmosphere conducive to families, convenient services, a quality beach strand, and fishable, swimmable waters.	**Recommended Actions:** The Town shall continue to work in partnership with the Wrightsville Beach Chamber of Commerce to promote quality tourism.	**Status:** ▪ A visitor's center is being developed. ▪ A new welcome sign will soon be installed **Constraints**: Not Applicable

Current Policies: Local Area of Concern	Recommended Actions	Status/Constraints
Policy 8.3.12 Parks and Recreation The Town supports the development, maintenance and enhancement of its parks and recreational facilities for the benefit of Town residents.	**Recommended Actions:** No actions listed in 1996 LUP	**Status:** ▪ A Kayak Trail has recently been established at Wrightsville Beach. ▪ There has been no significant investment in parks and recreation facilities since 1996 ▪ Central Parking now uses Fire Station Number 2, which was once used for indoor recreation programs. **Constraints**: Not Applicable
Policy 8.4.3 Neighborhood Planning The Town shall encourage a high level of involvement by citizens and property owners in planning decisions through neighborhood planning. The Town shall institute an on-going neighborhood planning program, within which different parts of the Town will be addressed, on a rotating basis.	**Recommended Actions:** The Town shall undertake a program of neighborhood-based meetings on a rotating basis.	**Status:** ▪ Although no neighborhood planning has occurred a series of ad hoc committees including the 1939 Building Line and the Better Beach Committees have been established to hear resident concerns. **Constraints**: Not Applicable

Appendix C

Maps for the Land Suitability Analysis (LSA) & Environmental Composite