North Carolina Coastal Zone Management Program

WRIGHTSVILLE BEACH

WRIGHTSVILLE BEACH, N.C.
CAMA LAND USE PLAN

1985 UPDATE

COASTAL ZONE
INFORMATION CENTER

PREPARED BY
TALBERT, COX & ASSOCIATES

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WRIGHTSVILLE BEACH, NORTH CAROLINA
LAND USE PLAN: 1985 UPDATE

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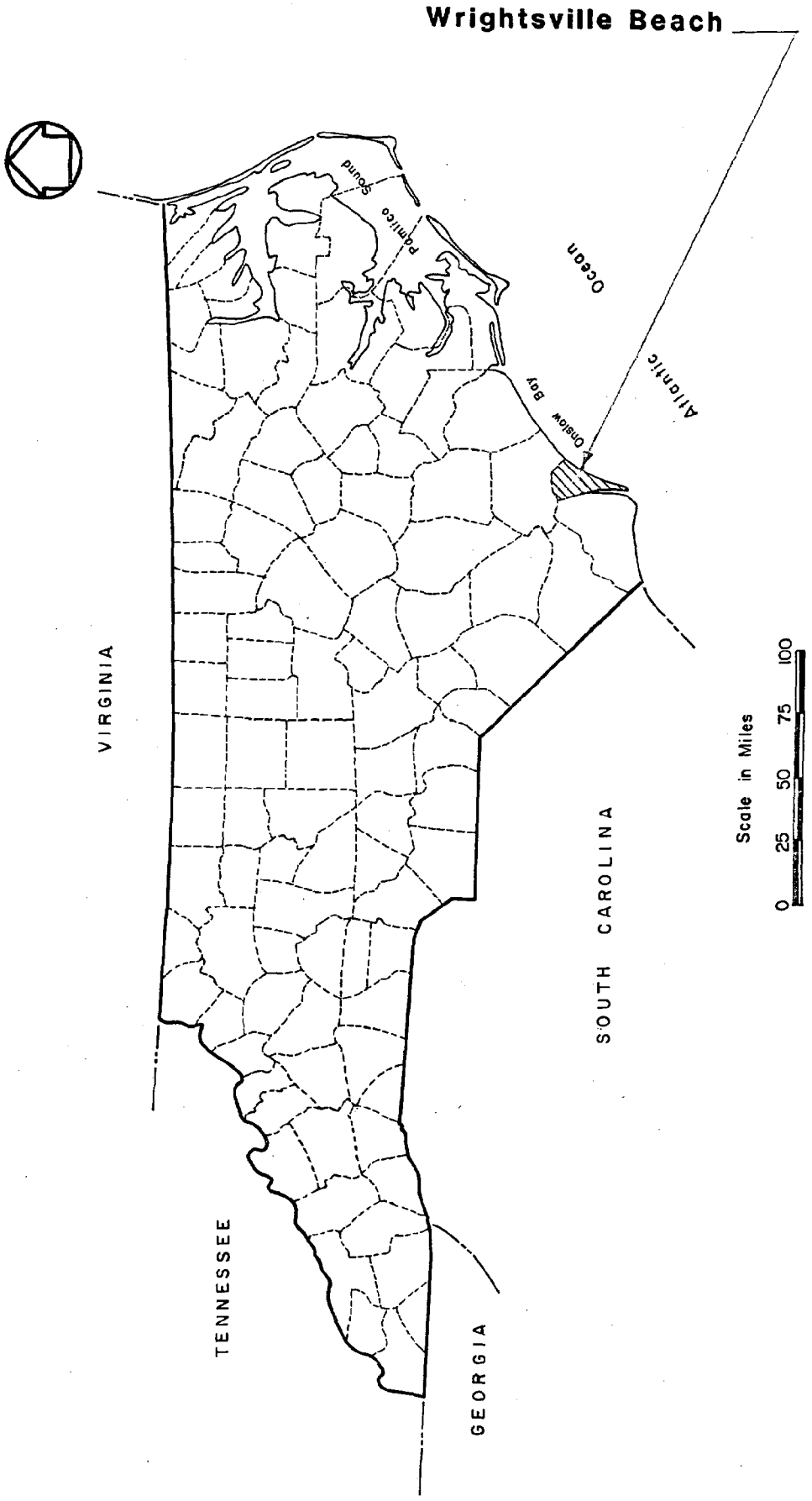

MAP 1
Location Map

WRIGHTSVILLE BEACH, NORTH CAROLINA
LAND USE PLAN: 1985 UPDATE

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SECTION I :
Analysis of Existing Conditions
and
Projected Demand

WRIGHTSVILLE BEACH LAND USE PLAN UPDATE
1985

A. Establishment of Information Base

This 1985 Land Use Plan Update for Wrightsville Beach has been prepared in accordance with requirements of the North Carolina Coastal Area Management Act (CAMA). Specifically, this document complies with Subchapter 7B, "Land Use Planning Guidelines," of the North Carolina Administrative Code, as amended, July 9, 1984.

The initial Land Use Plan was prepared for Wrightsville Beach in 1976, and the first update in 1981. According to the Land Use Planning Guidelines, the major purpose of periodic updating of local land use plans is to identify and analyze newly emerging community issues and problems. An additional element which was not required in either the 1976 Plan or the 1981 Update is a "Storm Hazard Mitigation, Post-Disaster Recovery, and Hurricane Evacuation Plan," and is required to be included in the 1985 Update. This element is designed to help local governments effectively coordinate policies and actions relating to the impact of hurricanes or other severe storms.

The guidelines further give the following objectives the update should meet:

- -- to further define and refine local policies and issues;
- -- to further examine and refine the land classification system and the land classification map;
- -- to assess the effectiveness of the existing land use plan and its implementation;
- -- to further explore implementation procedures, and;
- -- to promote a better understanding of the land use planning process.

Both the 1976 Land Use Plan and the 1981 Update provided much of the needed information base for this most recent update. However, in many cases, new information had to be developed. A number of data sources were tapped during the preparation of this plan in order to prepare updated analyses of population, housing, the economy, and existing land uses. Most of the data came from primary and secondary sources in the form of direct contacts with Town officials, representatives of various state and federal agencies and/or previously published documents or reports. Also, "windshield" surveys were conducted to obtain data on existing land use patterns. Efforts were made to obtain data that was as up to date and accurate as possible. Also, several public meetings were held with the Planning Board in order to solicit citizens' input on identifying preliminary land development issues.

B. Present Conditions

1. Population

In conventional land use planning, population analysis and future growth projections are often relatively uncomplicated procedures of collecting one set of figures from standard secondary sources, such as the U. S. Census Bureau or State agencies, and making estimates of future growth based on recent or existing trends. For seasonally attractive localities, particularly those with a high tourist orientation, population analysis and attendant forecasting is not as uncomplicated. Such is the case with Wrightsville Beach, North Carolina.

For all of this century, this beach community, which consists of two islands, the first one from the mainland known as Harbor Island, and a 5-mile long, slender, natural barrier island, has attracted thousands upon thousands of beachgoers each summer to its clean, sandy Atlantic Ocean shores. Many visitors only come for a few hours, while others stay overnight in motels or rental cottages. And more and more, in recent years, many have "come to the beach" to stay - - forming part of the ever-growing year-round or "permanent" population of Wrightsville Beach. Thus, the population of Wrightsville Beach for land use planning purposes, has four distinctive components; 1) permanent or "year-round" population; 2) property-owning summer residents; 3) renters and overnight visitors, and 4) day visitors. Each of these components will be addressed separately below.

a. Year-Round Population:

The 1980 U. S. Census reported a total of 2,884 persons residing at Wrightsville Beach year-round. However, Town officials felt quite strongly that this figure was somewhat low, although it represented a 70% increase over the 1970 Census year-round figure of 1,701 persons. The year-round population contained in the 1981 Land Use Plan Update as the "base" population, was 3,081, i.e. 197 persons more than the official Census figure. In 1984, statistics reported by the N. C. Department of Revenue projected the current year-round population to be 3,092 persons, which is 208 more persons than the official 1980 Census, but only 11 persons more than the 1981 Land Use Plan figure. The recent State estimate, like the 1980 Census figure, is considered by Town officials, to be "low." Based on water usage and utilization of other local utilities and services, Wrightsville Beach Town officials estimate the year-round population in January, 1985, to be near 5,000 persons. For analytical purposes, it will be assumed that the current population lies between the State's and the Town's estimate, or about 4,046 persons. This figure, i.e. 4,046, represents an increase of 965 persons over the 1981 Land Use Plan estimate of 3,081 persons, or a total increase of 31% at an annual average rate of 6.2%. For

this 1985 Land Use Plan Update, 4,046 will be considered as the "base" year-round population estimate for Wrightsville Beach.

However, it is important to note that a number of "new" year-round residents were likely former "summer-owners," i.e., absentee owners who lived in residences they owned only during the summer months or portions of the summer. The remainder of the time, the units were either vacant or rented out as "beach" cottages. With more people either retiring or just relocating to the "beach" full-time, the number of available rentals will likely decline (See the following section, and Table 2, page 7). The average household size for year-round residents in the 1981 Plan was estimated at 3.0 persons. It is likely that this estimate is still valid. Assuming 3.0 persons per dwelling, 1,349 of the Town's total dwelling units house year-round residents.

b. Property-Owning Summer Residents

A growing number of persons maintain legal or voting residences in other locations, but who own property in Wrightsville Beach and reside there during the summer months. The 1981 Land Use Plan reported that an estimated 200 units were used for this purpose in 1980, with an average occupancy of four (4) persons per unit. In 1985 however, Town officials estimate that a total of 336 units -- 136 more than 1980, are used as summer residences. This is an average annual increase of 27 units per year, or a total percentage increase of nearly 68%. Using an average occupancy rate of four persons per unit, as reported in the 1981 Plan, the total population from property-owning summer residents at Wrightsville Beach is estimated to be 1,344 persons in 1985. Again, it should be noted that this increase represents to some degree "conversions" from some units which were absentee owned and available as rental "cottages" year-round, but now are lived in by the owners or their families during the summer. As stated previously, as more owners take up residence in their properties, the number of available conventional rental "cottages" can be expected to decline.

Again, it should be noted that this increase represents, to some degree, "conversions" from some units which were absentee owned and available as rental "cottages" year-round, but now are lived in by the owners or their families during the summer. As stated previously, as more owners take up residence in their properties, the number of available conventional rental "cottages" can be expected to decline.

c. Overnight Visitor Population

The motels at Wrightsville Beach, along with the many rental units or "cottages," host many "overnight visitors" to the beach. An estimate of the population resulting from overnight visitors

can be made by multiplying an average occupancy rate in motels or rental units times the number of units available.

1) Motel Units

In 1981, there were 9 motels with 483 total units. In 1985, however, there are 12 motels with 536 total units -- a gain of three motels and 53 additional units. The motel occupancy rate is projected to be an average 3.0 persons per unit. Therefore, at complete occupancy, the motels at Wrightsville Beach can host 1,608 overnight visitors.

2) Rental Units

The number of non-motel rental units is estimated to be 530 in 1985 at Wrightsville Beach, representing a decrease of 220 available units since 1980. As discussed above, the trend of increasing numbers of both year-round residents and summer owner-residents has had an impact on the availability of rental units. An occupancy rate of 4.0 persons per unit, as reported in the 1981 Plan, is still considered a reasonable average for rental units by local realtors. Thus, the 530 units, when completely occupied, contain an average of 2,120 overnight visitors.

The total peak overnight visitor population, i.e. from cottage rentals and motels, is projected to be 3,728 persons, which is 715 fewer persons than the number shown in the 1981 Plan Update. As noted previously, however, this may be attributable to increases in both year-round and summer resident occupancy, and a corresponding decrease in the availability of rental units. Notice Table 1, which summarizes the data on the number of units and population.

Table 1: Wrightsville Beach Population by Dwelling Unit Type 1980-85

1980

Population Category	No. Units	Persons Per Unit	No. Persons at Peak
- Year Round	1,027	3.0	3,081
- Summer Owners	200	4.0	800
- "Overnight"			
- Cottages	750	4.0	3,000
- Motels	483	3.0	1,440
TOTAL	2,460		8,321

1985

				Change 80-85 Units	Change 80-85 Persons
- Year Round	1,349	3.0	*4,046	322	965
- Summer Owners	336	4.0	1,344	136	544
- "Overnight"					
- Cottages	530	4.0	2,120	-220	-880
- Motels	536	3.0	1,608	53	159
	2,751		9,118	+291	+788

Sources: 1981 Plan Update, Town Public Works Department; Projections by Talbert, Cox & Associates, Inc. *See p. 2, B.1, a.; Figures are rounded.

These three components of Wrightsville Beach's population, i.e., year-round and summer residents, and overnight visitors, might be considered to be the "resident" population. If all available units are occupied to average occupancy levels, then the resident population is projected to be 9,118 persons in 1985.

d. Day Visitor Population

The final component of the population picture at Wrightsville Beach is the day visitor population, i.e., people coming from Wilmington or other nearby communities to spend a few hours or a whole day at the beach. The "day visiting" population, although largest in numbers, has a more short-term impact upon the Town's public facilities and services than the three other components of the population. The most pronounced impact of this group is upon traffic and parking, both of which are very serious and will be discussed in later sections of the Plan.

It is rather difficult to estimate the total number of "day visitors" to the beach community. However, since the Intracoastal Waterway drawbridge is the only means of access to Wrightsville Beach from the mainland, an analysis of traffic counts across the

bridge can provide some indication. Peak daily traffic volumes across the bridge occurs usually in July, at the height of the summer season, while the lowest volumes are normally recorded in January. The N. C. Department of Transportation recorded that the peak traffic across the bridge on an average Saturday in July, 1983, reached 38,875 vehicles. Saturday is the traditional peak "day at the beach". In January, 1984, however, an average peak volume of 14,410 vehicles per day (VPD) was registered, a difference of 24,465 vehicle trips. The July weekend peak day represented an increase over the January average of 170%. (It should be noted that traffic figures for July, 1984, are not available, because of a malfunction in the traffic counting device. However, the historical trend reflects an increase of about 3% per year).

The traffic volume (14,410) in January, 1984, reflects total trips of the year-round resident population, commercial and business traffic, construction crews, and an increasing segment of the "off-season" population, so called "nine-month rentals". The 9-month rentals are a growing number of units leased out to teachers and UNC-W students for 9 months and as cottages for three months. At the projected growth rate of 3% per year, the January, 1985, average daily volume would be 14,842 vehicles, while the July, 1985, peak weekend day is projected to be 41,242 vehicles. In an attempt to extrapolate the number of "day visitors" from the projected July, 1985, weekend day peak, it will be assumed that the January "low" average figure is roughly equivalent to the traffic generated by year-round residents, general business, as well as some motel and cottage rental traffic. This figure, therefore, will be subtracted from the 41,242 July weekend ADT count, leaving 26,400 vehicle trips per day across the bridge from other sources. Also, at peak occupancy, residents of all 1,402 units in motels, cottages, and summer-owned units contribute to the traffic volume. However, because of off-season rentals of cottages and motel units appealing to more "commercial" business, about 50%, i.e., 701 units, generate additional traffic during the January peak period. Assuming one car per unit and an average of 4 trips across the bridge per day, it is projected that an additional 2,804 trips of the "resident" population should be subtracted from the July peak, leaving an estimated 23,596 trips by "day visitors". These visitors flow onto the beach at different times during the day and stay for varying lengths of time.

For analytical and projective purposes, however, it is assumed that the directional split is 60% going and 40% leaving, on the average. Therefore, 14,158 cars carrying day visitors would be on the beach during a peak weekend day. (This figure, it should be noted, does not include trips by the "resident" population, i.e., year-round, summer-owners, or overnight rental residents). Further, assuming that during the course of a 12-hour day, each vehicle stayed on the beach 1/3 of the day, i.e., 4 hours, then at any given time during the day, at least 4,719 vehicles carrying "day visitors" could be on Wrightsville Beach.

If each vehicle carried a conservative average estimate of 4.0 persons each (based on discussions with the Police Chief), then the typical Saturday peak population of day visitors would be 18,876 persons at any given time. This represents a significant increase over the 1980 day visitor population estimate.

e. Population Summary

A summary of the population and indication of recent trends are included in Table 2, below:

Table 2: Wrightsville Beach Population Summary, 1980, 1985

Component	1980	1985	Number Increase	% Annual Increase
Year-Round Residents	3,081	4,046	965	6.2
Summer Residents	800	1,344	544	13.6
Overnight Visitors	4,440	3,728	-712	-3.2
Day Visitors	15,438	18,876	3,438	4.5
Totals	23,759	27,994	4,235	17.8%

Source: 1981 Land Use Plan: Town of Wrightsville Beach (Public Works, Police & Tax Departments)

Notice that the most significant numerical gains during the period came from increases in year-round residents, summer residents and day visitors. There was as noted previously, a decline in the number of overnight visitors. Nevertheless, the overall population trend is one of continual increases throughout the next 10 years, particularly with the development of Shell Island, which is the largest tract of undeveloped but developable land on the barrier island containing Wrightsville Beach. More information on Shell Island's proposed development will be presented in the discussion of existing land use.

2. Economy

The word "economy" is synonymous with "Tourism" in Wrightsville Beach. The appeal of the Town as a summer recreational and resort area has constantly increased since the last update of the CAMA Land Use Plan (1981). This growing appeal has led to significant investments in residential and commercial development both within the Town and even beyond the jurisdictional boundaries as more and more people want to get close to "the beach," but without paying the higher housing costs, and as developers move to meet that demand. (This subject will be expanded upon in the discussion of existing land use and analysis of land use trends, in this section).

It is difficult to assess the detailed impact of tourist-generated income from Wrightsville Beach. However, according to the N. C. Division of Travel and Tourism, tourist income in New Hanover County as a whole, grew at an average annual rate of above 13% from 1980 to 1983. Notice Table 3 below:

Table 3: Tourism Income for New Hanover County: 1980-1983

	1980	1981	1982	1983	Change 80-83
Amount ($ Millions)	98.0	111.1	121.3	137.9	+39.9 (41%)

Source: N. C. Division of Travel and Tourism, Department of Commerce

Tourism dollars in New Hanover County rose from 98 million in 1980 to nearly 138 million in 1983, an increase of nearly 40 million dollars over the three-year period. This represents an average increase of over 13 million dollars per year. Unquestionably, Wrightsville Beach, with its motels and rental units, restaurants, marinas, fishing piers, stores and specialty shops, contribute substantially each year to the total tourism revenue in New Hanover County.

Another indicator of the Town's economic base is the growth in its taxable base. Notice Table 4.

Table 4: Wrightsville Beach Assessed Tax Base: 1980-1984

Year	Amount (Millions)	Change (Millions)	%
1980	$ 106.6	-	
1981	110.5	+ 3.9	4.0
1982	117.3	+ 6.8	6.0
*1983	245.0	+ 127.7	109.0
1984	259.3	14.3	6.0

Source: New Hanover County Tax Office

* First year of a major re-evaluation

The tax base has been steadily increasing in Wrightsville Beach as new development of property and/or redevelopment, i.e., conversion of older properties into new uses, continue. The figures presented in the table above are obviously skewed as a result of the property re-evaluation in 1983. Nevertheless, from 1983 to 1984, the tax base expanded by 14.3 million dollars, or 6% over the 1983 base. This trend is reflective of the increasing value of property in Wrightsville Beach, as the amount of developable land declines.

Revenues generated directly to the Town government, such as State Sales Tax receipts, property taxes, and utility fees partly defray the expense to the Town of accommodating the large summer populations.

3. Impact of Seasonal Population

As Table 2, page 7, showed, the Town's small year-round population, estimated at 4,046, can easily swell nearly seven times to about 28,000 people on a typical weekend day in the summer -- and even this projection is considered conservative by Town officials. While the economic impact of the influx of summer residents, overnight visitors and day visitors is important, this seasonal population bulge places significant stresses on most of the Town's facilities and services. A general picture of this impact upon selected services is indicated in Table 5, below, by comparing peak or "high" utilization, with off-season, or "low" utilization rates for these services in 1984. Notice also the "Impact Factor," which is simply the peak use rate divided by the low use rate.

Table 5: Summary of Seasonal Impact on Selected Services/ Facilities: 1984

	Service/Facility	"Low"	"High"	Impact Factor
1.	Streets (traffic, total ADT)	14,410	39,938	2.77
2.	Water (thousands GPD)	431.0	1,247	2.8
3.	Sewer (thousands GPD)	248.7	975.8	3.9
4.	Solid Waste Incinerator (days in use)	3 days/wk	6 days/wk	2.0
5.	Police Dept. Personnel	21.0	* 46.0	2.2

Source: Town of Wrightsville Beach (Public Works & Police Departments): Talbert, Cox & Associates, Inc.

* Includes 21 lifeguards, 3 meter maids, and 1 meter mechanic

The data in Table 5 indicates that from periods of "low" utilization of these selected facilities (typical of December or January), to periods of "high" utilization (typical of June, July and August), also affected by watering of lawns, i.e., "the green thumb" effect, water demand more than doubles and sewer demand goes up more than three times. The traffic impact is compounded by the fact that in 1984 there were only 2,490 public parking spaces in the Town. Also, the Town's two trash incinerators, with a capacity of 12.5 tons each, do not operate at full capacity during the off-seasons, but do operate at or near full capacity during the peak season. In order to help deal with parking, the Police Department hires three (3) additional meter maids and one (1) meter mechanic. The Department also takes on 21 lifeguards for the summer.

The impact of the seasonal population at Wrightsville Beach is substantial and appears to be increasing.

4. Existing Land Use Analysis

a. Current Conditions

The overall land use pattern in Wrightsville Beach has changed little since the preparation of the 1981 Land Use Plan Update, or even since the 1976 Plan. Although there have been many land use changes, mainly the conversion of undeveloped land into residential uses and to a lesser extent, commercial uses, the overall pattern is basically the same. Within the Town's corporate limits, are 1,488 acres of land, water, wetlands, and beaches. Notice Table 5 below, which shows a comparison between 1980 acreages and estimated 1985 acreages within the corporate limits.

Table 6: Corporate Limits Land Use Acreages: 1980-1985

URBAN	1980	1985	% Change
Residential	200	214	7.0
Commercial	30	31	3.3
Industrial	1.5	1.5	0.0
Governmental and institutional	48	48	0.0
Roads	121	121	0.0
Recreation	8.7	8.7	0.0
*Undeveloped	108	93	-14.0
TOTAL URBAN	517.2	517.2	0.0
Water	714	714	0.0
Wetlands	82	82	0.0
Beaches	174	174	0.0
TOTAL ALL AREAS	**1,487.2	1,487.2	0.0

Source: 1980 Land Use Plan; Wrightsville Beach Planning and Development Dept.
* within the existing urbanized area; ** rounded figures.

Wrightsville Beach has the authority to exercise planning jurisdiction up to one mile beyond its corporate limits. This jurisdiction is modified to conform to natural boundaries, e.g., the AIWW to the West, but still places 2,474 additional acres within the Town's jurisdiction for a total of 3,961 acres. However, nearly all of the acreage in the extraterritorial area, except for Shell Island, consists of wetlands, spoil areas, beaches, and water and are unsuitable for urbanized uses. Shell Island, on the other hand, is a large tract of developable land on the northern end of the barrier island portion of Wrightsville Beach, extending from the end of North Lumina Avenue to Mason's

Inlet. Of the total 84.3 acres of Shell Island (not technically an "island"), located within the Town's current jurisdictional limits, 44.3 acres are considered "developable". The other 40 acres are designated as "conservation," or for public use, i.e., access. The remaining acreage, extending to Mason's Inlet, is located outside of the Town's jurisdictional control. Shell Island is currently in various stages of development. The area within the Town's jurisdiction is expected to be developed within the next 10 years (1985-1995). (See Existing Land Use Map, attached to this report as Map 4).

An indication of the building trends since the preparation of the 1981 Land Use Plan Update through mid-1984, is shown in Table 7, page 12.

Table 7: Wrightsville Beach Building Trends: 1981-1984

	7/1/81		7/1/84		Changes 81-84		% Change	
	Bldgs.	Units	Bldgs.	Units	Bldgs.	Units	Bldgs.	Units
SFD	682	682	736	736	54	54	7.9	7.9
Duplex	348	696	373	746	25	50	7.1	7.1
Triplex	43	129	44	132	1	3	2.3	2.3
Commercial	46	55	54	63	8	8	17.4	14.5
Other	34	150	34	150	-	-	-	-
Townhouse	5	194	10	206	5	12	100%	6.2
Condo.	3	245	3	245	-	-		
Totals	1,161	2,151	1,254	2,278	93	127	8.0	5.9
Motel	9	483	12	536	3	53	33.3	11.0
Total All Units	1,170	2,634	1,266	2,814	96	180	8.2	6.8

Source: Town of Wrightsville Beach Public Works Department

Historical trends have favored single-family detached housing. However, duplexes, triplexes, or higher density townhouses figured significantly in recent trends and as available land decreases, more emphasis will likely be placed on higher density housing. Land use surveys conducted in November, 1984 noted a total of 205 vacant building lots within the Town's already urbanized jurisdiction on a total of 31.91 acres. (Surveys were conducted by Talbert, Cox & Associates, Inc. See attached Existing Land Use Map.) Although single-family detached housing will continue to be built throughout the current planning period (through 1995), or until complete "buildout", whichever occurs first), the development trend is leaning toward the higher density townhouse developments.

b. Land Compatibility Problems

In the conventional land use planning concept, a land compatibility problem is generally identified when two or more land use types are adjacent to each other and one is somehow restricted from expansion because of adverse conditions caused by the other use or uses, thus discouraging additional investment. As noted in the 1981 Plan Update, this situation has not been a major problem in Wrightsville Beach. However, an unconventional "compatibility" problem has emerged within the Town's jurisdiction, and that is the issue of so-called "floating homes," i.e., people living on boats for extended periods of time. This situation will receive detailed treatment in Section II of this Plan, "Policy Statements". (See page 54.)

c. Problems from Unplanned Development

The major land use related problem from the steady growth of Wrightsville Beach is traffic congestion and inadequate parking. Adequate transportation access in case of required emergency evacuations during peak seasons of the Beach is also of growing concern, since there is only one bridge across the Intracoastal Waterway. There has been general discussion about the possibility of a second bridge across the Waterway, either as a high-level bridge to replace or parallel the existing drawbridge, or a new bridge connecting the northern end of the beach community to the mainland.

d. Areas Likely to Experience Changes in Predominant Land Use

The areas within the Town's current jurisdiction likely to experience changes in predominant land use during the planning period are those areas which are presently vacant. As previously alluded to, Shell Island, the largest tract of developable land on Wrightsville Beach is currently being developed and will likely be completely developed within the planning period. Approved proposals presented to the Town call for the development of 52 single-family detached units, 274 condominium units, and a 170-unit resort hotel. It should be noted that the hotel will include a 150-seat restaurant, a 200-seat meeting room, and a 5-level parking deck.

In addition to Shell Island, some other already approved developments which should take place during the planning period include: a new 35-unit motel on Short Street on Harbor Island; an 8-unit motel proposed near the Surf Motel; and two separate townhouse developments -- one near Lee's Cut for 28 units, and another one for 27 units, for a total of 55 townhouse units. These developments, and Shell Island, should all be developed by 1987, by which time a total of 594 additional new dwelling units will be in Wrightsville Beach. Notice that Table 8, below, summarizes these anticipated developments and, by using current occupancy factors, projects the potential increase in the "resident" population to be 2,111 by 1987.

Table 8: Currently Scheduled Developments in Wrightsville Beach

Type	Buildings	Units	Occupancy Factor	Projected Population
SFD	52	52	3.0	156
Townhouse	10	55	4.0	220
Condominiums	21	274	4.0	1,096
Motel	3	213	3.0	639
Totals	86	594		2,111

Source: Information Provided by Public Works Department.

However, it is also quite possible that the 31.91 acres (205 lots), noted as vacant in November, 1984, will also be developed before the current planning period is over (by or before 1995). The overwhelming majority of these lots are currently in the R-1 zone, which permits a maximum of five families (or 5 units) per acre. It is projected that the four non-Shell Island development proposals will consume about four acres of the 31.91 vacant lot acreage, leaving 27.91 acres for other development. An estimated 22.21 acres are currently zoned R-1, 4.6 in R-2, which allows up to 10 families (units) per acre, and 1.1 in the commercial zones, allowing for up to 48 units per acre. A "buildout" scenario by 1995, assuming no changes in current zoning could result in the following, shown in Table 9, page 15:

Table 9: Impact of Vacant Lot "Buildout" by 1995

Zone	Acreage	Max. Density (du's)	No (du's)	Maximum Occupancy Factor	Total Persons
R-1	22.21	5	111	3.0	333
R-2	4.6	10	46	4.0	184
C(1-4)	1.1	48	53	3.0	159
Totals	27.91	-	210	-	676

Source: Land Use Surveys and Projections by Talbert, Cox & Associates, Inc.

Some other land use changes which will likely have an impact upon Wrightsville Beach during the next 10 years, are presently taking place, or are proposed to take place to the west of the Town's jurisdiction on the mainland. For example, the currently undeveloped Pembroke Jones Property, located across the Waterway from Wrightsville Beach could very well be developed, having an impact on Wrightsville Beach. Other relatively new townhouse residential developments on Eastwood Road (U. S. 74), such as Lion's Gate and Wrightsville West, are already beginning to have a "traffic" impact upon the Town. As development in these areas intensifies, Wrightsville Beach may want to consider expanding its jurisdictional control beyond the current boundaries in order to exercise some input, i.e. land development controls, as to the location and quality of development in adjacent areas.

e. Areas of Environmental Concern

As far as the Coastal Area Management Act (CAMA) is concerned, perhaps the most important features of the coastal landscape in relationship to land use planning are Areas of Environmental Concern or "AECs." In the 1980 Update, these areas were mentioned very briefly and not defined. However, since their impact upon policy development is so important, it is quite useful to discuss the AECs in more detail. Areas of Environmental Concern which affect Wrightsville Beach, as defined by North Carolina General Statutes, come under two broad categorical groupings, i.e. the Estuarine System AECs and the Ocean Hazards AECs. These will be discussed separately, below:

1. Estuarine System AECs

There are four components in the Estuarine System AECs - coastal wetlands, estuarine waters, estuarine shorelines, and public trust waters.

a. Coastal Wetlands

These are defined as any salt marsh, or dry marsh, subject to regular or occasional flooding by tides, including wind tides, whether or not the tide waters reach the marshland areas through natural or artificial watercourses, not including hurricane or tropical storm tides. Coastal wetlands, or marshlands, also contain some, but not necessarily all, of specific marsh plant species. Basically, all of the marsh areas outside of the Wrightsville Beach Town limits, north to the Intracoastal Waterway (excluding most of Harbor Island) are considered coastal wetlands. On Harbor Island, there is a substantial marsh area adjacent to the Town Park, extending from US 74-76 to Pelican Drive. Coastal wetlands make up a portion of the area within Wrightsville Beach's jurisdiction.

b. Estuarine Waters and Estuarine Shorelines

These two components of the Estuarine system are so closely linked, that they should be considered together.

Estuarine waters are defined in G. S. 113A-113(b)(2) as "all the water of the Atlantic Ocean within the boundary of North Carolina and all the waters of the bays, sounds, rivers, and tributaries thereto seaward of the dividing line between coastal fishing waters and inland fishing waters, as set forth in an agreement adopted by the Wildlife Resources Commission and the Department of Natural Resources and Community Development filed with the Secretary of State, entitled "Boundary Lines, North Carolina Commercial Fishing -- Inland Fishing Waters," revised to March 1, 1965.

Estuarine shorelines are those non-ocean shorelines which are especially vulnerable to erosion, flooding, or other adverse effects of wind and water and are intimately connected to the estuary. This area extends from the mean high water level or normal water level along the estuaries, sounds, bays, and brackish waters as set forth in an agreement adopted by the Wildlife Resources Commission and the Department of Natural Resources and Community Development, for a distance of 75 feet landward.

As an AEC, Estuarine Shorelines, although characterized as dry land, are considered a component of the estuarine system because of the close association with the adjacent estuarine waters. Estuarine waters and adjacent estuarine shorelines are significant components of the estuarine system in Wrightsville Beach. The significance of the estuarine system is that it is one of the most productive natural environments of North Carolina. It not only supports valuable commercial and sports fisheries, but is also utilized for commercial navigation, recreation and aesthetic purposes. Species dependent upon estuaries include menhaden, shrimp, flounder, oysters and crabs. These species make up over 90 percent of the total value of North Carolina's commercial catch.

These species must spend all or part of their life cycle in the estuary. The preservation and protection of these areas are vitally important.

Within Wrightsville Beach's jurisdiction, the Intracoastal Waterway, Lee's Cut, Banks Channel, Mott's Channel, Shinn's Creek, and all of the other natural creeks and channels within the marshland areas, are all estuarine waters. The estuarine shorelines, which are particularly vulnerable to "erosion, flooding, or other adverse effects of wind and water" in Wrightsville Beach consist of the following: all of the shoreline around Harbor Island and all of the shoreline adjacent to Banks Channel, commonly referred to as the "soundside" of the slender main island of Wrightsville Beach to a distance of 75 feet inland from the high water mark.

c. Public Trust Areas

Public trust areas are partially defined as all waters of the Atlantic Ocean and the lands thereunder from the mean high water mark to the seaward limit of State jurisdiction; all natural bodies of water subject to measurable lunar tides and lands thereunder to the mean high mark; all navigable natural bodies of water and lands thereunder to the mean high water level or mean water level, as the case may be. In other words, public trust areas are waters and adjacent lands, the use of which, benefits and belongs to the public.

In Wrightsville Beach, all of the waters described as estuarine waters and the Atlantic Ocean along the beachfront are considered public trust waters.

Currently, all development and development-related activities within Wrightsville Beach's designated Areas of Environmental Concern are subject to regulations from the State, Federal and local levels. At the State level, the CAMA major and minor permit processes are enforced, while the U. S. Army Corps of Engineers regulates development in "404" wetland areas. Locally, the major development regulating tool is the Wrightsville Beach Zoning Ordinance. However, it should be noted that CAMA regulations allow for the Town to develop its own local policies regarding development in Areas of Environmental Concern through the Land Use Plan. Then the CAMA major and minor permit decisions are guided somewhat by those local policies.

2. Ocean Hazards AECs

The second broad category of Areas of Environmental Concern which affects Wrightsville Beach are those natural hazard areas along the Atlantic Ocean shoreline having a special vulnerability to erosion, or other adverse effects of sand, wind, and water. Because of this vulnerability, improperly managed growth and development could expose life and property to unreasonable levels

of danger. These ocean hazard AECs could include beaches, frontal dunes, inlet lands, and ". . other areas in which geologic, vegetative and soil conditions indicate a substantial possibility of excessive erosion or flood damage." (NCAC 07H .0301). The sands which form the Atlantic Ocean shoreline are usually unstable. Therefore, the primary causes of the ocean hazard AECs are the continual forces exerted upon these sands by waves, wind and currents, all of which can intensify significantly during a storm. With such intensification, significant changes in the bordering landforms and to structures located on them, can occur. Hazard area property, i.e. the beach, frontal dunes, and inlet areas, are usually owned by a large number of individual owners or several public agencies, and is utilized by vast numbers of visitors to the coast. Ocean hazards areas are very important considerations in developing land use policies in shorefront communities.

The ocean hazard system of Areas of Environmental Concern within Wrightsville Beach's jurisdiction consist of the following:

a. Ocean Erodible Area. "This is the area in which there exists a substantial possibility of excessive erosion and significant shoreline fluctuation. The seaward boundary of this area is the mean low water line. The landward extent of this area is determined as follows:"

1) a distance landward from the first line of stable natural vegetation to the recession line that would be established by multiplying the long-term annual erosion rate which for the purposes of this section shall be those as set forth in tables entitled "Long Term Annual Erosion Rates Updated Through 1980," approved by the Coastal Resources Commission on March 18, 1983 . . . times 60, provided that where there has been no long-term erosion or the rate is less than two feet per year, this distance shall be set at 120 feet landward from the first line of stable natural vegetation; and

2) a distance landward from the recession line established . . [above]. . to the recession line that would be generated by a storm having a one percent chance of being equalled or exceeded in any given year." (NCAC 07H .0301).

In Wrightsville Beach, because of recent and ongoing berm restoration projects, the oceanfront is not a hazardous "ocean erodible area."

b. High Hazard Flood Area. "This is the area subject to high velocity waters (including, but not limited to, hurricane wave wash) in a storm having a one percent chance of being equalled or exceeded in any given year, as identified as Zone V1-30 on the Flood Insurance Rate Maps of the Federal Insurance Administration, U. S. Department of Housing and Urban Development. In the absence

of these rate maps, other available base flood elevation data prepared by a federal, state, or other source may be used, provided said data source is approved by the CRC." (NCAC 074 .0301).

The high hazard flood areas in Wrightsville Beach have been determined by preliminary Flood Insurance Rate Maps prepared by the Federal Emergency Management Administration (FEMA) and identified as Zone V-13. This area runs along the entire immediate beach front area in Wrightsville Beach. The entire Town, however, is subject to the 100-year flood.

c. Inlet Hazard Area. "The inlet hazard areas are natural-hazard areas that are especially vulnerable to erosion, flooding and other adverse effects of sand, wind, and water because of their proximity to dynamic ocean inlets. This area shall extend landward from the mean low water line a distance sufficient to encompass that area within which the inlet will, based on statistical analysis, migrate, and shall consider such factors as previous inlet territory, structurally weak areas near the inlet (such as an unusually narrow barrier island, an unusually long channel feeding the inlet, or an overwash area), and external influences such as jetties and channelization. . . in all cases, this area shall be an extension of the adjacent ocean erodible area and in no case shall the width of the inlet hazard area be less than the width of the adjacent ocean erodible area." (NCAC 07H .0301).

There are no inlet hazard area AECs within Wrightsville Beach's current jurisdiction, since the northern end of the ocean front barrier island, which borders Mason's Inlet is currently beyond the Town's extraterritorial jurisdiction and the land area near Masonboro Inlet is protected by two jetties.

5. Current Plans, Policies, and Regulations

a. Local Plans and Studies

1. Land Use Survey and Analysis; Population and Economy and Attitude Survey, 1970. This report was prepared for Wrightsville Beach by the North Carolina Division of Community Planning.

2. Land Development Plan and Community Facilities Plan, 1970. These reports were also prepared by the N. C. Division of Community Planning, and were based on the report cited in Number 1, above. These two reports were adopted by the Town Board of Aldermen.

3. Traffic and Planning Study (Phase I) for the Town of Wrightsville Beach, 1973, prepared by Kimley-Horn and Associates, Inc. This study was primarily concerned with the improvement of traffic and parking conditions on Lumina Avenue and Waynick Boulevard between Mallard and Seashore Streets, and particularly with

intersection improvements at North Lumina and U. S. 74, South Lumina and Stone Street, and Waynick Boulevard with U. S. 76.

4. Greater Wilmington Area Thoroughfare Plan, which includes Wrightsville Beach, contains a list of planned improvements to thoroughfares within the Wilmington area, to the year 2005. The plan is prepared by N.C.D.O.T. in cooperation with the City of Wilmington Transportation Planning Staff, and adopted by N.C.D.O.T. and the Metropolitan Planning Organization (MPO), which is the area Transportation Advisory Committee.

5. The Greater Wilmington 201 Facilities Planning Study Report, Part 1, Town of Wrightsville Beach, North Carolina, Final Revision, June, 1975, is intended to "develop a facilities plan for the construction of the most logical, economical, socially acceptable and environmentally sound wastewater treatment and disposal facilities for Wrightsville Beach." The report was prepared by Henry von Oesen and Associates, Consulting Engineers and Planners.

6. The Coastal Area Management Act (CAMA) Land Use Plan, 1975, prepared for the Town with assistance from the Local Planning and Management Services Section of the N. C. Department of Natural and Economic Resources. This was the first required CAMA Plan and was an update to the 1970 Land Development Plan. The first CAMA Plan, which contained general policy statements on growth and development, was also adopted by the Town Board of Aldermen and approved by the N. C. Coastal Resources Commission.

7. Methods of Financing Beach Preservation Projects, 1978, was prepared for the Town by the N. C. Department of Natural Resources and Community Development. This study analyzed fiscal and legal alternatives North Carolina local governments can use to finance beach renourishment projects and established procedures and policies for using these methods at Wrightsville Beach.

8. Dune Maintenance and Protection Plan. This Plan established procedures and methods for protection of the dune and berm through vegetation maintenance and by the use of restrictive ordinances. This Plan has been implemented at Wrightsville Beach, through U. S. Army Corps of Engineers projects within the past few years.

9. Wrightsville Beach Access Plan. This Plan set out policies for development of public access points and to encourage beach visitors to use alternative modes of transportation, other than the automobile. With financial assistance from the Office of Coastal Management, the Town has established a system of public access points up and down the oceanfront. The implementation of this plan has assured visitors free and open accessibility to the oceanfront.

10. The Wrightsville Beach Coastal Area Management Act Land Use Plan, February, 1981, prepared by John J. Hooton and Associates, was essentially an "update" of the initial 1975 CAMA Land Use Plan. This report represented more of a policy document than the initial CAMA Plan and contained more specific policy statements on such land use issues as protection of and use restrictions in Areas of Environmental Concern (AEC); the location, type, and density of desired development; and, continuing public participation. In addition to the policy statements, specific implementation actions on the part of the Town were included.

This current report, the 1985 CAMA Land Use Plan, for Wrightsville Beach, is both an update of the 1981 Plan, and also a "new" plan in that it is intended to reflect policies and implementary actions relevant to current and projected land use trends over the next 10 years.

b. Local Regulations and Enforcement Provisions

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 safety, health and welfare of its citizens. The local plans and policies of the Town of Wrightsville Beach are enforced through ordinances adopted by the Town Board of Aldermen, which is granted this power by the Charter of the Town of Wrightsville Beach (Private Laws 1899, Chapter 305, ratified March 5, 1899). Below is a listing of Town ordinances and enforcement provisions related to land use and development.

1. Zoning Ordinance: This is the most prominent land development regulatory device utilized by the Town of Wrightsville Beach and covers all of the area within the Town limits and to a line one mile north, called the "extraterritorial jurisdiction". The ordinance was originally adopted in 1972, with subsequent amendments. The Zoning Ordinance is designed to accomplish several purposes, including:

> "to lessen congestion in the streets; to secure safety from fire, panic and other dangers; to promote health and the general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provisions of transportation, water, sewerage, schools, parks and other public requirements."
>
> (Town of Wrightsville Beach Zoning Ordinance, adopted May 15, 1972)

The ordinance attempts to carry out its functions by regulating the location and height of buildings, establishing minimum

building lot sizes, and establishing certain "districts" in which particular uses relating to residential, commercial, or institutional uses, are either allowed or prohibited. In its initial adoption, it was further stated that:

> "Such regulations have been made with reasonable consideration, among other things, to the character of the districts, of their peculiar suitability for particular uses and with a view to conserving the value of the buildings and encouraging the most appropriate use of land throughout the Town." (Town Zoning Ordinance)

Currently, the Town has 10 "districts": two residential districts (R-1 and R-2), a Private Club District; four commercial districts, allowing for increasing densities (C-1 through C-4); a public and semi-public district for institutional uses, a shore district for the beachfront area; and a conservation district, which restricts all uses except for piers and marinas.

In addition to the uses allowed "by right" within each district, certain "conditional" uses are permitted on a case-by-case review basis. Conditional use permits have been used quite effectively at Wrightsville Beach.

Overall, the Zoning Ordinance is effective in Wrightsville Beach. However, criticism has arisen from developers who sometimes claim that the boundary lines separating districts, and subsequent uses, are unclear and arbitrary. For example, the R-1 district, which allows primarily for single-family low-density housing, may be just across the street from, or on the border line with the slightly higher density R-2 district. The issue is usually raised by investors seeking to obtain "the highest and best use" of a parcel in the economic sense by developing at a higher density. However, what appears to be arbitrary boundary lines may not necessarily be true in Wrightsville Beach. The initial Zoning Ordinance was developed by carefully examining then existing land use patterns -- patterns which had developed over a number of years without zoning. Being in primarily a linear pattern, as opposed to the "square blocks" or dominant grid-like pattern of non-oceanfront towns, it was not unusual for duplexes or higher density residential uses to be developed adjacent to or across the street from single-family residences. The Zoning Ordinance itself did and still does represent an attempt to regulate potential incompatible land uses as much as possible. The decision for the determination of particular district boundary lines must, therefore, be in the interest of the Town as a whole, if the Zoning Ordinance is to fulfill its purpose and intent.

2. Subdivision Regulations: The Wrightsville Beach subdivision regulations basically regulate the conversion of raw land into building sites. In conjunction with the Zoning Ordinance, these regulations help ensure consistent development, by establishing design standards for provision of certain facilities and infra-structure such as streets, water and sewer service, and drainage facilities. Developers of raw, i.e., unplatted, land, must comply with these standards.

3. Pierhead Line Ordinance: This is a set of regulations enforced by the Town of Wrightsville Beach concerning how far a pier can extend out into the water.

4. State Building Code: The Town of Wrightsville Beach has an active building inspections program and enforces the North Carolina State Building Code.

5. General Enforcement Provisions: The responsibility for enforcing all local land use ordinances, including the State Building Code in Wrightsville Beach, is the responsibility of the Town's Department of Building and Land Use Development. This department is headed by a Director, with three additional full-time personnel. All planning and land development matters are brought before the Wrightsville Beach Planning Board, which meets monthly. The Planning Board conducts reviews and makes recommendations to the Town Board of Aldermen, which has final responsibility for making planning decisions. The Town does not have a full-time staff planner.

C. Constraints: Land Suitability

The purpose of this section of the Wrightsville Beach Land Use Plan proposes to identify features of the land or landscape of the Town which are or could pose serious constraints to development. Under land suitability, these constraints are generally considered under the broad categories of 1) physical limitations, i.e., hazardous (man-made or natural) areas, areas with soil limitations, hazardous slopes, etc., 2) fragile areas, i.e., AECs, complex natural areas, or areas with cultural (architectural or archaeological) significance, and 3) areas with resource potential.

1. Physical Limitations

In developed or developing barrier island communities like Wrightsville Beach, the major physical limitation is land availability. As noted under the discussion of existing land uses, there were only 205 platted vacant lots left in Wrightsville Beach as of November, 1984. The only substantial tract of developable raw land is Shell Island, on the northern end of the beach community and which is currently being developed with a mixture of uses.

As Table 7, page 12, showed, a net total of 93 structures, including all residential types (single-family, duplex, triplex, and townhouse) and commercial buildings, were developed within the three-year period from 1981 to 1984. This is an average of 31 total new structures (not counting units within the structures) per year. Shell Island is projected to be developed within three years, or by 1988. This will also likely accelerate the total build-out within the current Town jurisdiction to about the same time frame. It should be noted that Wrightsville Beach has annexed a small tract of land west of the Intracoastal Waterway, on which is being developed a shopping center. This area was annexed as a result of a petition by the owners. It is anticipated that additional commercial developers in the same general area may request similar "satellite" annexations. The impact of these annexations upon residential development is uncertain. However, potential mainland well sites for future water supplies may result.

Although land availability, from a physical standpoint, is the overshadowing "land suitability" constraint to development in the Town over the next 10 years, it is useful to mention other constraints under this category.

a. Man-Made Hazards

There are no known man-made hazards limiting development in Wrightsville Beach.

b. Natural Hazard Areas

1. Ocean Area Hazards

The only natural hazard area posing a limitation to development in Wrightsville Beach is the high hazard flood area, which was described under the Ocean Hazards Areas of Environmental Concern. The ocean erodible area, frontal dunes, high hazard flood area, and inlet hazard areas are limitations to development. These areas were discussed on pages 17 and 18 of this report. Currently, however, and in accord with existing local policies, development is prohibited in potential hazard areas through the enforcement of local ordinances and support of federal and state permitting procedures. Wrightsville Beach's oceanfront "buildable line" is located well outside of potential natural hazard areas. It should be noted that the entire Town is located in the 100-year flood area.

2. Areas with Soils Limitations

As a constraint to development, the physical properties and capabilities of various soil types are among the most important considerations. Unlike many other localities which may contain a large number of complex soil types and associations, there are only three soil associations within Wrightsville Beach's jurisdiction, according to the Soil Survey of New Hanover County, published by the U. S. Department of Agriculture Soil Conservation Service, 1977. These three soil types are: Newhan fine sand, Tidal Marsh, and Urban Land. All three are generally described below: [1]

a. Newhan Fine Sand: This soil type consists of gently sloping, excessively drained sands on dunes and along beaches and coastal waterways. Newhan soils are very low in natural fertility, organic matter content and available water capacity, have rapid permeability and a low shrink-swell potential. The water table is generally about 6 feet below the surface, except in lower lying areas that are subject to tidal fluctuations. Due to the rapid soil permeability, there is a probable danger of contamination of groundwater supplies from use of septic tanks or other pollution sources. However, Wrightsville Beach has centralized sewage collection and disposal facilities. Virtually all of the barrier island portion of Wrightsville Beach, including the beach area and all of the developed area backing up to Banks Channel, consists of Newhan fine sands. There are also smaller "pockets" of Newhan fine sand on some of the marsh islands near the Intracoastal Waterway.

[1] Soils information taken from 1981 Land Use Plan, and Soil Survey of New Hanover County

b. Tidal Marsh: These are the soils of the tidal flood plains between the coastal sand dunes on the ocean and the upland areas on the mainland. Most of these soils are covered by smooth cordgrass (Spartina alterniflora), but farther inland may be increasingly covered by black needlerush (Juncus roemerianus). These soils are very poorly drained, have slopes of 0 to 2 percent, and are used mainly for natural habitat for shore and water birds except in those areas where they have been drained and filled for construction. Most of the area within Wrightsville Beach's jurisdiction is classified as Tidal Marsh. The area between Banks Channel and the Intracoastal Waterway (except for Harbor Island), is basically all Tidal Marsh. As mentioned above, however, there are pockets of Newhan fine sand soils in some of the upper marsh islands near the Intracoastal Waterway. Generally, tidal marsh areas have no potential for conventional development.

c. Urban Land: This is a miscellaneous soil type that exists 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) have been substantially altered or destroyed. All of the developed portion of Harbor Island is classified as Urban Land. A more detailed explanation of the capabilities and characteristics of these three soil types is contained in the Soil Survey report. The report also shows the general location and extent of these soils on maps. However, these maps and interpretations will not eliminate the need for on-site sampling, testing and study of specific sites for design and construction projects. They should be used primarily to plan more detailed field investigations to determine the conditions of the soil at the proposed site for the intended use.

3. Estuarine Erosion Area

The estuarine erosion natural hazard area is defined as the non-ocean shoreline subject to erosion or similar effects of wind and water, which is usually the immediate estuarine shoreline. In Wrightsville Beach, however, the estuarine shoreline is not considered to be an estuarine erosion hazard area.

4. Sources and Estimated Quantity of Groundwater Supply[1]

Within the Lower Cape Fear River Basin, Wrightsville Beach uses groundwater to supply all water demands. By definition, Wrightsville Beach is not in any designated public water supply watershed, since groundwater is used exclusively. In another sense, however, since the water is publicly used, it is a "public water supply watershed".

[1] Groundwater information taken from 1981 Land Use Plan, and based on discussions with N. C. Division of Environmental Management Water Quality personnel.

The hydrogeology of Wrightsville Beach is complex. An unconsolidated sand occurs between surface and 60 feet Below Land Surface (BLS) and contains water under water table and/or semi-artesian condition; tentatively, this aquifer is the Post-Miocene Aquifer. Underlying the Post-Miocene Aquifer is the Tertiary System Aquifer, and artesian aquifer comprised of limestone; groundwater is stored within this aquifer from 60 to 190 feet BLS. From 190 feet to an estimated 1,100 feet BLS is the Cretaceous System Aquifer which is composed of sands containing brackish groundwater under artesian and flowing artesian conditions. Basement is at 1,100 feet BLS.

Rainfall directly infiltrates into the Post-Miocene Aquifer and is a source of recharge. Under favorable circumstances, the Tertiary System Aquifer would probably receive recharge from the overlying Post-Miocene Aquifer.

Potable and brackish groundwater exists in the Post-Miocene Aquifer in significant quantities. Potable groundwater exists in the Tertiary System Aquifer in sizable quantities.

The aquifer of importance to Wrightsville Beach's water supply is the Tertiary System Aquifer. Eight wells that are open end from 128 to 180 feet BLS provide a potential 1,315 GPM or 1.89 MGD of water. (Well locations are shown on Map 4, Existing Land Use, attached). However, two wells are currently closed due to chloride intrusion. They are used only in times of emergency. Currently, the quantity and quality of the groundwater from the six remaining wells is sufficient except for peak usage periods when some of the Town's stored water supply must also be used. However, as withdrawals increase, there is also the increased likelihood of increasing chlorides, i.e., saltwater intrusion, into the groundwater supply source. If major chloride intrusion becomes a serious problem, the Town may wish to develop wells across the Intracoastal Waterway on the mainland and/or expand its water treatment capacity. The addition of wells on the mainland would lessen the intensity of utilization of the Town's other wells. Currently, however, because of the depth of the wells and the hydraulic separation between the Town's withdrawal aquifer and the "unconfined," or saltwater aquifer, above-ground development poses no threat to existing well fields. Because of a recent satellite annexation, the Town may eventually be able to develop well sites on the mainland.

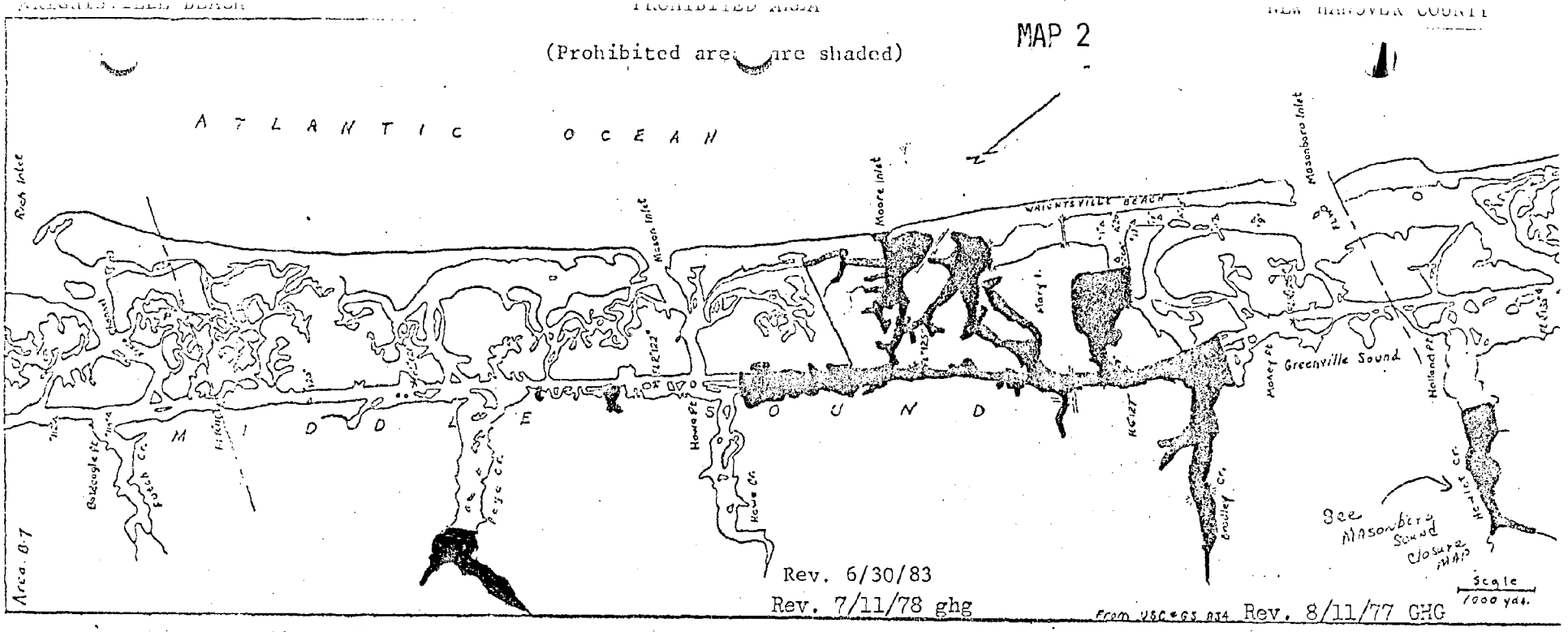
5. Surface Water

a. General Use. Wrightsville Beach has substantial amounts of surface waters which are affected by land development in terms of water quality. According to reports from the Water Quality Section of the N. C. Division of Environmental Management (DEM), and the Shellfish Sanitation Unit of the N. C. Division of Health Services, surface water quality has been improving in some areas and declining in others. The Division of Environmental Management currently does not have any detailed data on "nutrient" content,

i.e. substances which determine the level of pollution such as fecal coliform and metallic substances. However, DEM established a monitoring station, for the first time, at Wrightsville Beach in January, 1985. The station is located at the Intracoastal Waterway bridge. Representatives of DEM expect water quality in Wrightsville Beach's waters, i.e. the Intracoastal Waterway, the waters of the Greenville and Middle Sounds, Lee's Cut, Motts Channel and Banks Channel, to continually improve, particularly since all of the Town's wastewater is now tied into the New Hanover County northeast interceptor. Prior to tying into the regional interceptor in September, 1983, the Town's system discharged treated effluent directly into the Sound.

According to the DEM, water quality standards and stream classification for "saline," i.e. coastal waters, most of the waters around Wrightsville Beach were classified as "SC" i.e., suitable only for fishing and fish propagation and not for swimming. However, a request submitted to DEM petitioning an upgraded classification to "SA," i.e., not only suitable for fishing, but also for swimming and body contact sports, was approved in late 1985. This higher DEM classification also allows for shellfishing. According to the regional DEM office, there have been no water quality violations or other major problems in Wrightsville Beach. However, there is increasing concern on the part of DEM over storm-water runoff from all urbanized areas and subsequent fecal coliform counts. The Division of Coastal Management is also very much concerned about stormwater runoff and the resultant increase in various pollutants, including fecal coliform.

b. Shellfish Waters. The determination of the suitability of waters for shellfish harvesting is determined by the Shellfish Sanitation Unit of the Division of Health Services, based on levels of fecal coliform in these waters. The most recent map of shellfish waters in Wrightsville Beach (January 24, 1985) shows some areas in the Greenville Sound area as "open," which have been "closed" for several years. The recent upgrading is attributed to ending the direct discharge of effluent into the Sound since the Town has tied into the northeast sewer interceptor. However, some areas which were "open" have been "closed" for shellfishing due to increased counts of fecal coliform. Compare Map 2, page 29, which shows the prohibited areas as of June 30, 1983, with Map 3, Page 30, which shows the areas in January, 1985. The major suspect in increased fecal coliform counts is urban storm-water runoff. It should be noted that coliform counts fluctuate and the Marine Fisheries Reports are issued regularly. However, if surface water quality is to be maintained and continue to improve in Wrightsville Beach's waters, then the issues of urban storm-water runoff and other contributors to high fecal coliform counts must be addressed by the Town.



No person shall take or attempt to take any oysters or clams or possess, sell, or offer for sale any oysters or clams taken from the following areas, at any time:

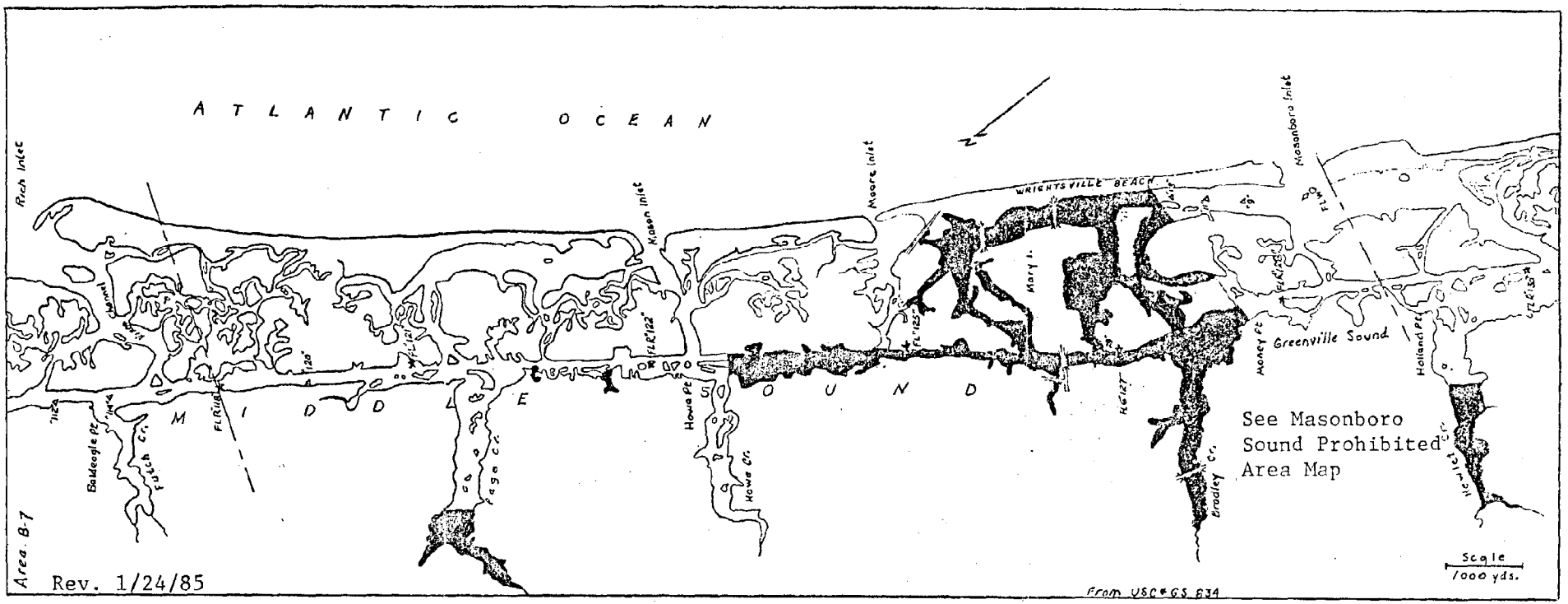
Wrightsville Beach Area:

(a) In all of the waters of Page and Fibbs Creeks north and west of a line drawn from a point on the east shore of Page Creek 34° 16' 50" N - 77° 46' 43" W; thence 224° M, 400 yards to a point on the west shore of Page Creek 34° 16' 40" N - 77° 46' 53" W.

(b) In Middle Sound within two hundred (200) feet of Harrelson's Marina

(c) All those waters bounded on the north by a straight line across the creek at 34° 14' 10" N - 77° 46' 41" W, and a line across the ICWW beginning on the east shore at 34° 14' 42" N - 77° 47' 10" W; thence to the west shore at 34° 14' 47" N - 77° 47' 17" W, (with Stokely Cut, Daniel Drain and Spring Landing Channel remaining closed), and bounded on the south by a line beginning on the shore near Bradley Creek at 34° 12' 17" N - 77° 49' 25" W; thence across the ICWW to a point at 34° 12' 13" N - 77° 49' 12" W; thence northerly 575 yards to a point at 34° 12' 27" N - 77° 49' 06" W; thence east 750 yards to a point at 34° 12' 30" N - 77° 48' 40" W; thence across the creek to a point on the west end of Borrow Pit at 34° 12' 27" N - 77° 48' 37" W; thence along the north shore of Borrow Pit to a point at 34° 12' 22" N - 77° 48' 25" W; thence across Motts Channel to a point on Harbor Island at 34° 12' 28" N - 77° 48' 19" W; thence southeasterly along shoreline 375 yards; thence 1,450 yards northeasterly to the Highway 74 bridge; thence along the bridge to the shore on Wrightsville Beach. This includes all creeks and tributaries within said boundary.

(d) All waters within Johnson Marina upstream of the mouth of the Marina.



No person shall take or attempt to take any oysters or clams or possess, sell, or offer for sale, any oysters or clams taken from the following areas, at any time:

30

Wrightsville Beach Area:

In all of the waters of Page and Fibbs Creeks north and west of a line drawn from a point on the east shore of Page Creek 34° 16' 50" N - 77° 46' 43" W; thence 224° M, 400 yards to a point on the west shore of Page Creek 34° 16' 40" N - 77° 46' 53" W.

In Middle Sound within two hundred (200) feet of Harrelson's Marina.

All those waters in Middle Sound and the ICWW bounded on the southwest by a straight line beginning at Money Point 34° 11' 58" N - 77° 49' 27" W; thence to a point on the northwest shore of Banks Channel at 34° 12' 03" N - 77° 48' 08" W and bounded on the northeast by a line beginning at a point 34° 13' 14" N - 77° 47' 21" W; thence in a straight line to 34° 13' 24" N - 77° 47' 22" W; thence in a straight line to the east shore of the ICWW at 34° 13' 50" N - 77° 47' 57" W, near ICWW Fl Beacon "125"; thence in a northeasterly direction along the shoreline across the mouth of Stokley Cut and proceeding along the shoreline in a northeasterly direction to 34° 14' 42" N - 77° 47' 10" W; thence in a straight line to 34° 14' 47" N - 77° 47' 17" W, to include Bradley Creek and all other tributaries.

All waters within Johnson Marina upstream of the mouth of the Marina.

6. Slopes in Excess of 12%

Although there are some frontal and primary dunes in the Shell Island oceanfront area of Wrightsville Beach, there are none with hazardous slopes, i.e. in excess of 12%.

2. Fragile Areas

Coastal fragile areas are those which could easily be damaged or destroyed by inappropriate or poorly planned development. In Wrightsville Beach, all of the Estuarine System Areas of Environmental Concern, i.e. coastal wetlands (marshlands), estuarine waters, estuarine shorelines, and public trust waters, might be considered "fragile areas." Natural resource and cultural resource fragile areas are generally recognized to be of educational, scientific, or cultural value because of the natural features or cultural significance of the particular site, and are therefore environmentally sensitive and have features which distinguish them from the majority of the surrounding landscape. This could include: complex natural areas, areas that sustain remnant species, unique geologic formations, prime wildlife habitats, or registered natural landmarks.

According to the North Carolina Department of Cultural Resources, there are no recorded archeological or historic sites within the Town's jurisdiction. There are no habitats for endangered or remnant species of areas containing unique geologic formations. However, spoil islands are considered as natural resource fragile areas because of their importance as a wildlife habitat. Research has proven that North Carolina seabirds utilize dredge islands extensively for their breeding activities; and further, that because of lower elevations, vulnerability to storm waters and increased human activity, nesting mortalities are higher on "natural" sites. These natural sites are ordinarily the dunes and beaches of barrier islands. However, as development and human activity have increased in these areas, birds have been forced to find other sites for breeding and nesting. These substitute sites are very often the spoil islands. These islands are not only important for breeding and nesting activities, but there is also support for their value as a resting and feeding area for migrating birds. The number and variety of birds will vary with each stage of the island's vegetational succession--from bare, sandy dome to forests. A bare island, devoid of vegetation, will be used by royal terns (Thalasseus maximus), sandwich terns (Thalasseus sandvicensis), least terns (Sterna albinfrons, and oyster catchers (Haematopus pallaratus). As vegetation becomes established, common terns (Sterna hirundo) and gull-billed terns (Gelochelidon nilotica), black skimmers (Rynchops nigra) Wilson plovers (Charadrius Wilsonia), and willets (Cataptrophorus semi-

palmatus) will inhabit the island. As the density of the grasses increases, willets will continue to increase and laughing gulls (Larces articilla) will move in. With the emergence of shrubs and thickets, redwinged blackbirds (Agelaius phoeniceus), boat-tailed grackles (Cassidix mexicanus), and common grackles (Quiscalus quiscula) immediately colonize the island. (Proceedings of a Conference on Management of Dredge Islands in North Carolina Estuaries, 1974.)

A vegetation survey of the several spoil islands and deposit areas within the planning jurisdiction shows that each of these stages of vegetational succession exists in one or more locations. While detailed investigations of these areas have not been conducted, the continued use and development of that natural habitat in that beach area has undoubtedly forced many of the above birds to seek the artificial habitat of the spoil islands. Recent surveys indicate that the majority of these birds are actively present within the planning area.[1]

3. Areas with Resource Potential

Wrightsville Beach, being primarily a barrier island resort community has no agricultural, forest, or known mineral resource areas. The most significant resource is the beach itself, which is the primary attraction for the thousands of visitors each year. Some of the waters on the sound side areas of Wrightsville Beach are productive recreational and commercial fishing areas, which should also be a consideration in formulating land development policies.

[1] Natural resource fragile area discussion excerpted from 1981 Land Use Plan

D. Constraints: Capacity of Community Facilities

Introduction

Of crucial importance to any community experiencing growth and the pressures for more growth is its capacity to accommodate that growth. The support facilities and services operated and maintained by and within a locality can be likened to a living organic "system", in which continual population growth represents "injections" into that system. However, within the confines of certain limitations, such a "system" can only take so many injections before it reaches a "critical threshold". In the case of a community, at the point which the population growth reaches the maximum service capacity of that community, it can be said to have reached its critical threshold, or its "carrying capacity".

In a broad sense, carrying capacity is reached when any one necessary parameter reaches its limit, whether natural or man-made. However, the concept of "carrying capacity" will generally be applied to Wrightsville Beach with emphasis on service provisions, i.e., in order to determine the ability of existing and proposed developable land, water, sewer, solid waste disposal, transportation facilities (including parking and bridge access), police protection, and recreational facilities to accommodate growth. At the point of critical threshold or maximum carrying capacity, the decision must be made by the community to either increase the system's capacity, or do something to stem its population growth.

This discussion will begin with a look at the capacity of developable land and its impact upon future population. Although not a "community facility" in a technical sense, without land, nothing else would take place. Therefore, this brief discussion will serve to lay the foundation for the remaining discussion of community facilities.

1. Land

Developable land is a major physical constraint to development in barrier island communities. As discussed under physical constraints to development, besides Shell Island, there are just under 28 acres of land not already scheduled for development. (See Tables 8 and 9, pages 14 and 15). At current development rates, and assuming no changes in current densities allowed in the Town's Zoning Ordinance and assuming current occupancy averages, the maximum population for the Town's "buildout" can be projected. Notice the following Table 10:

Table 10: Population Impact of Wrightsville Beach Buildout

Factor	"Resident" Population	Time Frame
1. Shell Island & Other Scheduled Development	2,111	1988
2. Vacant lot buildout	676	1988
Sub-total	2,787	
Current "Resident" Population	* 9,118	
TOTAL POPULATION CAPACITY	11,905	

Source: Projected by Talbert, Cox and Associates, Inc. *(See Table 1, page 5)

Thus, the current developable land along with already programmed developments could support 2,787 additional "residents", i.e., non-day visitors who could reside in single or multi-family dwellings and motels either seasonally, or theoretically, all year-round. It is important to keep in mind that this projection cannot take into account possible zoning changes which would allow higher than current densities, or the possibility that average occupancy sizes per unit will increase or decrease. The assumption is made for projective purposes that these factors will remain constant throughout the planning period. A total buildout is projected by 1988, at which time the development could sustain 11,905 residents. Now it is important to look at the capacity of the Town's service facilities.

2. Water

The current capacity of the seven regularly utilized wells at Wrightsville Beach is 1,533,600 gallons per day (gpd). The seventh well, with a capacity of 360,000 gpd, was developed by the developers of Shell Island. In addition, the Town has a 1.5 million gallon storage capacity. The water storage capacity is very important, since, as Table 5, page 9 showed, the peak daily demand for water in the summer could approach the peak pumping capacity. The storage is also important for maintaining fire flow and other emergencies. According to the Public Works Department, water utilization has declined in recent years due to an emphasis on conservation measures. Assuming that water usage per capita has not changed significantly since 1984, then these figures can be utilized to project current and future demand. For projection purposes, it will be assumed that the average consumption per capita of the "resident" population is 90 gallons per day (gpd) during the "off-peak" or "low" periods of the year, and 110 gpd during the summer "peak" season. During the summer, residents,

including year-round occupants, summer residents and overnight visitors, generally use more water. More showers are taken to remove sand and salt, cars are washed more frequently for the same reason, and the "green thumb effect" leads to the almost continual watering of lawns or floral gardens. Although these factors account for most of the increased water use during the summer months among the "resident" population, day visitors also have an impact upon peak water consumption. By taking the "peak" water use figure shown in Table 5, page 9, the impact of the day visiting population can be projected by subtracting the estimated water usage of the resident population, and dividing the balance by the estimated number of day visitors. The results show an average demand upon the Town's water system of about 13 gpd.

The Town's water distribution system serves the entirety of the Town.

3. Sewer

Since the preparation of the 1981 Land Use Plan, the Wrightsville Beach sewer treatment capacity has nearly doubled--from 870,000 gpd to 1.5 mgd. This is because of the Town's connection onto the Wilmington-New Hanover County northeast sewer interceptor in September, 1983. Connection onto the regional sewer system is quite a beneficial element in the Town's current and projected ability to meet sewer demands. As Table 5, page 9 shows, "peak" demand for sewer service in the summer was .975 mgd in 1984, and a "low" demand of .248 mgd. The "low" demand, compared to a year-round population and estimated "off-season" rentals (estimated based on water usage), indicates a per capita demand of 75 gallons per day for the "resident," non-day visiting population. If this rate of demand is applied to the peak resident population of 9,118 persons, then peak sewer use is projected to be at 683,850 gpd, excluding day visitors. The impact of the day visitors might be estimated by subtracting the peak utilization for the resident population from the total peak (i.e., .975-.684 mgd) to project sewer utilization by the non-resident populace. When the day-visitor population is divided into the remaining peak sewer utilization, a factor of about 15 gpd per visitor is the result.

Thus, the current total peak demand of .975 mgd is only 65% current capacity. The entire Town is served by central sewer service and the new development on Shell Island will also be served by the Town's sewer system.

4. Transportation

Transportation routes and traffic, while not constituting current constraints to development in Wrightsville Beach, represent on-going important issues in the beach community. At the heart of the issue is the fact that there is only one means of ingress and egress to the Town from the mainland, and that is the

US 74-76 bridge across the Atlantic Intracoastal Waterway. Crossing the bridge onto Harbor Island, the 4-lane drawbridge connects into a five-lane road (US 76), which has a two-lane fork heading to the north end of the beach (US 74-Pelican Drive), intersecting with North Lumina. On the other hand, the 5-laned US 76 runs into Waynick Boulevard and Lumina across the Banks Channel Bridge at the center of the Town. Waynick Boulevard, which is 4-laned, is the major thoroughfare to the southern end of the beach. Utilization of the main roads on Wrightsville Beach, like all other facilities, is subject to the seasonal peaks: notice Table 11, below, which shows the annual average daily traffic volumes, compared to peak "high" traffic volumes, along with estimated design capacities:

Table 11: Traffic Volume/Road Capacity

Thoroughfare	Annual ADT '82	'83	*Peak Day Volume 1983 (VPD)	**Est. Design Capacity(VPD)	% Use At Peak
1. AIWW Bridge	20,590	18,500	38,875	50,000	78
2. US 76	10,600	12,000	23,280	35,000	67
3. US 74	5,000	5,500	10,670	20,000	53
4. Waynick Bd.	5,300	6,000	11,640	28,000	42

Source: N. C. Department of Transportation and Talbert, Cox & Associates, Inc.

* Projections based on the percentage increase factor across the AIWW bridge from "average" to "peak," i.e. 94%, applied uniformly for projection purposes.

** Provided by NCDOT, based on maximum "free flow" capacity, i.e. no traffic lights, roadside parking or other obstructions.

Compared to the maximum design capacities, all of the major thoroughfares appear to have current excess capacities. However, this is assuming free and open flow on all thoroughfares, without obstructions and limited roadside parking.

As the 1981 Plan noted, in case of a severe storm or other emergency requiring evacuation, the AIWW bridge is the only evacuation route across to the mainland. From May 1 through October (which falls within the hurricane season), the bridge opens every hour "on the hour" from 7:00 a.m. to 7:00 p.m., and on demand for commercial vessels and government vessels, i.e., U. S. Coast Guard, Army Corps of Engineers, and U. S. Navy. The average opening of the drawbridge lasts about 4 minutes per vessel passing through, but could be longer. If the bridge becomes "stuck" because of mechanical problems, or is "knocked out" for other reasons, many beachgoers or resident travellers could find themselves stranded on the beach. According to the N. C. Department of Transportation, if the bridge were ever disabled during a storm or during

dangerous or threatening weather, a temporary ferry shuttle system would be established, using DOT supplied ferry boats. Ferries would be located here from other areas, depending on which ones are available. These ferries would be used to transfer cars and people across the AIWW to the mainland. The boats would also be used to ferry emergency vehicles, school buses, commercial traffic (food delivery trucks, for example). To supplement the ferries, smaller State-owned boats would also be mobilized in order to move people without vehicles.

Another serious problem related to traffic is the shortage of public parking spaces. With ever-increasing numbers of day visitors to the beach during the summer season, traffic congestion often results because of the limited availability of parking spaces. Recent estimates by the Public Works Department showed that there were 2,490 public parking spaces, with an additional 300 proposed as part of North Shell Island's development, for a total of 2,790. Addressing the issue of public parking is crucial, particularly since the discussion of day visitors pointed out 4,719 cars could be out looking for parking at any time on peak days.

5. Solid Waste

The Town of Wrightsville Beach handles its own solid waste collection and disposal. The Town has four compactor trucks--two in regular use and two reserved as "back-up" trucks. Solid waste disposal is by incineration in the Town's two incinerators. Each incinerator has a rated capacity of 12.5 tons. In the "off" season, the incinerator operates from two to three days per week. During the summer, however, with population peaks, the incinerators must be utilized on the average of six days per week. If the Town's population continues to expand, the Town will need to expand its own solid waste disposal capacity, or make plans to utilize New Hanover County's disposal facilities.

6. Schools

The Wrightsville Beach Elementary School, serving grades K through 6, is the only school in the Town. In addition to serving residents, the school, located on Harbor Island, also serves the Wrightsville Sound area on the mainland across the Intracoastal Waterway. The school's 7 classrooms have a State Department of Education mandated capacity of 26 pupils per room, or a maximum of 182. The 1984-85 enrollment is 177, or 97.2% of capacity.

New Hanover County Schools officials do not anticipate much growth in the numbers of elementary school age children within Wrightsville Beach over the next few years. However, growth in the elementary school age population is expected to occur in the Wrightsboro Sound area outside of the Town's jurisdiction, but within the same school district. According to school officials, the demand for more classroom space cannot be fulfilled at the

Wrightsville Beach Elementary School since it is already near capacity and has no real potential for expansion due to limited land availability. A school official also stated that the acquisition costs of additional property within Wrighsville Beach would likely make construction of a new facility too expensive. If demand for school space substantially exceeds the availability of space, one alternative may be redistricting in order to reassign pupils to other area schools with the required capacity. However, this would be a responsibility of the County and not of Wrightsville Beach. Also, it should be noted that a new elementary school is under construction on Greenville Sound Road about 5 miles from the corporate limits and is designed to meet the area needs for a number of years.

7. Police

The Wrightsville Beach Police Department currently provides police protection for the Town. The year-round full-time staff of 21 personnel consists of 15 police officers, 4 desk officers (including the Chief of Police), 1 secretary, and 1 animal control officer. The 19 officers serve both the year-round population and the seasonably high summer population. However, in the summer, three additional parking meter maids and one meter mechanic are employed, along with 21 lifeguards. In addition to the full-time personnel, the Town employs 5 auxiliary officers on a part-time basis. The current size of the police force, according to the Police Chief, is adequate to serve the Town year-round. Also, within the planning period, because of the development of Shell Island, the police department anticipates hiring 4 additional full-time officers. This will give the Town a force of 28 sworn-in officers, including the 5 auxiliary officers. Additional police personnel may also be required as a result of satellite annexation of land areas across the waterway, such as the Galleria Shopping Center.

8. Fire

Fire protection is provided to the Town through the Wrightsville Beach Volunteer Fire Department. The Department consists of a Fire Chief, who is employed full-time, and an average of 25 volunteers. The Town's equipment includes three pumpers. According to the Fire Chief, the level of volunteers is adequate for year-round service to the Town. However, response time can be delayed during high population periods because of traffic congestion along the beach strand, i.e., Lumina Avenue. To decrease response time during these periods, pumper trucks are occasionally stationed along Lumina Avenue, and from April 1st through October 1st, the east side of Lumina from Stone to Salisbury Streets, normally used for parking, is used as an extra traffic lane for emergency vehicles. This takes place only on weekends and holidays. With the development of Shell Island, approximately one additional mile of developed area along the extension of North Lumina will occur. Within current service levels, response time

to the north end of Shell Island will also be delayed. The Fire Chief further stated that to assure a consistent and rapid response, and to maintain the Town's Fire Prevention Codes, the Town will maintain a sufficient number of full-time personnel, i.e., two men in rotation.

9. Recreation

The Wrightsville Beach Parks and Recreation Department operates a major outdoor park (13 acres), which has a variety of outdoor recreational and sports facilities. Also, the Town has fine "mini-parks", ranging from .5 to .85 of an acre located in both Harbor Island and the barrier island portions of the Town. These facilities are summarized below.

The Parks and Recreation Director estimates that between 60-75,000 persons per year utilize these facilities, mostly on weekends. Generally, the outdoor facilities are adequate to handle the resident population of Wrightsville Beach and a number of "day visitors" from surrounding areas to the 13-acre park. However, the Town does not currently have an adequate indoor facility. It appears that a growing community of Wrightsville Beach's size should consider the provision of an indoor facility for multi-purposed recreational, instructional and cultural uses.

1. Wrightsville Beach Recreational Park

   (13-acre park with tennis courts/backwall, sand volleyball courts, basketball court, shuffleboard courts, horseshoes, one softball field, soccer/football field, jogging/fitness trail, tot lot, children's playground area & equipment, overlook deck, 150-car parking lot).

2. Lees Nature Park

   (.5-acre nature oriented park for plant and bird identification)

3. Greensboro Street Park

   (.8-acre park with playground equipment)

4. Wynn Plaza

   (.85-acre park on Banks Chanel used for water-oriented activities)

5. South Channel Drive Park

   (.5-acre park on Banks Channel for water-oriented activities)

6. Island Drive Park

   (.5-acre park with benches for passive atmosphere)

E. Estimated Demand and Carrying Capacity

1. Population Trends

The demand for housing and other goods and services and the use of public facilities is a direct function of population levels. As Table 1, page 5, indicates, in summarizing the four components of Wrightsville Beach's population, the total 1985 "resident" population, i.e., year-round residents, summer residents, and overnight visitors, is estimated at 9,118 persons, growing since 1980 at an average rate of 2% per year. The "day visitor" population during the same period, however, grew at an average rate of 4.5% per year. Assuming that the recent historical growth will continue at the same rates, Table 12, below, shows the projected peak populations for Wrightsville Beach from 1986 through 1995.

Table 12. Wrightsville Population Projection: 1986-1995

	Population		
Year	* Resident	Day Visitors	Total "Peak"
1986	9,300	19,725	29,025
1987**	10,602	20,142	30,744
1988*	11,905	21,049	32,954
1989	12,143	21,996	34,139
1990	12,386	22,986	35,372
1991	12,634	24,020	36,654
1992	12,886	25,101	37,987
1993	13,144	26,230	39,374
1994	13,406	27,411	40,817
1995	13,675	28,644	42,319

Source: Talbert, Cox & Associates, Architects, Engineers & Planners
* Year-round residents, summer residents, and overnight visitors
**Completion of Shell Island North and other developments.
Partial completion of Shell Island and other developments; also reaching maximum land supporting capacity

Assuming that the growth rates occurring during the past five years will remain constant, and taking into account the development of Shell Island, and other scheduled developments and current vacant, but developable land, the resident population, i.e., those exerting full demand on community services and facilities, will increase by nearly 3,000 persons by 1988, to 11,905 persons. According to current land use regulations, this is the maximum capacity of the Town's current buildable land. After the Town's resident "capacity," or critical threshold is reached, if the

resident population could continue to increase at the average rate of 2% per year through 1995, the population could expand to nearly 14,000 people. However, within existing allowable densities and current zoning, the "resident" capacity should be reached by 1988. Of more concern, however, is the projected increase of day visitors from 18,876 in 1985 to 22,986 in 1990, to 28,644 in 1995. In addition, accommodating the increased resident population, the projected growth in the day visitor population will also exert substantial pressures on the Town's facilities and services. These will be addressed in more detail below.

2. Future Land Need

Most of the land needed to accommodate the projected maximum resident population will be developed at Shell Island. With current vacant, developable lots accounting for the rest. Section 4a, page 14 of this report, noted a total of 205 vacant lots consisting of 31.91 acres, within the currently developed portion of the Town. Most of these lots are currently zoned R-1, i.e., mainly single-family residential. The maximum density for the R-1 district is currently 5 families per acre. If the total vacant acreage is developed within current density requirements, 676 persons could be added to the resident population. This is in addition to the 2,111 persons resulting from the Shell Island development and other scheduled developments.

However, if demands and historical growth rates are examined without regard to current land constraints, as Table 12 showed, the resident population could reach 13,675 by 1995. This is 1,770 persons over the projected maximum of 11,905 persons. Assuming an average dwelling unit occupancy size of 3.0 persons, to accommodate this increase would require 590 dwellings. At current maximum allowable density, i.e., 48 dwellings per acre under the C-4 zone, at least 12 additional developable acres would be required, not including land for parking, side yards, open space, etc. (although there is no additional developable land within the Town's current jurisdiction, there still remains about 8± acres, known as the "Hutaff property," located from the northern end of the current Shell Island development, but outside of the current extra-territorial jurisdiction).

3. Community Facilities Need

Steadily increasing populations, both resident (year-round, summer, and overnight visitors) and day visitors are projected to continue at Wrightsville Beach throughout the period covered by this plan -- through 1995. Obviously, an increase in the "peak" population from just under 28,000 in 1985, to possibly 42,000 projected by 1995, has some implications for the provision of public services, most notably water and sewer.

a. Water. Notice Table 13, below, which is estimated based on current total peak water demands per capita, remaining constant throughout the forecast period. This table reflects both resident and day visitor peak demand.

Table 13. Estimated Peak Water Demand - 1986-1995

Year	* Projected Peak Demand (MGD)	** 1985 Capacity (MGD)	% of Current Capacity
1986	1.273	1.53	83.0
1987	1.428	1.53	93.3
1988+	1.583	1.53	103.5
1989	1.623	1.53	106.0
1990	1.661	1.53	108.5
1991	1.702	1.53	111.2
1992	1.744	1.53	114.0
1993	1.787	1.53	116.8
1994	1.831	1.53	119.8
1995	1.878	1.53	122.7

*Based on the "highest use" day; **Not including 1.5 MG storage capacity: +Projected "buildout" year
Source: Projections by Talbert, Cox & Associates, Inc.

The 1985 maximum pumping capacity is sufficient to handle peak seasonal demands until 1988, which is the projected "buildout" year for the Town, within current density regulations. The daily maximum capacity does not include the 1.5 million gallons of water contained in storage, since this total amount would not be available every day but is reserved for occasional peak mitigation, maintenance of sufficient fire flow and emergency reserve. If all of the storage capacity is used, the same wells must also be pumped to refill the storage tanks. If the populations continue to increase and consumption patterns continue, Wrightsville Beach will need expanded water supply capacity after 1988. The water system could supply the needs of the resident population through 1995, were it to continue to grow. The increased peak demand will come from day visitors. (See pages 5-7, and 52, for discussion on population and service extension policy).

b. Sewer. The demand for sewer service will increase substantially also, assuming per capita peak demand remains constant as the population expands. Notice Table 14, below.

Table 14. Estimated Peak Sewer Demand: 1986-1995

Year	* Projected Peak Demand (MGD)	1985 Capacity (MGD)	% of Current Capacity
1986	.993	1.5	66.2
1987	1.097	1.5	73.1
1988	1.209	1.5	80.6
1989	1.241	1.5	82.7
1990	1.274	1.5	85.0
1991	1.308	1.5	87.2
1992	1.343	1.5	89.5
1993	1.379	1.5	92.0
1994	1.417	1.5	94.5
1995	1.455	1.5	97.0

* Based on "highest use" day.
Source: Projections by Talbert, Cox & Associates, Inc.

At current population growth rates and sewage treatment rates, the existing capacity would be sufficient through 1995.

c. Roads. Although the capacity of the AIWW bridge and major streets within Wrightsville Beach appears adequate through most of the planning period, problems of traffic congestion and public parking difficulties will continue unless some mitigative actions are taken. Roadside parking and traffic congestion may cause serious delays in response times for emergency vehicles, i.e., police, fire, and emergency rescue. Also, of important consideration during the next 10 years as more and more people come to the beach community in the summers, is the issue of access to and from the mainland. As populations increase, the issue of evacuability due to an emergency must be considered in light of the current road network and single access bridge to the mainland. A second bridge across the Intracoastal Waterway from the northern end of the island, may be a solution.

d. Other Facilities. Current and projected police personnel may not be adequate for the entire planning period, even though the Town has a relatively low crime rate. However, with increasing density of residential development (mostly of wood frame construction), the Volunteer Fire Department may need to have more full-time personnel in addition to the Fire Chief.

e. Carrying Capacity Summary

By merging the analyses of facility constraints to growth and estimated demand, the general "carrying capacity," i.e. the population limit the Town's facilities and services can support can be projected. Notice Table 15, below:

Table 15: Carrying Capacity Summary: Peak Population Limits with Existing Facilities

Facility	Resident	Day Visiting	Total	Year
*Land	11,905	28,644	40,549	-
Water	11,905	21,049	32,954	1988
Sewer	13,675	28,644	42,319	1995
Solid Waste	9,118	18,876	27,994	1985
Police	11,905	21,049	32,954	1988
Fire	11,990	21,049	33,039	1988
Parking	9,118	18,876	28,575	1985
**Recreation	13,675	28,444	42,319	1995

* Refers only to developable land for residences, and motels, etc. under current regulations. Will not affect day visiting population.
** Outdoor facilities are adequate throughout planning period.

Source: Projections by Talbert, Cox & Associates, Inc.

Table 15 shows that public parking and solid waste disposal are already at or over capacity during peak seasons. By 1988, at current building rates and densities, along with the projected completion of Shell Island North and other proposed developments, Wrightsville Beach could be "built out," with its maximum peak "resident" population of 11,905 persons, i.e. year-round residents, summer owners, and overnight visitors in rental units and motels. Also, by 1988, the threshold capacity of the current water system, police service, and fire proteciton will be reached. outdoor recreation facilities, mainly because of the 13 acre park, will likely be adequate throughout the period. However, the Town may wish to consider developing an indoor "community center" type recreational facility suitable for multi-uses to serve the growing resident population.

With more people will inevitably come more solid waste. The Town's incinerators already operate at capacity during peak seasons. During the planning period, expanded capacity will likely be required.

4. Summary of Trends and Policy Issues

The following statements are presented in summary of this Section I of the 1985 Land Use Plan Update, analyzing development trends and policy implications for the next 10 years. Because of land limitations, the resident population may reach capacity by 1988.

a. Both the resident and day visitor populations at Wrightsville Beach have shown steady increases in recent years. However, the day visiting population is projected to continue increasing throughout the planning period.

b. The resort-tourist based economy of Wrightsville Beach is strong, contributing significantly to growing tourism revenues in New Hanover County each year.

c. Residential and commercial development (including motels) in the community will continue and possibly, along with the development of Shell Island, cover all of the developable land within the Town's current jurisdiction. Although outside of Wrightsville Beach's jurisdiction, major developments across the Waterway such as that proposed for the Pembroke Jones property, will impact the Town. The Town might consider extending its jurisdictional limits in order to exercise zoning and other land use controls in those areas.

d. Surface water quality has improved in some areas and needs continued enhancement. Policies dealing with urban stormwater runoff certainly need to be addresed. The Town also recognizes the need to define and address the issue of regulating "floating homes" and has already taken action on this issue. Additional details are presented in the following section.

e. At current demand rates, water, sewer, and solid waste disposal capacities will need to increase during the planning period in order to adequately handle "peak" demands, particularly from day visitors.

f. Public safety, i.e., provision of adequate police and fire protection, and evacuation needs, may be affected by limited roadways and the one accessway to the mainland. Adequate public parking provisions will also have to be addressed.

All of the above issues and others, including storm hazard mitigation, and post-disaster recovery, will be addressed in more detail in Section II of this Plan, "Policy Statements."

SECTION II :

Policy Statements

SECTION II: POLICY STATEMENTS

The formulation of specific policies regarding growth, development, and management objectives is perhaps the most important part of any land use plan prepared under the State's Coastal Area Management Act. Because of regulatory requirements, these policies must often strike a delicate balance between desires and objectives of the citizens and the local government of Wrightsville Beach and the objectives of the CAMA program, as overseen by the Coastal Resources Commission. Land development policies, which should be based on an analysis of existing conditions and projected trends, serve as general guides for effectuating desired development patterns. The land use policies also have important interface with local regulations, such as the zoning ordinance or subdivision regulations, as well as with State and Federal regulations and programs. For example, development permits issued under CAMA must be consistent with the local land use plans. Also, projects supported by State and Federal funds must be consistent with the local land use plans, prior to allowing expenditures.

Some relevant trends identified in Section I of this Plan include: the population of Wrightsville Beach, both resident and day visitors, is constantly increasing; the Town's tourist-based economy continues to contribute strongly to tourist revenues in New Hanover County; with the projected development of Shell Island, along with continued growth of residential and commercial development in other parts of Town, all of the developable areas will likely be covered during this planning period; additional stresses will be placed on public facilities and services, such as water, sewer, police and fire protection, and parking, as the population increases. These are some of the issues which need to be addressed by the Town during the planning period.

The Coastal Resources Commission, recognizing the diversities which exist among the coastal communities, required the Town to specify particular development policies under four rather broad topics in 1980. For the 1985 Update, however, the CRC has added a fifth issue, i.e. "Storm Hazard Mitigation." In most cases, policies developed under these topics will cover most of the local development issues, but in some cases, they do not. In the latter case, the locality has the flexibility to address its own locally defined issues. The five required broad topics are:

- -- Resource Protection
- -- Resource Production and Management
- -- Economic and Community Development
- -- Continuing Public Participation
- -- Storm Hazard Mitigation

After an analysis of the existing conditions and trends and input from the Town's citizens, the foregoing policies were devel-

oped to provide an overall framework for guiding growth and development in Wrightsville Beach throughout the next 10-year planning period (1985-1995).

A. Resource Protection: Estuarine System.

1. Areas of Environmental Concern: Wrightsville Beach recognizes the primary concern of the Coastal Resources Commission, in terms of protecting resources, as managing Areas of Environmental Concern (AECs). The Town also shares this concern for the protection and sound management of these environmentally sensitive lands and waters. The AECs which occur in Wrightsville Beach were identified in Section I of this Plan on pages 15 through 19, with areas within both the Estuarine System and Ocean Hazards area. In terms of developing policies, the Estuarine System AECs, which include Coastal Wetlands, Estuarine Waters, Estuarine Shorelines, and Public Trust Areas, will be treated as one uniform grouping since they are so closely interrelated. Another reason for grouping these AECs together is the fact that the effective use of maps to detail exact on-ground location of a particular area, sometimes pose serious limitations.

Wrightsville Beach's overall policy and management objective for the Estuarine System is "to give the highest priority to the protection and perpetuate their biological, social, economic, and aesthetic values and to ensure that development occurring within these AECs is compatible with natural characteristics so as to minimize the likelihood of significant loss of private property and public resources." (15 NCAC 7H. 0203) In accordance with this overall objective, Wrightsville Beach will permit those land uses which conform to the general use standards of the North Carolina Administrative Code (15 NCAC 7H) for development within the Estuarine System. Generally, only those uses which are water dependent will be permitted. Specifically, each of the AECs within the Estuarine System is discussed below.

a. Coastal Wetlands

The coastal wetlands or "marsh" in Wrightsville Beach, as discussed on Page 16 and shown on Map 1, are located mainly in the extraterritorial area of Wrightsville Beach's jurisdiction between Banks Channel and the Atlantic Intracoastal Waterway. The first priority of uses of land in these areas should be the allowance of uses which promote "conservation" of the sensitive areas, with conservation meaning the lack of imposition of irreversible damage to the wetlands. Generally, uses which require water access and uses such as utility easements, fishing piers and docks, will be allowed, but must adhere to use standards of the Coastal Area Management Act (CAMA: 15 NCAC 7H).

b. Estuarine Waters and Estuarine Shorelines

The importance of the estuarine waters and adjacent estuarine shorelines in Wrightsville Beach was discussed in Section I of this document on pages 16-17. Although there are no "hazardous" estuarine shorelines in Wrightsville Beach subject to severe erosion, the Town is very much aware that protection of the estuarine waters and adjacent estuarine shorelines is of paramount importance to fishing, both commercially and for recreation. Wrightsville Beach recognizes that certain actions within the estuarine shoreline, which is defined as the area extending 75 feet landward of the mean high waterline of the estuarine waters, could possibly have a substantial effect upon the quality of these waters.

In order to promote the quality of the estuarine waters, Wrightsville Beach will permit only those uses which are compatible with both the estuarine shorelines and which protect the values of the estuarine system. Residential, recreational, and commercial uses may be permitted within the estuarine shoreline, provided that:

1. a substantial chance of pollution occurring from the development does not exist;
2. development does not have a significant adverse impact on estuarine resources;
3. development does not significantly interfere with existing public rights or access to, or use of, navigable waters or public resources.

c. Public Trust Areas

Wrightsville Beach recognizes that the public has certain established rights to certain land and water areas. (For definitions and geographic locations of public trust areas, see Page 17, Section I). These public areas also support valuable commercial and recreational fisheries, tourism, and also are of significant aesthetic value. Wrightsville Beach will continue to promote the conservation and management of public trust areas. Appropriate uses include those which protect public rights for navigation and recreation. Projects which would directly or indirectly block or impair existing navigation channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters, shall generally not be allowed. Allowable uses shall be those which do not cause detriment to the physical or biological functions of public trust areas. Such uses as navigational channels, drainage ditches, bulkheads to prevent erosion, piers or docks, shall be permitted.

d. Policy Statements: Development in AECs

Sections a, b, and c, above, included a discussion of Wrightsville Beach's policy on land uses in the statutorily defined Areas of Environmental Concern (AECs). Protection of environmentally sensitive as well as vitally important public resources is a strong ongoing concern of the Town of Wrightsville Beach. The overall policy of the Town in relation to Resource Protection shall be as follows:

1. Wrightsville Beach shall continue to give priority to those uses which are supportive of the protection and coordinated management of the Estuarine System. It is the intent of the Town to safeguard and perpetuate the system's biological, social, economic and aesthetic values and to insure that any development occurring within the system is compatible with natural characteristics, so as to minimize the likelihood of significant loss of private property and public resources.

e. Policy Implementation

Wrightsville Beach believes that the existing development permit system enforced by CAMA, the U. S. Army Corps of Engineers, combined with enforcement of the Town's Zoning Ordinance (which includes a "Conservation Zone" for AECs), Pierhead Line Ordinance (which regulates the construction of bulkheads and piers beyond the mean high water mark), Subdivision Regulations and Dune Maintenance and Protection Plan, represent adequate measures to protect the discussed resources. Enforcement of these provisions will continue.

2. Areas of Environmental Concern: Ocean Hazards Areas

Ocean Hazards Areas of Environmental Concern are the second broad category of AECs occurring in Wrightsville Beach. These are areas along the Atlantic Ocean shoreline which have a special vulnerability to erosion or other adverse effects of sand, wind, and water. Because of this vulnerability, improperly managed growth and development could expose life and property to unreasonable levels of danger. The Ocean Hazards in Wrightsville Beach, as discussed on Pages 17-19 of this document include: 1) the ocean erodible area; 2) the high hazard flood area; and 3) the inlet hazard area. However, in the conventional sense of "hazards," the only Ocean Hazards area is the high hazard flood areas, or "V" zones, i.e. high velocity areas identified on Flood Insurance Rate Maps. Due to recent and ongoing beach renourishment and berm restoration projects, the ocean erodible area is currently not considered "hazardous" in Wrightsville Beach. Also, a jetty on the south end of the beach community has helped stabilize the area near the Masonboro Inlet, so that it is also currently not considered "hazardous." This was a federally funded navigation project, not an activity conducted by Wrightsville Beach. Mason's Inlet, at the northern end of the island, is beyond the Town's current jurisdiction.

For both the ocean erodible and inlet hazard areas, development of any type is prohibited or tightly controlled by existing regulations and enforcement provisions. It is the susceptibility to change from the constant forces of waves, wind, and water upon the normally unstable sands that form the shore, which causes these areas to be considered "hazardous." These forces are magnified during storms and can cause significant changes in bordering land forms (such as dunes and beaches), as well as to any structures located on them. It is the flexibility of these land forms (dunes and beaches), however, which also lends protection from the magnified energies of wind and water as a first line of defense for development located behind them. The important, basic and essential function of the beach and dunes is their capacity for storing sand, serving to absorb and thereby dissipate the initial impact of excessive wind and waves.

Thus, it is important to consider policies which are aimed both at protecting the land forms (dunes and beach) and any structures which are allowed to be constructed in those areas.

a. Policy Statements: Ocean Hazards Area

Generally, all land uses in the areas classified under the "Ocean Hazards" category, i.e. ocean erodible, high hazard flood, and inlet hazard areas, shall be consistent with the requirements of the Wrightsville Beach Zoning Ordinance (with particular regard to the "Conservation Zone"), Subdivision Regulations, Dune Maintenance and Protection Plan, and the Town's requirements for the National Flood Insurance Program and the Town's ocean areas "building line."

1. Any allowable land use shall be designed and constructed so as to maximize structural protection from wind and water and to minimize damage to the protective land forms of dunes and beaches.

2. Wrightsville Beach continues to support comprehensive shoreline management such as the Corps of Engineers beach renourishment project as a preferred control measure to combat ocean-front erosion.

3. When existing dunes are "added to," this shall be accomplished in a manner which minimizes damage to existing vegetation. Any areas filled should be replanted immediately or stabilized temporarily until planting can be successfully completed.

b. Implementation

1. Wrightsville Beach will continue to enforce its local regulations as cited above, and continue to support the CAMA major and minor permitting, and the Corps of Engineers 404 wetlands permitting programs.

3. Development in Areas with Constraints

The constraints to development in Wrightsville Beach were discussed in Section I, pages 24-44 of this report. Elements posing constraints to growth and development can relate to physical land capability constraints such as availability of developable land, man-made or natural hazards, AECs, special fragile areas, or areas with soils limitations. Also, the capacity of community facilities and services such as water, sewer, solid waste disposal, police and fire protection and parking can often pose constraints to development. All of these are facilities which need to be considered by any community in proposing land development policies.

There are no known man-made hazards in Wrightsville Beach prohibiting development and the natural hazards are closely linked to AECs in both the Estuarine System and Ocean Hazards category, as are also the "fragile" areas. The areas with soils limitations, as discussed on pages 25-26, are not developable. Also, the entire Town is served by a central sewer system and since private septic tanks and small package treatment plants are not allowed, soil conditions as they relate to septic tank placement are not major policy concerns.

As a barrier island community, it is not suprising that Wrightsville Beach's entire jurisdiction is located in the 100-year flood zone area, i.e. subject to a one percent chance of major flooding in any given year. Also, as stated previously, the Town has certain "high velocity" or "V-13" flood zones identified on recent Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency. Both the 100-year flood area and V-Zones pose possible serious constraints to development. However, most of the V-Zones are located along the immediate oceanfront in areas where virtually any type of development is prohibited. But the 100-year flood zones includes the Town's entire jurisdiction and it is not practical to prohibit development in all areas.

As the discussion and tables on pages 42-44, indicated, at current and projected demand rates during "peak" utilization, Wrightsville Beach will need expanded capacity in the provision of water, sewer, and solid waste disposal services during the next 10 years. Also, it was noted that transportation access and parking would likely increase in significance as constraints to development during the planning period. In consideration of all of the constraints relating to the physical capacity of the land, and the capacity of community facilities, the following policies are proposed:

a. Policy Statements: Physical Constraints to Development

1. Since in many cases, conditions posing physical limitation to growth and development in Wrightsville Beach are closely associated with identified areas of environmental concern or other sensitive areas, the Town believes that these areas should generally be protected from any adverse or potentially adverse development. Also, development in certain areas which could result in unnecessary risks to the safety and protection of life and property should also be prohibited.

2. Allowable land uses in areas posing physical constraints should be only those approved through the CAMA and Army Corps of Engineers "404" permitting processes and by the Town of Wrightsville Beach's Zoning and Pierhead Line Ordinances, as well as its Dune Maintenance and Protection Plan.

3. All uses allowed in the Town's Zoning Ordinance shall be permissable in the 100-year flood zones, provided that all new construction and substantial improvements comply strictly to the Town's Flood Damage Prevention Ordinance, which shall be adopted in conjunction with Wrightsville Beach's participation in the National Flood Insurance Program.

4. In relation to capacity of community facilities, it shall be the policy of the Town of Wrightsville Beach to attempt to provide services, such as, water and sewer, to meet anticipated peak demand during the planning period.

5. Because of the current development trends in the Town and the limited availability of developable land, services will not be extended or established solely as an incentive for increased residential, commercial, or institutional development.

6. The Town of Wrightsville Beach believes that improved access from the beach to the mainland, either in the form of a replacement for the existing AIWW drawbridge or a second bridge across the Waterway, must be provided. Therefore, adequate land should be preserved for bridge rights-of-way.

b. Policy Implementation

1. The existing local ordinances and building regulations in Wrightville Beach shall continue to be enforced. Also, the Town will continue to support State and Federal regulatory programs for areas with physical constraints to development, including CAMA and the Corps of Engineers 404 program.

2. Beginning in Fiscal Year 1986, the Town will initiate discussions with the City of Wilmington concerning the provision of additional water after 1988, to help meet projected peak demands, and additional sewer capacity to help meet projected peak demand after 1993. The Town will also seek grant assistance from federal and/or state sources for funds to support water and/or sewer capacity expansion projects.

3. In FY 1986, the Town will seek assistance in the preparation of a "Solid Waste Disposal Alternatives", study, in order to help determine the most efficient and economical means of handling peak loads of solid wastes.

4. In FY 1986, the Town of Wrightsville Beach will seek assistance in the preparation of a report on "Feasible Alternatives for Public Parking" to help clearly define the extent of the parking problem in the Town and to propose feasible solutions.

5. In FY 1986, the Town will request that the State Department of Transportation make a preliminary evaluation of the need to replace the existing drawbridge across the Atlantic Intracoastal Waterway.

4. Hurricane and Flood Evacuation Needs and Plans

This area will treated in a separate section of this Land Use Plan, which will include policy statements on hurricane and flood evacuation as well as storm mitigation and post disaster recovery policies.

5. Protection of Potable Water Supplies

As stated in the discussion on ground water resources (p. 26-27), above ground development poses no immediate threat to the water supply.

6. Use of Package Treatment Plants

In 1983, the Town of Wrightsville Beach's sewer system became connected to the Wilmington regional sewer system's northeast interceptor. As a result, the use of all package treatment systems has been eliminated and all future new developments will be required to connect onto the Town's sewer system. This provision is expected to foster improvement in the quality of the Town's surface waters.

7. Stormwater Runoff

The Town of Wrightsville Beach shares the concern of the State Division of Environmental Management (DEM) that stormwater runoff from urbanized areas may be contributing to declining surface water quality in some areas (see p. 27-28). Maintenance of water quality is of utmost concern to Wrightsville Beach. The Town recognizes the value of water quality maintenance both in terms of protecting commercial and recreational fishing resources and providing clean water for other recreational purposes. The Town will continue to enforce local ordinances and state building regulations relating to stormwater runoff resulting from development. Currently, Wrightsville Beach is considering adoption of local stormwater management and runoff requirements. If adopted, the new requirements will call for strict on-site retention (See Appendix 1).

8. Marina and Floating Home Development

The development of bulkheads, marinas, and private boatslips in Wrightsville Beach have generally been allowed and regulated by the Town's Zoning and Pierhead Line Ordinances and CAMA. These uses will be continued as long as they do not result in any adverse impacts on identified environmentally sensitive areas, in compliance with State, federal and local regulations.

In recent years, Wrightsville Beach and other coastal communities have become increasingly concerned over the issue of "floating homes", i.e., waterborne vessels used not only as "boats" but as permanent domiciles. The legal aspects of this issue have been hotly debated in many areas, including Wrightsville Beach. The Town has sought to prohibit a preponderance of long, boxy vessels with shallow drafts from dominating local marinas and which lack proper connection to water and sewer services. After nearly two years of research and debate, Wrightsville Beach has developed a definition for, a "floating home" to distinguish it from a "boat". This definition is based on something called a "volume coefficient", which is derived by dividing the habitable space of a vessel, measured in cubic feet, by the depth of the vessels's draft, which is measured in feet. Any vessel with a volume coefficient of greater than 3,000 square feet is not considered a "boat" but a floating home.

This definition has been included in an amendment to the Zoning Ordinance regulating floating homes, which was adopted by the Town Board of Aldermen. The overall policy concern stated in the ordinance amendment is the protection of the quality of the estuarine system (coastal wetlands, estuarine waters, and public trust waters) within the Town's jurisdiction. It is pointed out in the adopted ordinance that floating homes designed "primarily as permanent dwelling units create the same or similar problems associated with land based housing and require regulation in the same fashion as land based housing to include the areas of solid waste disposal, sewerage, police protection, and related requirements." The ordinance allows "floating homes," as distinguished from "boats," as a "conditional use" only in commercial marinas. However, the responsibility of providing all proper connections to or for services, including water, sewer, solid waste disposal, fire protection, two automobile parking spaces on land per unit, and at least 2,000 s.f. of land space contiguous to the dock for each unit, is placed on the commercial marina.

In summary, the newly adopted or ordinance reflects the policy of Wrightsville Beach to both protect its estuarine system from the potential adverse effects of floating homes and keep its waterways open for general recreational uses. Although these vessels will be allowed under certain conditions, they will not be encouraged. (A copy of the ordinance is attached to this Plan as Appendix 2).

9. Industrial Impacts of Fragile Areas

There are no conventional industrial impacts on fragile areas in Wrightsville Beach and the Town does not anticipate industrial development.

10. Development of Sound and Estuarine System Islands

Policies related to managing growth and development in these areas are included in policy statements regarding development in Areas of Environmental Concern and in areas with physical constraints, particularly dealing with "fragile" areas. Specifically, it is the Town's policy to disallow development in any Sound or Estuarine islands in the Town's jurisdiction. These areas are currently zoned and classified as "conservation".

The Town of Wrightsville Beach also supports County and State efforts to preserve Masonboro Island.

B. Resource Production and Management

1. Recreational Resources/Fisheries

In most coastal counties and towns, "resource production and management" usually relates to agricultural, forestry, mining, fisheries, as well as, recreational resources. In Wrightsville Beach, however, recreational and fisheries resources are the only relevant ones in the conventional sense. In resort settings such as Wrightsville Beach, because of the abundant water areas (which are also Estuarine and/or Public Trust Waters), recreational and fishery resources quite often overlap. The overall, major recreational resource is the "beach" and the attractiveness of the Atlantic Ocean. Fishing, both as a recreational and commercial resource, is important to Wrightsville Beach and to all of New Hanover County. From 1980 to 1983, both commercial catches and revenues declined each year in New Hanover County. In 1980, according to the N.C. Division of Marine Fisheries, the total catch for New Hanover County was 3.14 million pounds with revenues totaling $2.77 million dollars. In 1983, however, poundage was down to 1.55 million pounds with revenues of $1.61 million dollars. It is difficult to ascertain the reasons for this dramatic change. Part of the reason, however, may be due to the closing of certain shellfishing areas, which is affected by poor water quality (See Pages 28-30). Maintenance of water quality is of utmost concern to Wrightsville Beach, as stated above in the discussion and policy statement on floating homes. The Town recognizes the value of water quality maintenance both in terms of protecting commercial and recreational fishing resources and providing clean water for other recreational purposes.

a. Policy Statements

With the above-stated concerns in mind, the Town of Wrightsville Beach adopts the following policies:

1. The Town supports current on-going State and federal programs designed to maintain and/or restore water quality within its jurisdiction.

b. Implementation

1. Wrightsville Beach will begin immediately enforcing the recently adopted amendment to the Town Zoning Ordinance, regulating floating homes.

2. The Town will continue to enforce local regulations as well as support State and Federal initiatives, related to maintaining and enhancing water quality.

2. Off-Road Vehicles

In accordance with its Dune Maintenance and Protection Plan, the Town of Wrightsville Beach does not allow off-road vehicles on dunes or on the shoreline area, with the exception of public service or emergency vehicles. These provisions shall continue to be enforced.

C. Economic and Community Development

Essentially, "development," including residential, commercial, institutional, etc., is limited in Wrightsville Beach primarily because of the limited availability of land. With the development of Shell Island taking place within this planning period, there remains ever dwindling amounts of land suitable for development. A significant set of issues before the Town concerns the desired patterns of use foreseen for the remaining developable land in terms of types of development, desired densities, responsibility for service provisions, availability of support facilities such as parking, and economic impacts. The relevant policy areas to be addressed are discussed below, along with the Town's policy position.

1. Local Commitment to Providing Services to Development

The Town of Wrightsville Beach does not support the concept of providing urban services, such as water and sewer, to undeveloped areas solely to attract development. As undeveloped areas develop, it is the policy of the Town that the developer share in the financial responsibility of providing basic urban services.

2. Redevelopment of Developed Areas:

Most of Wrightsville Beach has no need for consideration for redevelopment. However, in some sections of the Town, older structures, including houses and motels, have been torn down in recent years to allow for the construction of new similar uses on the same site. In keeping with the dynamic character of the community, Wrightsville Beach supports such activity as a positive

re-use of land resources, enhancing the Town as a whole. Such redevelopment shall be permitted as long as the activity complies with the spirit and intent of existing regulatory requirements. It is the Town's policy that density allowances for redevelopment areas conform to existing Town building and zoning regulations.

3. Desired Urban Growth Patterns

a. Policy

Virtually all of Wrightsville Beach is urbanized with the predominant development pattern consisting of single-family and duplex residential units. As the amount of developable land decreases in the Town, it is likely that developers will seek increasing development densities in order to maximize their investment in relatively expensive land. For example, the economic and financial return on 30 units per acre has much more appeal than that from five units per acre. And, whereas the Town recognizes and appreciates the goal of investor-developers, it is the overall intent of Wrightsville Beach to retain, as much as possible, the "family character" of the beach community. Therefore, the Town will continue to encourage single-family and duplex type residential development as the preferred type of residential development. However, higher density development may be allowed in the appropriate zoning districts according to the Town's Zoning Ordinance.

Since commercial establishments (mostly retail and tourist-oriented services) have a different "character," which is not compatible with residential development in many instances, it is the desire of Wrightsville Beach to keep these uses separate, to the extent practicable.

In early 1985, the Town annexed by "satellite", a small shopping center on the mainland at the request (or petition) of the owners. This area is located near the Plaza East Shopping Center on the south side of U.S. 76. The Town, because of a sincere concern about the types of development "approaching" Wrightsville Beach, anticipates additional satellite annexations in the future. Also, Wrightsville Beach would eventually like to extend its extraterritorial jurisdiction north of the currently ongoing development of North Shell Island, out to Mason's Inlet.

b. Implementation

1. The Town will continue to enforce its current land use regulations to encourage development of the Town primarily as a single-family/duplex residential area with appropriate supporting retail and tourist-oriented services.

2. In FY 87, the Town will seek assistance in preparing a feasibility analysis on expanding jurisdictional control across

the Waterway. Wrightsville Beach will carefully review each annexation request by petitioning owners of developing property on the mainland, on a case-by-case basis to determine if such annexation is in the best interest of the Town.

4. Commitment to State and Federal Programs

Wrightsville Beach is generally receptive to State and Federal programs, particularly those which either enhance or improve the Town's facilities. The Town will continue to fully support such programs, including CAMA. The North Carolina Department of Transportation road and bridge improvement programs are very important to Wrightsville Beach because of ever-increasing traffic volumes.

Examples of other State and Federal programs which are important to and supported by Wrightsville Beach include: dredging and channel maintenance, as well as beach renourishment and restoration, by the U. S. Army Corps of Engineers; and Federal and State projects which provide efficient and safe boat access for sports fishing.

All of these programs and others are important to Wrightsville Beach, and the Town is committed to their continued support.

5. Assistance to Channel Maintenance and Beach Renourishment

Proper maintenance of channels, particularly the Atlantic Intra-Coastal Waterway, is very important to Wrightsville Beach because of the impact of commercial and recreational fisheries and general boating. Currently, Wrightsville Beach does not provide direct assistance to the Corps by helping to obtain or provide spoil sites. The Corps of Engineers have adequate spoil easements on either side of the Waterway. The Town will provide indirect assistance, however, as requested, to aid in channel maintenance. Beach renourishment, as stated in 4, above, is important to the Town and will continue to be supported by Wrightsville Beach.

6. Tourism and Beach and Waterfront Access

While tourism is obviously important to Wrightsville Beach and to New Hanover County, the Town views its increasing popularity as a tourist resort with mixed feelings. The revenues generated by commercial activities (mainly hotels and restaurants) and the expanded tax base from new construction are important, but are not sufficient to cover the costs of providing all of the facilities and services demanded. Nevertheless, tourism is significant enough for the Town to take steps to provide facilities and services such as water and sewer to the growing tourist population. Wrightsville Beach recognizes that as the day visiting population increases, there will be a need for more of certain basic facilities on the beach, e.g., more public bathrooms. The Town will seek to provide these facilities as the need arises and as financial capacity permits. Federal and/or State financial assistance will also be sought when such grant funds are available.

The Wrightsville Beach Access Plan was an implementary tool from policies contained in the 1976 Land Use Plan. The Town is still committed to the provision of "reasonable means and opportunity for the public to have access to the beach, shore or other public trust lands and waters, provided such means do not conflict with the rights of residents to the use and enjoyment of their property," (1976 Land Use Plan). Subsequently, public access points including "walkover" sites and "overlook" sites have been developed with appropriate designations along the beach strand. Public access sites have also been designated for the sound side of the community. In 1985, the Town developed another "overlook" ramp on the southern end of the beach near Jack Parker Drive. The State-operated public boating access ramp near the Intercoastal Waterway bridge is currently heavily utilized. The Town believes that another public ramp should be developed perhaps by New Hanover County on the West Bank, to relieve the pressures exerted on the existing facility. Wrightsville Beach supports the utilizaton of State and Federal, as well as local resources, to develop additional access areas. Another tourist-related concern of Wrightsville Beach is the need for improved enforcement of water safety regulations, particularly as more and more boats fill Banks Channel on summer weekends. The Town feels that current enforcement is inadequate and should be improved by the State.

7. Types, Density, and Location of Development

As discussed under "Desired Urban Growth Patterns," the preferred residential type of development in Wrightsville Beach is either single-family or duplex construction. However, in accordance with the Town's Zoning Ordinance, and policies aimed at protecting natural resource and fragile areas, more dense residential development such as townhouses, cluster homes, and mid-rise to high-rise condominiums may be permitted. Although the Town recognizes the fact that developable land is diminishing, Wrightsville Beach believes that development densities should not be allowed to exceed those contained in the current zoning ordinance, which ranges from five families per acre in the R-1 residential district to 48 families per acre in the C-4 commercial district. All zoning ordinance amendments requesting increased densities, shall be scrutinized very carefully by both the Planning Board and the Town Board of Aldermen. As stated previously, the Town sees no need to extend water and sewer services as an incentive for new development. However, services will need expansion to serve anticipated high levels of "day visitors" during the period.

As far as location of various types of development is concerned, again, in recognition of the limited amount of developable land within the Town, Wrightsville Beach desires as much as practicable that all development be designed and placed so as to be compatible with the residential character of the Town. All new development will adhere to the Town's building and development regulations. Also, due to concerns about the "approach" to the Town from across the Waterway, Wrightsville Beach favors satellite annexations, if feasible, in order to facilitate orderly growth and development.

D. Continuing Public Participation Policies

Wrightsville Beach recognizes that an important element in developing and implementing any local policies or plans regarding the use of land in the Town, is involvement of the Town's citizenry. From the initial stages of development of this 1985 update of the Town's CAMA Land Use Plan, Wrightsville Beach has sought to provide open opportunities for citizen input. A "Public Participation Plan" was developed for the plan updating process, outlining the methodology for citizen involvement. The plan stated that public involvement was to be generated primarily through the Town Planning Board and through "public information" meetings, advertised in local newspapers and open to the general public. The Planning Board meetings also are open to the general public.

Specifically, during the beginning stages of the update process, the Planning Board met with the planning consultant to review and discuss preliminary development issues; afterwards, a public information meeting was announced in the Wilmington Star-News newspaper, and public notices of the meeting were posted in conspicuous places in the Town. This meeting was held with citizens, the Planning Board, and the planning consultant attending. Citizens provided input and voiced their concerns about land use policies. Also, during the second quarter of the plan preparation, the Town Board of Aldermen received a report on the update process, and was presented with the major issues identified by the citizens at the public information meeting. Throughout the plan development process, the Town Planning Board was actively involved. A series of meetings, or "working sessions" were held. All of these meetings were open to the public. Specifically, work sessions and/or meetings were held on the following dates: September 25, 1984 (Planning Board); November 15, 1984 (Board of Aldermen); November 23, 1984 (an advertised and posted Public Information Meeting); November 23, 1984 (with Town Board of Aldermen); April 23, 1985 (meeting was announced in the Star-News newspaper, and public was invited to attend); May 21, 1985; June 11, 13, and 27, 1985.

The final draft plan, prior to submission to the CRC, was presented to the Town Board of Aldermen on June 27, 1985.

In addition to direct citizen's input through the public meetings, interviews were conducted with representatives of various agencies in the Wilmington-New Hanover County area to solicit input. These included both the County and City Planning Departments, and the Bridge Maintenance Division of the North Carolina Department of Transportation.

In order to continue providing citizens an awareness of the land use planning process, all of the regular meetings of the Planning Board will be announced in local newspapers.

It is the belief of the Wrightsville Beach Board of Aldermen that all citizens be afforded adequate opportunities to participate in the governmental and planning decisions which affect them. Therefore, citizens input will continue to be solicited, primarily through the Planning Board with advertised and adequately publicized public meetings held to discuss special land use issues, and to keep citizens informed.

E. Storm Hazard Mitigation, Post-Disaster Recovery, and Evacuation Plans

The entire North Carolina Coastal region, including Wrightsville Beach, faces strong threats of damage each year from hurricanes, Northeasters, or other major storms. For nearly 20 years, there was a marked "slowdown", or "lull", in hurricane activity along the State's coast. Predictions were that a major storm could strike the State at any time during the hurricane season, since such a storm was "long overdue". And then, in September, 1984, the "waiting" ended. Hurricane Diana, with some of the strongest sustained winds ever recorded, rammed into the Southeast coast near, but fortunately not directly on the Wilmington/-Wrightsville Beach area. Although damage was extensive, the potential destruction could have been much greater. The damage would have been greatly intensified had the storm hit land at a slightly different location. This time the State and the Southeast coastal area were relatively fortunate. But, what about next time . . .?

Notice the excerpt below from Before the Storm: Managing Development to Reduce Hurricane Damages, McElyea, Brower, & Godschalk, 1982, concerning development in coastal communities:

> "At the same time, development along the coast has grown by leaps and bounds. Unless this development is wisely located and built to withstand hurricane forces, North Carolina's coastal communities will face massive destruction. Local governments, as the primary protectors of the public health, safety, and general welfare, have a responsibility to reduce the risk of property damages and loss of life attending coastal development. They also have a responsibility to ensure that reconstruction following a major storm can occur quickly and leave the community safer from disaster in the future. These are the goals of hazard mitigation and reconstruction planning." (p.iii)

The purpose of this section of the 1985 CAMA Land Use Plan Update, is to assist the Town of Wrightsville Beach in managing development in potentially hazardous areas through establishing hazard mitigation policies and to reduce the risks associated with future hurricanes by developing post-disaster reconstruction/-recovery policies, and reviewing the adequacy of the Town's current evacuation plans. (See "Composite Hazards Map", Map 5, attached to this report). The overriding concept behind this exercise is simple - "Plan for disasters ahead of time." Notice the excerpt below:

> "Hazard mitigation includes any activity which reduces the probability that a disaster will occur or minimizes the damage caused by a disaster. Hazard miti-

gation includes not only managing development, but also evacuation planning and other measures to reduce losses of life and property. Reconstruction involves the full range of repair activities in the wake of a disaster which seek to return the community to a "normal" level of operations." (McElyea, Brower, & Godschalk, p. iii).

With this introduction, the following pages will present the storm hazard mitigation and post-disaster recovery policies, and review of the existing evacuation plan along with appropriate discussions and maps.

1. Storm Hazard Mitigation: Discussion

Hazard mitigation, or actions taken to reduce the probability or impact of a disaster could involve a number of activities or policy decisions. The starting point, however, is to identify the types of hazards (including the relative severity and magnitude of risks), and the extent of development (including residential, commercial, etc.) located in storm hazard areas.

Hurricanes are extremely powerful, often unpredictable forces of nature. The two most severe effects are fatalities and property damage, which are usually the result of four causes: high winds, flooding, wave action, and erosion, each of which are discussed briefly below:

a. High Winds

High winds are the major determinants of a hurricane, by definition, i.e., a tropical disturbance with sustained winds of at least 73 miles per hour. Extreme hurricanes can have winds of up to 165 miles per hour, with gusts up to 200 miles per hour. These winds circulate around the center or "eye" of the storm. Although the friction or impact of the winds hitting land from the water causes some dissipation of the full force, there is still a tremendous amount of energy left to cause damage to buildings, overturn mobile homes, down trees and powerlines, and destroy crops. Barrier islands, like the majority of Wrightsville Beach's jurisdiction, are often the first areas hit. Also, tornadoes are often spawned by hurricane wind patterns. Wind stress, therefore, is an important consideration in storm hazard mitigation planning, particularly for barrier island communities. Wrightsville Beach has certain areas identified as "high velocity" or "V-13 zones," located along the immediate ocean front, primarily. Because of a hurricane's size and power, however, it is likely that all of Wrightsville Beach would be subject to the same wind velocity in the event of a major storm.

b. Flooding

Flooding, on the other hand, may not affect all areas with equal rigor. The excessive amounts of rainfall and the "storm surge" which often accompany hurricanes can cause massive coastal and riverine flooding causing excessive property damage and deaths by drownings. (More deaths are caused by drowning than any other cause in hurricanes.) Flooding is particularly a problem in barrier island areas because of the storm surge and low-lying areas. However, flooding can cause extensive damage in inland areas also, since many coastal areas have low elevations and are located in high hazard or "Zone A" flood areas according to the Federal Emergency Management Agency Maps. Based on recent preliminary flood insurance maps prepared for Wrightsville Beach, virtually all of the Town is classified as being in the 100-year "high hazard" flood zone, or Zone A. (These maps do not include the recently annexed area across the AIWW, which was not part of the Town at the time of the study.) Because of low elevation, all of the beach area, including Harbor Island, would be subject to flooding during a severe hurricane. The wind-driven storm surge would also affect Harbor Island, since this area is surrounded by water (i.e., the AIWW, Lee's Cut, Bank's Channel, and Mott's Channel). See Map 5, "Composite Hazards Map," attached).

As Map 5 shows, all of the "development" in Wrightsville Beach's original jurisdiction is in the high hazard Zone A area.

Consideration of potential flood damage is important to Wrightsville Beach's efforts to develop storm mitigation policies.

c. Wave Action

Damage from wave action is connected very closely to the storm surge, i.e., wind-driven water with high waves moving to vulnerable shoreline areas. Areas most likely to be affected are ocean erodible areas and estuarine shoreline areas. The ocean erodible area in Wrightsville Beach, as defined on page 13 of this Plan, includes the area basically considered as "the beach." In conjunction with CAMA requirements and the Town's building line, the only "development" allowed in this area are piers. The base flood elevation for Wrightsville is calculated to be 12.1 feet mean sea level (msl), while the wave surge is calculated to be 2.6 msl, for a total flood elevation of 14.7 feet msl. The potential for wave action damage to development in Wrightsville Beach is greatest within the "first row" of development along the oceanfront behind the official building line. Within this area, there are 138 single-family lots developed (some lots may contain duplexes, for projection purposes; however, one unit per lot will be assumed); 168 condominiums (including 22 townhouse units), 415 motel units, 3 commercial establishments other than motels, and two lots in institutional use. Notice the summary of property most susceptible to wave action drainage included below:

Table 16: Summary of Property Most Susceptible to Water Action Damage

Type	No.	Est. Pct. Town's Total
1. Single Family	138	19.0
2. Condominiums	168	69.0
3. Motel Units	415	77.0
4. Commercial	3	5.0
5. Institutional	2	16.0

Source: Based on data from Town Building Inspector, Public Works Department; Projections by Talbert, Cox & Associates

Table 16 indicates that about 22% of all structures in the Town could be affected by severe wave action.

The estuarine shoreline within Wrightsville Beach jurisdiction, as described on page 16, includes all of the land area around Harbor Island and the Banks Channel Shoreline (referred to as the "Soundside"), inland to a distance of 75 feet from the mean high water mark. There is a considerable amount of development in this area, mostly residential. Wave action would not be anticipated to cause significant damage in this area.

d. Erosion

The final major consideration in storm hazard mitigation is severe erosion, caused by a combination of high winds, high water, and heavy wave action. Again, in Wrightsville Beach, the areas most susceptible to storm-related erosion are the undeveloped oceanfront areas and estuarine shoreline AEC as described above in Part c. Shoreline erosion, particularly resulting from rapidly receding flood waters, could lead to loss of property through portions of waterfront lots being washed away or even actual structural damage to buildings. While erosion potential is an important factor to consider in developing storm hazard mitigation policies, it should be noted that there is extensive bulkheading along Banks Channel, and around Harbor Island. The presence of these bulkheads could likely mitigate some of the potential erosion damage.

e. Summary: Storm Hazard Mitigation Considerations

In summary, all four of the major damaging forces of a hurricane, i.e., high winds, flooding, wave action, and shoreline erosion could have a potential significant impact upon Wrightsville Beach in the event of a major storm. The degree of susceptibility to losses and/or damages is an important consideration in storm hazard mitigation planning. Table 17, below, provides some perception of the percent of the Town's building structures (residential and commercial, etc.), subject to the potentially devastating effects of a major storm:

Table 17 *Percent of Structures Subject to Storm Damage Factors, Wrightsville Beach

Storm Impact	Percent Structures Possibly Affected
1. High winds	100%
2. Flooding	100%
3. Wave Action	22%
4. Shoreline Erosion	20%

Based on preliminary projections derived from examination of Existing Land Use Map and discussion with personnel in Town's Public Works Department. Map prepared by Talbert, Cox & Associates.

The information in the Table above is preliminary and is not intended to convey the impression that every single structure possibly affected by damaging factors would be affected, only that the potential is there. With a 1984 tax base of nearly 259 million dollars (see Table 4, page 8), if every structure susceptible to damage were damaged 50%, the impact upon the Town's tax base would be quite significant. Knowing that the potential exists,

therefore, forms the basis for setting forth storm hazard mitigation policies, keeping in mind that "mitigate" means actions which may reduce the probability of disaster, or minimize the damage caused by a disaster (McElyea, Brower, & Godschalk, p. iii).

f. Policy Statements: Storm Hazard Mitigation

In order to minimize the damage potentially caused by the effects of a hurricane or other major storm, Wrightsville Beach proposes the following policies.

1. High Winds

Wrightsville Beach supports enforcement of the N. C. State Building Code. The Town will continue to enforce the State Building Code on wind resistant construction with design standards of from 120 to 150 mph wind loads.

2. Flooding

Wrightsville Beach is an active participant in the National Flood Insurance Program and is supportive of hazard mitigation elements. Wrightsville Beach is participating in the regular phase of the insurance program and enforces a Flood Damage Prevention Ordinance. The base flood elevation, as set out in the ordinance, is 12.1 msl. For all construction, however, Wrightsville Beach requires an additional 2.6 feet for "wave surge height," for a total of 14.7 feet to the bottom of "the first supporting member," i.e. joists. This results in the first floor being more than one foot above the flood stage level and exceeds the usual standards of the Flood Insurance Program. Also, the Town allows only 200 S.F. of entrance and enclosed storage space on the first floor of structure. This is less than the area allowable under the National Flood Insurance Program. Wrightsville Beach also supports continued enforcement of the CAMA and 404 Wetlands development permit processes in areas potentially susceptible to flooding.

3. Wave Action and Shoreline Erosion

Wrightsville Beach is supportive of the CAMA development permit process for estuarine shoreline areas and the requisite development standards which encourage both shoreline stabilization and facilitation of proper drainage.

g. Implementation: Storm Hazard Mitigation

1. Wrightsville Beach will continue to enforce the standards of the State Building Code.

2. The Town will continue to support enforcement of State and Federal programs which aid in mitigation of hurricane hazards, including CAMA and the U. S. Army Corps of Engineers 404 permit process, FEMA, as well as local ordinances such as zoning and subdivision regulations.

2. Post-Disaster Reconstruction Plan

Wrightsville Beach recognizes that in the event of a major storm, it will be very important to have a general recovery and reconstruction plan. The Town's Civil Defense Plan, which includes Post-Disaster elements as well, was utilized during after Hurricane Diana, in September, 1984. However, the experience taught the Town that some additional elements were needed. This section of the Land Use Plan Update will address this issue.

a. Appointment of a "Post Disaster Recovery Team"

In the event of a major storm having landfall in or near Wrightsville Beach, when evacuation orders are issued, the Mayor shall appoint a "Post-Disaster Recovery Team". The total team may consist of the following:

1. Town Manager
2. Civil Defense Director (Team Leader)
3. Police Chief
4. Public Works Director
5. Town Building Inspector
6. Town Council Members

The Civil Defense Director will serve as the Team Leader and will be responsible to the Town Manager. The base of operations will be the Emergency Operations Center (EOC) identified in the Town Evacuation Plan or as designated by the governing body. The Disaster Recovery Team will be responsible for the following:

1. Establishing an overall restoration schedule.

2. Setting restoration priorities.

3. Determining requirements for outside assistance and requesting such assistance when beyond local capabilities.

4. Keeping the appropriate County and State officials informed.

5. Keeping the public informed.

6. Assembling and maintaining records of actions taken and expenditures and obligations incurred.

7. Recommending to the Mayor to proclaim a local "state of emergency" if warranted.

8. Commencing and coordinating cleanup, debris removal and utility restoration which would include coordination of restoration activities undertaken by private utility companies.

9. Coordinating repair and restoration of essential public facilities and services in accordance with determined priorities.

10. Assisting private businesses and individual property owners in obtaining information on the various types of assistance that might be available to them from federal and state agencies.

b. Immediate Clean-Up and Debris Removal

As soon as practical after the storm, the Disaster Recovery Team specifically, the Public Works Director, will direct appropriate Town personnel, and as necessary, request State and/or Federal assistance to begin clearing fallen trees and other debris from the Town's roads and bridges.

c. Long Term Recovery/Restoration

The Disaster Recovery Team will be responsible for overseeing the orderly implementation of the reconstruction process after a major storm or hurricane in accord with the Town's building and land use regulations and policies.

1. Damage Assessments

Damage assessments will be necessary to determine as quickly as possible a realistic estimate of the amount of damage caused by a hurricane or major storm. Information such as the number of structures damaged, the magnitude of damage, and the estimated total dollar loss will need to be developed.

As soon as practical after the storm, i.e., clearance of major roadways, the Disaster Recovery Team Leader shall set up a Damage Assessment Team (DAT), consisting of the Building Inspector, Civil Defense Director, a local realtor or building contractor, and appropriate personnel from the New Hanover County tax department. If sufficient personnel is available, two Damage Assessment Teams will be established. The DAT will immediately begin to make "windshield" surveys of damaged structures to initially assess damages and provide a preliminary dollar value of repairs or replacement. The following general criteria shall be utilized:

a. Destroyed (repairs would cost more than 80 percent of value).

b. Major (repairs would cost more than 30 percent of the value).

c. Minor (repairs would cost less than 30 percent of the value, but the structure is currently uninhabitable).

d. Habitable (some minor damage, with repairs less than 15 percent of the value).

Each damage assessment will be documented according to County tax records. Also, Town tax maps and/or records may be used for identification purposes). The total estimated dollar value of damages will be summarized and reported to the Disaster Recovery Team Leader.

2. Reconstruction Development Standards

Generally, reconstruction shall be held at least to the same development standards as before the storm in accord with Section 21.9.g of the Town zoning ordinance. However, developed structures which were destroyed and which did not conform to the Town's building regulations, zoning ordinances, and other storm hazard mitigation policies, i.e., basic measures to reduce damage by high winds, flooding, wave action or erosion, must be redeveloped according to those policies. In some instances, this may mean relocation of construction, or no reconstruction at all. Building permits to restore destroyed or damaged structures, which were built in conformance with the Town's building code and Town storm hazard mitigation policies, shall be issued automatically. All structures suffering major damage will be repaired according to the Town's building code. All structures suffering minor damage, regardless of location, will be allowed to be rebuilt to the original condition prior to the storm.

3. Development Moratoria

Because of the density of development at Wrightsville Beach and the possible extensive damage caused by a major storm, it may be necessary for the Town to prohibit all redevelopment activities for a certain period of time after a storm. This "moratorium" could

allow the Town time to carefully access all damage in view of existing policies, building regulations, and ordinances, in order to help determine whatever existing policies, etc., should be revised to mitigate similar damage from future storms. The intent of such a moratorium would be to learn all the lessons possible and try and determine what steps and precautions the Town can take in rebuilding so as not to suffer damage to the same extent. If a moratorium is established, the time frame will be commensurate with the extent of the damage. The actual time frame will be established by the Board of Aldermen.

4. Repair/Reconstruction Schedule

The following schedule of activities and time frame are proposed with the realistic idea that many factors of a hurricane may render the Schedule infeasible.

Activity	Time Frame
a) Complete and Report Damage Assessments	One week after storm
b) Begin Repairs to Critical Utilities and Facilities	As soon as possible after storm
c) Permitting of Reconstruction activities for all damaged structures ("minor" to pre-storm original status, "major" to State Building Code and hazard mitigation standards	After a 90-day moratorium, and completion of all assessments

5. Agency Responsible for Implementation

The Civil Defense Director will serve as overall Emergency Coordinator, under the direction of the Town Manager. The Mayor may also delegate the oversight of the reconstruction and recovery effort and implementation of the plan to this person or other Town personnel.

6. Repair and Replacement of Public Utilities

If water lines or any component of the water system is damaged and it is determined that the facilities can be relocated to a less hazardous location, then they will be relocated during reconstruction. This activity will be coordinated with Carolina Power and Light Company, for electrical service. The Public Works Department Director will be responsible for overseeing the repair or replacement of public utilities.

9. Hurricane Evacuation Plan

a. General

Wrightsville Beach has an official "Civil Defense Operations Plan" which includes a general Hurricane Plan. Included in the Hurricane Plan are procedures for responses to various pre-hurricane conditions:

a) Condition 3 - Hurricane Watch

b) Condition 2 - Hurricane Warning

c) Condition 1 - Evacuation

For each condition, specific procedures are outlined involving all of the Town's departments, including Administrative, Public Works, Parks and Recreation, and fire departments. The Fire Chief also serves as Civil Defense Director. Also, all implementation activities are coordinated with the New Hanover County Emergency Management office in Wilmington. Unlike many smaller beach communities, the evacuation provisions of the Wrightsville Beach Civil Defense Operations Plan is very detailed and spells out clearly most of the duties and responsibilities of the Town's staff in the event of a major storm. The Plan had a recent opportunity to be "tested" in September, 1984 during Hurricane Diana. Although the Plan was implemented successfully, Town officials made several observations of how the Plan could be improved. Also, as part of the 1985 Land Use Plan Update, the evacuation plan was reviewed by the Assistant Director of the North Carolina Division of Emergency Management for its adequacy. Generally, the plan was appraised as adequate to meet the needs of the Town. Several elements, such as the attachments to the Plan and the "assistance call checklist" were praised for their innovativeness (it was noted that Wrightsville Beach's call list was one of only two the Assistant Director had seen). The attachments and the call list, he pointed out, do require periodic updating. Other comments from the Division of Emergency Management are included below.

b. Review of Adequacy of Evacuation Plan

First, it was pointed out that an "increased readiness checklist" would simplify the actions required of the several departments at any level of readiness or operational condition, i.e., watch, warning, evacuation, etc. Also, a checklist could summarize the actions of the 10 agencies shown in the evacuation plan, as well as possibly reduce the size of the current plan.

Some of the specific activity shown for the departments should be included in their internal Standard Operating Procedures and not just in the Town's Plan. Names and numbers must also be kept current.

Additional information which should be included would be to identify who is in operational control and display it with a manning chart. Decisions are made by the executive members of government, but they are put into effect by the operations officer. Prior to evacuation, coordination must be made with New Hanover County to preclude congestion and traffic control problems when the beach traffic hits the major highways; otherwise, the evacuation process could encounter problems.

Several activities are to be undertaken at various times according to the plan. Trailers are to be rented, machinery and records packed and moved, and identification tags issued. These activities depend on personnel that may not be available or willing to remain when needed. They should be accomplished prior to the time that the need for them arises. Agreements should be developed to assure that trailers are available in an emergency without a leasing process. Also, it should be clarified which personnel will be responsible for moving which motors and other equipment. It should be certain that "packaging material" is available for the records which will be removed, remembering that when the need to move them arises, it will likely be in bad weather. The required identification tags should be readily available and the personnel who will use them should know where to locate them. Again, most of this information should be included in the department's Standard Operating Procedures.

c. Evacuation Time

The evacuation time from Wrightsville Beach would vary according to the season in which a storm would be threatening. In the "off season," when tourism is at its lowest (as occurred during Hurriane Diana, the evacuation time was approximately 3-4 hours. However, if a storm should occur during the peak of the summer tourist season, it is projected to take 12 hours. All projected evacuations, however, are contingent upon proper operation of the drawbridge. There are currently no specific plans addressing the situation if the drawbridge were "out" during a massive evacuation. This is an issue which must be addressed, particularly since the drawbridge is the Town's only access across the Intracoastal Waterway to the mainland. Under "normal" bridge operating conditions, the current projected evacuation times are adequate within the standard warning time provided by the National Weather Service.

One possible alternative to the malfunction of the drawbridge is to identify and designate as much as possible any potential "shelter" sites on Harbor Island. These sites, while theoretically not as safe as farther inland shelters, could afford a higher measure of protection than could be found on the beach strand.

4. Re-Entry

Procedures for re-entry are addressed in the existing evacuation plan. Basically, during the imposition of the evacuation, no one other than required Town personnel and emergency personnel are allowed back across the Waterway.

SECTION III :

Land Classification System

SECTION III: LAND CLASSIFICATION SYSTEM

The land classification system provides a uniform way of looking at how the planned use of land interacts with environmentally sensitive areas and with the development of a County or Town. It is not a strict regulatory device in the sense of a zoning ordinance or zoning map. It represents more of a tool to understand relationships between various land use categories and how these relationships help shape local policy. Particular attention is focused on how intensely land is utilized and the level of services required to support that intensity. The regulations for the Coastal Area Management Act state:

> "The land classification system provides a framework to be used by local governments to identify the future use of all lands. The designation of land classes allows the local government to illustrate their policy statements as to where and to what density they want growth to occur, and where they want to conserve natural and cultural resources by guiding growth." (7B.0204) (b)

There are five general land use classifications under CAMA, Developed, Transition, Community, Rural, and Conservation. In applying the land classification system, each local government should give careful consideration to how, where and when certain types of, and intensity of "development," will be either encouraged or discouraged. A brief summary of the five broad classifications, as contained in the CAMA rules, might illustrate this. For example:

> "Urban land uses and higher intensity uses which presently require the traditional urban services should be directed to lands classified developed. Areas developing or anticipated to develop at urban densities which will eventually require urban services should be directed to lands classified transition. Low density development in settlements which will not require sewer services should be directed to areas classified as community. Agriculture, forestry, mineral extraction and other similar low intensity uses and very low density, dispersed residential uses should be directed to lands classified rural. Generally, public or private water or sewer systems will not be provided in areas classified rural as an incentive for intense development." (7B.0204) (c)

The purpose of the conservation class is to "provide for the effective long-term management and protection of significant, limited, or irreplaceable areas." Consequently, urban services (whether public or private) should not be provided to those areas as an incentive to "stimulate" more intense development. Each of these classes must be represented on a Land Classification Map.

The five land classifications and Land Classification Map are therefore intended to serve as a visual reflection of the policies

previously stated in Section II. Ideally, the map which depicts these classifications should be as flexible as the policies that guide them. (See attached Land Classification Map) of these five land classifications, only three, Developed, Transition, and Conservation, are applicable to Wrightsville Beach.

These three land use classifications, as they will be applied in Wrightsville Beach, are identified and defined below.

A. DEVELOPED

The developed class of land use provides for continued intensive development and redevelopment of existing cities or municipalities. Areas to be classified as "developed" include lands currently developed for urban purposes or approaching a density of 500 dwellings per square mile that are provided with usual municipal or public services, police and fire protection. In other words, such areas must currently be "urban" in character, i.e. have mixed land uses such as residential, commercial, industrial and institutional, or other uses at high to medium densities.

Nearly all of the developable land in Wrightsville Beach's jurisdiction comes under this classification, including the recently annexed Galleria Shopping Center across the Waterway; and other than the Galleria, the Town's water and sewer system serves the entire jurisdiction.

B. TRANSITION

Transition land is classified as those lands providing for future intensive urban development within the ensuing ten years on lands that are most suitable and that will be scheduled for provision of necessary public utilities and services. They may also provide for additional growth when additional lands in the developed class are not available or when they are severely limited for development.

Lands classified "transition" may include:

1. lands currently having urban services;
2. lands necessary to accommodate the population and economic growth anticipated within the planning jurisdiction over the next five to ten years;
3. areas which are in, or will be in, a "transition" state of development, i.e. going from a lower intensity to a higher intensity, of uses and will eventually require urban services.

Transition lands must further:

1. be served or be readily served by public water, sewer, and other urban services including public streets, and

2. be generally free of severe physical limitations for urban development.

The "transition" class should not include:

1. lands of high potential for agriculture, forestry, or mineral extraction, or land falling within extensive rural areas being managed commercially for these uses, when other lands are available;
2. lands where urban development might result in major or irreversible damage to important environmental, scientific, or scenic values, or;
3. land where urban development might result in damage to natural systems or processes of more than local concern; and
4. lands where development will result in undue risk to life or property from natural hazards or existing land uses.

The only area to be classified as "transition" in Wrightsville Beach is the north end of Shell Island, which is projected to be developed within the early phases of the planning period. This area will be provided the same municipal services currently provided to the rest of the Town.

The Developed and Transition classes should be the only lands under active consideration by a municipality for intensive urban development requiring urban services. The area within these classes is where detailed local land use and public investment planning will occur. State and Federal expenditures on projects associated with urban development (water, sewer, urban street systems, etc.) will be guided to these areas.

C. CONSERVATION

The final land use category for Wrightsville Beach is the "Conservation" class which provides for effective long-term management of significant limited or irreplaceable areas. This management may be needed because of its natural, cultural, recreational, productive or scenic values. This class should be limited to lands that contain: major wetlands; essentially undeveloped shorelands that are unique, fragile, or hazardous for development, for providing necessary habitat conditions; publicly owned water supply watersheds and aquifers.

In Wrightsville Beach, the environmentally sensitive areas identified as Areas of Environmentally Concern (AECs) i.e. some of the Wetlands, Estuarine Waters, Estuarine Shorelines, Public Trust

Areas, and Ocean Hazards AECs are classified as "Conservation." These areas are designated currently as "conservation zone" in the Town's zoning ordinance.

D. LAND CLASSIFICATION SUMMARY

The proposed classification of land, according to the levels of intensity and provision of public services in Wrightsville Beach, were presented in parts A through C, above. These classifications relate directly to the "policy statements" contained in Section II of this Plan. Additional information on the relationship between the land classification system and policies will be presented in the following Section IV.

SECTION IV:

Relationship Of Policies And Land Classification System

SECTION IV: RELATIONSHIP OF POLICIES AND LAND CLASSIFICATIONS

As required by the Coastal Area Management Act, the land use plan must relate the policies section to the land classification map and provide some indication as to which land uses are appropriate in each class.

A. DEVELOPED AND TRANSITION CLASSES

As mentioned in the discussion of existing conditions, nearly all of Wrightsville Beach is developed, and the largest developable tract of land will be developed within the planning period. This is the area where basic services such as water, sewer, and community support services are available and/or will be available within the planning period. The developed and transition classes were specifically designated to accommodate the more intensive land uses, including residential, commercial, and open space, community facilities and transportation. Hazardous or offensive uses such as land application systems, power plants, and chemical storage facilities will not be permitted in these classes. Land uses will be strictly regulated by the Town's existing zoning and development regulations.

B. CONSERVATION CLASS

The conservation class is designated to provide for effective long-term management of significant limited or irreplaceable areas which include Areas of Environmental Concern, both in the estuarine and ocean hazards systems. Development in the estuarine system should be restricted to such uses as commercial piers, bulkheads, marinas, and other water-dependent uses which are judged not to be detrimental to water quality or the overall integrity of the environment through pollution, etc. Policy Statements under Resource Protection, and Resource Production and Management in Section II of this plan address the Town's intentions under this class.

APPENDICES

APPENDIX 1

PROPOSED AMENDMENT TO CHAPTER 4-17(E) OF THE BUILDING CODE
October 11, 1985

Add new paragraph as follows:

All building projects shall be designed, constructed, and completed in such a manner that no stormwater will run off the site. The building inspector shall approve all plans and inspect all construction. Design standards shall be zero stormwater runoff for up to four (4) inches of rainwater in a 24 hour period. The building inspector shall certify on the permit compliance with installation of the design standard.

APPENDIX 2

Board of Aldermen
Town of Wrightsville Beach, North Carolina

Date: April 11, 1985

AN ORDINANCE OF THE BOARD OF ALDERMEN OF THE TOWN OF WRIGHTSVILLE BEACH, NORTH CAROLINA AMENDING CHAPTER 21 OF THE ZONING ORDINANCE OF THE TOWN OF WRIGHTSVILLE BEACH

WHEREAS, the Board of Aldermen of the Town of Wrightsville Beach, North Carolina, as public officials acknowledge their duty to the residents and visitors to Wrightsville Beach, North Carolina, in protecting their health, safety and welfare; and

WHEREAS, it has come to the attention of the Board of Aldermen that there is potentially a substantial increase in the number of floating homes designed primarily as permanent dwelling units to be located on or in the estuaries and public trust waters within the zoning jurisdiction of the Town of Wrightsville Beach; and

WHEREAS, the Board of Aldermen also are aware that the waterways and estuaries located within the zoning jurisdiction of the Town of Wrightsville Beach at the present time are enjoyed by Town residents, other residents of New Hanover County and visitors to the area for recreational and other purposes; and

WHEREAS, the preservation of a high water quality within those waters located within the zoning jurisdiction of the Town of Wrightsville Beach has been and continues to be of importance to the Town of Wrightsville Beach; and

WHEREAS, it is desirable that the Board of Aldermen control the growth and density of floating homes designed primarily as permanent dwelling units within said estuaries and public trust waters; and

WHEREAS, a significant influx of floating homes designed primarily as permanent dwelling units will have a detrimental effect upon the use of the waterways within the zoning jurisdiction of the Town of Wrightsville Beach; and

WHEREAS, the Board of Aldermen is aware of the dangers of the introduction of wastewater or "grey water" of any kind into the waterways of the Town, and of the problems associated with the potential increase in such discharges resulting from a significant increase in the number of floating homes; and

WHEREAS, Wrightsville Beach's coastal wetlands, estuarine waters, estuarine shorelands and public trust waters are a most important and valuable natural resource for the Town of Wrightsville Beach; and

WHEREAS, floating homes designed primarily as permanent dwelling units create the same or similar problems associated with land based housing and require regulation in the same fashion as such land based housing to include the areas of solid-waste disposal, sewage, police protection and related requirements; and

WHEREAS, floating homes designed primarily as permanent dwelling units create a fire hazard similar to or greater than that of land based housing.

NOW, THEREFORE, the Board of Aldermen of the Town of Wrightsville Beach doth ordain:

1. That the zoning ordinance of the Town of Wrightsville Beach, North Carolina, as amended, be and the same is hereby further amended as follows:

A. Amend Article I, Section 21-1, definitions, by adding the following definitions in proper alphabetical order:

Floating Home. Any vessel in fact used, designed, or occupied as a permanent dwelling unit, business office, or source of any occupation or for any private or social club of whatsoever nature, including, but not limited to, a structure constructed upon a barge primarily immobile and out of navigation or which functions substantially as a land structure while the same is anchored, moored or docked within the zoning jurisdiction of the Town of Wrightsville Beach, whether such vessel is self propelled or not and whose volume coefficient is greater than 3,000 square feet. Volume coefficient shall be determined by dividing the habitable space of a vessel measured in cubic feet by the draft of a vessel measured in feet of depth.

Where the dead weight of a vessel is excessive from the use of ballast or the extensive use of materials not reasonably needed to provide a safe and durable hull, the weight of such ballast or additional hull thickness shall be computed and any draft resulting from such excess weight or from keels or other projections from the vessel's bottom shall not be included in the vessel draft used to compute the volume coefficient of the vessel.

Vessel. Any watercraft of any type or size, including but not limited to, barges, ferry boats, yachts, houseboats, floating homes and rafts.

B. Amend Article II, Section 21-27 of the zoning ordinance of the Town of Wrightsville Beach by adding under Subparagraph (E) Additional Conditional Uses, the following:

Commercial marinas with floating homes.

C. Amend Article II, Section 21-27 of the zoning ordinance of the Town of Wrightsville Beach by adding a new Subparagraph (G) as follows:

(G) Requirements for commercial marinas with floating homes. Commercial marinas with floating homes shall be permitted as provided in this Section 21-27 subject to the following conditions:

(1) Not more than one dwelling unit per floating home shall be permitted;

(2) The height of a floating home shall not exceed sixteen (16) feet above the water line; provided that antennas, removable canopies, masts and electronic and navigational equipment shall not be included in making this height determination;

(3) Floating homes shall be moored to provide a clear waterway projection between adjacent floating homes or vessels of six feet on all sides;

(4) All walkways or gangways providing access to any floating home shall comply with the following requirements:

(a) Be constructed in accordance with the Pier and Dock Ordinance of the Town of Wrightsville Beach;

(b) Be lighted to provide illumination of 0.1 footcandles at the deck level, but in no case less than 0.05 footcandles;

(5) A minimum of two (2) off-street parking spaces per floating home shall be provided on shore;

(6) Each marina shall provide for each floating home permanent water and sewer systems approved by the Public Works Department of the Town of Wrightsville Beach. Each floating home shall be connected to such water and sewer system. All wastewater piping from the floating homes shall be constructed in accordance with the North Carolina State Plumbing Code and all water and sewer connections to the public utility system shall be as prescribed under Federal and State Safe Drinking Water Acts. No overboard discharge openings through the hull or home shall be permitted except for one dewatering pipe, which may not be connected to wastewater piping or to any bilge or sump into which wastewater drains. For purposes of this Ordinance, wastewater shall include bathwater, dishwater and other greywater as well as sewage.

(7) All electrical wiring running on docks and/or shore from the distribution center to the point of supply on the floating home shall conform to the National Electrical Code;

(8) A system for the collection and removal of solid wastes approved by the Public Works Department of the Town of Wrightsville Beach shall be provided by each marina;

(9) Each marina shall provide a drypipe fire fighting system approved by the Fire Chief of the Wrightsville Beach Fire Department and constructed in accordance with the provisions of the Pier and Dock Ordinance of the Town of Wrightsville Beach;

(10) A minimum of 2,000 square feet of gross land area contiguous to the docks provided for floating homes and above mean high water shall be provided on-shore for each floating home;

(11) A site plan shall be submitted for approval in connection with the application for a conditional use permit, such plan to indicate all improvements as required by this ordinance;

(12) Any commercial marinas in which floating homes are located on the date of adoption of this ordinance shall have six months from the date of adoption to comply with all requirements of this ordinance.

D. Amend Article X. Supplementary District Regulations, by adding new Sections 21-72 and 21-73 as follows:

Article X. Supplementary District Regulations.

Sec. 21-72. Floating homes prohibited except in permitted districts.

It shall be unlawful for any floating home to dock, moor, anchor or remain within the waters within the zoning jurisdiction of the Town of Wrightsville Beach except in permitted commercial marinas.

Sec. 21-73. Prohibited acts and activities regarding floating homes.

(A) It shall be unlawful for any person to occupy, or cause, or permit another person to occupy any floating home within the zoning jurisdiction of

the Town of Wrightsville Beach except in permitted commercial marinas.

(B) It shall be unlawful for any person to cause or allow a floating home located on or docked or moored to his property to be occupied in violation of the zoning ordinance and other applicable ordinances of the Town of Wrightsville Beach.

2. That ordinance adopted July 28, 1983 controlling the use of floating homes within the limits of the Town of Wrightsville Beach entitled in part "Ordinance Controlling the Use of Floating Structures Within the Limits of the Town of Wrightsville Beach" is hereby repealed.

3. Any ordinance or any part of any ordinance in conflict with this ordinance, to the extent of such conflict, is hereby repealed.

4. This ordinance is adopted in the interest of public health, safety, morals and general welfare of the inhabitants of the Town of Wrightsville Beach, North Carolina, and shall be in full force and effect from and after its adoption.

This ordinance adopted this 11th day of April, 1985.

Frances L. Russ
Mayor

ATTEST:

W. W. Perry, Jr.
Town Clerk

(SEAL)

APPROVED AS TO FORM:

John C. Wessel III
Town Attorney

MAPS

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