LAND USE PLAN UPDATE

PREPARED FOR:

THE TOWN OF TOPSAIL BEACH, N.C.

[redacted]

BY:

SATILLA PLANNING

PLANNERS ☐ LANDSCAPE ARCHITECTS

ADOPTED JANUARY 8, 1986

CERTIFIED BY THE COASTAL RESOURCES COMMISSION

FEBRUARY 7, 1986

North Carolina Coastal Zone Management Program
HD268.T67L42 1986
HD
268
.T67
L42
1986

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THE TOWN OF TOPSAIL BEACH, NORTH CAROLINA

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Adopted January 8, 1986

Certified by the Coastal Resources Commission

February 7, 1986

The preparation of this report was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, N.O.A.A.

CONTENTS

INTRODUCTION 1

Local Government Uses 1
Local Land Development Uses 1
Regional Uses 1
State and Federal Uses 2

EXISTING CONDITIONS 3

Existing Land Use 3
Property Valuations 6
Vacant Land Ownership 7
Roadways and Transportation 7
Community Facilities 9
Existing Land Use Regulations 11
Community Design Structure 14

GROWTH TRENDS AND PROJECTIONS 16

CONSTRAINTS TO DEVELOPMENT 18

Land Suitability 18
Fragile Areas 20
Community Facilities Capacity 21

POLICY STATEMENTS AND IMPLEMENTATION STRATEGIES 22

Resource Protection 23
Resource Production and Management 28
Economic and Community Development 29
Continuing Citizen Participation 31
Storm Hazard Mitigation, Post Disaster Planning and Hurricane Evacuation Plan 33

LAND CLASSIFICATION 37

Background and Purpose 37
Relationship of the Land Classification Map to Policy Statements 37
Land Classes and The Land Classification Map 39

LIST OF MAPS

Map No.	Title	Page
One	Existing Land Use	4
Two	Vacant Land Ownership	8
Three	Community Facilities	10
Four	Community Design Structure	15
Five	Flood Hazard Areas	19
Six	Land Classification	38

INTRODUCTION

The Coastal Area Management Act of 1974 establishes a cooperative program of land planning and management between local governments and the State. Land use planning is intended to be the focus of local government's involvement; it gives local leaders an opportunity to establish and implement policies to guide the development of their community.

The Topsail Beach Land Use Plan is an expression of both short and long range planning goals in which the local government has set forth its major policies concerning how and where future development should occur over the next ten years.

The Land Use Plan is an important policy document at local, regional, state and federal levels. The users, in addition to the Town of Topsail Beach, are regional councils of government, state and federal permitting agencies, and public or private funding and development groups.

Local Government Uses

The Plan provides policy guidance for decisions related to overall community development, while serving as the basis for land development regulations and capital facilities programming. Planning for the provision and extension of capital intensive services, such as central sewer and water, is aided by the land use plan's identification of likely growth trends and by plan policies which will direct growth.

Local Land Development Uses

Developers and investors (including prospective residents) can use the land use plan as a primary source of information about the community. The plan provides data and analysis on present development patterns, capacity of community facilities, growth patterns, and physical limitations to development. The plan also provides developers with information about the community's preferences for development types, densities and locations.

Regional Uses

The Topsail Beach Land Use Plan will be used by the Cape Fear Council of Governments for regional planning purposes and in their function as Regional Clearinghouse (A-95) for State and Federal funding programs. The Plan also specifies municipal policies to the Pender County government. The local

plan indicates to these agencies what types of development the community feels are likely and where the development should take place.

State and Federal Uses

The Topsail Beach Land Use Plan will be used to evaluate development proposals requiring approval by State and Federal agencies. These agencies must ensure that permitting decisions consider and are consistent with the policies and land classification system established by this Plan. This requirement for consistency is established by the North Carolina Coastal Area Management Act. Similarly, the use of State and Federal funds, either as grants or as direct agency expenditures, must be consistent with the local plan.

EXISTING CONDITIONS

Existing Land Use

Existing land use in Topsail Beach is displayed by Map One. It shows how each parcel of land in the town is currently used (based on field inventories conducted during December, 1984) and is subdivided into five categories:

- Single Family Residential
- Duplex
- Multi-family
- Commercial
- Public/Institutional

Single Family Residential includes all detached Single Family Homes on individual lots.

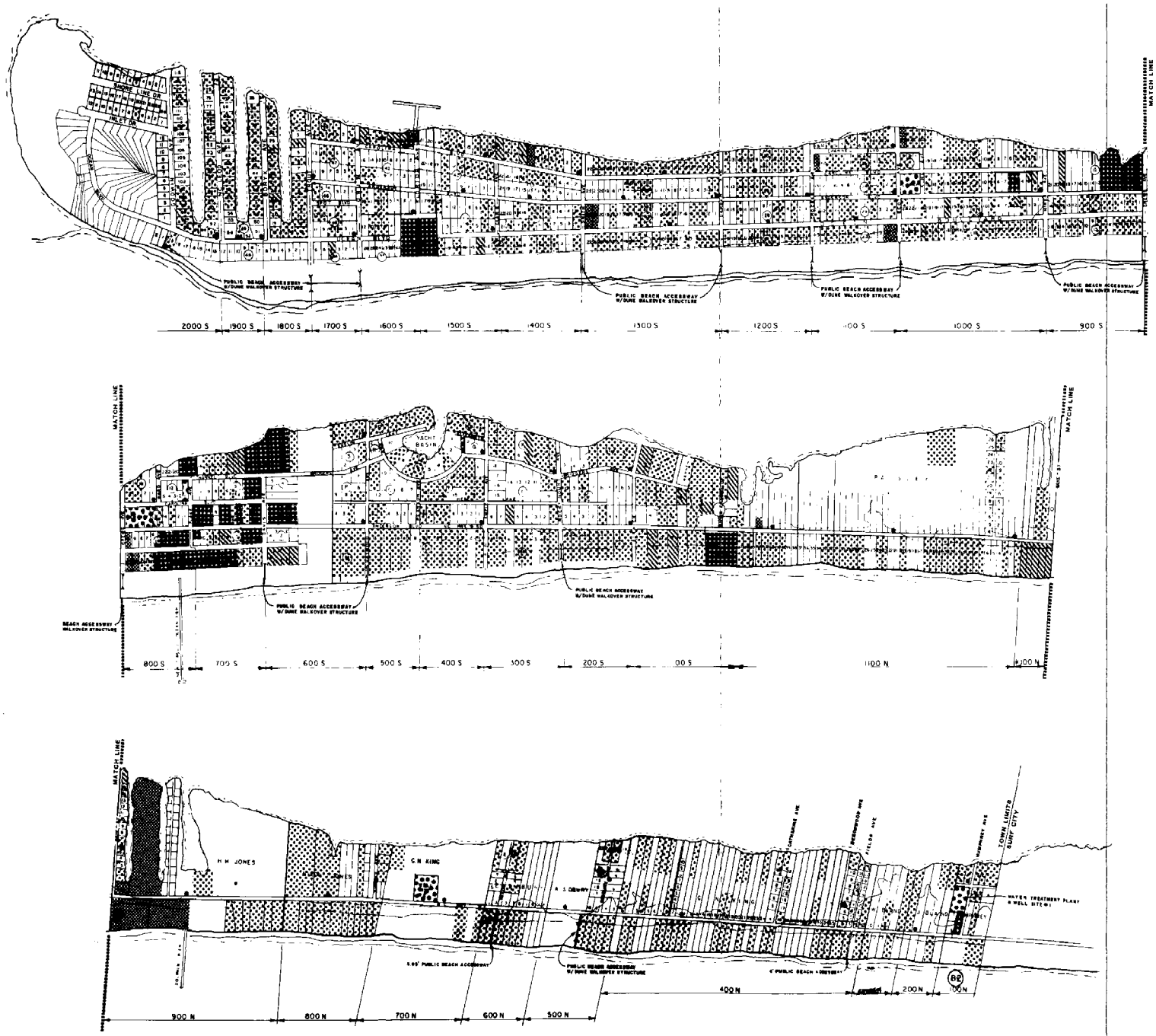
The duplex category includes all structures with two, attached dwelling units.

Residential structures with three or more dwelling units constitute the Multi-Family category.

The Commercial use category consists of retail sales and service establishments including tourist oriented, recreational businesses. Motels are also included in this category (units are included in dwelling unit counts).

Public/Institutional uses include government offices, water system well sites, and churches.

The following table provides a quantitative breakdown of land uses within the town. Both results of the 1984 survey and information from the 1980 Land Use Plan update are provided.



TOPSAIL BEACH

NORTH CAROLINA

EXISTING LAND USE

MAP 1

LEGEND:

- SINGLE FAMILY RESIDENTIAL
- DUPLEX
- MULTI-FAMILY
- COMMERCIAL
- PUBLIC/INSTITUTIONAL
- VACANT

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200 Osborne Street
St. Marys, Georgia

Mapping Date: FEBRUARY, 1985

NORTH

0' 200' 400' 800'

EXISTING LAND USE
TOPSAIL BEACH, NORTH CAROLINA

	1980 Acreage	1985 Acreage	Percent Change
Single Family Residential	154(1)	139.7	(1)
Duplex	----	9.3	(1)
Multi-Family	----	12.4	+ 4.8(2)
Commercial	15.3	12.7	- 17.0(3)
Public/ Institutional	2.9	3.1	+ 6.9
Streets	41.1	43.0	+ 4.6
TOTAL	213.3	220.2	+ 3.2

(1) Residential includes single family, duplexes and multi-family; 1980 plan did not break out different residential categories.

(2) Net increase in all residential categories.

(3) No actual decrease in commercial activity since 1980 noted - decrease due to different classification system.

Source: 1980 Land Use Plan Update and Satilla Planning, Inc. from December, 1984 field survey.

The existing land use table does not account for vacant land and water areas. According to the 1980 plan, there were 2,631 acres of vacant land consisting of vacant lots (186 acres), marsh (2,347 acres), and beach (98 acres). Since this time, about 7 acres were converted to urban land uses, leaving an estimated 2,624 acres vacant at the present time. The majority of this acreage is not developable; ie. the 2,445 acres of beach and marsh.

The existing land use table indicates increases in all land use development categories except commercial. Of the 7 acres converted from vacant to developed land uses in the past five years, most resulted from residential development.

Another way to view and analyze Topsail Beach's existing land use pattern is to examine the net, developed area only, excluding water, marsh, vacant lands and street rights-of-way. This analysis is presented by the following table:

DEVELOPED LAND
TOPSAIL BEACH, NORTH CAROLINA

	1980		1985		Net Change 1980-1985	
	Acres	%	Acres	%	Acres	%
Single Family Residential	154	89.4(1)	139.7	78.8	+ 7.4	+ 4.8
Duplex	--	--	9.3	5.2	--	--
Multi-Family	--	--	12.4	7.0	--	--
Commercial	15.3	8.9	12.7	7.2	- 2.6	-17.0
Public/ Institutional	2.9	1.7	3.1	1.7	+ 0.2	+ 6.9
TOTAL	164.32	100.0	177.2	10.0	+ 5.0	+ 2.9

(1) Includes single family, duplexes and multi-family residential; the 1980 plan did not break out residential categories.

Source: 1980 Land Use Plan Update and Satilla Planning, Inc. from December, 1984 field survey.

The developed land table demonstrates the single family character of Topsail Beach - accounting for nearly eighty percent of all developed land uses with all residential uses comprising more than 90%. The breakdown provided by this table indicates that the distribution of land use in Topsail Beach is similar of other low density beach communities. An examination of the existing Land Use Map shows that certain key features of Topsail Beach's land use pattern stand out as follows:

Residential Land Use. Topsail Beach is predominantly a single family community. Most of the Oceanfront lots are developed with as family vacation homes with occasional duplexes, apartments and motels. There is only one large scale multi-family development in the Town; it contains 43 oceanfront condominium units with 8 sound front townhouses under construction. An additional 86 sound side/canal front townhouses are planned. The ultimate project may, therefore, contain 137 units.

Commercial Land Use. Most of the Town's commercial facilities are centrally located in the 650 to 900 south blocks along Anderson and Ocean Boulevards. The new Topsail Ocean Pier is also in this commercial aea. The only significant commercial uses outside of this general area are motels and piers.

Public and Institutional. Most of these uses are owned by the Town: Town Hall, Wells and Water Treatment/storage sites, Police Station and Fire Station. The Topsail Beach Chapel comprises the only other use in this category.

Property Valuations

The Town's 1984 tax digest consisted of 1,320 parcels with gross real

property assessments of $36,959,050. Gross personal property assessments totalled $2,846,805 and utility assessments totalled $616,366. With exemptions of $52,450, the Town's net taxable digest is $40,369,771. These assessments are based on Pender County's 1979 appraisal; the next county wide re-assessment is scheduled for 1987.

Vacant Land Ownership

Ownership patterns of available vacant, developable land can be a principal factor affecting future growth and development. This section in conjunction with Map Two presents and analyzes these ownership patterns as they relate to future development.

Ownership of each significant parcel was identified, compiled and mapped from County tax records, according to the following three categories:

- Realty, Development Company or Partnership
- Development Concern with Preliminary Approval From The Town
- Individual, Family or Trust

For land use planning purposes, it is important to consider vacant land ownership patterns in conjunction with the natural capacity of the land to support development. Therefore, the Vacant Land Ownership Map should be analyzed in conjunction with flood hazard, wetlands and other environmental maps to determine the feasibility and desirability of developing these vacant areas. For example, significant areas that are currently vacant may not be developable at all under current State regulations governing wetlands and marshes.

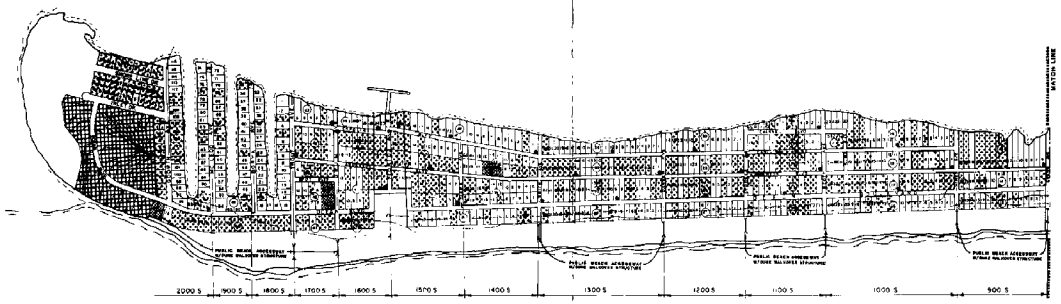
As indicated by the Vacant Land Ownership Map, most of Topsail Beach's vacant land is owned by individuals. The 1980 Land Use Plan estimated that 186 acres of land were vacant and generally available for development. Allowing for development which has occurred since 1980, there is still nearly 180 acres of vacant land available (not including marsh and other environmentally sensitive areas).

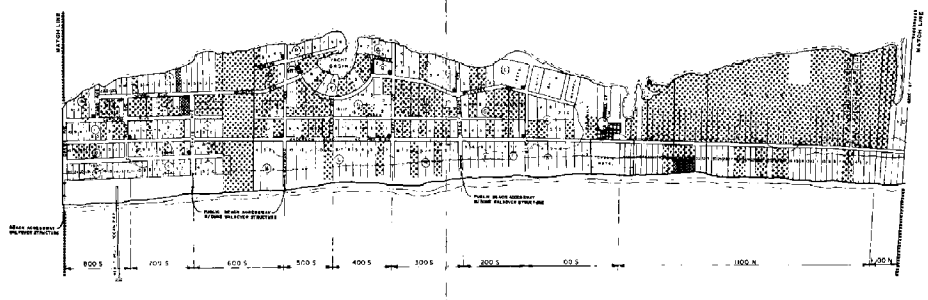
While most of this 180 acres consists of existing platted lots, much of it could conceivably be replatted as there are several relatively large areas under single ownership.

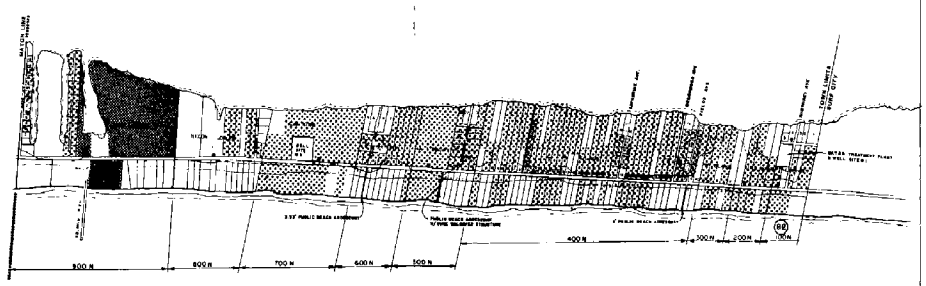
Roadways & Transportation

Street networks in and around a community are important aspects of future development. Road access can be a key determinant of the attractiveness of land for various types of land development. There are also critical reciprocal relationships between roads and land use. On one hand, the availability of good road capacity and traffic volume makes the adjoining land attractive for commercial uses that depend on high visibility and accessibility for economic success. On the other hand, the overloading of these roads with ill-designed land uses, such as strip commercial development with no control of curb cuts (driveways), can lead to problems of traffic safety, road capacity and poor visual appearance that can ultimately detract from the viability of the land uses and the road itself.

A customary land use plan would identify the comunity's road system in components such as Principal Arterials, Minor Arterials, Major Collectors, etc. With only one access point from Surf City to the northeast and one







TOPSAIL BEACH

NORTH CAROLINA

VACANT LAND OWNERSHIP

MAP 2

LEGEND:

- INDIVIDUAL, FAMILY OR TRUST
- REALTY, DEVELOPMENT COMPANY OR PARTNERSHIP
- DEVELOPMENT COMPANY W/ PRELIMINARY APPROVAL FROM TOWN

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major road serving the town (NC 50) this type of classification and analysis is unnecessary. It should be sufficient to say that Anderson Boulevard (NC 50) serves as a minor arterial feeding into Surf City and ultimately connecting with U.S. Route 17 - a principal arterial.

According to the North Carolina State Department of Transportation, the annual average daily traffic at N.C. 50 and Haywood Avenue was 2,000 in 1983.

The narrow pavement width of Highway 50 in conjunction with peak summer traffic and limited parking around touist destination areas such as the piers, continues to create hazardous traffic situations.

Community Facilities

Community facilities are an important land use planning factor not only because they can constitute significant land uses in themselves, but also because the type, location a capacity of these facilities bear an imporant reciprocal relationship to the areas they serve and therefore to most other land use categories.

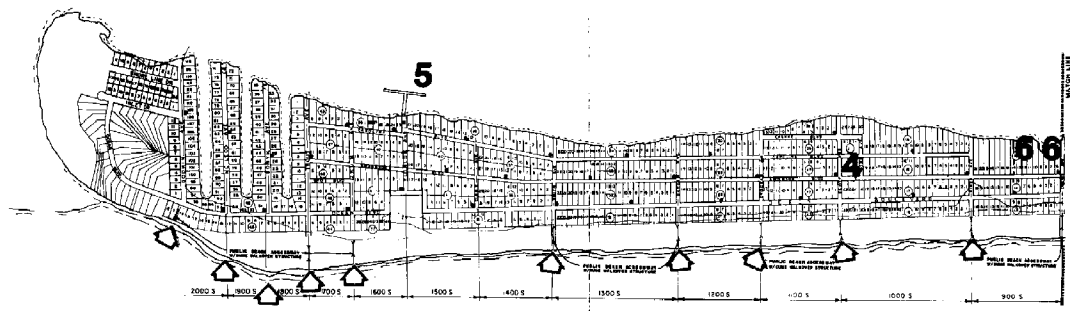
Map Three identifies existing and proposed facilities in Topsail Beach. As a small, family oriented comunity with less than 300 year round residents, the Town does not have extensive public facilities. The existing and proposed facilities identified are:

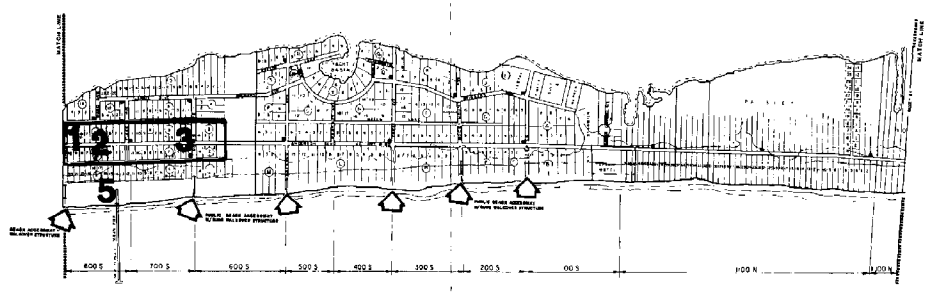
- The water distribution system
- The Town Hall and Police Department
- Primary Fire District
- Beach Access Points (developed and undeveloped)
- Topsail Beach Chapel
- Commercial Fishing Piers
- Commercial Marinas

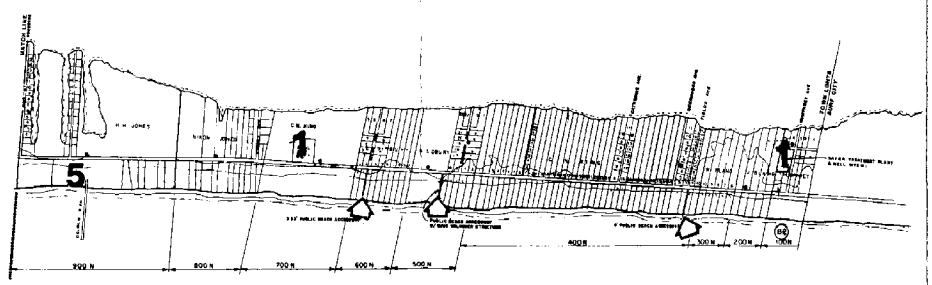
Water System. The Town's water system is supplied by three deep wells. The Town is currently in the process of upgrading the system by refurbishing pumps and adding a new 100,000 gallon storage tank to well number 3. Additional improvements to wells number 1 and number 2 will also be required in the near future to serve peak demand during summer months. The combined pumping capacity of these two wells was at one time as high as 350 gallons per minute; however, current capacity at less than 60% of this - 200 gallons per minute. The Town's annual pumpage has grown steadily over the past five years from 35 million in 1979 to 50 million in 1983. Current expansion plans are designed to meet peak demand which occurs June through August.

Sewage Treatment. There are no central wastewater treatment facilities in Topsail Beach other than a privately owned system constructed for a multi-family condominium project. Nearly all residences and businesses utilize individual septic tanks with nitrification fields.

A 201 Wastewater Treatment Facilities Plan prepared in 1979 with Onslow County and Surf City, proposed a regional collection and treatment system







TOPSAIL BEACH

NORTH CAROLINA

COMMUNITY FACILITIES

MAP 3

LEGEND:

1—WATER DISTRIBUTION SYSTEM
TANKS & TREATMENT FACILITIES
HYDRANT LOCATIONS

2—TOWN HALL & POLICE DEPARTMENT

3—PRIMARY FIRE DISTRICT

4—TOPSAIL BEACH CHAPEL

5—FISHING PIERS (COMMERCIAL)

6—MARINAS (COMMERCIAL)

BEACH ACESS POINTS

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with an estimated cost of $15 million. This system has not been pursued because of cost and lack of grant assistance. Surf City is currently pursuing its own collection and treatment system. Topsail Beach has no active proposal at this time but does wish to consider central sewage collection and treatment if an economically viable system can be constructed.

Solid Waste. The Town currently contracts to have solid waste collected and transported to a County landfill located on the mainland across from Surf City. The State has ordered this landfill closed. Once this site is closed, the only available Pender County landfill will be near Burgaw. Using current collection and hauling methods, utilizing the Burgaw site could triple the City's solid waste disposal costs. Many less costly options are available but each requires considerable front end capital investment.

According to a 1984 solid waste management analysis prepared for Pender County by Waste Industries of Wilmington, the following items should be considered in conjunction with a County wide system:

- o Hire a professional disposal contractor with an overall management system for hauling and disposal
- o Require the contractor to increase storage capacity and consolidate the number of collection sites
- o Install a transfer station in the Topsail/Hampstead area
- o Extend the life of the NC 53 landfill through operational procedures not allowing it to drop below a 5-year life limit
- o Explore incineration as most viable means of replacing existing landfill - compile detailed volume records and feasibility for incineration
- o Find energy customer for incinerator steam to reduce cost

The Town of Surf City faces the same basic solid waste disposal problems. Surf City has stated its desire to work with Topsail Beach in arriving at a plan that best addresses each Town's mutual needs. This will be pursued by Topsail Beach officials.

Existing Land Use Regulations

Zoning. The Topsail Beach zoning ordinance regulates the use of land with the Town's corporate limits. The Town does not exercise one mile extra-territorial zoning jurisdiction. The land use districts provided for in the ordinance are as follows:

- o R-1 Ocean Front
- o R-2 Sound Front
- o R-3 Canal
- o R-4 Inside
- o R-5 Oceanfront - High Density
- o B-1 General Business

- o B-2 Restricted Business

- o C-1 through C-4 Conservation

The R-1, Ocean Front District allows one and two family dwellings and public recreation areas by right. Home occupations are allowed with a special use permit. Most of the Town's ocean front land falls within this district.

The R-2, Sound Front District also allows one and two family dwellings. Most sound front land in the Town is within the R-2 District.

R-3, Canal District, likewise, allows one and two family uses.

R-4, Inside District, again, allows one and two family dwellings as permitted uses. Also churches are permitted as are home occupations. Mobile home parks and offices are allowed by special use permit.

R-5, High Density Ocean Front Residential include as Permitted Uses: Single family dwellings duplexes. Multi-family residential dwellings are allowed by special use permit.

B-1, General Business District allows most retail and service establishments including motels. Recreational Vehicle Parks are allowed by special use permit as are multi-family dwellings.

B-2, Restricted Business District allows less intensive retail and service establishments.

C-1, Conservation allows only agriculture and fishing piers/docks as permitted uses. Public recreational uses can be allowed by special use permit. The C-1 district encompasses the Town's beach areas along the Atlantic Ocean.

C-2 Conservation, consists of the waters andmarshland between the center of the Intracoastal Waterway and mean low water along Topsail Sound and adjacent waters.

C-3, Conservation, includes that portion of the Inlet Hazard Area east and south of the "sixth" subdivision which the Coastal Resources Commission has identified as being suitable for development (approximately 15 to 18 acres).

C-4 Conservation, includes the balance of the Inlet Hazard Area (previously not zoned).

Summary of Ordinance Provisions

- o Accessory uses are only allowed in the B-1 district.

- o Maximum height is 36 feet.

- o Minimum lot size is 5,000 square feet for one unit and 8,500 square feet for two units.

- o B-1 is the only district allowing multi-family development; using 8,500 square feet for the first two units and 3,500 square feet each additional unit, the following minimum areas are required

for multi-family dwellings:

Units	Minimum Lot Area In S.F.
1	5,000
2	8,500
3	12,000
4	15,500
5	19,000
6	22,500
7	26,000
8	29,500
9	33,000
10	36,500
11	40,000
12	43,500 1 acre

- The ordinance does not contain planned development regulations or a similar means of dealing with master planned developments.

Floodplain management regulations. This Town ordinance meets all requirements for participation in the Regular Phase of the Federal Flood Insurance Program. Specific ordinance requirements include:

- Non-residential structures must be elevated to 13 feet above MSL or floodproofed.
- Structure in the V-zone must have open space or breakaway walls below base flood elevations.
- Pilings, anchorages, and breakaway walls must be approved by the Building Inspector.
- No dunes may be altered.
- No use of fill for structural support shall occur in the V-zone.

Subdivision Regulations. The Town's subdivision regulations establish design and construction standards that apply when land is subdivided or re-subdivided for immediate or future sale. Specific objectives and ordinance requirements include:

- Subdivision platting requirements established including design standards for lots, streets, etc.
- Construction standards for street grading and paving, drainage, water, sewer (as available), and underground utilities established.
- Provisions to guarantee completion of improvements through performance bond or other methods.
- Public access to sound or ocean required every 400 feet; 20-foot access way must be dedicated to Town.
- As-built drawings identifying how required improvements were actually constructed must be submitted.

Community Design Structure

The way a person views the town he or she lives in - that is, how it looks and the kind of feelings it evokes - is a subtle but very important part of a town's livability.

A community's design structure is composed of those physical features which give a town individuality and legibility. Its public image can be traced to a specific mental picture carried by a large number of the town's residents and visitors. Generally speaking, community design is shaped by the following elements:

- o Pathways. These are the channels along with an observer moves. For many people, these are the predominant elements in their community image.

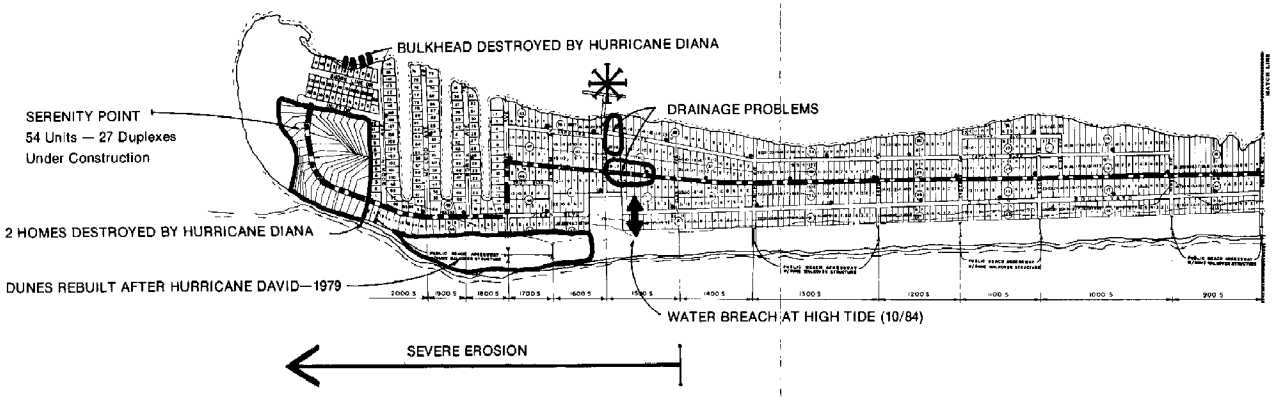
- o Edges. These are the linear elements that can be seen but which are not used or considered as paths. They are boundaries between two phases or linear breaks in continuity: shores, railroad lines, and edges of development. They may be barriers which close one area off from another, or they may be lines along which two areas are related and joined together.

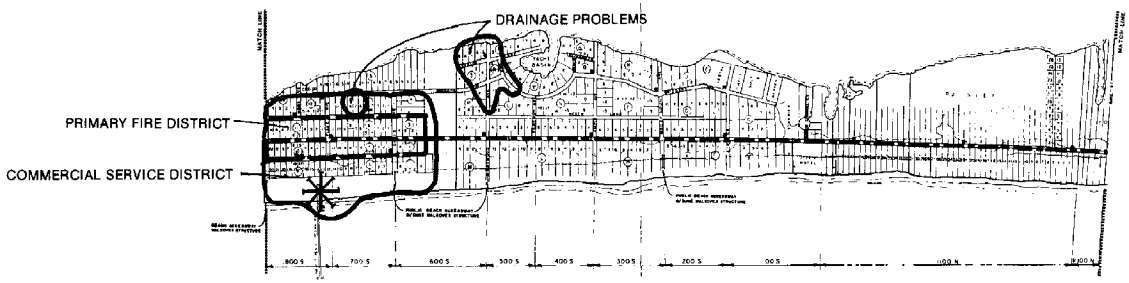
- o Districts. These are sections of the town with a two-dimensional character, which the observer mentally enters "inside of", and which are recognizable as having some common identifying character.

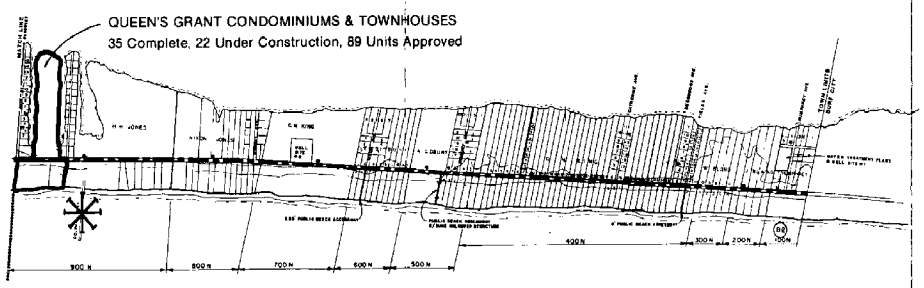
- o Nodes. These are the strategic points in a town into which an observer can enter. They may be junctions, places of a break in transportation, or a crossing or convergence of paths. A node may also be a concentration which gains its importance from having some special physical character, as a popular street corner, a fishing pier, or an enclosed square. Nodes can be at the junctions of paths or they can be the focus of a district.

- o Landmarks. These are another type of point reference but in this case the observer does not enter within them - they are external. They are usually simply defined physical objects: a building, sign, store or mountain. Some landmarks are visible from only a short distance, while others are some distance away.

The pattern of these elements provides a framework for organizing and analyzing the form and appearance of the natural and manmade environment. Map Four graphically displays the concept of Community Design Structure in Topsail Beach. Key features include: the beach, marshes, fishing piers, and N.C. 50 as the Town's major pathway. Additionally, specific districts that house a particular development, problem area or political boundary are identified.







TOPSAIL BEACH

NORTH CAROLINA

COMMUNITY DESIGN STRUCTURE

MAP 4

LEGEND:

- LANDMARK
- DISTRICT
- PATHWAY

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GROWTH TRENDS AND PROJECTIONS

The 1980 Land Use Plan presented the following population projections:

TOPSAIL BEACH, NORTH CAROLINA
POPULATION PROJECTIONS

Year	Peak Seasonal	Average Seasonal	Permanent
1975	4,110	3,140	200
1980	5,310	4,060	220
1990	7,720	5,890	260
2000	10,120	7,720	300

Source: 1980 Land Use Plan Update.

Growth trends over the past five years can be analyzed by comparing residential unit counts from 1980 and 1985. This data is presented by the following Table:

TOPSAIL BEACH, NORTH CAROLINA
Residential Units
1980 - 1985

	1980	1985	Net Change	% Change
Single Family	566	669	103	+ 18.2
Duplex And Multi-Family	61	185	124	+203.3
Motel	217	217	0	0
TOTAL	844	1,071	227	+ 26.9%

Source: 1980 Land Use Plan and Satilla Planning, Inc. from December, 1984 field survey.

Based on discussions with local realtors handling vacation rentals, the average number of persons per dwelling unit during vacation periods is 6.5. Using an 80% occupancy rate, the Town's estimated seasonal population is now approximately 5,569 persons. Peak seasonal population is estimated at 7.5 persons per unit with 100% occupancy or 8,033. These 1985 estimates exceed the 1980 plan's projections for 1990.

The ultimate build out of Topsail Beach and resulting estimates as to the number of dwelling units can be projected by the following method. The The Vacant Land Analysis identified approximately 180 acres of land in Topsail Beach that is both vacant and developable. If this vacant land were to developed with the same ratio of land uses as currently exists in the Town, the 180 acres would be 91% residential and 9% commercial and other uses. This means that nearly 164 acres would be residential or more than double the 161.4 acres of residential land currently in Topsail Beach. If this 164.9 acres were developed to the current average density of 5.29 dwelling units per acre, it would support 866 new units.

Using this means of estimating ultimate build out of Topsail Beach at current densities in conjunction with the estimated 6.5 persons per dwelling unit during normal vacation periods and 7.5 persons during peak period, the following projections are made:

- o ultimate average seasonal population: 10,072

- o ultimate peak seasonal population: 14,528

This analysis is based entirely on past trends and development patterns. Central sewage, additional condominium projects, and other factors which may significantly alter past trends, would serve to increase density and resulting future build out estimates.

CONSTRAINTS TO DEVELOPMENT

Land Suitability

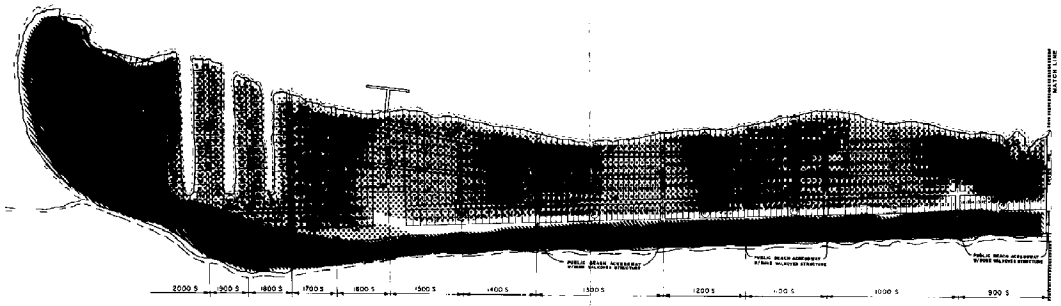
The 1980 Land Use Plan Update identifies Hazard Areas, Soils and Water Supply as the Land Suitability factors applicable to Topail Beach. The Hazard Areas identified are lands subject to erosion near New Topsail Inlet and Flood Plain areas.

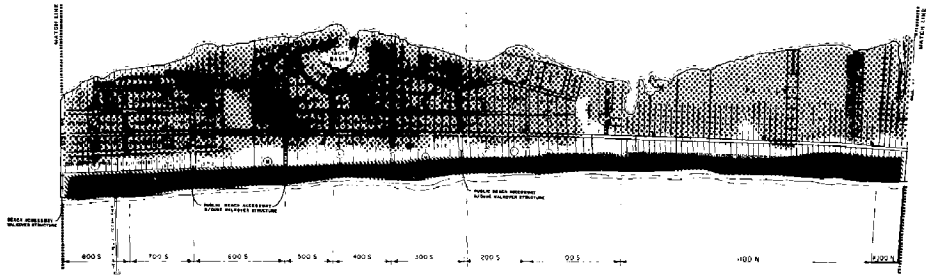
Erosion Hazard Areas. Map Four, Community Design Structures, identifies areas that experienced significant erosion and property damage during Hurricanes David (1979) and Diana (1984). Also identified are areas where the Town reconstructed dunes that were destroyed by Hurricane David. The 1980 plan concludes that erosion at the Island's south end - (both the inlet area and south end beaches) - is the long term trend. New Topsail Inlet will continue to migrate and the apparent current long term trend is eroding the south end of Topsail Island.

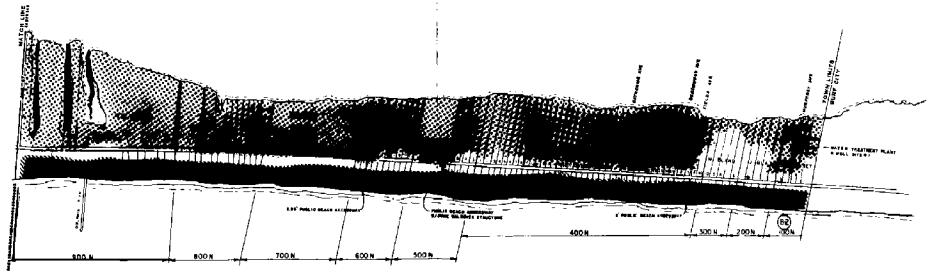
Flood Hazard Areas. These areas are identified by the National Flood Insurance Program's Rate Map dated February 15, 1985, and are delineated by Map Five. Essentially the same map in draft form was used to identify flood hazard areas as part of the Town's Storm Hazard Plan prepared in 1984. While the February 15, 1985 map significantly reduces the areas of the Town designated as "V" zones, or areas subject to high velocity wave action, it also raises "V" zone flood levels from 3 to 4 feet along the beachfront. The orignal September 30, 1985 map generally designated "V" zone elevations as 13' along the ocean. New "V" zone flood elevations range from 14 to 17 feet. The majority of the Town, however, benefits from lower base flood elevation "A" zones where the 100-year flood elevation is now typically 10 feet with 9 feet at the northeastern end of town.

Soils. The 1980 Plan identifies nine soil mapping units applicable to Topsail Beach and presented the following description as to their properties:

> Beach - fore dune association - This unit is mainly on the ocean side of the banks with a few areas adjacent to the inlets and consists of long narrow sandy strips between mean low tide and the back base of the frontal dune. Tidal flooding is a severe limitation to all uses other than beach related recreation activity.
>
> Carteret soils - Spartina alterniflora - These are lowest lying areas in the marsh on the sound side of the island. They are sandy throughout, flooded daily by tides, and vegetated mainly with Spartina alterniflora.
>
> Corolla fine sand - The soils are found on flats, between dunes, and next to depressions and sloughs. They are sandy throughout and have a seasonally high water table of 1.5 to 3 feet below their surface. Because of this high water table, installation, maintenance, and proper functioning of septic tank filter fields is a problem and pollution of ground waters may result.
>
> Dredge Spoil - These areas are located along the Intracoastal Waterway and are composed of sand and shells.







TOPSAIL BEACH

NORTH CAROLINA

FLOOD HAZARD AREAS
(FROM 2/15/85 F.I.R.M.)

MAP 5

LEGEND:

FLOOD HAZARD AREA—100 YEAR FLOOD PLAIN ("A" ZONES)

FLOOD HAZARD AREA ("V" ZONES)

The preparation of this map was financed in part through a gram provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, N.O.A.A.

Prepared By: SATILLA PLANNING
200 Osborne Street
St. Marys, Georgia

Mapping Date: FEBRUARY, 1985

Duckston fine sand - These are nearly level soils found on flats and in depressions west of the dunes and troughs between the dunes. It is a sandy soil with a seasonally high water table within one to two feet of the surface, and for this reason rapid filtration from septic tanks may cause ground water pollution.

Madeland - This mapping unit is adjacent to the water on the sound side. It was pumped or dredged during the construction of canals to be used as building sites. The water table fluctuates with the tidal changes and is usually between two and four feet of the surface during high tide. These soils generally have inadequate filtering capacity with an accompanying high hazard of ground water pollution.

Carteret Soils, J. roemerianus - These soils are on the marshside of the island with elevations from nearly sea level to one or two feet. They flood at least monthly and often weekly.

Newhan fine sand - These soils are on the vegetated dunes parallel to the ocean and are commonly separated by low trough like depressions. Because of inadequate filtering capacity, on-site sewage disposal may result in ground water pollution.

Newhan - Corolla fine sands - These soils are on low dunes and intervening troughs that parallel the ocean. They have a seasonably high water table of 1.5 to 3 feet below the surface and because of poor filtering capacity, on-site sewage disposal may result in ground water pollution.

Groundwater Supply. Pender County's groundwater is provided by three aquifers which yield water from wells: surficial sands, Peedee formation and Castle Hayne limestone. The water table throughout the County is almost always within 15 feet of the ground surface and in the surficial sands, as predominate at Topsail Beach, it represents the top of the zone of saturation. Consequently well points, drawing water from the surficial sands, are the chief source of domestic water supply for the rural areas. These surficial sands cover the beach areas of the County and constitute the principal water source for most private wells in the beach areas. Water in the sands is usually within 15 feet of the lands surface, but as discussed above, under certain soil conditions may occur within 1 to 3 feet of the land surface and are easily subject to contamination from on-site sewage disposal. Sands of the Pee Dee formation furnish water to most of the drilled wells west of the Northeast Cape Fear River. The Castle Hayne limestone unit is a potentially important aquifer in the northeastern and southeastern parts of the County. Because of sparse population little water is withdrawn from this unit and its high permeability and excellent recharge facilities indicate that large perennial supplies are available in the eastern part of the County.

Fragile Areas

These areas in Topsail Beach correspond to the specific resource systems identified by the C.A.M.A. as Areas of Environmental Concern (AEC's). AEC's applicable to the Topsail Beach Land Use Plan are:

The Estuarine System

- o Coastal Wetlands
- o Estuarine Waters
- o Public Trust Areas
- o Estuarine Shoreline

Ocean Hazard Areas

- o Ocean Erodible Areas
- o High Hazard Flood Areas
- o Inlet Hazard Areas

Fragile Coastal Natural Resource Areas

- o Coastal Complex Natural Areas

Subchapter 7H of the North Carolina Administrative Code describes each AEC in detail. The policy section of this plan identifies the importance of each AEC to the Topsail Beach Land Use Plan and its implementation program (page 22). The Town's Storm Hazard Mitigation and Post Disaster Reconstruction Plan dated June, 1984, identifies and maps the Ocean Hazard AEC's. Map Five of this plan (page 19) identifies the High Hazard Flood AEC and the balance of the 100-year flood plain.

The maritime forest area that exists primarily to the west of NC 50 at the northwest end of Town is recognized as a Coastal Complex Natural Area. It consists of upland, intermediate and wet forest that is dominated by hardwood tree species. It is thought to be the ultimate phase of forest succession ("climax forest") common to the barrier islands and may take up to 1000 years to develop. The forest's unique canopy shape and structure is the result of salt spray kill and soil growing conditions. The stunting from salt spray and poorly developed soils have combined to produce a very low canopy which includes species usually characteristic of the subcanopy. Subcanopy species include American Holly, Yaupon, Hornbeam, Hop Hornbeam and Flowering Dogwood. The maritime forest is significant for its aesthetic appeal, wind buffering ability, and soil stabilizing characteristics, and as habitat for many birds and animals.

The 1980 Plan determined that the following AEC's are not found in Topsail Beach and therefore are not applicable to this plan:

Fragile Coastal Natural Resource Areas

- o Coastal Areas that Sustain Remnant Species
- o Unique Coastal Geologic Formations
- o Significant Coastal Archeological Resources
- o Significant Coastal Historic Architectural Resources

The Town will consider appropriate resource management policies for such areas as future conditions may dictate.

Community Facilities Capacity

Community facilities and their capacities are identified by the Existing Conditions Section of this Plan.

POLICY STATEMENTS AND IMPLEMENTATION STRATEGIES

The Topsail Beach Board of Commissioners has adopted the following policies to guide land development within its jurisdiction over the next ten (10) years. These policies are intended to guide not only local government decisions but also state and federal agency decisions in accordance with subchapter 7B of the State's Coastal Management regulations. These policies establish a systematic basis by which proposed developments will be judged. If a proposed project or development would violate the intent of these policies, action to prevent its construction will be taken by the local, state and federal government agencies with jurisdiction.

Outline

1. RESOURCE PROTECTION
   a. Estuarine System
   b. Ocean Hazard Areas
   c. Physical Constraints to Development
   d. Fragile Land Areas
   e. Water Supply Protection
   f. Package Sewage Treatment Plants
   g. Storm Water Runoff
   h. Marinas
   i. Floating Home Development
   j. Development of Sound & Estuarine Islands

2. RESOURCE PRODUCTION AND MANAGEMENT
   a. Commercial and Recreational Fisheries
   b. Off-Road Vehicles

3. ECONOMIC AND COMMUNITY DEVELOPMENT
   a. General Land Use
   b. Density and Scale of Development
   c. Industrial Development
   d. Provision of Services to Development
   e. Preferred Urban Growth Patterns
   f. Beach Nourishment and Channel Maintenance Projects
   g. Tourism and Beach/Waterfront Access

4. CONTINUING PUBLIC PARTICIPATION

5. STORM HAZARD MITIGATION, POST-DISASTER RECOVERY AND EVACUATION PLANS

   a. Storm Hazard Mitigation
   b. Post-Disaster Reconstruction

1. RESOURCE PROTECTION

Topsail Beach will support and enforce through its CAMA permitting capacity the State policies and permitted uses in the Areas of Environmental Concern (AEC's). The State policy statements for AEC's offer protection for Topsail Beach's fragile and significant environmental resources through CAMA permitting procedures. In accordance with those policies set forth in subchapter 7H of the North Carolina Administrative Code, Topsail Beach adopts the following policies concerning AEC's within its jurisdiction.

a. The Estuarine System. In recognition of the enormous economic, social and biological values, the estuarine system has for North Carolina, Topsail Beach will promote conservation and management of the estuarine system as a whole, which includes the individual AEC's: coastal wetlands, estuarine waters, public trust areas, and estuarine shorelines.

The management objective for the system shall be to give highest priority to the protection and coordinated management of all the elements as an interrelated group of AEC's, in order to safeguard and perpetuate the above stated values, and to minimize likelihood of significant loss of private property and public resources.

Policies

In general, permitted land uses in the coastal wetlands, estuarine waters, and public trust areas shall be those which are water dependent. Examples of such uses may include: utility easements, docks, boat ramps, dredging, bridges, and bridge approaches, revetmets, bulkheads, culverts, groins, navigational aids, mooring pilings, navigational channels, simple access channels, and drainage ditches.

Land uses that are not water dependent shall not be permitted in coastal wetlands and public trust areas. Examples of uses that are not water dependent may include: restaurants, residences, apartments, motels, hotels, trailer parks, private roads, factories, and parking lots.

Specific policies regarding acceptable and unacceptable uses within the individual AEC's of the estuarine system are stated below. In all cases the particular location, use, and design characteristics shall be in accord with the general use standards for coastal wetlands, estuarine waters, and public trust areas as stated in NCAC 15 subchapter 7H.

Coastal Wetlands: Acceptable land uses may include utility easements, fishing piers, and docks. Unacceptable uses may include, but would not be limited to, restaurants, businesses, residences, apartments, motels, hotels, floating homes, parking lots, private roads, and highways.

Estuarine Waters: Appropriate uses may include simple access channels, structures which prevent erosion, navigational channels, boat docks, marinas, piers, and mooring pilings.

Public Trust Areas: In the absence of overriding public benefit, any use which significantly interferes with the public right of navigation or other public trust rights which apply in the area shall not be allowed. Projects which would directly or indirectly block or impair existing navigational channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish water shall, in general, not be allowed.

Uses that may be allowed in public trust areas shall not be detrimental to the public trust rights and the biological and physical functions of the estuary. Examples of such uses include the development of navigational channels or drainage ditches, the use of bulkheads to prevent erosion, the building of piers, docks or marinas.

Estuarine Shoreline: Suitable land uses within the estuarine shoreline AEC are those compatible with both the dynamic nature of estuarine shorelines and the values of the estuarine system.

Residential, recreational, and commercial land uses are all appropriate types of uses along the estuarine shoreline provided that all standards of NCAC 15 Subchapter 7H relevant to estuarine shoreline AEC's are met.

b. Ocean Hazard Areas. In recognition of the critical nature of Ocean Hazard Areas due to their special vulnerability to erosion and dynamic processes and their possible danger to life and property because of natural forces, Topsail Beach supports the State policies for Ocean Hazard Areas in Subchapter 7H of NCAC 15. The Ocean Hazard Areas designation for Topsail Beach includes the AEC's of Ocean Erodible Areas, High Hazard Flood Areas, and Inlet Hazard Areas.

Suitable land uses in Ocean Hazard Areas generally

are those which eliminate unreasonable danger to life and property and which achieve a balance between the financial, safety, and social factors involved in hazard area development. Ocean shoreline erosion control activities and dune establishment/ stabilization are acceptable types of land uses. Residential, commercial and recreational land uses and parking lots for beach access are also acceptable types of use in ocean hazard areas provided that:

- The setback measurements established by Subchapter 7H are met.
- Mobile homes are not located within high hazard flood areas.
- Development does not involve the significant removal or relocation of frontal dune sand or vegetation thereon.
- Development is consistent with minimum lot size, setback requirements, or other relevant requirements established by local regulations.
- Development implements means and methods to mitigate or minimize adverse impacts of the project as required by NCAC 15 Subchapter 7H.
- Development of growth-inducing public facilities such as sewers, waterlines, roads, bridges, and erosion control measures occurs only in cases where:

  national or state interest and public benefits are clearly overriding factors,

  facilities would not exacerbate existing hazards or damage natural buffers,

  facilities would be reasonably safe from flood and erosion control related damage, and

  facilities do not promote growth and development in ocean hazard areas.
- Development will not create undue interference with legal rights to public access and use of such areas.

c. Physical Constraints to Development. Two specific areas that constitute physical constraints to develop-

ment have been identified by Topsail Beach: Soils/ Septic Tank Suitability, and Flood Prone Areas. The following policies are adopted to properly recognize these constraints.

Policies

Soils and Septic Tank Suitability

1) Pender County enforces standards to ensure that all single and two-family dwellings constructed have properly installed and functioning septic tanks.

2) Special Use Permits for multi-family dwellings will be issued only if the sewage disposal systems meet the requirements of the Town of Topsail Beach, Pender County, the State of North Carolina, and the United States.

Flood Prone Areas

- The development of residential and commercial uses will only be allowed if they meet the Town's Flood Plain Management Regulations and other applicable state and federal regulations.

Policy Implementation

The above policies are implemented through enforcement of the Town's Zoning Ordinance and Flood Plain Management Regulations. Additionally, the Town Planning Board will make periodic requests to appropriate State and Federal agencies for monitoring and evaluation of water quality conditions surrounding the Town and the effect of development in the Town on water quality.

d. Fragile Land Areas. Maritime forests in Topsail Beach are recognized as both an important resource and as an important component of the barrier island eco-system providing wildlife habitat and serving to stabilize soil and sand.

Policy

It shall be the policy of the Town to encourage the maintenance of existing maritime forest by allowing development that is designed to cause the least practicable disruption to the maritime forest cover. All uses currently permitted under the Town Zoning Ordinance will be allowed in areas with maritime forests but only if consistent with the above policy.

Policy Implementation

The Town Building Inspector will determine if development plans conform with the above policy of "least practicable disruption" and issue building permits accordingly.

e. Water Supply Protection. The Town's water system draws from a deep aquifer which is recharged on the mainland. Therefore, little or no danger of pollution of the water supply from island development exists.

f. Package Treatment Plants. The following policy is hereby adopted:

Policy

Topsail Beach may permit the use of private sewage collection and treatment systems if associated development is consistent with the Town's development plans and policies; the system meets state and federal permitting requirements; the project will have no adverse impacts beyond its boundaries; and, the developer can assure the Town that a system guaranteeing perpetual monitoring and maintenance will be in place upon project completion.

Policy Implementation

The above policy will be enforced through the Town's Zoning Ordinance, site plan review, Subdivision Regulations and Building Code.

g. Storm Water Runoff. Development, often well outside designated Areas of Environmental Concern (AEC's), can pose a serious threat to the health and productivity of the estuarine system through the rapid discharge of pollutants washed off impervious surfaces such as streets, roofs, and parking lots by rain.

Topsail Beach's existing residential density for developed land is fairly low, about 6 units per acre. However, only about half of all platted lots are developed, and there is a substantial amount of unplatted land. As Topsail Beach continues to develop, impacts from stormwater runoff can be expected to increase. The following policy is adopted in recognition of potential impacts from storm water runoff.

Topsail Beach will implement various methods it considers appropriate to reduce storm water runoff. Examples of methods which could be used in single family construction to minimize runoff include

using pervious or semi-pervious materials, such as pebbles, turfstone or crusher-run, for driveways and walks, and retaining natural vegetation along marsh and waterfront areas to take advantage of their natural filtering properties. Zoning and subdivision regulations will be used to implement these policies.

Policy Implementation

This policy will be implemented through development review and approval under the Town's Development Code.

h. Marina Development. There are several types of impacts associated with the development of marinas. Of chief concern are those impacts which alter or disturb natural systems affecting resource production. Presently, the State, the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers place extensive limitations on the altering of natural systems in conjunction with marina development.

Policy

The Town will review any proposed marina development in light of the goals and policies of its Land Use Plan and land development ordinances.

Policy Implementation

This policy will be enforced through the Zoning Ordinance and Building Code in conjunction with state and federal regulations.

i. Floating Home Development. The Town has adopted an ordinance to regulate floating home development within its jurisdiction. The ordinance establishes standards and conditions by which such activities are permitted within certain zoning districts.

j. Development of Sound and Estuarine Islands. These areas within the Town are currently zoned "Conservation" under the terms of the Town's Zoning Ordinance. Water dependent uses such as docks, water access, boat ramps, and fishing piers are permitted as a matter of right as well as agricultural uses.

2. RESOURCE PRODUCTION AND MANAGEMENT

Topsail Beach's natural resources play a vital role in its

economy. Its waters and beaches are utilized for recreational activities including fishing. Protection of these resources is a prime concern of Topsail Beach. To deal with issues that involve resource production and management, Topsail Beach adopts the following policies:

a. Commercial and Recreational Fisheries. Protection of coastal and estuarine waters is a prime prerequisite to the protection of area fisheries. Habitats for shellfish and finfish in all stages of their life cycle must be preserved in order to maintain fishing as a viable economic and recreational activity. Topsail Beach also recognizes that Recreational Fisheries are extremely important to its tourism industry. Therefore, any development which will profoundly and adversely affect coastal and estuarine waters will be discouraged. In the design, construction and operation of water dependent developments, efforts must be made to mitigate negative effects on water quality and fish habitat. These efforts will be at the owner's or operator's expense.

b. Off Road Vehicles. No vehicular traffic will be allowed over the oceanfront dunes within the Town limits at any time; and, no vehicular traffic will be allowed on the beach between the dates established annually by the Town Board from the northern Town limits to the end of Topsail Inlet. Vehicles may be operated at other times on certain parts of the beach below mean high water after registration and issuance of a permit from the Town. The maximum speed limit is 10 miles per hour. This policy is implemented through Article F of the Town Code. Currently, there are portions of the beach that are closed at all times.

3. ECONOMIC AND COMMUNITY DEVELOPMENT

a. General Land Use Policy. Topsail Beach supports the development of residential, commercial and recreational uses within the Town consistent with other relevant policies and local land use regulations. The land use controls of Topsail Beach are and will continue to be written and enforced to insure that proper and adequate measures are incorporated into the design, construction and operation of such developments so that any substantial negative impacts to neighboring land uses and the environment are minimized.

It is the policy of the Town to permit those land uses which enhance the Town as a family-oriented tourist community for living and recreation. Examples of land uses consistent with this policy include

single and multi-family residential uses, tourist-oriented businesses, and supporting services or commercial uses.

b. Density and Scale of Development. Densities for new development shall be consistent with the density of existing land use as enforced through the Town's Zoning Ordinance. Building scales shall be consistent with existing construction in Topsail Beach, which is characterized by "low-rise" one, two and three story structures.

c. Industrial Development is not considered an appropriate use for Topsail Beach and is not permitted under the terms of the Town's Zoning Ordinance.

d. Provision of Services to Development. The Town provides water, and solid waste disposal services to its residents. Rescue squad and fire protection are provided through a volunteer department. The Town will continue to serve permitted development with water and solid waste collection services.

e. Preferred Urban Growth Patterns. Topsail Beach is a contained community at the southern end of Topsail Island. Therefore, all growth within the Town occurs in a relatively compact manner. The Town will continue to control specific development locations through enforcement of Resource Protection Policies and the Town Zoning Ordinance. The zoning map and land classification map graphically display these policies.

f. Beach Nourishment and Channel Maintenance Projects. The Town supports beach nourishment and channel maintenance projects. The use of appropriate dredged materials for beach nourishment is encouraged. The Town's current policy is to use its 3% accommodations tax receipts for erosion control projects.

The Town's policies with regard to erosion control and dune preservation are more fully identified in the Erosion Control Study - Town of Topsail Beach prepared in 1979. The following policies from this study are hereby incorporated into the Land Use Plan:

1) While the causes of erosion - the ocean's wind and waves - cannot be stopped, the effects of these processes can be mitigated or corrected.

2) The most effective corrective measures and mitigation methods are those which are ecologically sound, consistent with state and federal policies, and allocate costs most equitably among the users of the beach.

3) The best method of correcting erosion damage (consistent with the policy in number 2 above) is through renourishment of the berm and dune system.

4) The best methods of mitigating and preventing damage from erosion are land use controls and dune protection and maintenance.

5) The beach is a resource of statewide significance and the value of a healthy productive dune extends to users throughout the region and state.

6) Because of the uncertain and conflicting policies at the state and federal levels for assistance to local governments in protecting the dune and berm system, every effort must be made at the local level to generate funds for corrective and mitigating measures.

The average annual long term erosion rate in Topsail Beach is less than two feet per year.

g. Tourism and Beach/Waterfront Access. Topsail Beach considers beach access as a major priority. It is its policy to: 1) provide reasonable means and opportunity for all members of the public to have access to the beach and 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; 2) to encourage the use of non-auto oriented transportation methods such as bicycling and walking on the Town's beach and waterfront areas; 3) to prohibit all traffic on the dune and berm except at designated access points and upon a ramp or walkover structure; and 4) to consider future beach and water access improvements based on land availability, availability of funds for such projects, and demonstrated need for further improvements.

4. CONTINUING PUBLIC PARTICIPATION

It is the policy of the Town to assure that all property owners and residents have equal participation status in land use decisions that may affect them. In consideration of the relatively small resident population and geographical area of the Town, and in recognition of the inability of some persons to participate in the land planning process because of physical infirmity or job conflict, it shall be the policy of the Town to utilize a variety of public education and participation techniques. These techniques may include citizen surveys, pubic meetings and workshops, use of all news media to the extent that cooperation can be obtained, including required public hearings and review of draft plans and policies.

It is a further policy of the Town to follow a continuing land use planning process of problem identification, data collection, development of alternatives, policy formulation, development of implementation strategies, and monitoring.

In pursuit of the above policies the following methods of implementation should be used:

1) In addition to required public hearings, public meetings and workshps should be held to discuss land use policies and alternatives while in draft stages.

2) Draft copies will be circulated to local officials for review and made available to the general public at Town Hall and other appropriate public places.

3) To insure that the land use planning process is continuous the Town will conduct periodic reviews of the policies set out in this plan. The purpose of the review will be to evaluate the effect of the policies on land use changes that have occurred or may be anticipated. The Town, through either the Town Council or the Planning Board, shall either make a finding that no changes are necessary, or make recommendations for necessary changes. Such review shall be done on at least a 5-year basis or as may be determined necessary by the Town.

   Public meetings were held on the following dates to solicit citizen input during the planning process:

   October 23, 1984
   November 14, 1984
   March 20, 1985
   September 11, 1985
   October 23, 1985
   and a formal public hearing was held after the 30-day advertising period on January 8, 1986.

5. STORM HAZARD AND POST-DISASTER RECONSTRUCTION

a. Storm Hazard Mitigation

The Storm Hazard Mitigation Plan dated June, 1984 contains the following policies:

The entire Town of Topsail Beach is susceptible to significant storm damage from a hurricane or a storm of similar magnitude. About three-fourths of all development in the Town is located in AEC's or in areas susceptible to flooding associated with the 100-year storm. The entire Town is susceptible to wind damage. Recognizing this, the Town has already taken strong steps to insure that future development occurs in a manner that minimizes hazard damage - specifically:

(1) The Town's growth policy encourages low density residential development avoiding high density - high rise developments that are found in many North Carolina beach communities. The lack of specific plans for a central sewage treatment system will also enhance the continuation of this policy.

(2) The Town's policies support and are consistent with State policies and regulations for development in Areas of Environmental Concern.

(3) All new development must conform with the provisions of the N.C. Building Code.

(4) The Town's flood plain development policies conform with all Federal and State requirements.

b. Post Disaster Reconstruction

The Town's Post Disaster Reconstruction Plan dated June, 1984 is organized in the following sections:

- o Introduction
- o Organization of Local Damage Assessment Team
- o Damage Assessment Procedures and Requirements
- o Organization of Recovery Operations
- o Recommended Reconstruction Policies

The following provides a summary of the Plan's most important provisions and policies from each of these five sections:

(1) Introduction. Defines plan purpose and use; identifies 3 distinct reconstruction periods: Emergency, Restoration, and Replacement/Reconstruction. Outlines sequence of procedures to be followed to meet State and

Federal Disaster Relief regulations: 1) Assess storm damage and report to County; 2) County compiles and summarizes individual community reports; 3) State compiles County data and makes recommendation to the Governor; 4) Governor requests Presidential declaration; 5) Federal relief programs available.

(2) Organization of Local Damage Assessment Team. Outlines personnel available; establishes team members; designates building inspector as team chief.

(3) Damage Assessment Procedures and Requirements. The purpose of this phase is to rapidly determine immediately following a storm disaster: 1) number of structures damaged; 2) magnitude of damage by structure type; 3) estimated total dollar loss; and 4) estimated total dollar loss covered by insurance. To accomplish this, the Plan establishes four categories of damage: 1) destroyed - (repairs > 80% of value); 2) major (repairs > 30% of value); 3) minor (repairs < 30% of value); and 4) habitable (repairs < 15% of value). A color coding system in conjunction with tax maps is recommended for this phase of damage assessment.

Total damage in dollars is estimated by taking the County tax valuations times a factor to make prices current and then factoring these figures according to the above damage classifications. Estimated insurance coverage is made by utilizing information as to average coverage obtained from insurance agencies on an annual basis.

(4) Organization of Recovery Operations. The Mayor and Board of Commissiors assume the duties of a Recovery Task Force. The Task Force must accomplish the following:

- o Establish reentry procedures
- o Establish overall restoration schedule
- o Set restoration priorities
- o Determine requirements for outside assistance and request such assistance when beyond local capabilities.
- o Keep appropriate County and State officials informed using Situation and Damage Reports
- o Keep the public informed

- o Assemble and maintain records of actions taken and expenditures and obligations incurred

- o Proclaim a local "state of emergency" if warranted

- o Commence cleanup, debris removal and utility restoration activities undertaken by private utility companies

- o Undertake repair and restoration of essential public facilities and services in accordance with priorities developed through situation evaluations

- o Assist individual property owners in obtaining information on the various types of assistance that might be available from federal and state agencies

A schedule outlining tasks and general time frames is provided in the plan.

(5) Recommended Reconstruction Policies. The policies outlined are for the Mayor and Commissioners to consider after a storm occurs. It is not practical to determine at this time what specific responses are appropriate. The following policy areas are discussed:

- o Reentry. Not allowed until the Mayor or Town official in charge at the command post determines it safe and initial damage assessment is completed. A list of property owners will be maintained and kept at the N.C. Route 50 entry to Town.

- o Permitting. Permits to restore previously conforming structures outside AEC's issued automatically. Structures suffering major damage allowed to rebuild to original state but must be in compliance with N.C. Building Code, Zoning and Flood Hazard Regulations. Structures with minor damage allowed to rebuild to original state before the storm. Structures in AEC's allowed to rebuild only after determination has been made as to adequacy of existing development regulations in these special hazard areas.

- o Utility and Facility Reconstruction. Water system components repaired or replaced must be flood-proofed or elevated above 100-year flood levels.

- o Temporary Development Moratorium. To be consid-

ered after major storm damage for AEC's if existing regulations appear inadequate to protect structures from storm damage.

c. Hurricane Evacuation

Topsail Beach has adopted a Hurricane Emergency Plan in conjunction with the Town of Surf City. The Topsail Beach hurricane evacuation procedures are very thorough. The plan presents a program for carrying out evacuation operations as part of a five phase effort: Condition 3 - Hurricane Watch (approximately 48 hours to forecasted land fall); Condition 2 - Hurricane Warning (approximately 24 hours to forecasted landfall); Condition 1 - Evacuation Phase (12 hours or less to expected landfall); Condition 0 - Landfall Imminent; and Reentry. The plan describes how specific preparatory, shutdown, warning and evacuation operations will be conducted by Town personnel during each phase of the evacuation process.

At the southern end of the Town there are three north-south routes - Carolina Boulevard, Anderson Boulevard (N.C. Highway 50), and Ocean Boulevard. The number of north-south routes is reduced to two north of Hines Street and to only one (Anderson Boulevard) from Bridges Street to Surf City. Consequently, the successful evacuation of Topsail Beach is dependent upon keeping Anderson Boulevard clear and open until all evacuation operations are complete.

Therefore, the prime concern with the Topsail Beach Hurricane Emergency Plan is that if localized flooding or heavy winds occur prior to the setting of Condition 1, the only evacuation route from the Town could be impassable before evacuation operations are completed or before they even commence. Because of the potential difficulties in keeping this 4.5 mile length of roadway open for evacuation operations, a two-phase evacuation order was recommended for the Town's Hurricane Emergency Plan.

A Phase 1 Evacuation Alert is to be issued concurrently with the issuance of the hurricane warning and the setting of Condition 2 (24 hours prior to projected landfall). The Topsail Beach Chief of Police should request that the Pender County Emergency Services Coordinator open the designated shelter at the Topsail High School at this time and Town residents and visitors should be urged to evacuate at this time. A Phase 2 Evacuation Order (mandatory evacuation with door to door warnings provided by the Topsail Beach Police and Fire Departments) will be issued as Condition 1 is set, as is currently provided for in the Town's Plan.

LAND CLASSIFICATION

Background and Purpose

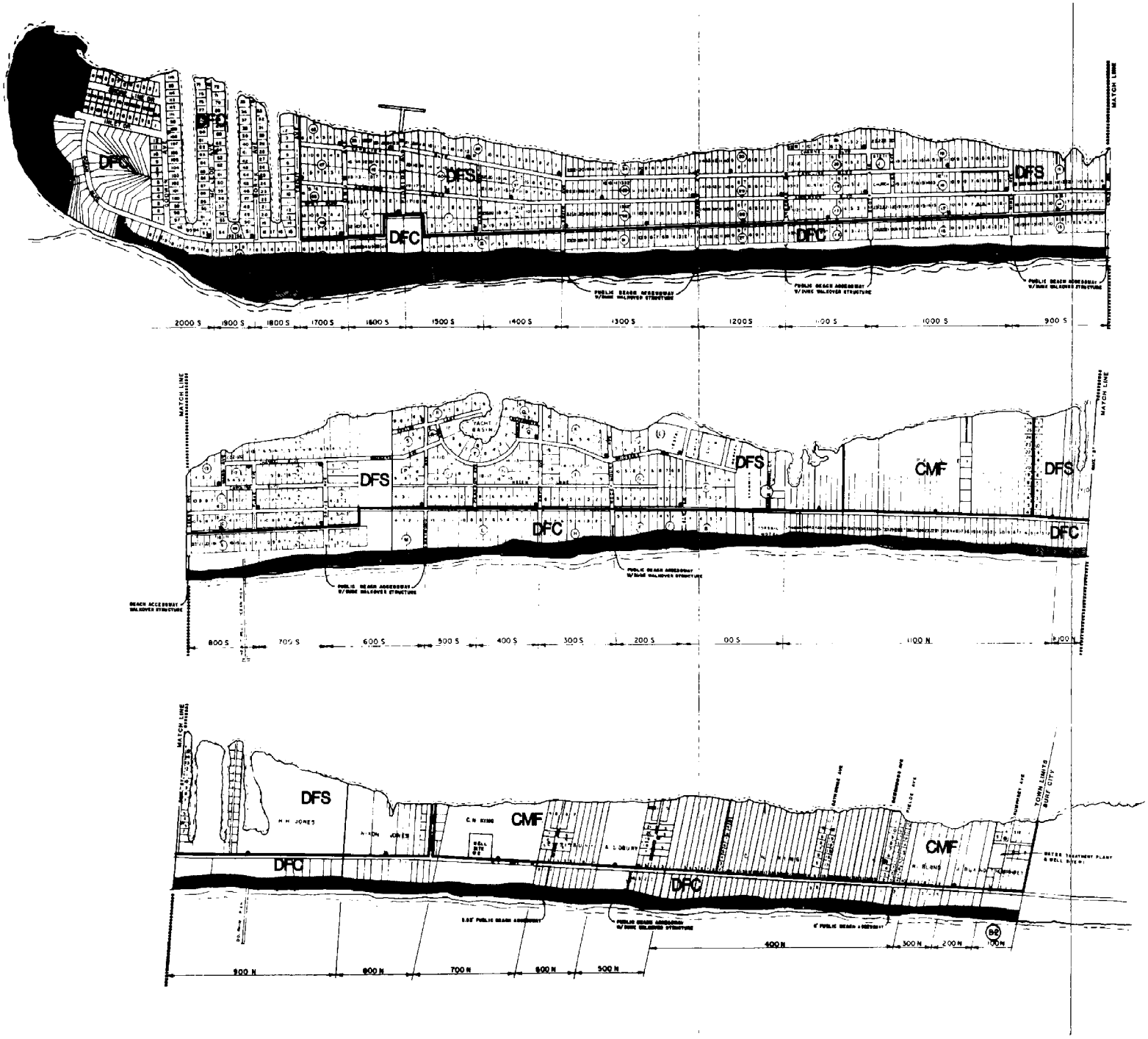
The North Carolina Coastal Area Management Act Guidelines require that each city, town and county located in the twenty county coastal area develop a land classification map placing all of the land within its jurisdiction into one of five classes and their subclasses.

A land classification system for Topsail Beach has been developed as a means of assisting in the implementation of the goals, objectives, and policies of this Plan. By delineating land classes on a map, the Town and its citizens can specify those areas where certain policies (local, state, and federal) will apply. Although specific areas are outlined on the Land Classification Map, it is merely a tool to help implement policies and not a strict regulatory mechanism. The designation of land classes therefore allow the Town to illustrate its policies as to where and to what density growth is desired, and where natural and cultural resources will be preserved.

Relationship of the Land Classification Map to Policy Statements

The Land Classification Map is a graphic representation of the policy statements formulated and adopted through the citizen participation and plan development process. The classification of land reflects existing development patterns as well as the desired pattern of development as specified in the policy statements.

There are two categories of land classification with significance for Topsail Beach. These are the Developed and Conservation classes. Each of these requires some modification in definition from the State guidelines to be of use to the Town of Topsail Beach. The Developed class, according to the State guidelines, is to provide for continued intensive development of areas currently developed at a density of 500 dwelling units per square mile, or at 1.28 dwelling units per acre; further such areas should be provided public water, sewer, fire and police protection and recreational facilities. Virtually all land within the Town falls within this classification since the overall density ratio is 4.86 dwelling units per acre and all services except public sewer are provided. However, the guidelines do permit areas which exceed the minimum density but which lack public sewer to be divided into a separate class to indicate that although they have a developed character, they will need sewer service in the future. The intent is to establish subclasses of the Developed class that will recognize the constraints to development - both natural and community facilities.



TOPSAIL BEACH

NORTH CAROLINA

LAND CLASSIFICATION MAP

MAP 6

LEGEND:

DEVELOPED

- DFS FUTURE SERVICE
- DFC FUTURE SERVICE/CONSTRAINT

CONSERVATION

- PUBLIC ACCESS
- CMF MARITIME FOREST

The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, N.O.A.A.

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200 Osborne Street
St. Marys, Georgia

Mapping Date: JUNE, 1985

The second category of land classification which requires recognition within the Town is the Conservation class. The purpose of this class is to provide for effective long term management of significant limited or irreplaceable areas. Three such areas occur within the Town and will fall within one of the subclasses of Conservation. These are the marshlands, the beaches, and the maritime forests. The degree to which development should be permitted in any of these areas is described in the following description of the land classes.

Land Classes and The Land Classification Map

The Land Classes applicable to Topsail Beach are described below. Each of the five broad classes identified by the C.A.M.A. are not used in Topsail Beach. The two applicable broad classes with subcategories are:

Developed

- o Future Service
- o Future Service/Constraint

Conservation

- o Public Access
- o Marshland
- o Maritime Forests

The inclusion of a land area into one of these classification categories or subcategories does not dictate the type of land use that will be allowed in a particular location. Several of the classes provide for and are designed to encourage a variety of different land uses. The classifications and subclasses are defined below. Map Six delineates each of the subclasses adopted by Topsail Beach.

Developed - Future Service. The purpose of this classification is to insure that future development within the Town occurs at rates and densities that are consistent with the Town's capacity to provide necessary sewage disposal facilities and protect surrounding estuarine waters. Thus it is intended that the rate and densities of development within this classification shall proceed at densities permitted under the Town Zoning Ordinance. It is the intent of this classification to permit all types of development allowed under the current zoning ordinance while implementing applicable policies of this Plan, specifically, the Resource Protection and Community Development policies.

Developed - Future Service/Constraint. The purpose of this subclass is to establish certain areas within the Developed-Future Service class that are

subject to constraints and thus should be developed with additional caution. These areas are the Inlet Hazard Area, Ocean Hazard Area, and Flood Hazard Area. It is the intent of this classification to permit all types of development allowed under the current zoning ordinance while implementing applicable policies of this Plan, specifically, the Resource Protection policies covering Ocean Hazard Areas.

Conservation - Public Access. The purpose of this classification is to preserve the public rights of access to and along the beach and to protect the dunes and wildlife. Specifically, this classification is designed to implement the following policies: Commercial and Recreational Fisheries, Tourism, and Beach/Waterfront Access, and Off-Road Vehicles. It covers the area between mean low water and the first line of stable vegetation on the dunes.

Conservation - Marshland. This classification is established to include the coastal wetlands, estuarine waters, estuarine shorelines and public trust areas. It is specifically included to implement the Estuarine System Policies and covers all the marshland areas.

Conservation - Maritime Forests. This classification is intended to include the maritime forests. It is specifically intended to implement the Fragile Land Areas policies but is not intended to restrict or limit any of the uses currently permitted under the Town Zoning Ordinance but rather to insure that these uses are consistent with the values represented by the maritime forests.

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