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Coastal Area Management Act

Land Use Plan

May, 1976

U.S. DEPARTMENT OF COMMERCE NOAA
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THE TOWN OF EMERALD ISLE

Route 1

Morehead City, N. C. 28557

Prepared with the assistance of
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Urban Planners - Project Designers
New Bern, North Carolina

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INTRODUCTION

Within the State of North Carolina, there are approximately 340 miles of Outer Banks. Almost half of these islands are owned by either the State or Federal Government. These public holdings will ultimately become a part of the National Park System. Most private property owners on the Banks realize that they own a portion of one of the most unique barrier island systems in the United States.

The Outer Banks is a tremendous natural resource to the citizens of North Carolina. They provide both recreation benefits, and contribute significantly to the food production in our coastal waters. Pressure for recreational development is great in areas having easy mainland access. In these areas there is a danger that pollution from overdevelopment will significantly damage the food production resources of nearby waters. This potential problem was the major reason that the Coastal Area Management Act was ratified by the North Carolina General Assembly in 1974. The purpose of the Coastal Area Management Act is "to increase the orderly balance of use and preservation of our coastal resources on behalf of the people of North Carolina and the nation." The Coastal Resources Commission was created to insure the carrying-out of the provisions of the new state law.

Land Use Plans have been developed by each local government within the twenty coastal counties and will be the

administrative tool for carrying out the provisions of the law. These plans cannot survive unless they represent the views of the local citizens. For this reason, the Coastal Resources Commission has required that a public participation program be the foundation of the Land Use Plan.

DESCRIPTION OF PRESENT CONDITIONS

POPULATION

The Town of Emerald Isle is located on Bogue Banks, North Carolina, and has a developable land area of approximately 3,000 acres. As one of the most attractive privately owned areas on the North Carolina Coast, much of the town is wooded and has dunes 20 to 35 feet high along the ocean front. The interior land elevation ranges between 15 and 25 feet above sea level. Bogue Sound, on the north side of the town, is quite shallow. Islands and wetlands enhance the scenic value of the area. The town, only a small portion of which has been developed, is eleven miles long, with a width of 4,000 feet on the western end and 800 feet on the eastern end. Most of the undeveloped parcels are in 1,100 feet wide lots and extend from the ocean to the sound.

Prior to 1962, there was little pressure for development of the land area, which is now the town. The to-be town was located at the end of a dead-end paved road 12 miles west of Atlantic Beach. The Atlantic Beach-Morehead City Bridge was the only connection with the mainland. Because of the poor access, there were few inhabitants of the to-be town. The U. S. Bureau of Census listed the population at 14 year-around residents in 1960. The 1970 year-around population was listed at 122.

Its current year-around population is approximately 400 persons.

In May, 1962, ferry service was established to the western end of the island. On May 5, 1971, the Cameron Langestone Bridge was opened. The ferry service, and subsequent bridge, placed a tremendous development pressure on the development of Emerald Isle. An indication of the effect that access has had on the town can be found in Census data. Between 1960 and 1970, there was a 771 percent increase in the year-around population. The annual growth rate between 1960 and 1970 was 64.3 percent per year.

The town has just been discovered by people looking for attractive areas for year-around homes, as well as for people desiring sites for vacation homes. As the town matures, the growth rate will likely decline.

Because the Town of Emerald Isle is so new and small, little population data is available from the Census Bureau. Emerald Isle is considered by many to be a retirement area. The 1970 Census data indicates that this is not the case. Its age distribution is typical to other towns its size. Twenty-three percent of the population are children under the age of 15. See Table 1. Schools are provided on the mainland.

Table 1 TOWN OF EMERALD ISLE
1970 POPULATION

	Males	Females	Total	Percent
Under 5	4	--	4	3.3
5-14	14	11	25	20.5
15-24	8	10	18	14.8
25-34	3	6	9	7.3
35-44	14	12	26	21.3
45-54	11	7	18	14.8
55-64	7	8	15	12.3
65 and over	5	2	7	5.7
Total	66	56	122	100.0

Source: U. S. Census

During the summer, the population increases about twenty-fold. In order to determine the summer population, a house count from town records was made. The town, in 1973, issued garbage collection permits for 1,010 dwelling units. As of September, 1975, an additional 408 units have been added. This gives a total of 1,418 dwelling units within the town. Applying 4.0 persons for each dwelling unit to the number of units within the town, the 1975 summer population was approximately 5,672. These figures will vary from month to month because of an unknown vacancy rate. The summer population is also increased by day visitors. The average daily visitor data is not available, and no attempt has been made to estimate this number.

Since incorporation in 1957, Emerald Isle has had the second largest percentage of growth in Carteret County. See Table 2.

Table 2 POPULATION OF MUNICIPALITIES WITHIN CARTERET COUNTY

	Municipality	1950	1960	Change	1970	Change
1.	Atlantic Beach	49	76	55.1%	300	294.7%
2.	Beaufort	3,212	2,922	-9.0%	3,368	15.3%
3.	Cape Carteret	Incorporated in 1957	52	--	616	1084.6%
4.	Emerald Isle	Incorporated in 1957	14	--	122	771.4%
5.	Indian Beach	INCORPORATED IN 1973				
6.	Morehead City	5,144	5,583	8.5%	5,233	-6.3%
7.	Newport	674	--	27.7%	1,735	101.5%
8.	Pine Knoll Shores	INCORPORATED IN 1973				
	Total	9,079	9,508	4.7%	11,374	19.6%

Source: U. S. Department of Commerce, Bureau of the Census

ECONOMY

The economy of Emerald Isle is based in part on the economy of Carteret County, and in part on the tourist industry on Bogue Banks. As indicated within the population section of this report, the population for Emerald Isle in 1970 was listed as 122 persons. Employment within the town generally falls into one of the following categories:

tourism, housing construction, land development and sales, and local government services. Housing construction and land sales have slackened slightly due to the state of the economy. The town employs approximately 12 people. An indication as to the impact of tourism on the local economy can be found by comparing the year-around population with the summer population. In addition to the Emerald Isle economy, the tourist dollar contributes greatly to the county. Table 3 shows the tourist expenditures in Carteret County in 1971.

Table 3 ESTIMATED CARTERET COUNTY TOURIST EXPENDITURES - 1971

Month	Visitors	Expenditures
Jan.	13,843	$ 161,550
Feb.	8,860	130,392
Mar.	23,810	277,866
Apr.	34,885	407,106
May	37,100	432,954
June	88,596	1,033,920
July	130,126	1,518,570
Aug.	96,902	1,130,850
Sept.	59,903	697,896
Oct.	33,777	394,182
Nov.	17,165	200,322
Dec.	8,860	103,392
Total	553,827	$6,489,000
Average	46,152	$540,750

The tourist industry in Emerald Isle was strong during 1975. As the state's economy is improving, tourist trade at Emerald Isle is expected to increase during the next decade.

EXISTING LAND USE

Because Emerald Isle is a new area, most of the land within the town is undeveloped. The only land uses within the town are Residential, Commercial, and Institutional. Prior to the town's incorporation, property owners divided the to-be town into fifty-four 1,100 foot blocks, extending from the ocean to the sound. The blocks are numbered from east to west. Development first began on the eastern end of the town in block 1. Residential development then began to spread slowly westward. The development type in this area is primarily cottages, both single units and duplexes. Many of these units are second houses.

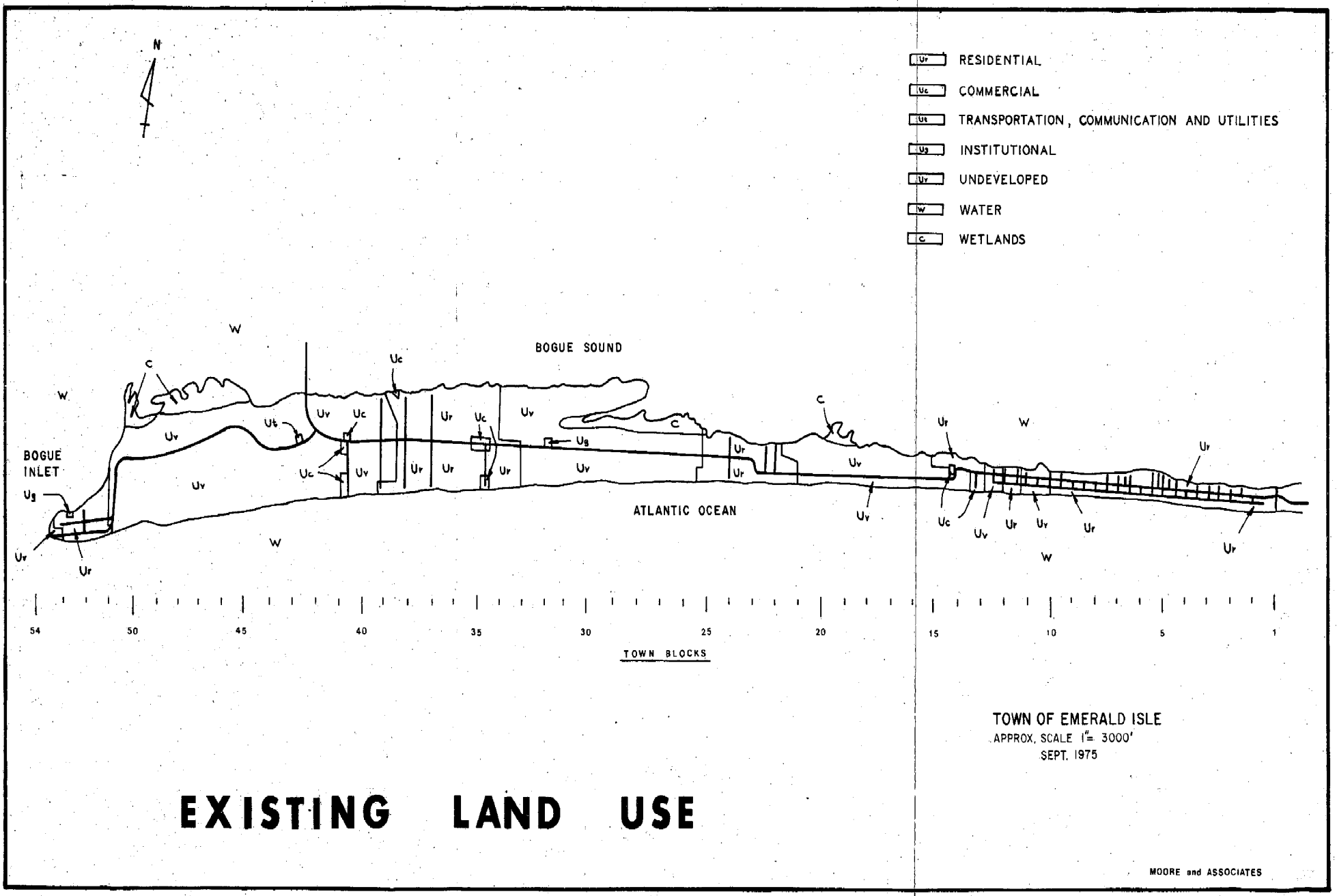
Upon the installation of ferry service at the western central portion of the town, block 37, development began at a much faster pace. Residential development was again the primary land use type. Mobile homes were the most popular dwelling unit type near the ferry access area. A small commercial area sprang up to serve the residential areas. With ferry service came easy access to Onslow and Jones Counties. Subsequently, a bridge replaced the ferry, and development continued to fill within the town center from

both the east and west ends. During the early 1970's, easy access was quickly followed by residential development of blocks 52 and 53.

The town currently has four (4) small commercial areas. One of these commercial areas is in block 41, two are in block 35, one is in block 15, and one is in block 14. The commercial land use totals 26 acres; residential accounts for 801 acres; institutional, 2 acres; and 2,135 acres are undeveloped. The figures indicate that 72 percent of the town is still undeveloped.

Mobile homes within the commercial areas present the major land use compatibility problem for the town. Adjacent to the fishing piers, some of these housing units are crowded within a distance of five feet of each other. Within most mobile home residential areas, these dwelling units are adequately spaced and provide excellent vacation homes for citizens of North Carolina.

The major problem of existing unplanned development is the size of the existing subdivision lots. There are a large number of lots which are plotted and recorded at a size of 10,000 square feet or less. Because only a small number of these lots have structures, septic tanks are not yet crowded. These small lots were recorded prior to the town's subdivision regulations. Current subdivison regulations require County Health Department review prior to subdivision approval. As of March 1, 1976, there were approximately 2,400 recorded lots within the town which have not yet been built upon.



EXISTING LAND USE

The areas of the town which are likely to experience major land use changes during the next ten years are near the bridge, and from the bridge westward to Bogue Inlet. These areas are currently under development.

CURRENT PLANS, POLICIES, AND REGULATIONS

Transportation Plans

A transportation plan has been prepared for Carteret County, including Emerald Isle, by the North Carolina Department of Transportation(N.C. DOT). The County Commissioners disagree with the plan and have not accepted it as a Transportation Plan for Carteret County. For this reason, Emerald Isle does not yet have an official Transportation Plan.

The major road through Emerald Isle, Emerald Drive-S.R. #1216, badly needs major improvements. The N.C. DOT plans to upgrade this road to a one-hundred foot right-of-way with a twenty-four foot roadway and six-foot paved shoulders. Several local property owners oppose these improvements and have filed suit in court to stop this project. The courts will decide what improvements, if any, are to be made on Emerald Drive.

Within the public participation plan, a major issue was the improvement of streets and roads within Emerald Isle. The town is taking necessary steps to devote more attention to its street maintenance.

Community Facilities Plans

Emerald Isle, being new, has not yet prepared a community facilities plan. In order to improve the necessary public services, the town has played a major role in the establishment of a town fire department and a town rescue squad. A police department has been in existence for several years. During the past year, the town began a supervised recreation program. Other than the purchase of some playground equipment, Emerald Isle does not have any written recreation or open space policies. As the town has no utility business, there has been no need for utility extension policies.

Sewage disposal in western Bogue Banks is provided by privately-owned individual septic tanks. The chief limiting factors for this type of treatment are land area and soil conditions. The private systems operate fairly efficiently when they are not crowded and when they are located in soil which allows good percolation. When too many of these systems are placed on too small an area, serious health problems occur. In most areas within the town, soil conditions are suited for efficient septic tank operation. Although septic tanks will operate almost maintenance free in these sandy soils, the movement of water through these soils can cause seepage from these tanks into the adjacent coastal waters. To date, no evidence has been found which would indicate that seepage into western Bogue Sound is occurring. Current North Carolina health regulations will permit almost 7,000

septic tanks within the town. If the town continues to rely on septic tanks installed at current state regulations, the life-supporting qualities of western Bogue Sound could be destroyed. For this reason, the town cannot depend on septic tanks for extended growth.

Plans are being made to construct a sewage treatment facility to serve Emerald Isle, Cape Carteret, and Swansboro. The Environmental Protection Agency (EPA), has funded an EPA 201 Sewer Facility Plan for the area. That plan, prepared by Henry Von Olsen and Associates, has been presented to EPA for approval. Upon approval, EPA will grant funds for the detailed engineering design for the treatment system. Upon approval of the plans and specifications for the facilities, EPA will then grant funds for the treatment plant and major collector lines. EPA will not provide funds for local street lines intended for house connections; these funds will have to come from local sources. Grants from EPA are on a matching basis-seventy-five percent from federal sources, twelve and one-half percent from state sources, and twelve and one-half percent from local sources.

Within the EPA 201 plan, there are seven alternatives for treating waste from Emerald Isle. Of the seven, two options have the chief advantages for Emerald Isle. The first choice includes two facilities, one to serve the Town of Swansboro and one to serve the Cape Carteret-

West Bogue Banks area. The proposed facility at Swansboro consists of secondary treatment and discharge into Foster's Creek, a tributary of the White Oak River. The other facility would be located in the vicinity of the Cameron-Langestone Bridge at Emerald Isle. The treatment system would include secondary treatment and discharge through a submarine outfall and diffuser system, roughly 3,600 feet offshore into the Atlantic Ocean; however, due to the present defacto moratorium on ocean outfalls in North Carolina, this alternative cannot be implemented at this time.

A secondary choice, not using an ocean outfall for effluent disposal, was deemed the best option. This option also incorporates two facilities that serve the same service areas. The facility serving the Cape Carteret/West Bogue Banks area would be located in the vicinity of Cape Carteret and utilize a spray irrigation system to dispose of its effluent. The cost of the facility is as follows:

Table 4 ESTIMATED PROJECT COSTS
CAPE CARTERET/WEST BOGUE BANKS
SPRAY IRRIGATION SYSTEM

	Construction	Cost/Year
Construction Period: 1977-1979 (Phase 1)		
Total Project Costs	$8,417,230.	$256,770.
Federal Grant request	5,853,900.	
State Grant request	977,150.	
Local Share	1,586,180.	256,770.
Debt Service		94,030./year
Total Annual Cost (Debt service + annual O & M)		350,800./year

Cape Carteret Share $ 94,030./year (Annual 1985 Cost-$161.55 per taxpayer.)
West Bogue Banks Share $295,870./year (Annual 1985 Cost-$ 94.15 per taxpayer.)

Construction Period: 1985-1987 (Phase 2)	Construction	Cost/Year
Total Project Costs	$1,467,000.	$66,800.
Federal Grant request	1,044,000	
State Grant request	174,000.	
Local Share	245,000.	66,800.
Debt Service		14,760./year
Total Annual Cost (Debt service + annual O&M)		81,560./year

Cape Carteret Share $13,126./year (Annual 1985 Cost-$38.61 per taxpayer.)
West Bogue Banks Share $68,434./year (Annual 1985 Cost-$21.77 per taxpayer.)

Olsen and Associates has estimated that this treatment system can be in operation in five to ten years.

Prior Land Use Plans and Policies

As a part of the Town's Planning Program, in 1974 a Land Development Guide was prepared. The guide was adopted as the official development policy by the Town Board of Commissioners on February 8, 1975. The following is the key statement of that policy:

> High intensity development should be located near the bridge with decreasing intensity as the distance from the bridge increases.

The location of people does have an effect on the cost of public services; for example, if a greater portion of the town's population is located near the bridge, then the impact on the town's road system will not be as great as if a greater portion of the people lived in the central or eastern portion

of the town. Motels, multi-family, and new commercial areas should be located near the bridge. Such a development policy may prevent the need of a four-lane highway through the entire town.

The location of the population is also going to have an effect on the cost to the town of installing a central sewage collection facility. The EPA 201 Plan indicated that sewage will be collected near the bridge and piped to the mainland for treatment. If the higher densities are located in this area,also, there will be a savings to the town on required pipe sizes, force main capacities and pumping capacities. For this reason, the higher density areas should be near the bridge, with decreasing densities as the distance from the bridge increases.

High quality single family areas will also benefit if high densities are located near the bridge. The high volumes of traffic associated with high densities will not travel through low density areas.

High intensity development at the bridge has another major benefit also. It is in the center of the most stable area of the town. At this point the town is almost 4,000 feet wide, has an approximately average elevation of 15 to 20 feet, and is covered with forest land over stable soils.

In summary, higher intensity land uses should be located near the bridge for the following reasons:

1. More efficient use of the town's road system.

2. Cost reduction in installation of a sewage collection system.

3. Reduction of high volumes of traffic through low density areas.

4. Development of stable area.

Commercial areas should be located near the high density areas in shopping center concept rather than in strip commercial. This means that commercial areas should be located near the bridge, also, on either or both sides of Emerald Drive. Strip commercial development should be discouraged, and existing strip commercial areas should be buffered by institutional or multi-family development to prevent encroachment into residential areas. Motels should be grouped in a few areas on the beach rather than scattered along the entire beach. The Islander Motel is in an ideal location relative to the bridge. Other motels should be encouraged to build in the same general area.

LOCAL REGULATIONS

Zoning Ordinance

The town adopted its first Zoning Ordinance during the late 1950's. It was based on a pyramid concept with R-2 Residential Zones at the top of the pyramid and Mobile Homes and Camps at the bottom of the pyramid. If a property owner does not want to be zoned, all he needs to do is to have his property zoned mobile home. This would allow the owner

to use his property for residential or commercial use. Orginally, if a degree of land use protection was desired, then restrictive covenants were used. This ordinance is largely responsible for the incompatible mixed land use which exists within the town today. Another problem with the original ordinance is that the minimum lot area was only 5,000 square feet. Problems will arise when the requests for septic tank permits are made for these lots.

On June 14, 1975, the town adopted a new Zoning Ordinance. The minimum lot size with this ordinance is 8,000 square feet. In order that the new ordinance would not have the same problems with septic tank permits as the old, a condition was placed in the subdivision regulations requiring a county health department review of all new subdivisions before they were presented to the Planning Board in preliminary form. A close coordination is necessary between the County Health Department and the Town Planning Board.

The Zoning Ordinance has a total of eight districts. These districts and the purpose of each are as follows:

Districts	Purpose
Residential 1 (R1)	A single family residential district allowing a single family dwelling on a lot.
Residential 2 (R2)	A residential district allowing a single family dwelling, or a two family dwelling, on a lot.

Residential MF (RMF)	A residential district allowing a single family dwelling, a two-family dwelling, or a multi-family dwelling on a lot.
Residential MH (RMH)	A residential district allowing a single family dwelling, a two-family dwelling, a multi-family dwelling, a motel or hotel on a lot.
Mobile Home (MH)	A mobile home district which allows mobile homes.
Institutional (Inst.)	A residential district which allows institutional and office uses, not including the sale of merchandise.
Commercial (Com.)	A commercial district which allows retail trade.
Camp (C)	A recreational district which allows travel trailers, campers, and tents.

Each of these districts is mutually exclusive. The ordinance has a table of permitted uses which states the types of uses allowed in each zone. Current zoning regulations will allow over 70,000 people within the town.

Subdivision Regulation

The town adopted a subdivision regulation as of March 15, 1974. This regulation simply lists the standards for land subdivision. It requires a report from the County Health Department stating that each lot on the preliminary plan has sufficient area for a septic tank. Once the preliminary plan is approved, development can begin. Lot sales cannot take place until the final plan is recorded. The Planning

and Zoning Commission reviews the final plan to insure compliance with the approved preliminary plan. Other ordinances adopted by the town which deal with local development include a Mobile Home Regulation, and the North Carolina State Building Code.

Emerald Isle does not have local historic district regulations, nuisance regulations, sedimentation codes or environmental impact statement ordinances. The development codes and ordinances are enforced by the Planning and Zoning Commission and the Town Board of Commissioners. The official enforcement officer is the Building Inspector. Any appeals of his decisions are presented to the Board of Adjustments. The town depends on Carteret County for enforcement of septic tank regulations and dune protection ordinances.

FEDERAL AND STATE REGULATIONS

The North Carolina Department of Natural and Economic Resources has not yet provided this information.

PUBLIC PARTICIPATION ACTIVITIES

MAJOR LAND USE ISSUES

Under the planning requirements of the Coastal Resources Commission, an identification and analysis must be made of the following major Land Use Issues.

1. The impact of the population and economic trend.
2. The provision of adequate housing and other services.
3. The conservation of productive natural resources.
4. The conservation of productive natural environments.
5. The protection of cultural and historic resources.

In addition to these major issues, the citizens, through the public participation program, identified the following major issues:

6. The desire to maintain the quiet, family beach atmosphere.
7. The desire to have a better road system for the town.
8. The desire to improve the quality of the mobile home areas.
9. The desire to designate public parking areas.
10. The desire to develop the town in accordance with the adopted Land Development Policy.

Current population and economic trends for Bogue Banks indicate that major growth will take place. Emerald Isle is very much a part of this growth trend. For the past three years, the town's building inspector has issued an average of 140 building permits for new dwelling units per year. Preliminary indication for 1976 shown that construction in the town will be even greater than in 1975. The town's developable

land area is approximately the same size as the City of New Bern. Based on current state septic tank regulations, Emerald Isle could grow to a summer peak population of approximately 28,000 persons. Current town zoning will allow over 70,000 persons. Based on soil types within the town and the close proximity of Bogue Sound, a summer peak population of 27,000 persons appears to be too many people to be served by septic tanks.

Because Emerald Isle is a tourist area with an abundance of second homes, it is not affected by housing shortages as are cities which provide primary residences. All of the year-around structures are in good condition. With the exception of a few older mobile homes, all of the second homes are in good condition also. In most mobile home areas, the units are adequately spaced to provide safe housing; however, adjacent to the town's fishing piers, the units are placed so close that it would be difficult to prevent fire from one unit spreading to several units.

Because Emerald Isle is a beach resort area, it is not likely that the town will get into the low-income housing business.

At Emerald Isle, the conservation of productive natural resources and the protection of important natural environments appear to be one and the same. The key elements are the Ocean Beach, Bogue Sound, and the Wetlands. Of these three, the Ocean Beach has received the most attention from the town.

All of the town's year-around residents cooperate to help keep the beaches clean. The town has a litter program which removes trash from the Ocean Beach daily. Development which has occurred and is expected to occur along the Ocean Beach is not likely to change this valuable resource.

Bogue Sound and the Wetland areas are more fragile than the Ocean Beach. Large scale development within the town depending on septic tanks for sewage treatment can degrade the quality of adjacent waters. Current state regulations allow almost 7,000 septic tanks in Emerald Isle. Although data on the ability of the town's soils to support septic tanks without contamination of adjacent waters has not yet been developed, there is concern that the number of septic tanks allowed by the state seems high. Town officials believe that a sewage treatment system will ultimately be necessary to protect Bogue Sound. For this reason, the town is searching for ways to implement the Swansboro-Cape Carteret-Emerald Isle EPA 201 Plan. A sewage treatment plant will prevent Bogue Sound from becoming polluted by human waste. If a treatment facility is not installed, the safe septic tank carrying capacity of the town's soils must be strictly observed. The space requirements for septic tanks will probably be increased.

ALTERNATIVES

Alternatives in the development of objectives, policies,

and standards for Emerald Isle were presented to the citizens in the form of a questionnaire. In determining the development alternatives, the question was asked as to what is liked best about Emerald Isle. Next, a determination was made as to what is liked least about Emerald Isle. Public opinion was solicited as to what the ideal fully-developed population should be, the quality of existing development, and public needs. A summary of the questionniare tabulation is shown below.

Table 5

QUESTIONNAIRE TABULATION SUMMARY
YEAR-AROUND EMERALD ISLE RESIDENTS
177 Responses

	% of Total Responses	
Liked most about Emerald Isle	57%	Quiet family area
Liked least about Emerald Isle	16%	Roads
	15%	Mobile homes
Most needed at Emerald Isle	12%	Better roads
	11%	Public parking
Desired fully-developed peak population	7,200	Average
Satisfied with Emerald Isle development	52%	Yes
Satisfied with Emerald Isle zoning	65%	Yes
Satisfied with Emerald Isle neighborhood development	85%	Yes
Satisfied with Emerald Isle neighborhood zoning	89%	Yes
Adequate number of shopping areas	73%	Yes
Adequate number of recreation areas	60%	Yes
Public parking areas needed	63%	Yes
Public beach access needed	67%	Yes
Agree with Town Land Development policy	87%	Yes

NON-RESIDENT PROPERTY OWNERS
165 Responses

	% of Total Responses	
Liked most about Emerald Isle	37%	Quiet family area
Liked least about Emerald Isle	23%	Mobile homes
	13%	Litter

Most needed at Emerald Isle	18%	Better roads
Desired fully-developed peak population	5,880	Average
Satisfied with Emerald Isle development	57%	Yes
Satisfied with Emerald Isle zoning	69%	Yes
Satisfied with Emerald Isle neighborhood development	83%	Yes
Satisfied with Emerald Isle neighborhood zoning	90%	Yes
Adequate number of shopping areas	65%	Yes
Adequate number of recreation areas	51%	Yes
Public parking areas needed	58%	Yes
Public beach access needed	64%	Yes
Agree with Town Land Development policy	86%	Yes

The complete questionnarie tabulation is also presented. Based upon the alternatives which were tabulated from the returned questionnaires, the following major development issues were evident:

The desire to maintain the quiet family beach atmosphere.

The desire to have a better road system for the town.

The desire to improve the quality of the mobile home areas.

The desire to designate public parking areas.

The desire to develop the town according to the adopted Land Development policy.

Questionnaire Tabulation

Year-Around Residents

177 Responses

1. Number of Children living at home and ages of each.

Number of Children	Ages of Children
1	2 months old
1	19 months old
31	1 year old
39	2 years old
23	3 years old
11	4 years old
10	5 years old
6	6 years old
10	7 years old
6	8 years old
6	9 years old
9	10 years old
11	11 years old
13	12 years old
12	13 years old
17	14 years old
9	15 years old
19	16 years old
19	17 years old
9	18 years old
7	19 years old
6	20 years old
6	21 years old
6	22 years old
2	23 years old
1	24 years old
1	28 years old

83 families responding to this questionnaire have no children living at home.

2. What do you like most about Emerald Isle?

88	Clean, quiet and peaceful
74	Fishing, family-type seashore area
36	Not overcrowded
23	Location
21	People
16	Lack of commercial development
15	Climate

5	Beach patrol
5	Police protection
3	Good drinking water
1	Small shopping area
1	New plans for sewer and highways
1	Fair tax structure
1	Family orientation

3. What do you like least about Emerald Isle?

38	Roads
36	Mobile home parks
21	Littering
15	Fast and loud traffic
12	More public parking
9	Too commercialized
8	Lack of access to beach
7	No shopping areas
6	Vehicles on beach
5	Prices of goods in area
4	Lack of garbage pick-up
5	Threat of overdevelopment
4	Poor town area development
4	Nothing
4	Air noise
4	Attitude toward fishermen
4	Planned development
4	Marines
3	Congested
3	Appearances of some areas
3	Too crowded
3	Lack of voice in government
3	Lack of proper facilities
2	Removal of dunes
3	County taxes
2	Lack of enforcement of zoning laws
2	Doctor closer
2	Lack of police
2	Poor phone service
3	No recreation facilities
2	Mini-bikes in city limits
1	Blowing and shifting sand
1	Sewage disposal plant
1	Fishing piers
1	Utilities rates
1	High story homes
1	Planned development
1	Marked signs
1	Dogs running loose
1	Commercialization towards Cameron-Langestone bridge
1	Strip commercialization development
1	Pool halls

1	Poor Civic development (signs, landscaping)
1	Poor publicity to out-of-town property owners
1	Summer residents should be checked for vandalism
1	Firing arms on beach
1	Mosquitoes
1	Lack of people
1	Beauty parlor needed
1	Destruction by non-property owners
1	Stagnant canal

4. What does Emerald Isle need that it does not now have?

24	More public parking
27	Better roads
19	Restaurants
14	More police
13	Water front access year around
11	Sewer
8	Shopping center
7	Strict commercial zoning
6	Boat ramps
5	Marina
5	Fewer trailers
4	Day beach area
5	Recreation for kids and adults
3	Interested Mayor and Council
3	Laws governing dump
3	Post Office
3	Public works department
3	Trash pick-up strickened
3	Careful planning
3	Lifeguards
3	Walk-ways to beach
3	Adult entertainment
3	Cleaner streets
3	Fire department
3	Liquor store
2	Building codes
2	Control on destruction of natural growth
2	More security lights
2	Public parks
3	Mosquito control
3	Laundromat
2	Dog control and leash ordinance
2	Doctor closer
2	Supermarkets
2	Bank
1	Play area
1	Elimination of taxation without representation
1	Place for fishermen
1	Limit to amount of land, per trailer
1	Non-permanent residents voice in government

1	Intelligent leadership
1	More dumpsters strategically located
1	Fences keeping dunes off limit
1	More attractive homes
2	News bulletin to residents
1	Free telephone service to Morehead
1	Mini-bike area
1	Library
1	Municipal landscaping
1	Public parking
1	Designated area for surfing
1	Permitted buggy fishing (June-September) and ramp for it
1	Fewer people
1	More town-owned land

5. Emerald Isle has approximately 2,000 summer residents. What do you believe would be an ideal future fully-developed population for Emerald Isle?

1	1,000
15	2,000
1	2,300
9	2,500
3	2,000 - 3,000
10	3,000
4	3,500
1	3,500 - 5,000
22	4,000
1	4,500
21	5,000
2	5,000 - 6,000
6	6,000
3	8,000 - 10,000
1	8,000 - 15,000
12	10,000
1	10,000 - 12,000
1	15,000
5	20,000
3	25,000
3	30,000 - 40,000
1	60,000

6. Are you satisfied with the way Emerald Isle is developing?

Yes - 89
No - 79

What should be changed?

20	Too many trailers
10	Restrictions on commercial building

10	Restrictions on appearances of trailers
9	Better zoning
4	Stricter dune controls
3	Road improvements
2	Development occurring too fast
2	Public beach needed
2	Too much commercial development
2	Need dance hall
2	Build more homes
2	Growing too fast
1	City government
1	Do not like future prognosis of condominiums
1	Road lights
1	Family dwellings only
1	Parking areas
1	Lack of regard to environmental problems
1	Recreation
1	Shopping centers
1	Remove temporary lean-to shelters and bus bodies
1	Need more motels and businesses
1	Population now too large
1	Poor publicity to out of town property owners
1	Need bowling alley
1	Need larger marina
1	Need medical aid station
1	Need better street maintenance
1	Litter problem
1	Point erosion
1	Point parking

7. Are you satisfied with the way the Town is zoned?

Yes - 86
No - 46

What should be changed?

12	Restrictions on mobile homes
7	Establish zoning policy
6	Trailers out
3	Need rigid building restrictions
2	Build more homes
1	Cottages and motel rentages in separate zones
2	More residential type areas
1	Businesses closer
1	Development by families only
1	More camp sites
1	Lifeguards
2	No more commercial developments
1	Approve new zoning ordinances and get rid of R-MH
1	Stop developers from re-zoning for their benefit
1	Make residential multi-family
1	Need billboards removed

8. Are you satisfied with the way your neighborhood is developing?

Yes - 145
No - 24

What should be changed?

8 Overcrowded
6 Poor planning
3 No trailer parks
2 Zone residential for single dwelling
2 Too much traffic
1 Year-around renting to undesirable tenants
1 Sea Oat Street - sound side needs paving
1 Restrict commercial areas too near bridge to cut down on traffic
1 Clean sound water
1 Don't like parking lot
1 Poor publicity to non-resident property owners
1 Pier area is a dump
1 Businesses should be made to keep their area clean

9. Are you satisfied with the way your neighborhood is zoned?

Yes - 139
No - 16

What change is needed?

4 Enforce zoning
3 Trailers (Canal Drive)
1 Need more business zones
1 Motels not to be constructed too close to residences
1 Proper zoning for rental prospect

10. Are there any undesirable areas in your neighborhood?

Yes - 47
No - 132

What areas?

9 Trailer parks
4 Canal Drive
4 Fix streets
4 Rental trailer lots
3 Stagnant canal
3 Trailer court at Emerald Isle Fishing Pier

3 Around Emerald Isle Pier
2 Public parking
2 Hallie-Johnson's Road
2 Bogue Pier area parking lot
1 Non-resident users of public park on W. Landing Drive
1 Need dance pavilion, pool tables
1 Businesses too close
1 Need rigid littering laws enforced
1 Low area around highway
1 Surfside subdivision
1 Camp grounds at Salter Path
1 Live Oak Street
1 9th and 10th Streets
1 Creek crossing Cedar Street
1 Lawrence Street

11. Have you ever had to force a neighbor to conform to your subdivision's restrictive covenants?

Yes - 3
No - 183

Did you have to take him to court?

1 No court action
1 A tenant
1 May have to keep developer from building on park land

12. Would you object to a condominium project next to your property?

Yes - 141
No - 28

13. Do you believe that the Town has an adequate number of shopping areas?

Yes - 135
No - 49

Where are additional areas needed?

9 Between Emerald Isle and Bogue Inlet
7 Emerald Isle Pier area
5 Supermarkets
3 Drug Stores
2 East end
2 Laundromat
2 Near bridge
1 North end

1 Commercial zone
1 Near Islander Motel
1 Center of Emerald Isle
1 Variety stores
1 Doctor
1 Anywhere zoned for business
1 Anywhere zoned for commercial
1 Morehead City
1 Have enough for year-around population, not for summer population
1 One main area is enough, rest should be residential

14. Do you believe that there are enough recreation areas in the Town?

Yes - 109
No - 72

What is needed?

16 Physical recreation facilities
14 Tennis courts
11 Public park
9 Public beach with parking
6 Beach access
7 Basketball courts
4 Public pool
1 Public parking
1 Ramps for on/off beach traffic
1 Boat launching on sound
1 Children's recreation area
1 Pavilion for teenagers
1 Playground
2 Shuffleboard courts
2 Baseball field
1 Hardees
1 West end facilities
1 Dance hall
1 Golf course
1 Football field
2 Surfing area

15. Do you believe that the town should provide public parking areas?

Yes - 119
No - 70

At what general location?

16 Evenly spaced along beach
12 Beach area
11 Near bridge

10 East of Emerald Isle Pier
15 Point
9 Bridge area
6 Away from Emerald Isle Pier
5 Fishing piers
3 Non-residents
2 Close to shopping area
1 Undeveloped areas
1 Adjacent curb front
1 Near trailer parks
1 Islander Motel and Pier
1 Midway
1 Amusement areas
1 Bogue Inlet Pier
1 In commercial areas
1 Have one now that is not sufficiently used
1 Other than shopping areas

How should each area be paid for?

48 Parking fees
21 Taxes
15 Daily or seasonal rates
15 Stickers for residents
5 Tax on merchants
2 State and Federal Government
2 State funds
1 Bonds
2 Town
1 Should not be developed
1 Town should provide parking areas only if publicly owned beach areas are nearby and public parking is restricted to streets

16. Do you believe that the Town should construct a public boat ramp?

Yes - 105
No - 79

How should the ramp be paid for?

82 Fees
17 Daily or seasonal rates
17 Taxes
2 Merchants
1 Bonds
1 State and Federal Government
1 Honor Box
1 State funds
1 Toll gate
1 Town
1 Public boating should be discouraged as it causes noise, air, and water pollution

17. Do you believe that the Town should provide for public beach access area?

Yes - 84
No - 47

18. Do you believe that there are any Town services needed which are not now offered?

Yes - 38
No - 63

What is needed?

7 Sewer service
4 Rescue Squad
3 More police protection
3 Shopping center
3 More street maintenance and repairs
2 Laundromat
2 Stop light at Bogue Pier Street
2 Clean beach
1 Clean sides of roads
1 Public parks
1 Boat ramps
1 Garbage collection
1 Guards for public beaches
1 Police directory
1 Government funds
1 Street lights
1 Medical center

How should these new services be paid for?

12 Taxes
7 Fees

19. Do you know of any changes which should be made in the Town's development regulations?

Yes - 28
No - 53

What changes are needed?

2 Town's development regulations sent to each property owner
2 Cut down on proposed development
1 Enforced littering laws
1 Motel area zoning
1 Enable property owners to vote
1 Keep development out of area

1 Enforce "no parking"
1 Regulation on types and sizes of signs on commercial properties
1 Restrictive rules on trees, dunes and beaches
1 Notify owners before changing zoning

20. The Board of Commissioners has adopted a Land Development Policy which will encourage a greater concentration of people on lands near the bridge than at the east and west ends of the Town. Such a policy will cost the Town less money in the long run for public services. Do you agree with such a development policy?

Yes - 98
No - 15

If no, how should the development policy be changed?

1 Nearer center of Emerald Isle area near bridge is growing fast enough
1 Standardize

21. Are there any comments or concerns you have concerning the development of, or services provided by the Town?

8 Emerald Isle should be kept for summer cottages, <u>not motels</u>.
8 Police protection is good.
3 Police protection is not adequate for either theft or littering.
2 Reduce tax rates following re-evaluation.
1 Keep out condominiums.
- Property owners need more voice in decision-making process of Emerald Isle.
- Towing enforced when home owners have cars on their streets.
- Listen to the property owner's wishes.
- Too much money going to police protection.
- Garbage cans need replacing.
- Signs should be placed on beach access areas.
- Ordinance governing dogs.
- Area around Bogue Inlet Stores is a traffic hazard.
- Police need help during winter to prevent break-ins.
- Too many trailer parks.
- Issue annual licenses for vehicles on beach.
- Name and number streets and homes.
- Restaurants are needed.
- Protect beach erosion.
- Streets need repair.
- Build boardwalks at designated areas with parking to eliminate sand dune erosion.
- Leash laws for pets.
- Mosquito control is needed.

Questionnaire Tabulation

Summer Residents

165 Responses

1. Number of children living at home and ages of each.

Number of Children	Ages of Children
1	8 months old
1	11 months old
18	1 year old
28	2 years old
22	3 years old
8	5 years old
6	4 years old
5	6 years old
4	7 years old
7	8 years old
10	9 years old
5	10 years old
14	11 years old
13	12 years old
9	13 years old
13	14 years old
12	15 years old
14	16 years old
9	17 years old
14	18 years old
10	19 years old
4	20 years old
5	21 years old
1	22 years old
2	23 years old
2	24 years old
1	25 years old

70 families responding to this questionnaire have no children living at home.

2. What do you like most about Emerald Isle?

55	Fishing, family seashore
43	Clean, quiet, peaceful
34	Not overcrowded
33	Privacy
28	Climate
20	No commercialization
17	Location

14	People
5	Sand dunes
2	Garbage pick-up
2	Police
2	Zoning
1	Bogue Inlet

3. What do you like least about Emerald Isle?

35	Trailer Parks
20	Litter
15	Bad roads
10	Overcrowded
7	No public parking
7	Vehicles on beach
4	Rules discriminating against fishermen
4	Destruction of sand dunes
4	Mosquitoes
4	Not enough access to beach
4	Destruction of natural growth
4	Non-residents' lack of voice
3	Commercial expansion
3	High taxes
3	Breakins
2	Dogs running loose
2	Not enough recreation
2	City government deaf ears in regard to taxpayers
2	Fishing piers
2	Condominiums
1	Planning and building restrictions
1	High prices
1	No shopping centers
1	Too close to Military Base
1	No house members
1	Sewage
1	Air noise
1	No supermarkets
1	Hot dog stands
1	No boat ramps

4. What does Emerald Isle need that it does not now have?

26	Better roads
12	Sewer
10	Public parking
7	Boat ramps
6	Shopping centers
5	Supermarkets
4	Confined commercial area
4	Strict environmental controls
3	Recreation

3	Lower fire insurance
3	Mosquito control
3	Governing body responding to taxpayers
3	Public access to beach
3	Stricter zoning
3	Public beach
3	Drug store
3	More police
3	Tennis court
3	Restaurants
2	Public beach access
2	Fewer trailers
2	Seafood markets
2	Mobile home standards
2	Beach patrol
2	State Park
2	Rescue Squad
2	Dog catcher
2	More construction
2	Breakwater
1	Leash law
1	More entertainment
1	ABC store
1	Hardee's
1	Radio station
1	Beauty shop
1	Post office
1	Large trash disposal units
1	Water system
1	State Wildlife Commission
1	Better lights on streets
1	Lower taxes
1	Less people
1	Laundromat
1	Better communication of residents

5. Emerald Isle has approximately 2,000 summer residents. What do you believe would be an ideal future, fully-developed population for Emerald Isle?

16	2,000
14	10,000
13	3,000
12	5,000
10	4,000
3	2,500
1	2,150
1	2,000 - 4,000
1	4,000 - 4,500
1	4,000 - 5,000
1	4,000 - 6,000
1	5,000 - 6,000

1 5,000 - 10,000
1 7,500 - 10,000
1 8,000
1 10,000 - 14,000
1 10,000 - 15,000
1 10,000 - 25,000
1 20,000
1 50,000

6. Are you satisfied with the way Emerald Isle is developing?

Yes - 76
No - 56

What should be changed:

13 Too many trailers
8 Stricter zoning
5 Fast growth rate
5 Need better roads
5 Too many duplexes in residential areas
5 Restrictions on trailers
4 Stricter building codes
3 Over development
2 Keep rental trailer lots off Canal Street
2 Higher standards in building appearance
2 Save dunes
1 Widen road to Atlantic Beach
1 More construction
1 Shopping center
1 Laws regarding fishing and recreation
1 Keep bulldozing to a minimum
1 Change rules too often
1 Better planning

7. Are you satisfied with the way the Town is zoned?

Yes - 76
No - 33

What should be changed:

8 Stricter zoning
3 Stricter on trailers
3 Building standards set
2 Trailers on Canal Street
1 Commercial property limits
1 Roads
1 Less condominiums and hotels
1 Too many small residential lots
1 Too many trailers

8. Are you satisfied with the way your neighborhood is developing?

Yes - 109
No - 21

What should be changed:

4 Highways
4 More permanent type cottages
2 Development too slow
2 Stricter zoning needed
2 Clear Canal Street of trailers
1 Development (don't like)
1 Decrease public traffic
1 Trailers too close
1 Better building codes

9. Are you satisfied with the way your neighborhood is zoned?

Yes - 105
No - 11

What change is needed:

2 Restriction on number of houses per size of lot
1 Trailers off of Canal Street
1 Rezoning of motels and condominiums on Point
1 Stricter zoning
1 Lots too small
1 Better building codes

10. Are there any undesirable areas in your neighborhood?

Yes - 24
No - 103

What areas:

4 Canal adjacent to Canal Street
2 Unoccupied mobile homes
2 Emerald Isle Marina
1 "Tent City" behind Jack Street's cottage
1 Eight Street
1 Parking lot
1 Point
1 Lots are overgrown
1 Trailer park past Singutes Realty
1 West end of Point

11. Have you ever had to force a neighbor to conform to your subdivision's restrictive covenants?

Yes - 1
No - 134

Did you have to take him to court?

- Petition but no court action.

12. Would you object to a condominium project next to your property?

Yes - 114
No - 24

13. Do you believe that the Town has an adequate number of shopping areas?

Yes - 84
No - 44

Where are additional areas needed?

6 Between Town Hall and Emerald Isle Pier
2 Emerald Isle
2 Near bridge and Islander Motel
2 Bogue Inlet Pier
1 Entering Main highway
1 Business district
1 Near existing shopping area
1 Between Bogue Inlet and Salter Path
1 Southern tip
1 In middle of island
1 East end
1 Town Hall section

14. Do you believe that there are enough recreation areas in the Town?

Yes - 65
No - 61

What is needed:

13 Tennis courts
12 Entertainment
9 Public pool
9 Public beach
7 Bath houses
7 Public walk ways to beach
6 Bike trails

6 Public parking
5 Bowling alley
5 Golf course
5 Basketball court
5 Movies
1 Marina
1 Boat ramp
1 Public recreation area

15. Do you believe that the town should provide public parking areas?

Yes - 76
No - 53

At what general location?

5 Near fishing piers
5 Emerald Isle Pier
5 Beach
4 Point
3 Access to beach
3 Bogue Inlet Pier
2 West side of island
2 Across from the Town Hall
1 Inlet near Coast Guard Station
1 West end of Point
1 Commercial location
1 Near bridge
1 Coast line
1 Either end of Town
1 25th Street
1 Off main road
1 Near commercial areas

How should each area be paid for?

51 Fees
18 Taxes
3 State and local funds

16. Do you believe that the Town should construct a public boat ramp?

Yes - 68
No - 63

How should the ramp be paid for?

53 Fees
12 Taxes
3 State Wildlife Federation for funds
1 Bonds

17. Do you believe that the town should provide for public beach access areas?

Yes - 130
No - 62

1 Need public parking near public beach access areas

18. Do you believe that there are any town services needed which are not now offered?

Yes - 69
No - 81

What is needed?

37 More police protection
22 Central sewage
14 Rescue service
15 More trash cans
13 Fire department equipment
4 Keep up access to beach
3 Enforce laws
2 Post Office
3 Streets
2 Mosquito control
2 Pools
2 Stop light at intersection of the main highway and road to Bogue Inlet Pier
1 Beach patrol
1 Fix Lawrence Street
1 Ramps for fishing vehicles
1 More signs
1 Recreation
2 Parks
1 Town owned water system
1 Building committee
1 Lifeguards
4 Parking lots
1 Garbage pick up
1 Attractive town signs
1 Landscaping assistance to property owners
1 Parking lot fees
1 Dances, barbecues
1 Public boat ramp
1 Public beach access area
1 Dog ordinance
1 Military Police patrol
1 Better Streets
1 Monthly newsletter

How should these services by paid for?

24 Taxes
17 Fees
1 Fund raising
1 Bonds

19. Do you know of any changes which should be made in the Town's development regulations?

Yes - 51
No - 73

What changes are needed?

8 No more zoning for trailers
8 Restrictions on commercial development
3 Encourage good architecture and construction
1 Lower height limit
1 50 feet maximum height limit
1 Less R-MH and Commercial
1 Vegetation protection
3 Slow zoning of multi-family areas
2 More attention to coastal environment
2 No parking signs in residential areas
2 Positive camp ground rules need to be set
2 Better inform property owners
2 Better zoning
1 Restrictions on trailer appearances
1 Installation of proper sewers
1 Planning Board
1 Street lights

20. The Board of Commissioners has adopted a Land Development Policy which will encourage a greater concentration of people on lands near the bridge than at the east and west ends of the town. Such a policy will cost the town less money in the long run for public services. Do you agree with such a development policy?

Yes - 144
No - 23

If no, how should the Development Policy be changed?

4 Uniform development
2 Develop equally throughout Town
1 No ghetto areas
1 One acre zoning
1 No concentration areas
1 No more commercial development
1 Don't concentrate all motels in same area

1 Avoid congestion at foot of bridge
1 No parking signs on Ocean View
1 Increase land size per residence
1 Do not agree with any growth
1 Emphasize quality of development, not quantity; keep town quiet, family orientated, and low density

21. Are there any comments or concerns you have concerning the development of, or services provided by the Town?

10 The Police Department checking on residences.
6 Too much commercial development will ruin Emerald Isle as a desirable family vacation spot.
- Greatest development should be in the widest and highest areas of the Town for protection. Encourage residents to participate in decision making and better communication to residents. Better roads.
- Town is slow.
- Need better access to beach.
- Need public telephones near East Landing and Ocean Drive.
- Emerald Isle is a family spot as well as a showing and sharing spot with others who visit on vacation or weekends.
4 Restrictions regarding garbage.
- Needs advice on how to receive the quickest emergency and medical service.
- Town should not provide public beach or boat ramp for people not living in Emerald Isle.
- Parking at beach front for summer residents or property owners.
5 Increase police patrol year around.
- Beach littering ordinances should be posted.
- Property owners should be given copies of town ordinances, zoning and development plans.
2 Enforce building code.
6 Issue tags to property owners for ocean and sound privileges.
- Repair streets.
- Heavily traveled highway through island is noisy.
- Chain stores.
3 Trash pick-up service is unsatisfactory.
2 Ban bulldozers.
2 More trained people are needed to provide services.
- Much beach grass needs planting.
3 Against closing beach to fishing vehicles.
- Inadequate highway lined with parked cars. Parking should be provided and tickets should be given to illegal parkers.
- No regular garbage pick up.
- Empty beach trash cans more frequently.

- Remove business advertising signs from residential areas, especially vacant lots.

- Keep land developers and real estate personnel off of Town Board of Commissioners.
- Business building should conform to certain atmosphere for better appearance.

- Town managed well. Agree with keeping vehicles off beach from May 30 to Labor Day.
- Keep Emerald Isle a family beach.
- Town is getting too big.
- Town doing little to make Emerald Isle a distinctive community reflecting pride of property owners. Opposed to planning or allowing heavy commercial development or high-density housing.

These desires, plus experience in dealing with development problems within the town during the past decade, caused the town to adopt the following Goals and Objectives:

> To continue to encourage the development of a good, clean family beach.
>
> To continue efforts to maintain high standards for both residential and commercial areas.
>
> To encourage the development of public facilities for beach access areas.
>
> To insure that the town's population does not exceed the capacity of natural resources and supporting public facilities.
>
> To continue efforts to construct a public sewage treatment system for the Bogue Sound area.
>
> To improve the quality of town streets.
>
> To continue to follow the Town Land and Development policy.

Through the public participation program, the year-around residents indicated that a desired, average fully-developed population for the town would be 7,000 people. Based on undeveloped land within the town and current land usage rate, such a maximum population would require the preservation as open space of at least 1,500 acres.

The above data leaves the town's governing body with three alternatives for selecting a desired fully-developed population. The first alternative is to make no decision regarding growth and allow the population to grow as the economy will permit. Under this alternative, the population

is expected to reach 25,254-33,672 by the year 2025; thus, a sewage treatment plant will be necessary. It may also be necessary to collect and filter water runoff prior to its release into the adjacent coastal waters.

The second alternative would be to limit growth base to the 7,000 desired, fully-developed population as determined by the public participation program. This alternative cannot be selected because the town has approximately 2,400 vacant lots already subdivided. Adding 4.0 persons per vacant lot to the current summer population, the peak summer population will be approximately 15,200 people within the recorded subdivisions. If the Coastal Resources Commission requires that the fully-developed population not exceed 7,000 people, then a moratorium must be placed on issuing building permits for existing recorded lots in the near future.

The third alternative would be to select a desired fully-developed population at some figure between alternative one and alternative two. Alternative one is so far out of line with public desire that it appears unreasonable. It is also a "Let's not do anything" approach for dealing with the problem of insuring an orderly balance of use and preservation of Emerald Isle and adjacent waters.

In establishing a desired population, sewage treatment capacity is also a major consideration. Because the town currently depends on septic tanks, efforts were made to determine how many septic tanks could be installed without polluting adjacent coastal waters. Scientific data relating to the land area necessary for septic tanks on Bogue Banks has not yet been developed, therefore, a low population base must be selected to assure that the number of septic tanks installed will not exceed the ability of the soil to absorb safely the discharge without allowing seepage into the adjacent coastal waters.

The governing body decided that alternative three was the best selection. The desired fully developed population was set at 17,000 persons. Such a selection gives the town time to develop equitable methods for preservation of open space, while at the same time it allows a comparison of desired population against the maximum number of septic tanks which can safely be installed. The 17,000 desired population will reduce the number of septic tanks from 7,000 to 4,250. Information will be developed by scientific research in the near future regarding the number of septic tanks which can safely be installed. Decisions will also be made in the near future regarding a central sewage treatment facility.

Table 6 DESIRED FUTURE POPULATION
Peak Summer Residents

1975	1980	1985	2000	2025
5,000-5,600	8,260-8,472	10,144-11,272	17,000	17,000

PUBLIC PARTICIPATION PROGRAM

The Town's Planning and Zoning Commission has the responsibility of directing the town's planning program. Under its direction, the Coastal Area Management Act's Public Participation program was established. The purpose of this program has been two-fold. It has served as the key element in goals and objectives determination and has made people aware of the overall purpose of the Coastal Area Management Act.

Efforts were made to solicit as much participation as possible in the Public Participation program. Each Planning Board member and Town Commissioner was responsible for interviewing each of the year-around residents in the town block assigned to him. Based on reports returned to the Planning and Zoning Commission Chairman, all year-around residents were contacted. One hundred sixty-seven questionnaires were completed via these interviews. In addition to these contacts, questionnaires were mailed to all non-resident property owners. Approximately 1,650 questionnaires were mailed. From these, 165 responses were received, a return rate of ten percent.

CONSTRAINTS

PHYSICAL LIMITATIONS

The Coastal Resources Commission has not yet designated the Areas of Environmental Concern. Because this designation has not yet taken place, it is not known what areas within the town will be designated. Based on descriptions within the planning guidelines, the following areas within the town are potential Areas of Environmental Concern.

	Letter Code
Coastal Wetlands	CW
Estuarine Waters	EW
Public Trust Areas (Waters)	PT
Sand Dunes along the Outer Banks	SD
Ocean Beaches and Shoreline	OB
Coastal Floodplains	CF
Ocean Erodible Areas	OE

These areas are not mapped within this plan because the boundaries are subject to change pending designation by the Coastal Resources Commission. Each of the above potential Areas of Environmental Concern are given a detailed description in this section. Appropriate land uses are also listed for each.

Flood Hazard Area-Coastal Floodplains (Potential AEC)

Emerald Isle is located on one of the narrow islands lying off the mainland. With over 22 miles of shoreline, portions of the town are susceptible to flooding. A flood

report has not been prepared for the town; however, flood data is available from a report prepared by the U. S. Army Corps of Engineers of the unincorporated areas of Carteret County for the Federal Insurance Administration, August, 1973. Coastal floodplain is defined as the land areas adjacent to coastal sounds, estuaries, or the ocean which are prone to flooding from storms with an annual probability of one percent or greater (100 year storm). These areas are analogous to the 100 year floodplain on a river.

On the ocean side of the town, south side, the beach system is subject to the full force of wind-driven ocean tides during hurricanes. The sound side, north side, does not have the potential to receive this full force; thus, the elevation of flood waters will not be as great. Within the study, the Corps of Engineers has determined, using emperical data, the 100 year frequency flood. For the ocean side of Emerald Isle, the 100 year flood elevation is listed at 11.0 feet above mean sea level. The sound side 100 year flood elevation is 7.1 feet. At Bogue Inlet, the elevation is 11.0 feet and decreases from 11.0 feet to 7.1 feet between the Inlet and the bridge. Development is appropriate within the flood hazard area provided it is protected from flood damage by flood proofing or elevation. Development within this area must conform to the standards of the Federal Insurance Administration.

Erosion-Ocean Erodible Areas (Potential AEC)

Ocean erodible areas are defined as the areas above mean high water where excessive erosion has a high probability of occurring. Ocean erodible areas are extremely dynamic lands highly susceptible to becoming completely displaced by water. The major objective is to limit unnecessary hazards to life or property and to maintain reasonable requirements for public expenditures to protect property or maintain safe conditions.

When discussing erosion at Emerald Isle, the conversation always turns to Bogue Inlet and its effect on "the point" at the western end of the town. History has shown that the Inlet has moved east and west across an area approximately one mile wide between Emerald Isle and Bear Island. In 1938, the channel was located at the extreme western edge of the area, adjacent to Bear Island. By 1953, it had moved approximately 3,000 feet to the center of the migration area; in 1964, it was located in the same general area. Between 1958 and 1964, rapid erosion began at "the point" on Emerald Isle.

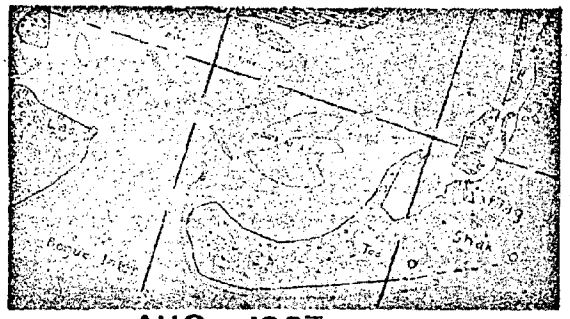
In 1953, the point extended 3,000 feet west of the Coast Guard Station. The narrow portion of the land west of the Station was over 800 feet wide. By 1971, 500 feet of the point was claimed by the inlet. The land mass width had been reduced to less than 600 feet in width; however, the frontal dune and dune system remained stable. This

fact led the landowners to believe that although erosion was occurring, land behind the frontal dunes was stable. A cul-de-sac was constructed 1800 feet west of the Coast Guard Station. The land was subdivided. This construction is shown on Map dated February 18, 1971. Shortly after this street construction, erosion began at an extremely high rate on both the north and south sides of the point. The erosion cut a new inlet within eighteen months, claiming the cul-de-sac and 1,500 feet of the land which existed in 1953. Currently the Inlet is less than 1,400 feet west of the Coast Guard Station, for approximately 600 feet of the street constructed in 1971 has been destroyed. Although a great variation in the shoreline exists from month to month, it appears that the Inlet is still claiming land eastward. Much research will be necessary to determine when Bogue Inlet will again begin its westward migration. Appropriate land uses within the excessive erosion area include open space recreation, temporary parking, and other similar uses. The following photographs and maps accurately depict the unstable nature of the point.

Erosion is occurring at a much slower rate along the town's ocean front. This erosion varies at different locations along the ocean front and has been plotted by use of aerial photographs. Since 1939 these photographs have shown that the dune line has moved inland on an average of almost

FEB , 1871

FEB 10 , 1964



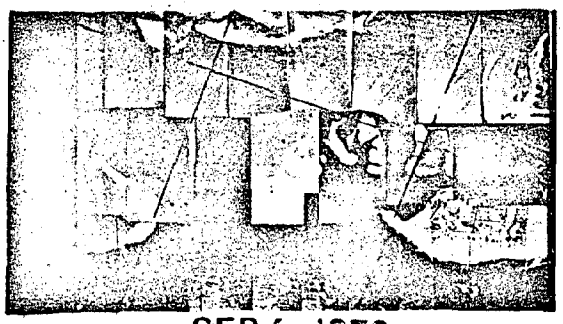
AUG , 1927

OCT 4 , 1970

APR 25 , 1938

USGS QUAD 1971

DEC 2 , 1953



SEP 6 , 1973

NOV 12 , 1958

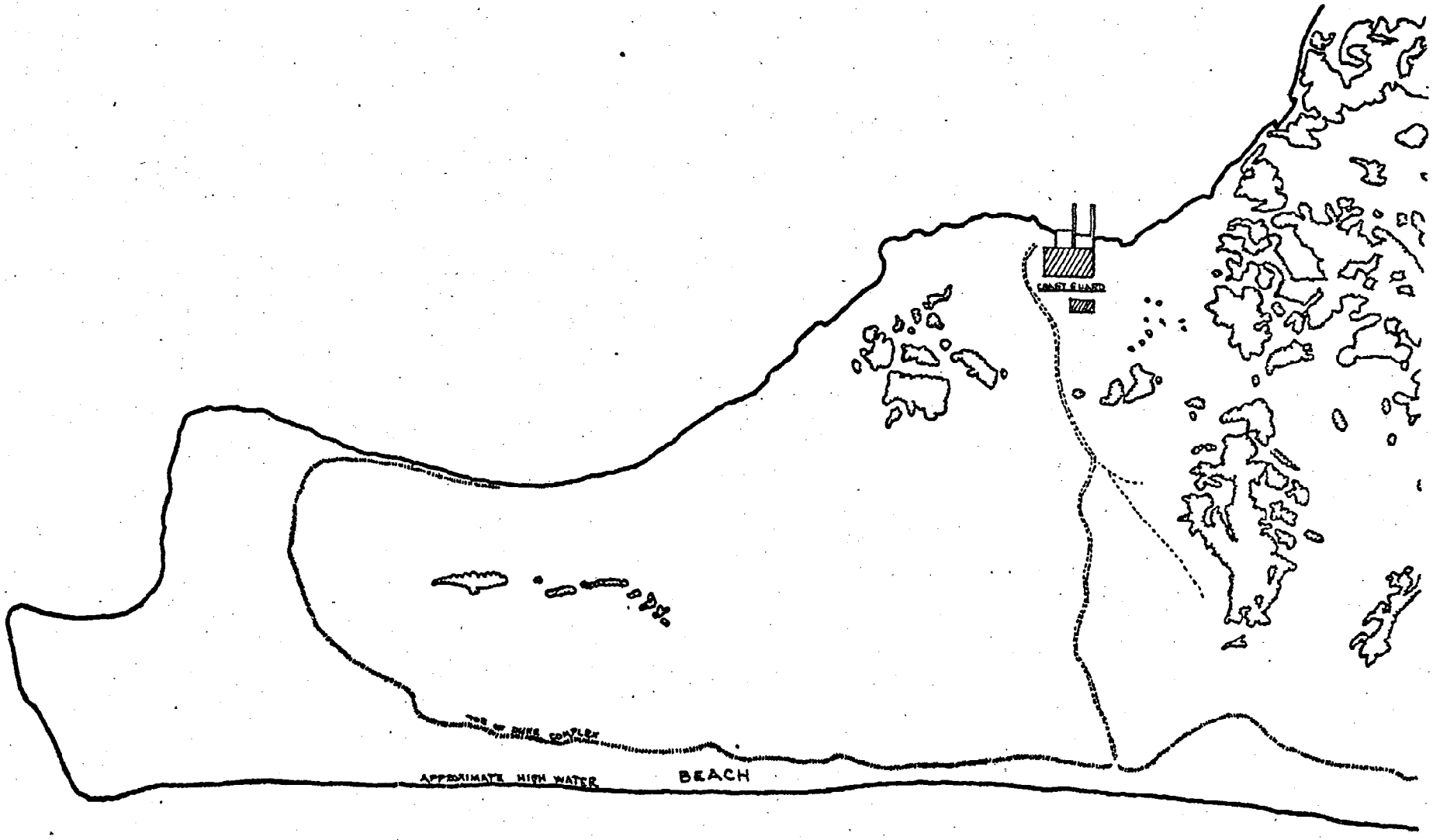
BOGUE INLET
... 100 YEARS

0 2000 8000

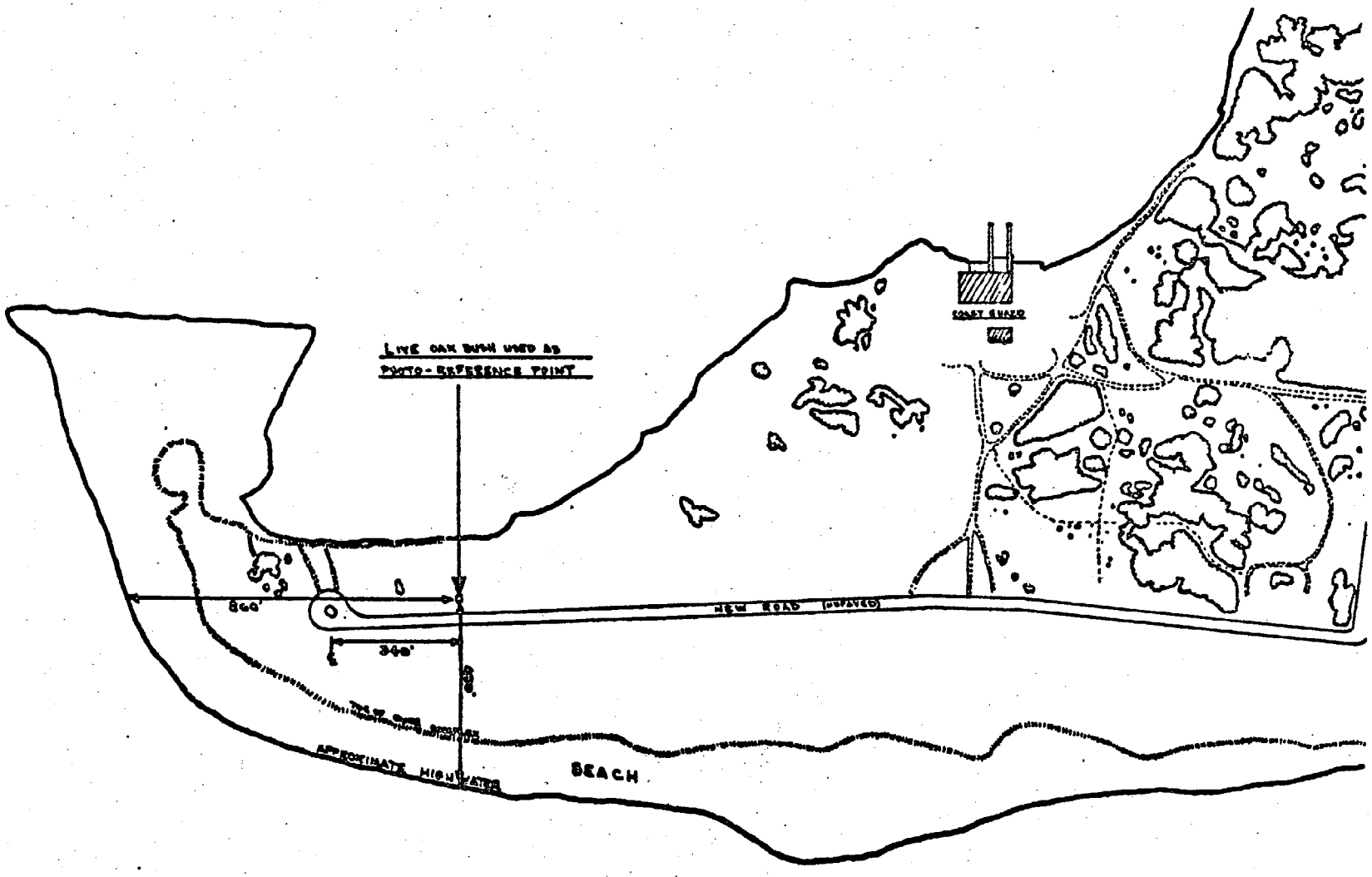
SCALE IN FEET

Prepared by the

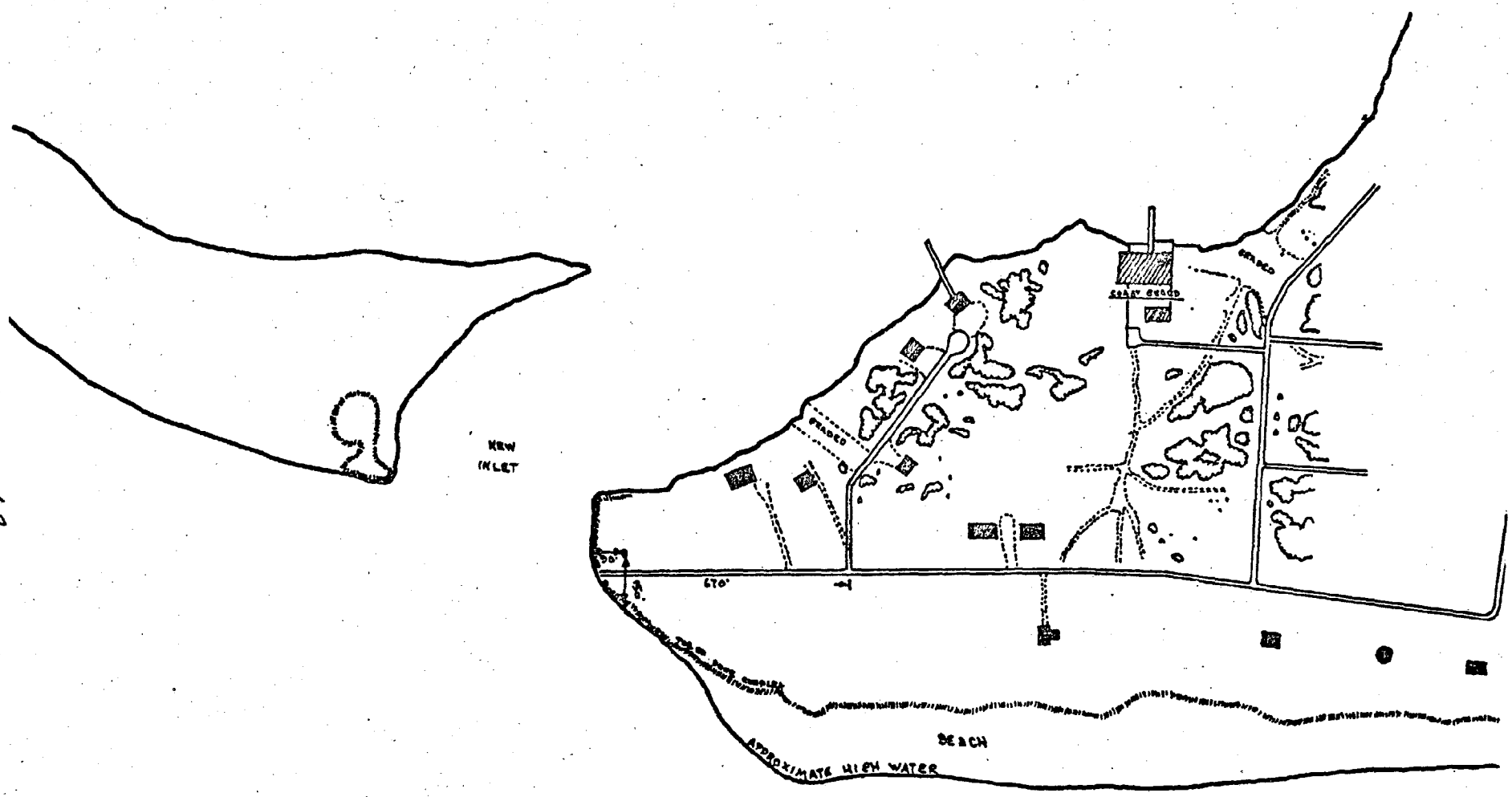
N C Division of Commercial and Sport Fisheries



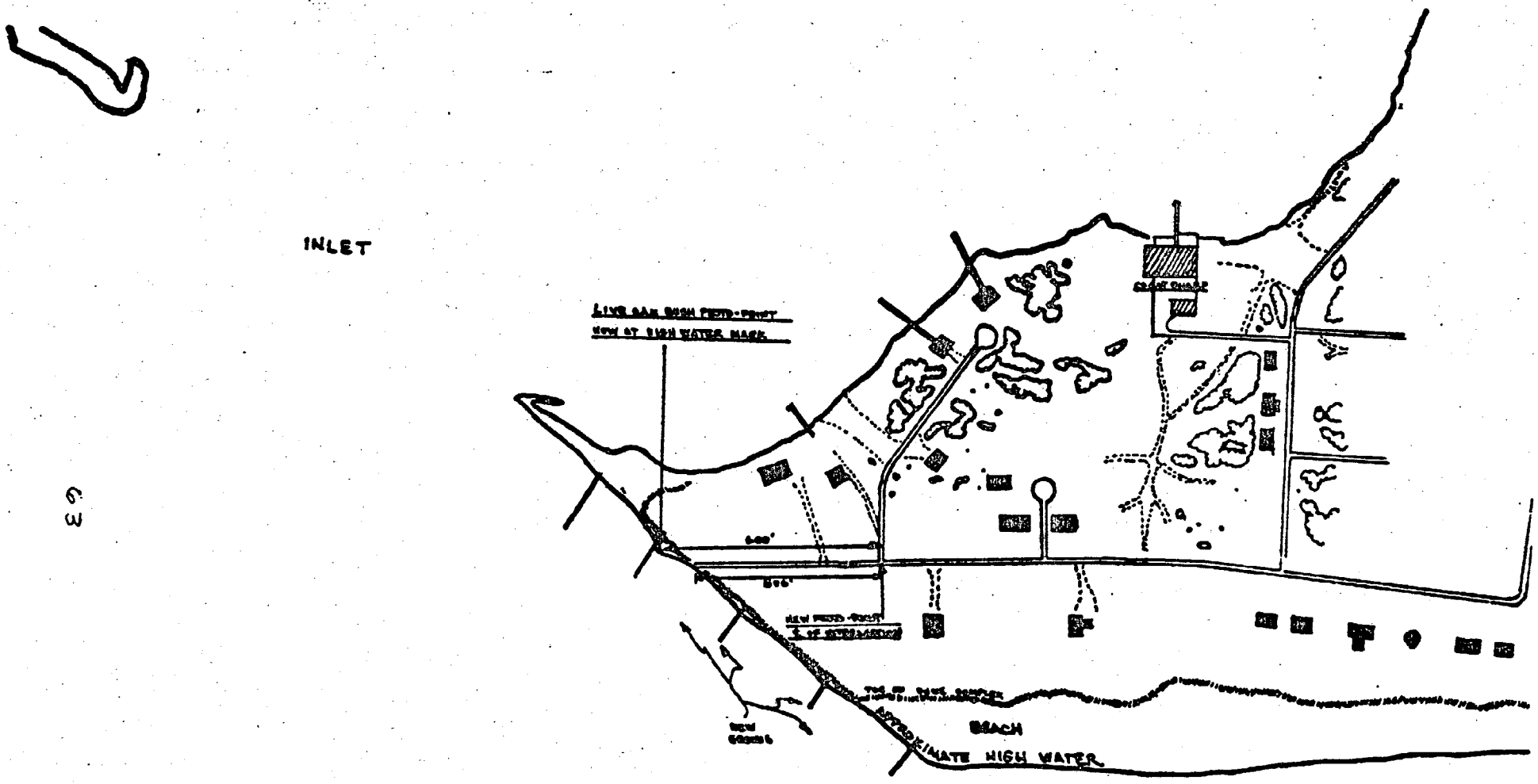
BOGUE INLET
DECEMBER 2, 1953
SCALE 1" = 400'
N.C. DIVISION OF COMMERCIAL & SPORTS FISHERIES (NER)
MOREHEAD CITY, N.C.



BOGUE INLET
FEBRUARY 18, 1971
SCALE 1" = 400'
N.C. DIVISION OF COMMERCIAL & SPORT FISHERIES (NRC)
MOREHEAD CITY, N.C.



BOGUE INLET
AUGUST 18, 1970
SCALE 1" = 400'
N.C. DIVISION OF COMMERCIAL & SPORTS FISHERIES (NCF)
MORE HEAD CITY, N.C.



BOGUE INLET
AUGUST 29, 1973
SCALE 1" = 400'
N.C. DIVISION OF COMMERCIAL & SPORTS FISHERIES (NCR)
MOREHEAD CITY, N.C.

ten feet in an area which extends from block forty-four westward to the point. The shoreline in that same area has eroded on an average of almost twelve and one-half feet. For the same period, the dune line for blocks nine through forty-four has moved inland on an average of less than one foot. The shoreline for these blocks has eroded on an average of five feet. Since 1953, the shoreline along blocks one through eight has moved slowly seaward two and one-half feet. The frontal dunes along these blocks have migrated inland on an average of four feet. See Chart 1.

Data was not available for erosion along the sound side of the town. A field survey of the shoreline has shown that erosion is not currently occurring along the sound side of the town.

With the exception of the point and the ocean shore directly east of the point, the town's ocean front is relatively stable. Although it is extremely difficult to predict erosion, all available data indicates that with the exception of the point and the area just east of the point, the shoreline will retain this relative stability for the foreseeable future.

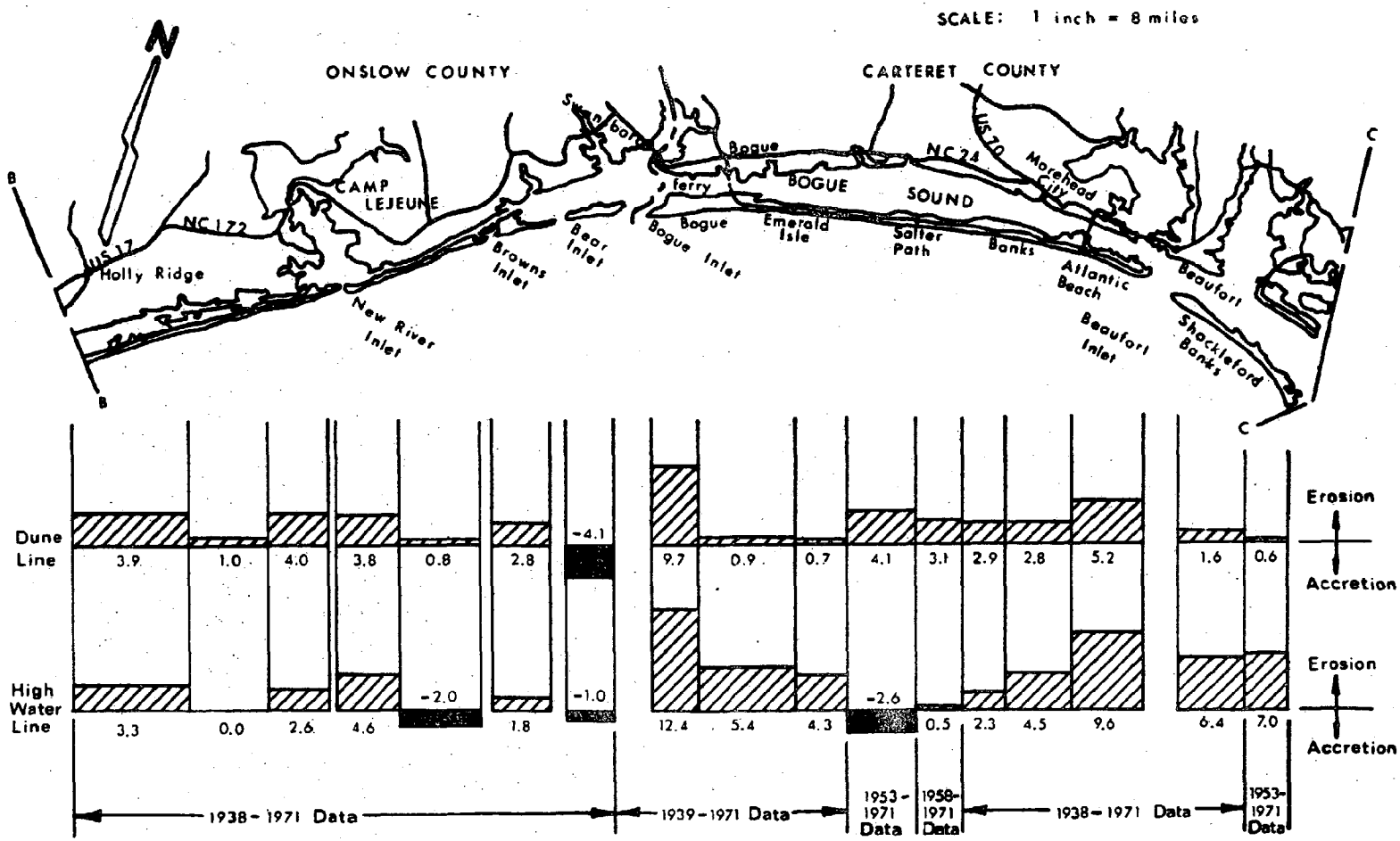


Chart 1 Onslow and southern Carteret Counties
(a) Dune line and high water line. Composite mean annual rates of change (feet per year), 1938-1971

Source: A Survey of North Carolina Beach Erosion by Air Photo Methods
H. E. Wahls, Report No. 73-1, May, 1973

Soil Limitations

Soils data for this Plan was obtained from the U.S.D.A. Soil Conservation Service (SCS). The SCS field survey for Emerald Isle was completed in January, 1975, and was published in an interim report which is subject to change. The following descriptions indicate the suitability of the various soil associations for development. The soil locations are shown on the soil map within this report.

1 FRIPP - FRIPP soils are on undulating to rolling dunes commonly adjoining beaches and waterways along the coast. Most areas are 5 to 25 feet above mean tide. Flooding is rare for very brief periods due to very high tides caused by coastal storms. Slopes are commonly 5 to 15 percent but range from 2 to 30 percent. The soil formed in sandy sediments that have been reworked by wind and wave action. Fripp soils are excessively drained with very slow runoff and rapid permeability. Most of this soil is used for recreation, beach cottages, and wildlife. Native vegetation consists of wax myrtle, live oak, palmetto, slash pine, loblolly pine, longleaf pine, sand pine, sea oats, seacoast bluestem, and beach grasses.

Limitations for Development

Dwellings - Severe: Floods

Septic tank filter fields - Slight

Local roads and streets -	Moderate:	2 to 8 percent slopes, floods
	Moderate:	8 to 15 percent slopes, floods, slope
	Severe:	15 percent +, slope

Camp areas - Severe: Too sandy

Picnic areas - Severe: Too sandy

Playgrounds - Severe: Too sandy

Paths and Trails - Severe: Too sandy

3 DUNELAND-NEWHAN COMPLEX - This complex is Newhan soil with sparse vegetation.

Limitations for Development

See 70 NEWHAN

7 NEWHAN-URBAN LAND COMPLEX - The association is Newhan soil that has gone or is undergoing urban development. Characteristics of this soil may vary slightly from Newhan due to on-site grading and the presence of urban development.

Limitations for Development

See 70 NEWHAN

11 - DUCKSTON - DUCKSTON soils are mainly in shallow depressions between Coastal dunes and on nearly level flats between the dunes and marshes generally at elevations less than 5 feet above mean tide level. Slopes are typically less than 2 percent, and surfaces are plane to concave. The soil formed in sandy sediments reworked by waves and wind. The soils are periodically flooded with salt water; salinity is variable according to length of time since last flooding. Duckston soils are poorly drained, have very slow runoff, and have rapid permeability above the water table. The water table fluctuates somewhat in relation to the tides, and the surface is flooded following heavy rains or high storm tides. The native plant community consists of wax myrtle (Myrica cerifera), black willow (Salix migra), black highbush blueberry (Vaccinium atrococcum), rush (Juncus sp), smooth cordgrass (Spartina alterniflora), marshhay (Spartina patens), dotted smartweed (Polygonum punctatum), threesquare (Scipus sp), virginia button weed (Diodia virginiana), Ludwigia and spagum moss (Sphagnum sp).

Limitations for Development

Dwellings - Severe: Wet

Septic tank filter fields - Severe: Wet

Local roads and streets - Severe: Wet

Camp areas - Severe: Wet

Picnic areas - Severe: Wet

Playgrounds - Severe: Wet

Paths and trails - Severe: Wet

12 COROLLA - COROLLA soils are on nearly level flats and gentle slopes between the dunes and next to depressions and sloughs along the Coast at elevations generally below about 5 feet. Slopes range from 0 to 4 percent. The soil formed in sandy sediments reworked by waves and wind. Average annual precipitation is about 48 inches, and mean annual temperature is about 65°F., near the type location. The soils may be flooded with salt water at high storm tides. Corolla soils are moderately well and somewhat poorly drained, have slow runoff and very rapid permeability. The water table is about 18 to 36 inches below the surface 2 to 6 months annually. The natural plant community consists of live oak (Quercus virginiana), wax myrtle (Myrica cerifera), bitter panicgrass (Panicum amarulum), Hudsonia (Hudsonia tomentosa), Coastal lovegrass (Eragrostit refracta), evening primrose (Oenothera humifusa), ground cherry (Physalis viscosa), and bushy beardgrass (Andropogon glomeratus).

Limitations for Development

Dwellings - Severe: Wet

Septic tank filter fields - Severe: Wet

Local roads and streets - Severe: Wet

Camp areas - Severe: Wet

Picnic areas - Severe: Wet

Playgrounds - Severe: Wet

Paths and trails - Severe: Wet

16 COASTAL BEACH - This association is considered as non-soil. It is located in an area extending from the back side of the frontal dunes to the ocean.

Limitations for Development

This area is not suitable for development.

22 NEWHAN-COROLLA COMPLEX - This complex is a combination of Newhan and Corolla soils.

Limitations for Development

Dwellings - Slight to severe

Septic tank filter fields - Slight to severe

Local roads and streets - Slight to severe

Camp areas - Severe

Picnic areas - Severe

Playgrounds - Severe

Paths and trails - Severe

70 NEWHAN - NEWHAN soils are on gently undulating dunes commonly near beaches and waterways along the coast. Slopes are commonly 2 to 7 percent but may range to 30 percent. The elevation of these soils commonly ranges up to about 20 feet or more above mean sea level. The soil consists of quartz, sand, and shell fragments deposited mainly by wind along the Atlantic Coast. Newhan soils are excessively drained, have slow runoff, and rapid permeability. Native vegetation consists of scattered myrtle, yaupon, live oak, silverling, and other shrubs along with sea oats, big bluestem, beach pea, beach grasses, and rush. Large acreages have been developed for urban beach cottages, recreation, and wildlife areas.

Limitations for Development

Dwellings - Slight: 2 to 8 percent slopes
Moderate: 8 to 15 percent slopes
Severe: 15 to 30 percent slopes

Septic tank filter fields - Slight: 2 to 8 percent slopes
Moderate: 8 to 15 percent slopes
Severe: 15 to 30 percent slopes

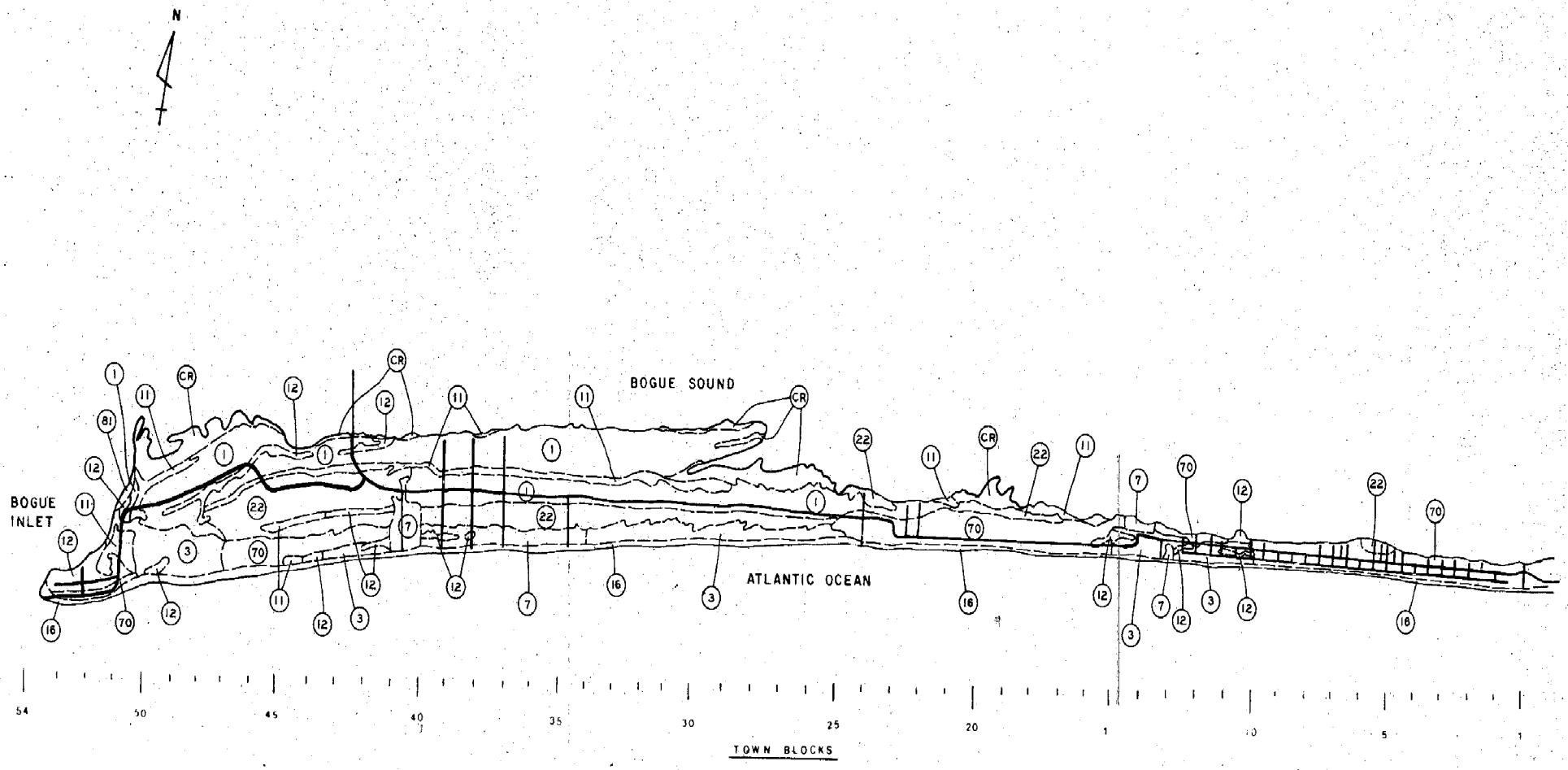
Local roads and streets - Slight: 2 to 8 percent slopes
Moderate: 8 to 15 percent slopes
Severe: 15 to 30 percent slopes

Camp areas - Severe: 2 to 15 percent slopes, too sandy
Severe: 15 to 30 percent slopes, too sandy

Picnic areas - Severe: 2 to 15 percent slopes, too sandy
Severe: 15 to 30 percent slopes, too sandy

Playgrounds - Severe: 2 to 6 percent slopes, too sandy
Severe: 6 to 30 percent slopes, too sandy

Paths and trails - Severe: 2 to 25 percent slopes, too sandy
Severe: 25 to 30 percent slopes, too sandy



SOIL SERIES

TOWN OF EMERALD ISLE
APPROX. SCALE 1" = 3000'
SEPT. 1975

MOORE and ASSOCIATES

81 CARTERET MADE LAND - CARTERET MADE LANDS are filled areas. The town has only one Carteret Made Land area. Cottages are constructed on this area. In other Carteret Made Lands, an on-site inspection is necessary to determine if such areas are suitable for development. The availability of water and sewer are prime considerations for development of Carteret Made Lands.

Limitations for Development

On-site inspection necessary.

Water Supply Areas

The Bogue Banks Water Association serves Emerald Isle, Indian Beach, and Salter Path. The total customers served as of October 15, 1975, was 905. Several of these customers are two-inch meters serving mobile home parks and camping areas. The system includes six-inch lines, two 60,000 gallon elevated tanks, two eight-inch wells-300 feet deep, and two pumps-175 gallons per minute each.

One of the wells is located in the eastern end of the town. The other is located at the Town Hall, near the center of the town. Each of these wells pump from the Castle Hayne aquifer.

The Association is currently reviewing plans to add an additional 100,000 gallon water tank. The organization has indicated that they have sufficient reserve capacity within the Castle Hayne aquifer to serve growth as it increases on Bogue Banks. This reserve capacity, however, has not been fully surveyed.

Steep Slopes

Other than the sides of sand dunes, the town has no steep slopes.

FRAGILE AREAS

Coastal Wetlands - Low Tidal Marshlands (Potential AEC)

The Town of Emerald Isle has extensive wetland areas. A large portion of the town's sound frontage is lined with low tidal marshland. Because of the map scale used in this plan, the smaller marshland areas cannot be shown on the map within the plan. However, all major marshlands are shown and identified as Conservation areas. The dominant plant species within the area are Salt Water Cordgrass (Spartina alterniflora), Black Needlerush (Juncus roemerianus), Glasswort (Salicornia, spp.), Salt Grass (Distichlis Spicata), Sea Lavender (Limonium spp.), Salt Meadow Grass (Spartina patens), and Salt Reed Grass (Spartina Cynosuroides).

These low tidal marshlands serve as a critical component in the coastal ecosystem. The marsh is the basis for the high net yield system of the estuary through the production of organic detritus (partially decomposed plant material) which is the primary input source for the food chain of the entire estuarine system. Estuarine dependent species of fish and shellfish, such as menhaden, shrimp, flounder, oysters and crabs currently make up over 90 percent of the

total value of North Carolina's commercial catch.

In addition, the roots and rhizomes of the spartina alterniflora serve as waterfowl food and the stems as wildlife nesting material. Low tidal marsh also serves as the first line of defense in retarding shoreline erosion. The plant stems and leaves tend to dissipate wave action while the vast network of roots resists soil erosion. Marshes of this type operate additionally as traps for sediment originating from upland runoff, thus reducing siltation of the estuarine bottoms and consequent detriment to marine organisms. These marshes should be considered unsuitable for all development which will alter their natural functions. Inappropriate land uses include, but are not limited to, the following examples: restaurants and businesses; residences, apartments, motels, hotels, and trailer parks; parking lots and offices; spoil and dump sites; wastewater lagoons; public and private roads and highways; and factories. Examples of acceptable land uses may include utility easements, fishing piers, docks, certain agricultural uses, except when excavation or filling affecting estuarine or navigable waters is involved, and such uses which do not significantly alter the natural functions of the marsh.

Sand Dunes Along the Outer Banks (Potential AEC)

Emerald Isle is a part of the Outer Banks system. Sand dunes are located throughout the town. Most of these dunes

are stable and are protected by nature's forest cover. Only in areas along the ocean are the dunes shifting as a result of wind action. The frontal dunes are most important, for these dunes serve as a buffer between the sea during a storm and the development behind the dunes. Appropriate land uses within the frontal dune system include only those uses which will not cause damage to the frontal dune system.

Ocean Beaches and Shorelines (Potential AEC)

The southern side of Emerald Isle is lined with ocean beaches and shorelines. This eleven mile strip is without vegetation covering and consists of unconsolidated soil material that extends landward from the mean low tide to a point where any one or combination of the following occur: (1) vegetation, or (2) a distinct change in predominant soil particle size, or (3) a change in slope or elevation which alters the physiographic land form.

Sand deposits of ocean beaches and shorelines represent a dynamic zone which does not afford long term protection for development. The nature of tidal action and the force of storms is such that they cause the beach areas to constantly shift. Littoral drift is a natural phenomenon whereby sand is removed from beaches by wave action and littoral currents and is deposited upon a different stretch of the beach. The action also shifts the line of high tide and low tide. Ocean beaches and shorelines are valuable for public and

private recreation and are located within a natural hazard area. Development within this dynamic zone may result in loss of property and possible loss of life.

The area must be preserved to the greatest extent feasible with opportunity to enjoy the physical, aesthetic, cultural and recreational qualities of the natural shorelines of the State. Appropriate development within the area must be that type development which will withstand the prevalent natural forces and not unreasonably interfere with the rightful use and enjoyment of the beach area.

Estuarine Waters (Potential AEC)

Bogue Sound and the Atlantic Ocean are a part of the state's estuarine system. Estuarines are among the most productive natural environments of North Carolina. They not only support valuable commercial and sports fisheries, but are also utilized for commercial navigation, recreation, and aesthetic purposes. Species dependent upon estuaries such as menhaden, shrimp, flounder, oysters and crabs make up over 90 percent of the total value of North Carolina's commercial catch. These species must spend all or some part of their life cycle in the estuary. The high level of commercial and sports fisheries and the aesthetic appeal of coastal North Carolina is dependent upon the protection and sustained quality of our estuarine areas.

Appropriate uses within the area are those which preserve

the estuarine waters so as to safeguard and perpetuate their biological, economic and aesthetic values. Highest priority will be allocated to the conservation of estuarine waters. The development of navigational channels, the use of bulkheads to prevent erosion, and the building of piers or wharfs where no other feasible alternative exists are examples of uses appropriate within estuarine waters, provided that such land uses will not be detrimental to the biological and physical estuarine functions and public trust rights. 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 are generally considered incompatible with the management of estuarine waters.

Public Trust Waters

Bogue Sound and the Atlantic Ocean are also public trust waters. Included in the public trust waters definition are 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 water mark; all navigable natural bodies of water and lands thereunder to the mean high water mark or ordinary high water mark as the case may be, except privately owned lakes to

which the public has no right of access, all waters in artificially created bodies of water in which exists significant public fishing resources or other public resources, which are accessible to the public by navigation from bodies of water in which the public has no rights of navigation, all waters in artifically created bodies of water in which the public has acquired rights by prescription, custom, usage, dedication or any other means. Included in public trust waters are areas such as waterways and lands under or flowed by tidal waters or navigable waters, to which the public may have rights of access or public trust rights, and areas which the State of North Carolina may be authorized to preserve, conserve, or protect under Article XIV, Section 5, of the North Carolina Constitution.

Appropriate uses in the public trust waters include channels, drainage ditches, bulkheads, piers and other similar uses, provided these uses do not damage the biological environment or restrict public access.

Within the Town of Emerald Isle, there are no known complex natural areas, areas sustaining remanant species, areas containing unique geologic formations, registered natural landmarks, or archaeologic and historic sites.

RESOURCE POTENTIAL AREAS

Based on the descriptions within the planning guidelines

Emerald Isle does not have any resource potential areas.

CAPACITY OF COMMUNITY FACILITIES

The entire Town of Emerald Isle is served by a public water system. The Bogue Banks Water Association serves Emerald Isle, Indian Beach, and Salter Path. The total customers served as of October 15, 1975, was 905. Several of these customers are two-inch meters serving mobile home parks and camping areas. The system includes six-inch lines, two 60,000 gallon elevated tanks, two eight-inch wells-300 feet deep, and two pumps-175 gallons per minute each.

One of the wells is located in the eastern end of the town. The other is located at the Town Hall, near the center of the town. Each of these wells pump from the Castle Hayne aquifer.

The Association is currently reviewing plans to add an additional 100,000 gallon water tank. The organization has indicated that they have sufficient reserve capacity within the aquifer to serve growth as it increases on Bogue Banks. This reserve capacity, however, has not been fully surveyed.

Emerald Isle high school age students attend West Carteret High School in Morehead City. Current enrollment at West Carteret is 1,461 students. West Carteret has a capacity of 1,550 students. There are no plans for expansion at West Carteret.

Grammar school students attend Morehead Elementrary School, which has an enrollment of 546 students; the school has capacity for 600 students. The school has grades kindergarten through six. Future plans are to transfer the sixth graders to the Morehead City Middle School; this transfer should occur within the next two to three years.

Grades seven through nine attend Morehead City Middle School. Current enrollment is 453 students, although the capacity for the school is only 400. Plans are to construct a new facility, which should be completed within the next two to three years. Capacity at the new school will be approximately 700 students; this should take care of the sixth grade students being transferred from the elementary school.

There are nineteen elementary school students living at Emerald Isle, who do not attend the school closest to them, Cape Carteret, because of overcrowding there.

Because Emerald Isle does not have a transportation plan, little is known concerning the existing capacity of the primary road, Emerald Drive. A 1973 traffic count by the N. C. DOT indicated that Emerald Drive carries 1,100 vehicles per day. Because of the poor condition of this road, this traffic load is considered above the roads'capacity.

ESTIMATED DEMAND

FUTURE POPULATION AND ECONOMY

Demographers find it extremely difficult to project the future population for areas as new and as small as Emerald Isle. The problem is further complicated by a summer peak population of unknown complexity. A suffusion of day visitors, which varies from day to day, also affects summer peak population.

The population at Emerald Isle can be divided into three groups, each with its own unique demand for services. These are (1) year-around residents, (2) summer residents, and (3) day visitors. The number of year-around residents can be determined with reasonable accuracy by using census data and voter registration rolls. The summer residents can be determined less accurately by a housing unit count. A long term traffic survey is necessary to determine the day visitor rate. According the the U. S. Census, in 1960, there were fourteen year-around residents. By 1970, the total had increased to 122. Based on voter registration, the N. C. Department of Administration listed the population on September 2, 1975 as 230. Based on this data, a population projection trend for year-around residents can be established.

Table 7

ESTIMATED FUTURE POPULATION
Year-Around Residents
1975 - 2025

1975	1980	1985	2000	2025
320-400	476-595	528-660	792-990	1,232-1,540

The data from which this projection is made does not cover a sufficient length of time for a relatively precise projection; however, it is the only data available and does give a "general feel" for the expected increase in the year-around population.

As expected, the summer population is growing at a much faster rate than the year-around population. In order to project this population, garbage collection and building inspection records were used. In 1973, the town issued 1,010 garbage collection permits for dwelling units. That same year, 138 building permits were issued for new structures. In 1974, the town issued 140 building permits, and during the first nine months of 1975, 143 building permits were issued. The average number of permits issued for the past three years was 140 permits issued per year. The town does not have building permit records for years prior to 1973. The following table includes both year-around and summer residents.

Table 8

ESTIMATED FUTURE POPULATION
Peak Summer Residents
1975 - 2025

1975	1980	1985	2000	2025
5,000-5,600	8,260-8,472	10,144-11,272	17,213-19,672	25,254-33,672

Day visitors were not projected because of the lack of data.

The above fifty-year projection is higher than was shown desirable within the public participation section of this plan. Based upon alternatives presented in the Land Use Objectives, Policies and Standards section of this plan,

the Board of Commissioners selected the following desired population projection:

Table 9 DESIRED FUTURE POPULATION
Peak Summer Residents

1975	1980	1985	2000	2025
5,000-5,600	8,260-8,472	10,144-11,272	17,000	17,000

The economy of Emerald Isle will continue to focus on the tourist industry. Because of the recreational resources within the town and easy access to the mainland, the tourist industry is expected to continue its prosperity. A major consideration in economic growth is the installation of a sewage treatment facility. If such a system is installed, Emerald Isle will likely imitate the economic growth that has taken place at Wrightsville Beach.

FUTURE LAND NEEDS

The Town of Emerald Isle is only 30 percent developed. The population projection indicates that Emerald Isle will have a summer peak population of approximately 17,000 people by the year 2025. The town currently has enough developable land zoned for residential purposes to support more than the expected number of people, based on current health requirements regarding space for septic tanks. It is likely that the space requirements will be increased for the protection of water quality in Bogue Sound. In this event, a sewage treatment facility may be necessary to support expected growth.

Industrial Space Requirements

The town does have land suitable for industrial use; but on account of the current demand for recreational-residential land on Bogue Banks and the fragile nature of the area, industrial uses seem inappropriate and should not be allowed. The Land Use Plan for Emerald Isle does not include land designated as industrial.

Commercial Space Requirements

Although there are now 343 acres zoned for Commercial use, only 26 acres are yet developed. The 343 acres zoned for commercial use is over ten percent of the total land area, far in excess of the two to three percent normally considered adequate for commercial. Emerald Isle does not, however, represent a standard town. As Emerald Isle is a resort area, a higher percentage than normal for commercial areas appears appropriate. Even though the town currently has two commercial areas, based on the adopted Development Guide, a third commercial area should develop near the bridge. These three commercial areas should serve the town's commercial area needs. The gross ten year estimate of additional commercial acreage needed is shown below.

Residential Space Requirements

The town has adequate land acreage to satisfy the space necessary for residential development for the population

projection within this plan if a sewer system is installed. The gross ten year estimate of additional residential acreage is shown in the following table.

Table 10 LAND USE ACREAGE NEEDS WITHOUT SEWER

	Commercial		Residential
1975	26	1975	801
1985	70	1985	1,594
1995	105	1995	2,386
2005	140*	2005	3,177*
2015	*	2015	*
2025	*	2025	*

*Fully Developed

Table 11 LAND USE ACREAGE NEEDS WITH SEWER

	Commercial	Residential
1975	26	801
1985	70	923
1995	105	1,043
2005	140	1,164
2015	175	1,285
2025	210	1,406

The commercial area is based on one-tenth acre per person. The residential area is based on current developed densities. When a central sewage system is installed, zoning density

standards will be used in lieu of septic tank space requirements. The acreage needs will be reduced substantially.

COMMUNITY FACILITIES DEMAND

Necessary future community facilities are based upon the number of people expected to be in an area during a certain period in time. The population projection for Emerald Isle is as follows:

Table 12 ESTIMATED FUTURE POPULATION
Peak Summer Residents

1975	1980	1985	2000	2025
5,000-5,600	8,260-8,472	10,144-11,272	17,000	17,000

It appears likely that a sewage treatment facility will be necessary in order to protect the fragile environment of Bogue Sound. In order to construct a treatment plant, the EPA 201 Plan indicates that it will be necessary for West Bogue Banks and Cape Carteret to construct jointly a facility which will cost each taxpayer approximately ten dollars per month. A sufficient tax base exists to construct a treatment facility. A problem arises as to whether the taxpayers will support a bond to raise the local share. The public water system will also need enlarging. By 2025 the projections indicate that the town will be using approximately one and one-fourth million gallons of water per day. The estimated cost of the water system improvements has not yet been determined.

PLAN DESCRIPTION

LAND CLASSIFICATION

The Land Use Plan is made up of several important elements which are (1) the development objectives of the Town of Emerald Isle, (2) the planning guidelines of the Coastal Resources Commission, and (3) spatial distributions of various existing land uses of the town.

The Coastal Area Management Act requires that lands within the jurisdiction of a local government be classified as Developed, Transition, Community, Rural and Conservation. Within the town, there are two classes of land-Conservation and Transition. The definitions of each of these two are as follows:

> Conservation--Fragile, hazardous and other lands necessary to maintain a healthy natural environment and that are necessary to provide for the public health, safety, or welfare. The Conservation class identifies land which should be maintained essentially in its natural state and where very limited or no public services are provided. Lands to be placed in the Conservation class are the least desirable for development because:
>
> 1. They are too fragile to withstand development without losing their natural value; and/or
> 2. They have severe or hazardous limitations to development; and/or

3. Though they are not highly fragile or hazardous, the natural resources they present are too valuable to endanger by development.

Such lands include:

1. Fragile areas

   a. Wetlands

   b. Steep slopes and prominent high points

   c. Frontal dunes

   d. Beaches

   e. Surface waters including
      -Lakes and ponds
      -Rivers and streams
      -Tidal waters below mean high water

   f. Prime wildlife habitat

   g. Unique natural areas and historic and archaeological sites

2. Hazardous areas

   a. Floodways

   b. Ocean erosive areas

   c. Inlet lands

   d. Estuarine erosive areas

3. Others

   a. Publicly owned forest, park, fish and game lands and other non-intensive outdoor recreation lands

   b. Privately owned sanctuaries, etc., which are dedicated to preservation

   c. Publicly owned water supply watershed areas

   d. Undeveloped key parts of existing water-supply watersheds

   e. Potential water impoundment sites

Within the Town of Emerald Isle, the Conservation areas are the ocean beaches, the frontal dunes, the excessive erosion area, and the wetlands.

Transition--Lands where local government plans to accommodate moderate to high density development during the following ten year period and where necessary public services will be provided to accommodate that growth. The Transition class identifies lands where moderate to high density growth is to be encouraged and where any such growth that is permitted by local regulation will be provided with the necessary public services. The area to be designated as Transition must be no greater than that required to accommodate the estimated county population growth at a minimum gross density of 2,000 people per square mile. For example, if the population increase for the following ten year period is projected to be 10,000 people, and it is planned that 8,000 of them will be accommodated in the Transition area, then no more than four square miles of Transition area should be shown. In addition, the minimum services which will be required are the necessary water and sewer facilities, educational services, and roads. Consideration must be given to the cost of public services in the Transiton area. Local government is encouraged to estimate the approximate

cost of providing public services where they do not already exist.

Land to be classified Transition should be considered in the following order:

1. First priority is for lands which presently have a gross population density of more than 2,000 people per square mile, but do not qualify as Developed because they lack the necessary minimum public services. These areas may not be expected to accommodate additional population, but they will require funds for services to avoid public health and safety problems.

2. Second priority is for lands that have all the necessary public services in place, but which lack the minimum gross population density of 2,000 people per square mile needed to qualify the area as Developed. These areas therefore have not utilized the capacity of the existing services.

3. Additional lands necessary to accommodate the remainder of the estimated Transition growth for the ten year planning period.

In choosing lands for the Transition class, such lands should <u>not</u> include:

1. Areas with severe physical limitations for dedevelopment with public services.

2. Lands which meet the definition of the Conservation class.

3. Lands of special value such as the following unless no other reasonable alternative exists:

   a. Productive and unique agricultural lands;

   b. Productive forest lands;

   c. Potentially valuable mineral deposits;

   d. Potential aquifers and key parts of water supply watersheds;

e. Scenic and tourist resources;

f. Habitat for economically valuable wildlife species

g. Flood fringe lands;

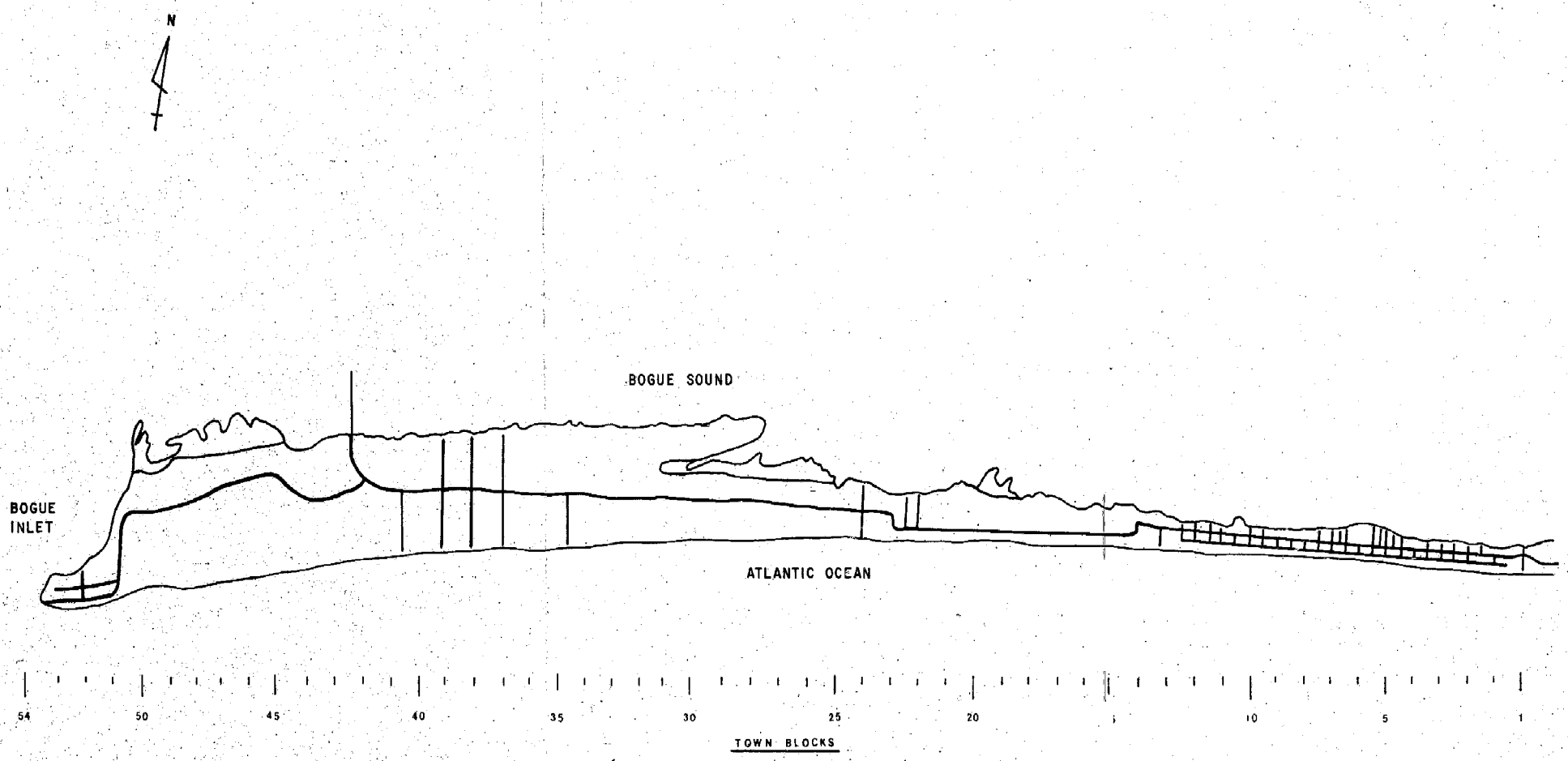
h. Open coast flood hazard areas, exclusive of ocean erosive areas;

i. Estuarine flood hazard areas, exclusive of estuarine erosive areas.

Within the Town of Emerald Isle, there are approximately 4.7 square miles of developable land. To date, approximately 1.3 square miles are developed. Based on our growth projections and densities allowed in the Transition class, an additional 2.5 square miles of developable land will be used in the next decade, bringing the total developed land to 3.8 square miles.

In 1970, water service was extended to the western end of the town; this extension made public water service available throughout the town. A new sewage treatment plant will probably be constructed within the next five to ten years. Upon construction of this plant, major outfalls will be constructed throughout the town.

Based on expected utility service and current growth trends, with the exception of the Conservation areas, the entire town is classified as Transition.



LEGEND

TRANSITION

CONSERVATION

TOWN OF EMERALD ISLE
APPROX. SCALE 1" = 3000'
SEPT. 1975

LAND CLASSIFICATION

MOORE and ASSOCIATES

In addition to the Land Classification, there are three other key parts in Emerald Isle's Land Use Plan. These are the Town's Land Use Objectives, Policies and Standards, the selected desired fully developed population and the Land Development Guide which was adopted by the town on February 8, 1975. Each of these elements have been discussed in previous parts of this plan.

Land Use Objectives, Policies and Standards

To continue to encourage the development of a good, clean family beach.

To continue efforts to maintain high standards for both residential and commercial areas.

To encourage the development of public facilities for beach access areas.

To insure that the town's population does not exceed the capacity of natural resources and supporting public facilities.

To continue efforts to construct a public sewage treatment system for the Bogue Sound area.

To improve the quality of town streets.

To continue to follow the Town Land and Development policy.

DESIRED FULLY DEVELOPED POPULATION

The desired fully developed population established for the town is 17,000 people.

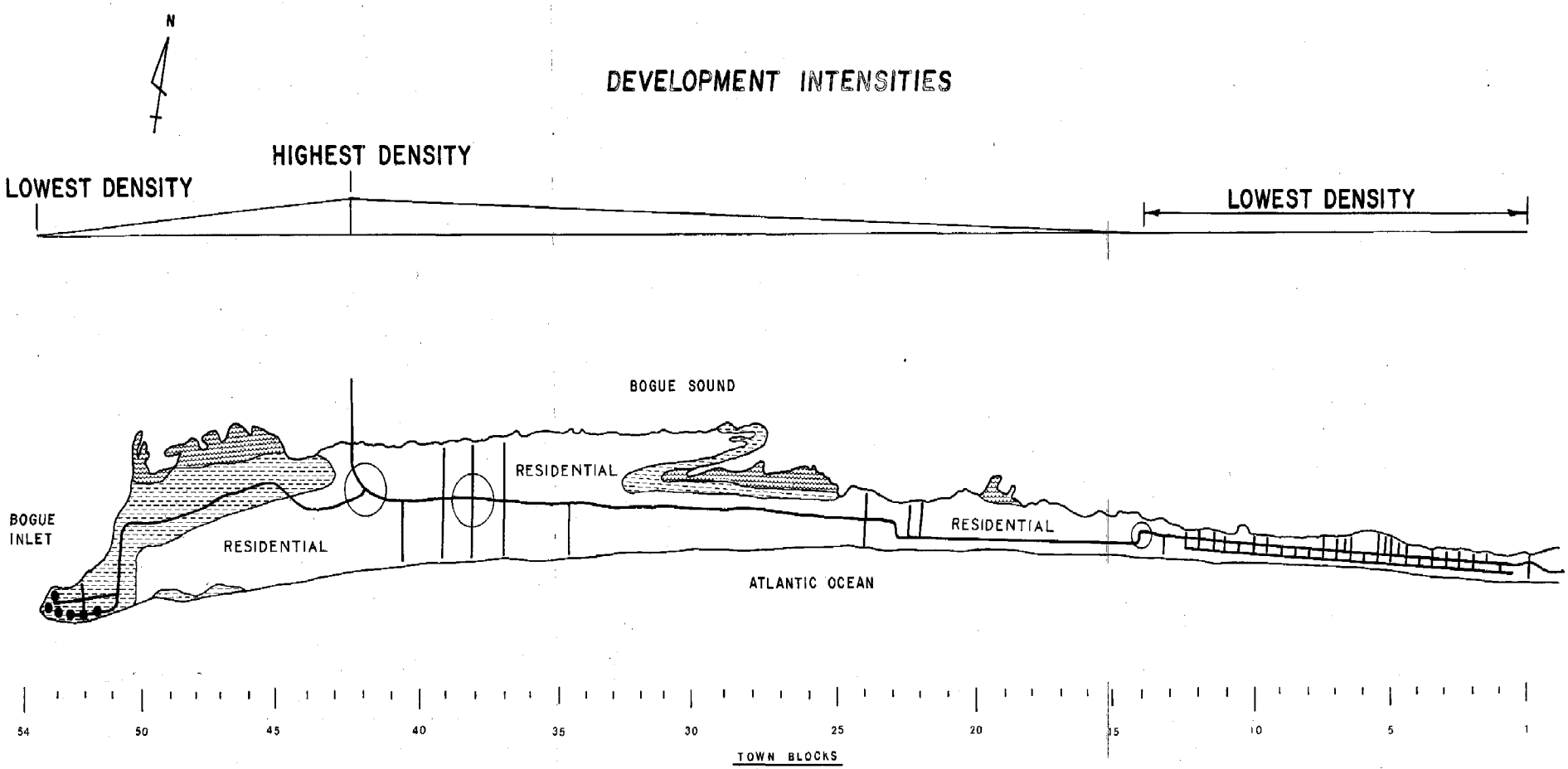
LAND DEVELOPMENT POLICY

As a part of the Town's Planning Program, in 1974 a Land

Development Guide was prepared. The guide was adopted as the official development policy by the Town Board of Commissioners on February 8, 1975. The following is the key statement of that policy:

> High intensity development should be located near the bridge with decreasing intensity as the distance from the bridge increases.

For an analysis of the above key elements see pages 50, 51, 52, and 16 of this plan.



LEGEND

- EROSION AREAS
- COMMERCIAL AREA
- WETLANDS
- FLOOD AREAS

TOWN OF EMERALD ISLE
APPROX. SCALE 1" = 3000'
SEPT. 1975

LAND USE PLAN

MOORE and ASSOCIATES

SUMMARY

The Coastal Area Management Act's land use planning program has not created new planning data. All of the data used in this plan was obtained from existing sources. These sources include the following:

Coastal Resources Commission
- Planning Guidelines
- Regulations dated January 22, 1976

Town of Emerald Isle
- Public Participation program
- Building permit records
- Garbage collection records
- Town Board minutes
- Land Development Guide
- Local Codes and Ordinances
- EPA 201 plan
- Bogue Banks Water Association

Carteret County
- Planning Department

State of North Carolina
- DNER-Division of Community Assistance
- Department of Administration

U. S. Government
- U. S. D. A. - Soil Conservation Service
- U. S. Army Corps of Engineers
- Federal Insurance Administration
- Bureau of Census

The manner in which the data was assembled was as required in the "General Applicable Standards of Review for Land Use Plans and Synopses."

Before a land use plan can be prepared, a determination of existing conditions must be made. This was the first step in preparing the Emerald Isle plan. Planning standards from the Coastal Resources Commission were reviewed to determine the purpose of the proposed land use plan. The next step was

to organize a public participation program in order to determine citizens' views concerning future development within Emerald Isle. While the public participation program was being organized by Town Officials, technical planning data was collected regarding existing development. Flood hazard areas, wetlands, erosion areas, and soil conditions were mapped. The distribution of these areas will indicate which areas are developable and which are not. Local development codes and ordinances were also evaluated. The number of vacant recorded lots was determined. The major conclusion of the Emerald Isle plan is that the current demand for recreational developed land is not likely to go away. The Town's Land Development Policy of higher intensity uses being located near the bridge with the intensity of development decreasing as the distance from the bridge increases appears to be a good policy to follow in future town growth.

With approximately 2,400 vacant lots on record, and only 38 percent of the town developed, there will be a large number of septic tanks within the town, seepage from which can reach Bogue Sound via the sandy soils. If the quality of Bogue Sound is to be maintained, it appears necessary to construct either a sewage treatment facility or greatly increase the space requirements for septic tank installation.

With a developable land area approximately the same size

as the City of New Bern, the town has developed a desired fully developed ceiling of 17,000 people. This figure may be revised when data becomes available concerning the safe development capacity of soils within the town. Once this planning data is developed through scientific research, a refined growth ceiling for the town can be established.

The planning data collected for uses in this plan was presented to the public in the public participation program, to the Planning Board at its regular meeting, and to the Town Board of Commissioners at its regular meetings in which the Land Use Plan was discussed. Through a discussion of the planning data, town officials were given an insight as to the effect that the data has on land use decisions and the Land Use Plan's development.

CITY-COUNTY PLAN RELATIONSHIP

The Emerald Isle Land Use Plan is but a small part of the Carteret County Land Use Plan. Constant communication has been maintained with the Carteret County Planning Department in order to ensure conformity with the County Plan. A coordination meeting was also held between all the local governments having jurisdiction of Bogue Banks. The only other land area within Carteret County adjacent to Emerald Isle is the Town of Indian Beach. That area is classified as Transition. Emerald Isle is classified as Transition, too. Adjacent land areas to Emerald Isle also have another common bond-the EPA-201 Sewer Facility Plan. The solution to west Carteret County's pollution abatement problem is also the solution to the Emerald Isle pollution abatement problem.

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