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TYRRELL COUNTY
LAND DEVELOPMENT PLAN

MAY 1976

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RECEIVED BY TYRRELL COUNTY IN CONFORMANCE WITH THE NORTH
A COASTAL MANAGEMENT ACT OF 1974.

RESOLUTION 34

A RESOLUTION ADOPTING THE TYRRELL COUNTY LAND USE PLAN.

WHEREAS, the Coastal Area Management Act of 1974 establishes a cooperative program of coastal area management between local and State governments, wherein local government shall have the initiative for planning and State government shall establish areas of environmental concern; and

WHEREAS, the General Assembly of North Carolina has determined and declared as a matter of legislative finding that among North Carolina's most valuable resources are its coastal lands and waters, and that the coastal area, and in particular the estuaries, are among the most biologically productive regions of this State and of the nation; and

WHEREAS, the General Assembly has found that an immediate and pressing need exists to establish a comprehensive plan for the protection, preservation, orderly development, and management of the coastal area of North Carolina; now, therefore,

The Tyrrell County Board of Commissioners resolves:

That the Tyrrell County Land Use Plan is hereby adopted in accordance with the Coastal Area Management Act of 1974, and the guidelines established by the Coastal Resources Commission, for the purpose set forth above, and it is hereby declared to be public policy.

This Report Has Been Prepared For
The Residents of Tyrrell County, North Carolina

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May, 1976

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I

INTRODUCTION

A. Purpose & History of the Plan

B. Geographical Setting

The Coastal Area Management Act, passed in 1974, is more forceful than enabling legislation: it requires all coastal counties to accept the responsibility of purposefully planning for the wisest and best use of all resources. Land use planning on such a scale has never before been attempted in North Carolina and it is inevitable that a long maturing process must follow the passage of such a unique program. This plan will also require further refinements and more specific studies in several planning areas.

But planning is only the first step. A planning document is a useless pile of paper unless both citizens and elected representatives commit themselves to making the plan work. Each decision, each action must add support and structure to the plan. The legislature made many revisions in the act to insure a plan that both protects the resources and provides for the citizen, and the county should be prepared to respond with the same effort. The Coastal Resources Commission, composed of appointed representatives from the twenty coastal counties, has further worked to develop guidelines which have specified both the planning procedure and the planning document.

This document is the first step toward satisfying the requirements of the Act. Future action by the county in implementing this program will affect the status of grants and programs in Tyrrell and the county's acceptability as a receiving agent for these.

This Land Use Plan is a policy statement which attempts to show where, when, and how the county expects to encourage the land uses throughout Tyrrell to change or remain the same. The strength of this plan rests almost entirely on the willingness of the citizens to enact further land use regulations where they see fit. However, within the areas of environmental concern (AEC's) land use shall be regulated according to the guidelines set forth by the Coastal Resources Commission.

GEOGRAPHICAL SETTING

The Swanquarter area, a part of the east-central coastal plain of North Carolina, includes Dare, Hyde, Pamlico, Tyrrell and Washington Counties. Tyrrell County is bounded on the north by the Albemarle Sound, on the east by the Alligator River, on the south by Hyde County, and on the west by Washington County. The county lies within the Pamlico Terrace, a broad, flat eastward sloping plain that represents a former ocean floor. The terrace is one of a series of marine terraces formed by successively lower stands of the sea during Pleistocene times. Much of the county is less than five feet above sea level. Lake Phelps is a prominent feature in the south-west corner of the county. Oddly enough the lake is higher than the surrounding land. Pocosins occupy much of Tyrrell.

The county is drained by slow moving streams, drainage ditches, and canals which empty into the Scuppernong and Alligator Rivers and the Albemarle Sound.

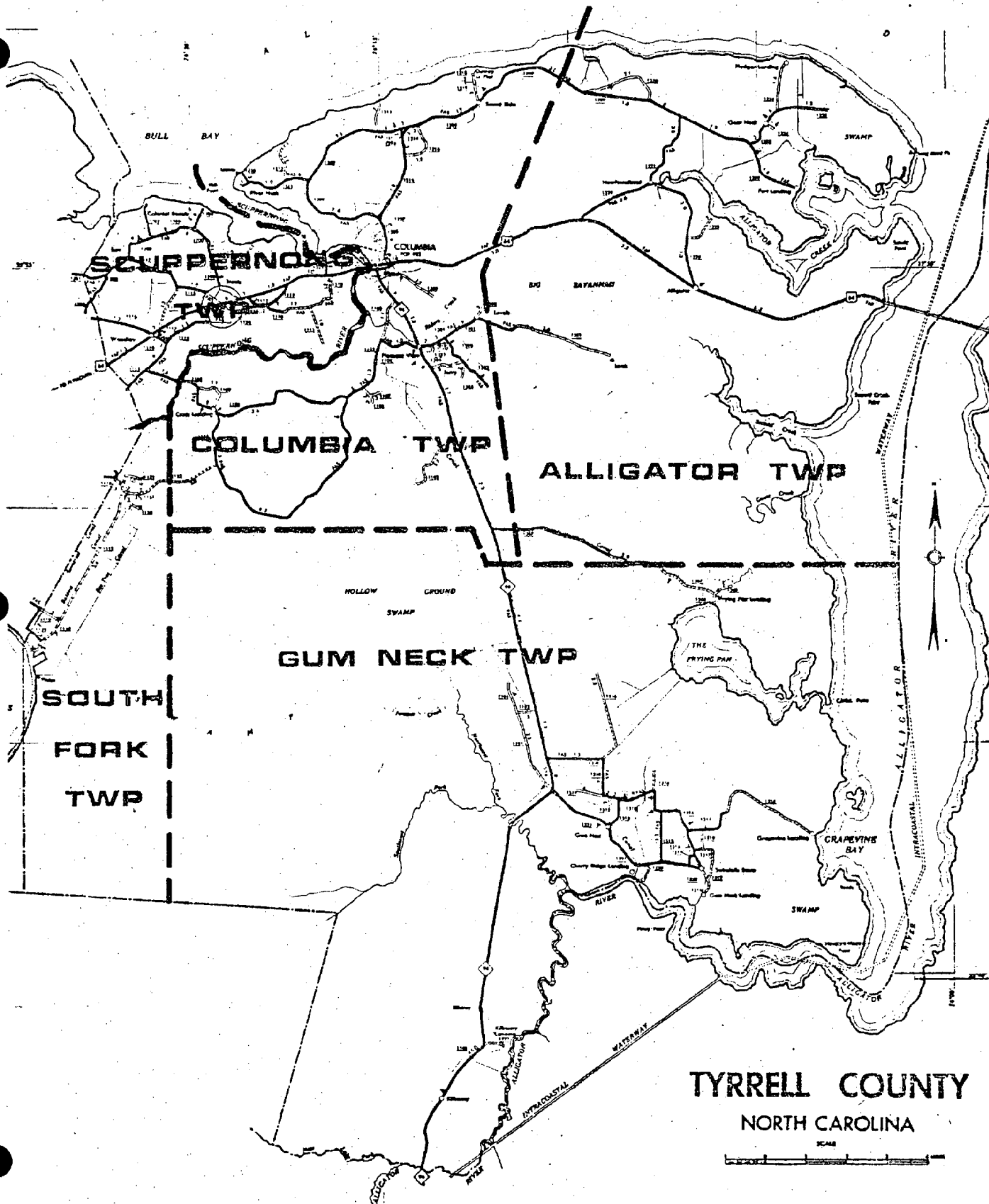
Tyrrell is underlain by sedimentary rocks that range in age from Cretaceous to Recent and represent deposition in both marine and non-marine environments. The sedimentary formations include beds of limestone, sand, unconsolidated shells, marl, clay, and unconsolidated sand stone. Throughout most of the area, sediments of Pleistocene and Recent age form a layer 25 to 100 feet thick.*

CLIMATE

The climate is mild with a 184 day growing season, average January temperature of 43.7 degrees, and average July temperature of 77 degrees. The average annual precipitation is 51.15 inches.**

* Geology and Ground Water Resources of the Swan Quarter Area, North Carolina. Division of Ground Water, Ground Water Bulletin Number 4, 1964.

** A New Geography of North Carolina. Bill Sharpe.



TYRRELL COUNTY

NORTH CAROLINA

SCALE

TOWNSHIPS

II

DESCRIPTION OF PRESENT CONDITIONS

- A. General Population Trends
- B. Economy
- C. Existing Land Use
- D. Constraints

GENERAL POPULATION TRENDS

The Coastal Area Management Act was passed to protect people through careful management of natural resources. Man's presence is a major force affecting natural resources. No matter how we view people in the environment we are both part of the problem--and part of the solution. The impact of population must, therefore, be considered as an important part of land use plans.

In 1970, Tyrrell County had a total population of 3,806--the lowest county population in the state. As seen in Table 1, the county population has been decreasing at an ever increasing rate. Between 1960 and 1970 the county lost over 15% of its population--a total decrease of 714 people. During the same period, North Carolina had a population increase of 11.5%.

Table 2 shows the greatest losses occurred in age groups 0-4 (51% loss) and 35-44 (31% loss). This population trend is graphically shown in Table 3. Tables 4 and 5 show township populations and indicate that Gum Neck Township lost the greatest percentage of people while Scuppernong lost the smallest percentage. The losses in children under 4 can be matched with the comparable loss of women in the child bearing age groups (defined as women between the ages of 15 and 49) Table 6.

Contrasting with the decreases in the two younger age groups are increases in the number of people over 55 years of age. Not only did these two age groups (55-64, and 65+) increase in number, but they also make up a greater proportion (%) of the population. This is shown in Table 7.

As a result of the high percentage of older people, the median age within the county is high as can be seen in Table 8. Only 7 other counties in North Carolina have a higher median age.*

The median age for the whole county is high, but the racial division of age is even more informative. The white population median age is nearly 8 years older than the total population median age, while the Negro median age is nearly 10 years younger than the combined population median. Tables 9 and 10 also show the Negro and white populations for 1960 and 1970 according to age groups. The Negro population age group 5-14 is the only age group that is not losing members faster than the white population group. More importantly, the Negro age groups 20-24 have continued to lose members while the white age group 20-24 has experienced a 29% increase.

*Median age is defined as that age which divides the population exactly in half, with half the people older than the median age and half the people younger.

TABLE I

TYRRELL COUNTY POPULATION 1940-1970

YEAR	POPULATION	CHANGE	PERCENT
1940	5,556		
1950	5,048	-508	- 9.1
1960	4,520	-528	-10.5
1970	3,806	-714	-15.8

SOURCE: Statistical Analysis System, N. C. State University, 1975.

TABLE 2
TYRRELL COUNTY
POPULATION BY AGE GROUPS

AGE GROUP	1960	1970	CHANGE	PERCENT
0 - 4	537	265	-272	-51 %
5 - 14	1064	849	-215	-20
15 - 19	427	375	- 52	-12
20 - 24	200	210	+ 10	+ .05
25 - 34	412	311	-101	-24
35 - 44	526	364	-162	-31
45 - 54	526	464	- 61	-12
55 - 64	374	474	+100	+27
64+	454	493	+ 39	+ 8

SOURCE: U. S. Census of Population 1960 and 1970.

TABLE 3
TYRRELL COUNTY
County Population by Age Groups 1950-1970

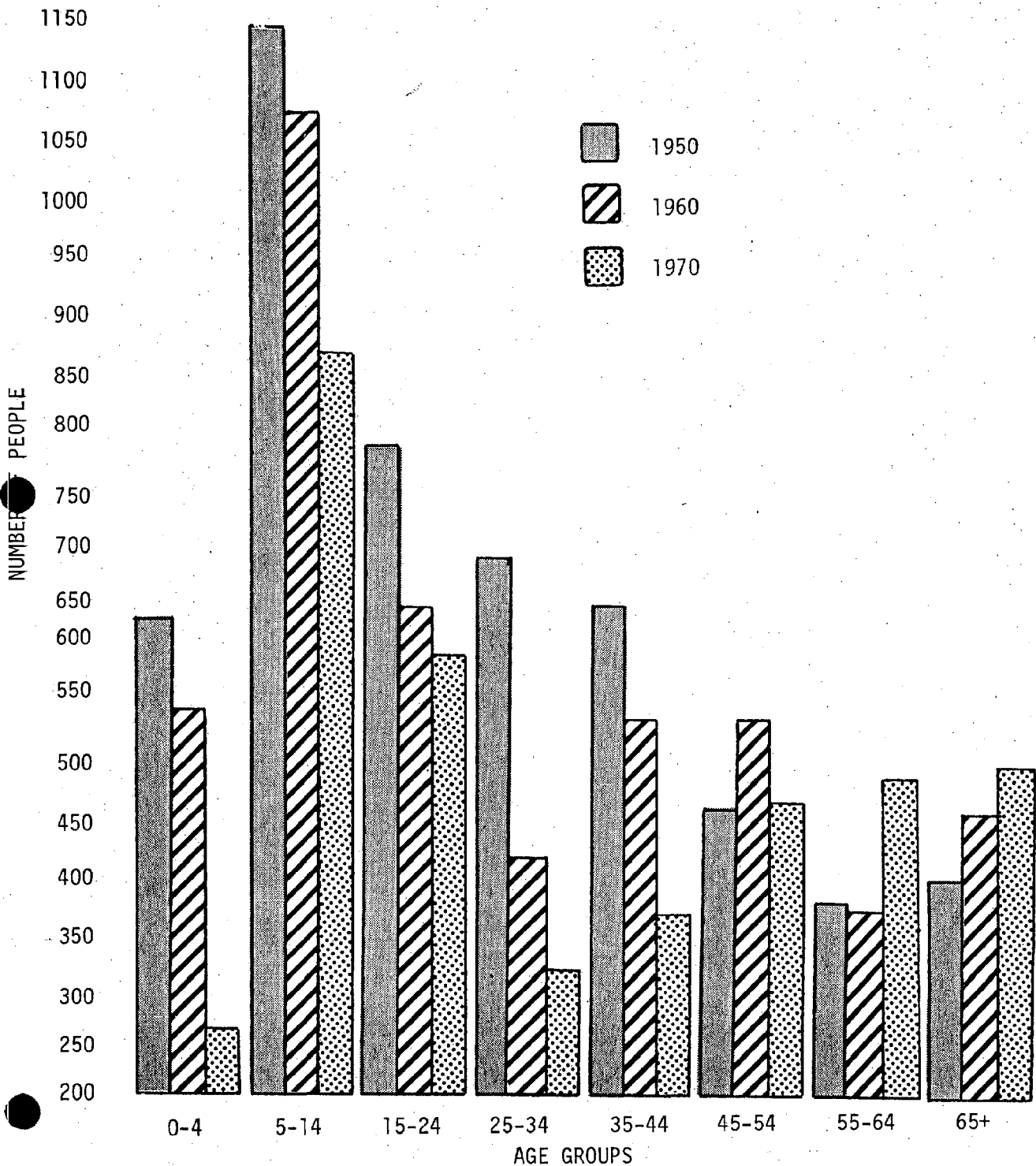


TABLE 4
POPULATION BY COUNTY AND TOWNSHIP
TYRRELL COUNTY POPULATION BY TOWNSHIP

YEAR	COUNTY	ALLIGATOR	COLUMBIA	GUM NECK	SCUPPERNONG	SOUTH FORK
1940	5,556	607	2544	1198	1074	133
1950	5,048	587	2482	883	1002	92
1960	4,520	613	2212	732	901	63
1970	3,806	482	1910	523	838	56

SOURCE: N. C. State University Statistical Abstract System, 1975.

Table 5
TYRRELL COUNTY
COMPARISON OF TOWNSHIP POPULATION CHANGES

TOWNSHIP	1960	1970	CHANGE	PERCENT
Tyrrell Co.	3806	4520	-714	-15.8
Columbia Twp.	1910	2212	-302	-13.7
Columbia Town	902	1099	-197	-17.9
Gum Neck Twp.	523	732	-209	-28.6
Scuppernong Twp.	838	901	- 63	- 7.0
South Fork Twp.	53	62	- 9	-14.5
Alligator Twp.	482	613	-131	-21.4

SOURCE: N. C. State University Statistical Analysis System, 1975.

TABLE 6
 TYRRELL COUNTY
 WOMEN OF CHILD BEARING AGE

1960	1970	Change	Percent
938	446	-492	-52.6%

SOURCE: U. S. Census of Population 1960, 1970

TABLE 7

TYRRELL COUNTY
TOTAL POPULATION BY AGE AND SEX



*Showing % changes are misleading. Here the age group 45-55 has decreased in size, yet those who remain are a larger proportion of the population.

SOURCE: U. S. Census of Population

TABLE 8
Tyrrell County
Median Age
1960-1970

	Females		Males		Total
	<u>Negro</u>	<u>White</u>	<u>White</u>	<u>Negro</u>	<u>Population</u>
1960	18.1	35.4	34.4	16.8	25.7
1970	21.2	40.6	38.6	19.0	31.8

SOURCE: U. S. Census of Population 1960, 1970.

TABLE 9
TYRRELL COUNTY
Negro Population By Age Groups

<u>Age Group</u>	<u>1960</u>	<u>1970</u>	<u>Change</u>	<u>%</u>
0 - 4	321	135	-186	-57.9
5 -14	558	505	- 53	- 9.5
15 -19	222	193	- 29	-13.1
20 -24	106	87	- 19	-17.9
25 -35	161	118	- 43	-26.7
35 -44	187	135	- 52	-27.8
45 -54	181	170	- 11	- 6.1
55 -64	117	168	+ 51	+43.6
64+	123	141	+ 18	+14.6
	Non-white	Negro		

*In 1960 there were only two people who were non-white and non-Negro.

SOURCE: U. S. Census of Population 1960, 1970.

TABLE 10
TYRRELL COUNTY
White Population By Age Groups

<u>Age Group</u>	<u>1960</u>	<u>1970</u>	<u>Change</u>	<u>Percent</u>
0 - 4	216	130	- 86	-39.8
5 - 14	506	340	-162	-32.0
15 - 19	205	182	- 23	-11.2
20 - 24	94	122	+ 28	+29.8
25 - 34	251	193	- 58	-23.1
35 - 44	339	229	-110	-32.4
45 - 54	345	295	- 50	-14.5
55 - 64	257	306	+ 49	+19.1
65+	331	352	+ 21	+ 6.3

SOURCE: U. S. Census of Population 1960, 1970.

TABLE 11
REGIONAL POPULATION COMPARISONS

<u>COUNTY</u>	<u>1900</u>	<u>1910</u>	<u>1920</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>
Camden	5,474	5,640	5,382	5,461	5,440	5,223	5,598	5,453
Chowan	10,258	11,303	10,649	11,282	11,572	12,540	11,729	10,764
Currituck	6,529	7,693	7,268	6,710	6,709	6,201	6,601	6,976
Dare	4,757	4,841	5,115	5,202	6,041	5,405	5,935	6,995
Gates	10,413	10,455	10,537	10,551	10,060	9,555	9,254	8,524
Hyde	9,278	8,840	8,386	8,550	7,860	6,479	5,765	5,571
Pasquotank	13,660	16,693	17,670	19,143	20,568	24,347	25,630	26,824
Perquimans	10,091	11,054	11,137	10,668	9,773	9,602	9,178	8,351
Tyrrell	4,980	5,219	4,849	5,164	5,556	5,048	4,520	3,806
Washington	10,608	11,062	11,429	11,603	12,323	13,180	13,468	14,038
R	85,048	92,800	92,422	54,334	96,907	97,580	97,698	97,302

SOURCE: Region R Water and Sewer Study, Freeman and Associates.

ECONOMY

Of the 100 counties in North Carolina, Tyrrell ranks 98th in per capita income (\$1,562) leading only Bertie (\$1,555) and Northampton (\$1,514) counties. 44% of the county's population lives below the poverty level.

The county has a small population, and therefore a small labor force. Under-employment may be serious as indicated by the high percentage (44%) of persons below poverty level. Employment opportunities are scarce with practically no industry in the county. The percentage of women in the labor market is low (34%) in comparison to percentages of women in the labor force from areas which are more economically developed (generally about 50%). In Tyrrell, most people (41%) are blue collar workers. Thirty-six percent have white collar jobs. Sixteen percent are in farming and 11% are service workers. Since 1960, white collar positions have increased 16%.

No single sector employs a large percentage of the work force. Agriculture, forestry, and fishing industries together account for 18% of the employment. Wholesale, retail, service, education, government and construction sectors each employ about 10% of the labor force. Manufacturing employs about 20%.

Agricultural Trends

Fewer farms, larger farms, shifts in tenure pattern and a large increase in value of agricultural real estate highlighted the changes in North Carolina agriculture between 1964 and 1969.

The number of farms decreased 19% in the state. Average farm size increased by 10% from 97 to 106.6 acres.

Value of farm land and buildings increased by 45%. Average sales of farm products per farm increased from \$7,200 in 1964 to \$10,000 in 1969, an increase of 39%. The proportion of commercial farms with sales of \$10,000 or more increased slightly from 20% to 24%. The percentage of farms with sales exceeding \$5,000 was 40 percent in 1964 and 1969. Thus, 60% of all farms in North Carolina continue as marginal or part-time operations with gross sales of less than \$5,000.

There was a slight decrease in part owners and a shift from tenants towards full ownership.*

For Tyrrell County, cash farm receipts went up between 1959 and 1969, although receipts still fall behind the rest of the region. Of course, First Colony Farms has now begun operations and these figures will change drastically in the near future.

Tyrrell County employment in agriculture decreased by 40% between 1960 and 1970.

*Source: Tar Heel Economist, November, 1972.

TABLE 12

INCOME AND POVERTY CHARACTERISTICS FOR FAMILIES,
UNRELATED INDIVIDUALS, AND PERSONS
TYRRELL COUNTY - 1970

Family Income Distribution

<u>Income</u>	<u>Number of Families</u>	<u>936 Families</u>
1,000	55	355 below poverty level;
1,000 - 1,999	129	37.9% below poverty level
2,000 - 2,999	144	
3,000 - 3,999	117	
4,000 - 4,999	75	Median Income \$4,307
5,000 - 5,999	52	Mean Income \$5,808
6,000 - 6,999	81	
7,000 - 7,999	64	
8,000 - 8,999	72	
9,000 - 9,999	15	
10,000 - 11,999	54	
12,000 - 14,999	21	
15,000 - 24,999	48	
25,000 - 49,999	5	
50,000 or more	4	

Unrelated Individuals = 228126 Below Poverty Level
55.3% Below Poverty Level\$1,750 = Median Income
\$2,133 = Mean IncomePersons having income less than poverty level = 1,702
= 44.8% of all personsPer capita income of persons = \$1,562Only Bertie and Northampton have lower per capita incomes

*Source: U. S. 1970 Census of Population

TABLE 13

1970 OCCUPATIONS OF EMPLOYED PERSONS

	<u>Number</u>	
Total Employment	1220	
Professional, Technical	132	
Managers, Administrators	39	White collar = 386 = 32%
Sales	69	Workers * (333 = 25%)
Clerical	146	
Craftsmen, foremen	128	
Operatives	204	Blue collar = 504 = 41%
Laborers, except farm	172	Workers * (575 = 42%)
Farm labor & foremen	85	Farm = 197 = 16%
Farmers & managers	112	* (32 = 24%)
Service workers	104	Services = 133 = 11%
Private households	29	* (135 = 10%)

* (1960 census totals)

TABLE 14

1970 INDUSTRIAL DISTRIBUTION OF EMPLOYED PERSONS

	<u>Number</u>	<u>Percent of Total</u>
Agriculture, forestry, fishing	225	18%
Construction	143	12
Manufacturing	243	20
Wholesale	76	7
Retail	128	10
Finance (Banking credit, insurance, real estate)	51	4
Personal & community service	164	13
Education & government	125	10

Source: U. S. Census, 1970.

TABLE 15
REGIONAL COMPARISON OF FARM CHARACTERISTICS

Area and County	No. of Farms		Average Size of Farm		Value of Land and Buildings per Farm	
	1969	1964	1969 (acres)	1964	1969 (dollars)	1964
Beaufort	1,467	1,683	133.6	130.6	41,259	33,028
Camden	221	215	254.8	252.1	89,020	55,554
Chowan	430	448	137.4	127.8	50,492	31,300
Currituck	205	307	256.2	226.2	79,084	44,907
Gates	614	620	140.5	145.1	36,137	23,537
Hyde	294	336	270.3	227.9	75,816	33,709
Pasquotank	379	446	178.1	164.6	77,625	53,853
Perquimans	492	603	165.5	150.8	54,878	37,913
Tyrrell	213	259	157.7	154.7	50,621	20,490
Washington	477	506	190.5	138.3	63,431	26,017

Source: Dr. Stone, N. C. State Agricultural Extension Service

TABLE 16

CASH FARM RECEIPTS - REGIONAL COMPARISON

	Total (thousand dollars)	1969		1959-69		
		Percent of Total Livestock & Poultry		Percent change in receipts		
		Crops	Total Livestock & Poultry	Total	Crops	Livestock & Poultry
Camden	4,062,831	80.8	19.2	44.6	27.2	239.3
Chowan	7,292,226	62.9	37.1	88.0	60.9	163.0
Currituck	4,323,619	70.0	30.0	14.6	4.2	49.3
Dare	N/A	N/A	N/A	N/A	N/A	N/A
Gates	7,657,181	53.0	47.0	97.3	56.3	180.1
Hyde	4,541,690	73.0	27.0	87.5	62.6	220.1
Pasquotank	6,988,753	79.9	20.1	35.9	22.6	139.0
Perquimans	6,153,846	68.1	31.9	51.6	40.2	83.2
Tyrrell	2,718,965	61.9	38.1	112.9	96.0	147.5
Washington	6,198,665	79.1	20.9	80.1	80.5	78.7
Region R	49,937,776	69.3	30.7	62.7	43.8	132.0

Source: Dr. Stone, N. C. State Agricultural Extension Service

TABLE 17
VALUE OF FARM PRODUCTS SOLD
Farms Selling

<u>Area & County</u>	<u>\$5,000-\$9,999</u>		<u>\$10,000 and Over</u>	
	<u>1969</u>	<u>1964</u>	<u>1969</u>	<u>1964</u>
	(percent)			
Beaufort	18	22	30	35
Camden	11	14	35	34
Chowan	14	16	37	33
Currituck	14	14	41	30
Gates	19	20	30	23
Hyde	13	12	39	32
Pasquotank	15	15	41	37
Perquimans	18	18	39	26
Tyrrell	8	16	25	12
Washington	17	19	32	23

TABLE 18
TENURE OF FARM OPERATORS (Percent)

<u>Area & County</u>	<u>Full Owners</u>		<u>Part Owners</u>		<u>Tenants</u>	
	<u>1969</u>	<u>1964</u>	<u>1969</u>	<u>1964</u>	<u>1969</u>	<u>1964</u>
Beaufort	52	41	28	38	20	20
Camden	47	39	35	46	18	15
Chowan	47	42	33	36	20	22
Currituck	43	46	39	39	18	13
Gates	59	48	25	34	16	18
Hyde	50	38	40	43	10	18
Pasquotank	48	41	36	40	16	19
Perquimans	43	45	39	38	17	17
Tyrrell	60	53	27	34	13	13
Washington	57	45	25	29	18	25

SOURCE: Dr. Stone, N. C. State Agriculture Extension Service

First Colony Farms

With a 375,000 acre spread in Washington, Tyrrell, Dare and Hyde Counties, the farm may be one of the largest in the country. Although the farm's potential for major problems is well-known, it is not well documented. Environmentally, the farm's effect has been less than feared. Sociologically the impact on the various counties also appears minimal. It is a generally accepted principle that a single isolated industry (as First Colony Farms may be considered) does not add enough value to pay for the service requirements it generates. In the case of First Colony Farms the burden (costs/services) may fall unequally among the surrounding counties as employees settle in various places and as equipment warehouses and stock yards are located throughout the 4 counties. The impact on Tyrrell and Hyde may be quite different than that on Dare and Washington Counties. In general, there should be limited social impacts unless specific steps are taken to concentrate the work force.

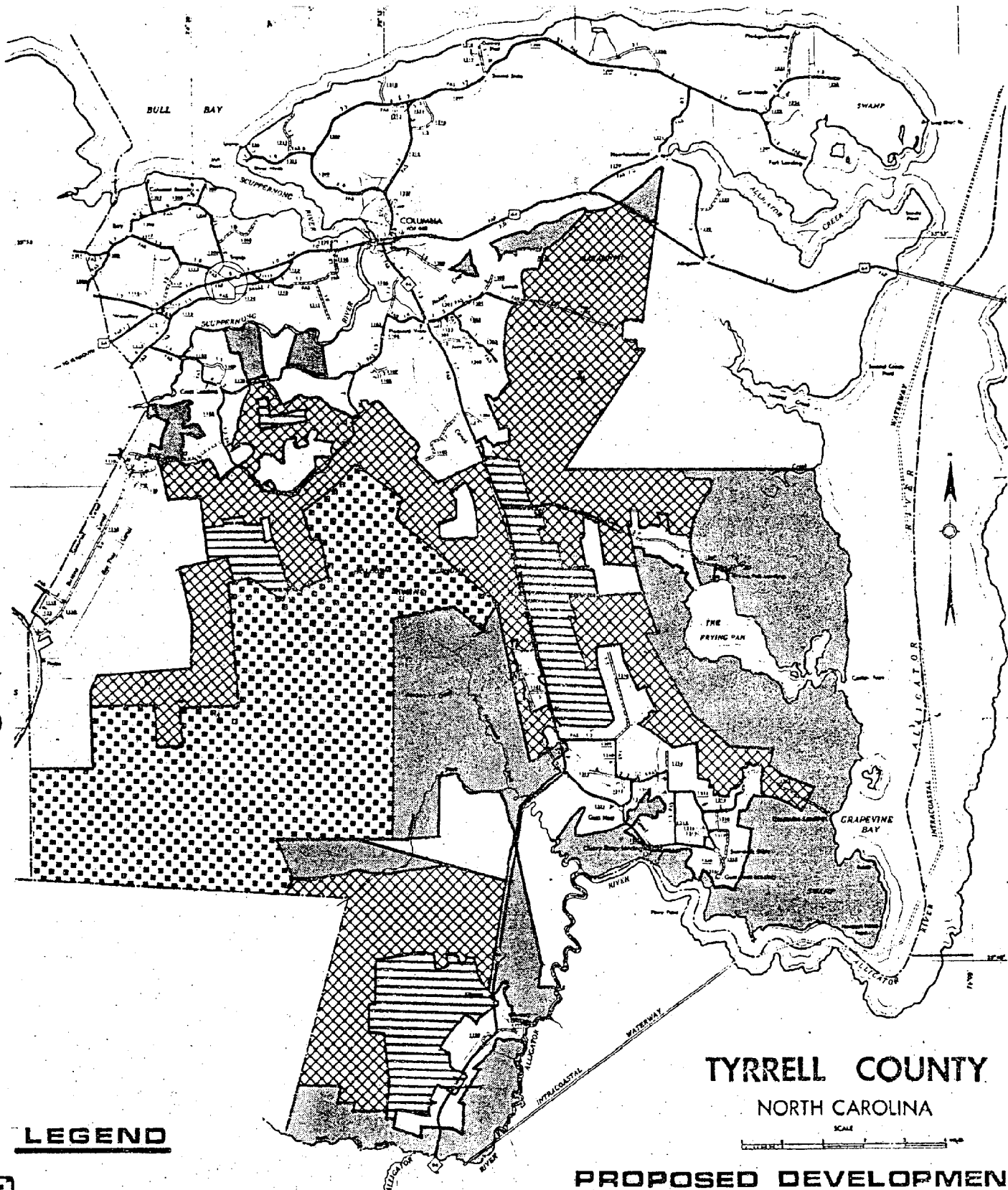
First Colony Farms has no plans to do so.

Most of First Colony Farms' buying, selling, and financing is done outside the area: in fact, it is done predominately outside the state. Few independent buyers, sellers, or processors are therefore expected to establish in the area.

The farm expects to hire a limited number of people every year (about 30). Of these employees 1/3 will be skilled, 1/3 semi-skilled, and 1/3 professional.

As preferential assessment does not apply to First Colony Farms, the tax dollars generated by land conversion in Tyrrell County added some \$74,000 to the county's 1975-76 budget of \$2,318,113 (or about 3% of the budget).

Socially, First Colony Farms is not creating a commotion in Tyrrell County nor is it a drain on services of the budget. However, the massive land conversion may be negatively affecting wildlife habitats or other recreational resources.

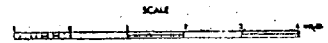


LEGEND



- PROPOSED PASTURE
- RECREATION AND WILDERNESS
- PROPOSED ROW CROP
- CULTIVATED ROW CROP
- OTHER OWNERSHIP

TYRRELL COUNTY
NORTH CAROLINA



PROPOSED DEVELOPMENT
FIRST COLONY
FARMS
1975

EXISTING LAND USE

General Development Pattern

The County meets the census definition of a rural area--it has no "place" or incorporated town of more than 2,500 inhabitants. Little acreage is developed in moderate to high density residence or for commercial or industrial uses.

Columbia is the only municipality in the county. Various communities exist in name but are actually widely dispersed "neighborhoods" (perhaps with a store and community center) in an identifiable section of the county.

Commercial establishments are located primarily in Columbia. Some remain in the central business district but more are being attracted to the U. S. 64 by-pass.

Small industrial enterprises--lumber yard, sawmill, farmer's supply are located on U.S. 64 west of Columbia.

Residential development occurs along the roads dispersed throughout the county. There are 12 subdivisions or trailer parks in the county. These are all located along the shore of the Albemarle Sound and are a mixture of vacation, retirement, permanent homes, and mobile homes. Mobile homes which have nearly quadrupled in number from 1970-75 or 84 to 309. Most new development of any sort occurs in Columbia, Scuppernong Community or Sound Side Community.

Large farms and large commercial timber tracts dominate the land holding pattern in the county. Approximately 68% of the land is corporately held (First Colony Farms, Weyerhaeuser, Horner Waldorf, Connecticut General Life Insurance, and others).

Existing recreation sites as described in the State Comprehensive Recreation Plan are: Bulls Bay Boatel, Gum Neck Landing boat ramp, Columbia boat ramp, Norman Smith Memorial Beach, Pettigrew State Park, Prichetts Marina, Sawyer's Marina, Scuppernong Community Center, Travis Playground, and Scuppernong Travel Trailer Park.

Problems From Unplanned Development

Several problems have resulted from the unplanned development within the county. Most obvious is the congestion along U.S. 64 both in Columbia and throughout Scuppernong Township. Uncontrolled driveway access has permitted every individual residence or place of business to have its own direct driveway. A traffic hazard is created when cars are constantly turning off or coming on to the highway. Speed is drastically lowered and the effectiveness of the highway reduced. This loss can be counted in tax payer's dollars when the road must be widened, traffic lights installed, or other traffic control measures instituted.

Ill-planned development with poorly designed streets and inadequate lots will be a handicap for a long time along the Sound Shore, in Goat Neck and perhaps in Gum Neck. Any new development in these areas must now contend with poor road systems, the lack of recreation areas, and anticipated water supply and sewage disposal problems. Indiscriminate countywide dumping is evident due to the lack of a proper landfill and a solid waste collection system.

Three areas are experiencing or can be expected to experience major land use changes: Scuppernong community, Gum Neck, and the Sound Shore area.

Scuppernong, because of its better soil conditions and location on U.S. 64, between Columbia and Creswell, is already showing signs of development. Several commercial establishments and many residences already exist. Scuppernong's population fell less than any other township between 1960 and 1970. One well located subdivision would probably create considerable changes.

Massive land clearing and drainage operations for large scale farming are the changes occurring throughout Gum Neck Township. Grain storage, shipping facilities, and expansion of the cattle and swine feed lots by First Colony Farms can be expected in the near future. Barge facilities and food processing plants are possibilities also, as secondary developments.

Now that the Southeast states are experiencing greater immigration--especially to rural areas--recreation home development along the Albemarle Sound can be expected to continue and possibly increase. Such development unless strictly regulated can be expected to degrade water quality by septic tank effluent or accelerated shore erosion.

The Scuppernong River is a natural area providing prime fish spawning areas along the hardwood fringe. Any drainage operation upstream (in Washington County) can be expected to modify downstream characteristics.

CONSTRAINTS

An analysis has been made of the general suitability of land for development with special emphasis given to physical limitations, fragile areas, and areas with resource potential.

PHYSICAL LIMITATIONS

Hazard Areas

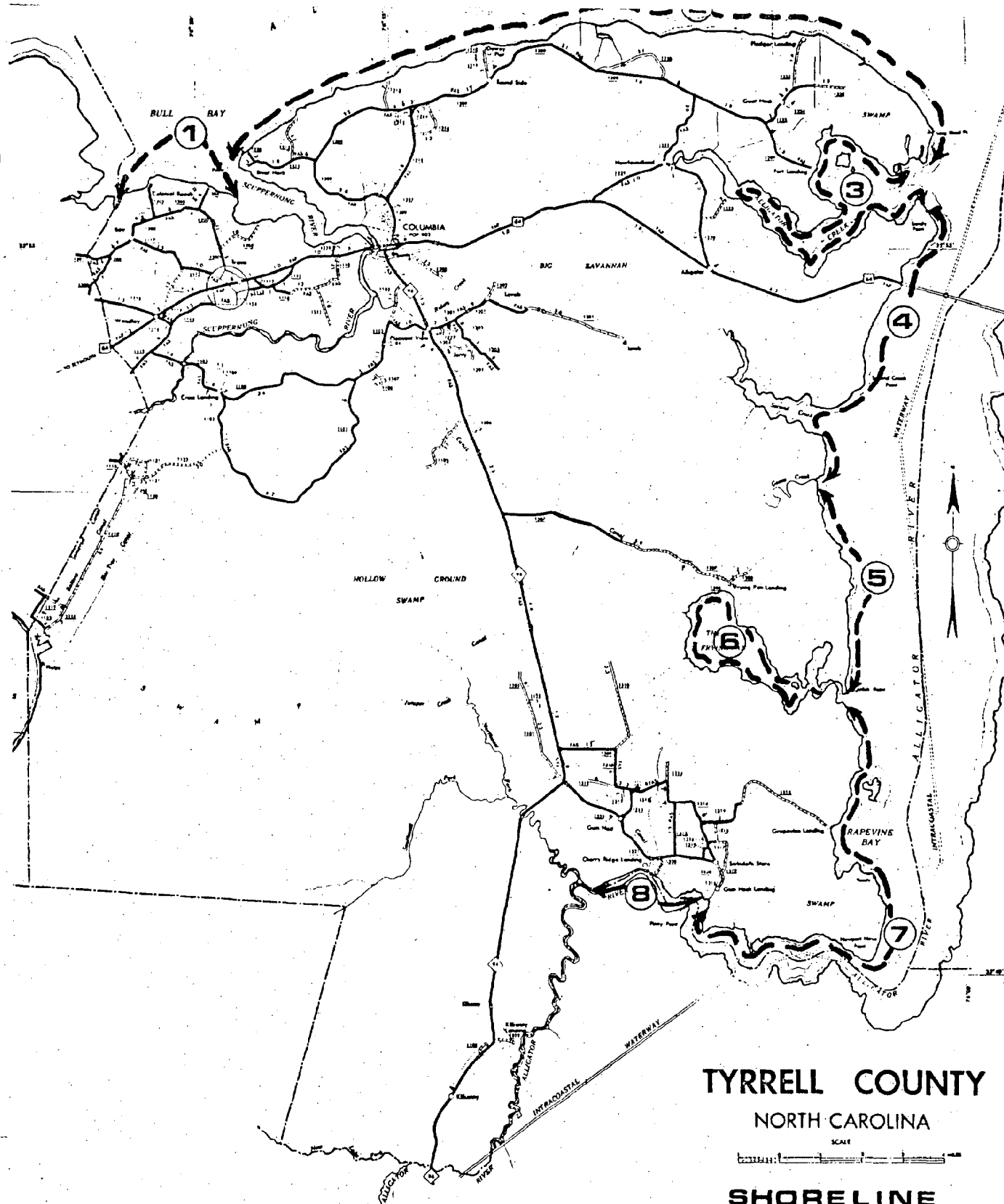
Several man-made hazards exist. A USAF bombing range is located in the Albemarle Sound directly north of SR 1209 where the road curves closest to the Sound Shore near SR 1218 (Dewey Pier). Boating is prohibited in the area although the warning is frequently ignored. A privately owned landing strip is located directly east of Dewey Pier. The owner of the air strip is subdividing the surrounding land.

One oil tank storage facility is situated on Columbia's waterfront in a residential neighborhood, another is in a commercial area and a third is in a residential neighborhood near the high school.

Coastal flood prone areas are one of the major natural hazards in the county. All land areas below 6 feet elevation have been designated flood prone. Which means, according to the United States Geologic Service and Department of Housing and Urban Development maps, most of the county has a 1% chance each year of being flooded. Or, put differently, the flood prone area will be inundated on the average, once every hundred years.

Riverine floodways and flood plains have not been delineated for Tyrrell County. This should be done for both the Scuppernon River and Alligator River because such areas serve as buffer zones to public trust and estuarine waters, besides providing excellent habitat in the form of seasonally inundated wooded swamp fringes for spawning herring.

Estuarine erosion areas have been determined by the Soil Conservation Service for 121 points along the Albemarle Sound and Alligator River. An average 25-year erosion rate has been calculated.



SHORELINE LOST TO EROSION 1947 - 1969

Reach No. 1

Erosion = 22.5 acres or 168,395 tons
Av. Width of Eroded Area = 61.8 Ft.
Tons Lost Per Year = 7,654
Ave. Height of Bank = 3.8 ft.
Distance = 3.0 Miles

Reach No. 2

Erosion = 98.3 acres or 403,083 tons
Av. Width of Eroded Area = 42.8 Ft.
Tons Lost Per Year = 18,322
Av. Height of Bank = 2.1 Ft.
Distance = 19.0 miles

Reach No. 3

Erosion = 89.7 acres or 283,417 tons
Av. Width of Eroded Area = 43.4 Ft.
Tons Lost Per Year = 12,883
Av. Height of Bank = 1.6 Ft.
Distance = 17.1 miles

Reach No. 4

Erosion = 85.6 acres or 212,620 tons
Av. Width of Eroded Area = 66.4 Ft.
Tons Lost Per Year = 9,665
Av. Height of Bank = 1.4 Ft.
Distance 10.6 miles

Reach No. 5

Erosion = 27.6 acres or 54,000 tons
Av. Width of Eroded Area = 40.0 Ft.
Tons Lost Per Year = 2,455
Av. Height of Bank = 1.0 Ft.
Distance = 5.7 miles

Reach No. 6

Erosion = 77.5 Acres or 151,920 tons
Av. Width of Eroded Area = 40.0 Ft.
Tons Lost Per Year = 6,905
Av. Height of Bank = 1.0 Ft.
Distance = 16.0 miles

Reach No. 7

Erosion = 70.3 acres or 206,550 tons
Av. Width of Eroded Area = 40.0 Ft.
Tons Lost Per Year = 9,389
Av. Height of Bank = 1.5 Ft.
Distance = 14.5 miles

Reach No. 8

Erosion = 14.1 Acres or 41,310 tons
Av. Width of Eroded Area = 30.6 Ft.
Tons Lost Per Year = 1,878
Av. Height of Bank = 1.5 Ft.
Distance = 3.8 miles

SUMMARY:

Total Erosion = 485.5 acres or 1,521,295 tons
Av. Width of Eroded Area = 44.7 Ft.
Tons Lost Per Year = 69,150
Ave. Height of Bank = 1.6 Ft.
Distance = 89.6 miles

Soils

Soils which occur together in a characteristic and repeating pattern on a landscape constitute a general soil area or a "soil association." Soil associations are named for two or more of the most extensive soil types found on a particular landscape. The less extensive soil types may or may not be included in the association name.

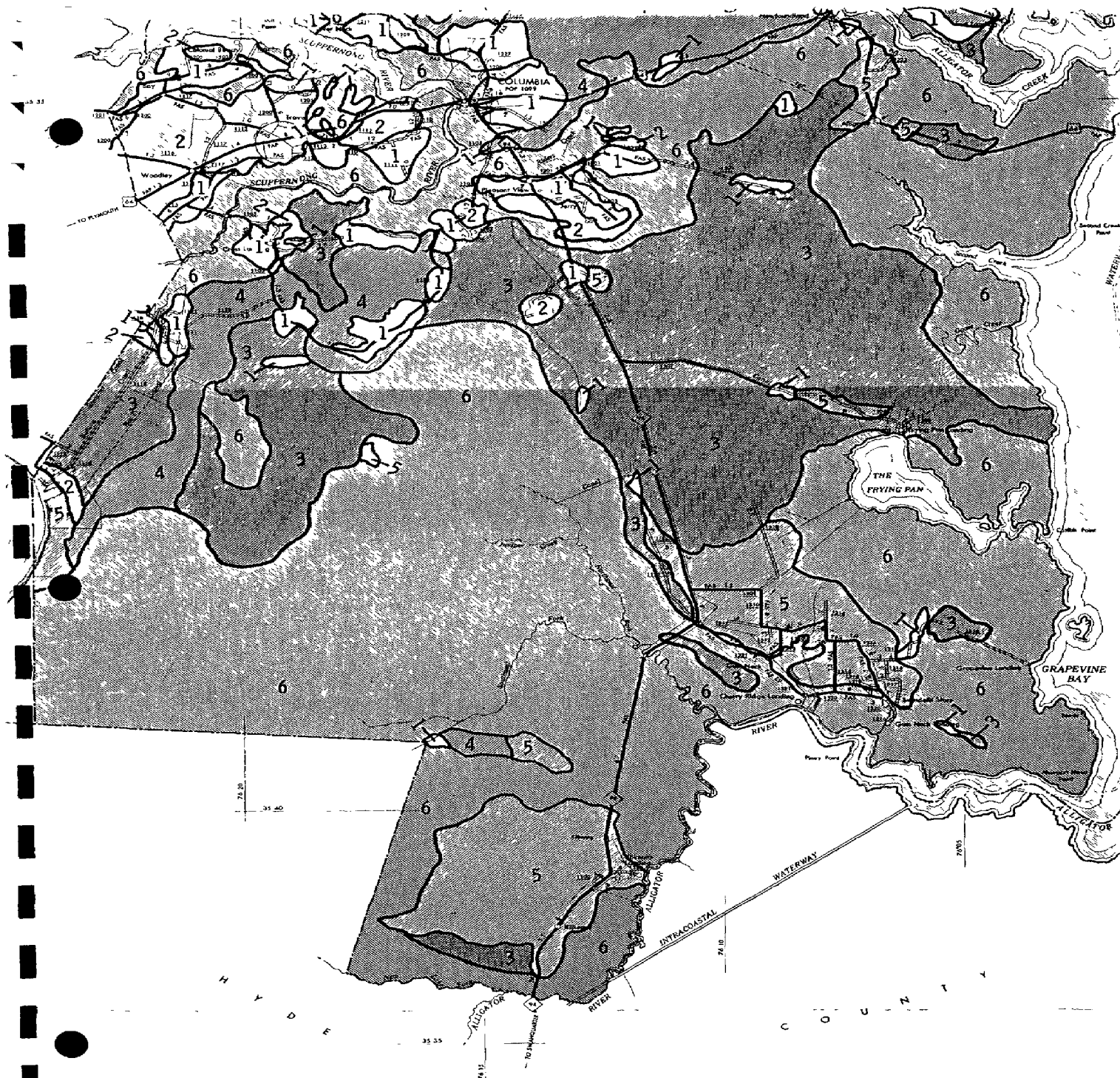
A generalized soils map showing the locations and extent of six associations in Tyrrell County has been prepared. This map, along with the accompanying text and interpretations, provides the general soils data necessary for planning the efficient use and orderly development of the county's land resources. This map will be useful to those who are interested in the location and extent of soil types in the county, as well as to those who seek the locations of areas suitable for agricultural, industrial, or other broad land use potentials within the county.

It should be emphasized that this general soils map has been prepared for broad planning purposes only. It does not accurately depict specific soil types on individual tracts of land and is not suitable for detailed planning of such tracts. A more detailed soil survey is necessary for detailed planning and should be prepared by the county.

The accompanying soil interpretations table gives limitations of the main soil types for dwellings, recreational areas, light industries, and highway development, as well as suitability for general agriculture, woodland, and pasture development.

The accompanying maps, legends and tables were prepared by the Soil Conservation Service assisting the Pamlico Soil and Water Conservation District.

As one can easily see from the tables and map, the drainage issue is a serious matter for Tyrrell. At best, the soils have moderate limitations, at their worst the soils are nearly underwater. This is not to say, however, that the soils are unuseable but rather that any use would require some sort of soil modification.



LEGEND

BERTIE-LUMBEE-JOHN'S ASSOCIATION: Moderately well drained, somewhat poorly drained and poorly drained soils with friable sandy clay loam subsoils; on nearly level to gently sloping areas on the higher landscapes.

MYATT-COXVILLE ASSOCIATION: Poorly drained soils with friable to firm fine sandy clay loam or sandy clay subsoils; on broad flat plains of the Coastal Plain.

HYDE-BAYBORO ASSOCIATION: Very poorly drained soils with firm to very firm clay loam or clay subsoils; on extensive broad "flats" or depressions.

TORHUNTA-PORTSMOUTH ASSOCIATION: Very poorly drained soils with friable loamy sand or sandy loam to sandy clay loam subsoils; on the "pocasin-like" areas in the low areas.

PASQUOTANK-WEEKSVILLE ASSOCIATION: Poorly and very poorly drained soils with friable silt loam subsoils underlain by sandy substratum; on broad, flat areas of the lower Coastal Plain.

BELHAVEN-DARE-DOROVAN ASSOCIATION: Very poorly drained organic soils which are inundated throughout most of the year; on low flat first bottom lands along the major estuaries.

0 1 2
MILE

Approximate Scale.
Map prepared at 1:126,720;
regard to scale for maximum

GENERAL S
TENTATIVE: SUBIEC
TYRRELL C
NORTH CAR

This problem of wet soils is probably the major land use constraint facing the county. If a more balanced economy is sought, the business will need to contend with severe soils limitations. If agricultural production is to expand, land clearing must be united with water table management. If the housing shortage is to be eased, water and sewerage systems must be very carefully planned. In short, soil conditions may be the strongest factor working against development in Tyrrell.

Ground Water

The Yorktown aquifer is the principal source of water supply in Hyde and Tyrrell Counties. This aquifer consists chiefly of beds of marl, sand and consolidated coquina that are generally separated by beds of clay or sandy clay. Yields of 5 to 20 gpm are common in most small diameter wells in the Yorktown aquifer. Yields of 75 to 100 gpm may possibly be obtained from carefully constructed wells of large diameter. The aquifer is recharged directly in the area of out crop and indirectly by seepage of water through overlying surficial sand. The chemical quality of water from the Yorktown aquifer varies with the lithology. The water is commonly moderately hard to hard but is generally acceptable for most domestic purposes throughout the area.

Surficial sediments of Pleistocene and Recent age comprise the non-artesian or water table aquifer of the Swan Quarter area. This aquifer is recharged directly by precipitation and surface storage, and where it immediately overlies artesian aquifers, acts as a source of recharge to them. The water table is usually within 2 to 3 feet of the land surface except in the swamp, where it is at the surface.

Water from this shallow aquifer is characteristically soft, irony and corrosive. The vulnerability of this aquifer to local bacteriological or chemical contamination must be considered in well construction and adequate safeguards taken.

Only a small fraction of the available ground water in Tyrrell County is now being used. Because of the relatively shallow depth to saline water (120-160 ft.) development of large ground water supplies at most places must be carefully planned to insure proper well spacing and pumping rates in order to prevent contamination of the aquifer.

Steep Slopes

There are no steep slopes in Tyrrell County.

FRAGILE AREAS

Coastal Wetlands

Coastal wetlands containing the species of vegetation included in the statutory definitions of wetlands have been identified for Tyrrell County. The majority of wetlands occur along the Alligator River and its tributaries with the largest wetland located on Long Shoal Point. In total, about 850 acres of wetland are located on 15 sites. The majority of the wetlands are in little danger from development. Most occur in completely unpopulated areas but remain subject to the pressures of drainage, clearing, and forestry practices.

Estuarine and Public Trust Waters

Tyrrell County has a lake, streams, canals and a sound which are all public trust waters and include commercial fishing waters, important herring nursery areas (along the Scuppernong and Alligator Rivers), and the Intra-Coastal Waterway which provides access to all states on the eastern seaboard as far north as New Jersey.

The relationship between any body of water and adjacent land uses is complex and various land uses may directly or indirectly damage the public rights in these waters. For example, septic tanks may create water quality problems at Lake Pehls or along the Albemarle Sound unless sanitation regulations are strictly enforced.

The North Carolina Stream Classification System categorizes all streams according to their intended use. The system and its relationship to water bodies in Tyrrell county are described here.

The use of water is only partially dependent on the quality of water in the stream. If the stream is to be used for drinking water then water quality must be high. However, if the stream is to be used as an open sewer, water quality really isn't important. These distinctions are important in understanding HOW stream classifications are determined. Streams are classified according to how they will be used and the classification does not necessarily reflect the actual water quality.

The following list shows the classification of major water bodies in Tyrrell County:

C Swamp	Scuppernong River to Riders Creek and tributaries. Alligator River and tributaries to junction of main forks. Most canals, including Bee Tree, Batava, and Somerset, Goose Creek, and Frying Pan canals.
SB	Bull Bay
SC	Albemarle Sound
SC Swamp	Alligator River

Class AI and AII

Source of water supply for drinking, culinary, or food-processing purpose or any other usage requiring water of lower quality.

Class B

Bathing and any other best usage except as source of water supply for drinking, culinary, or food-processing purposes.

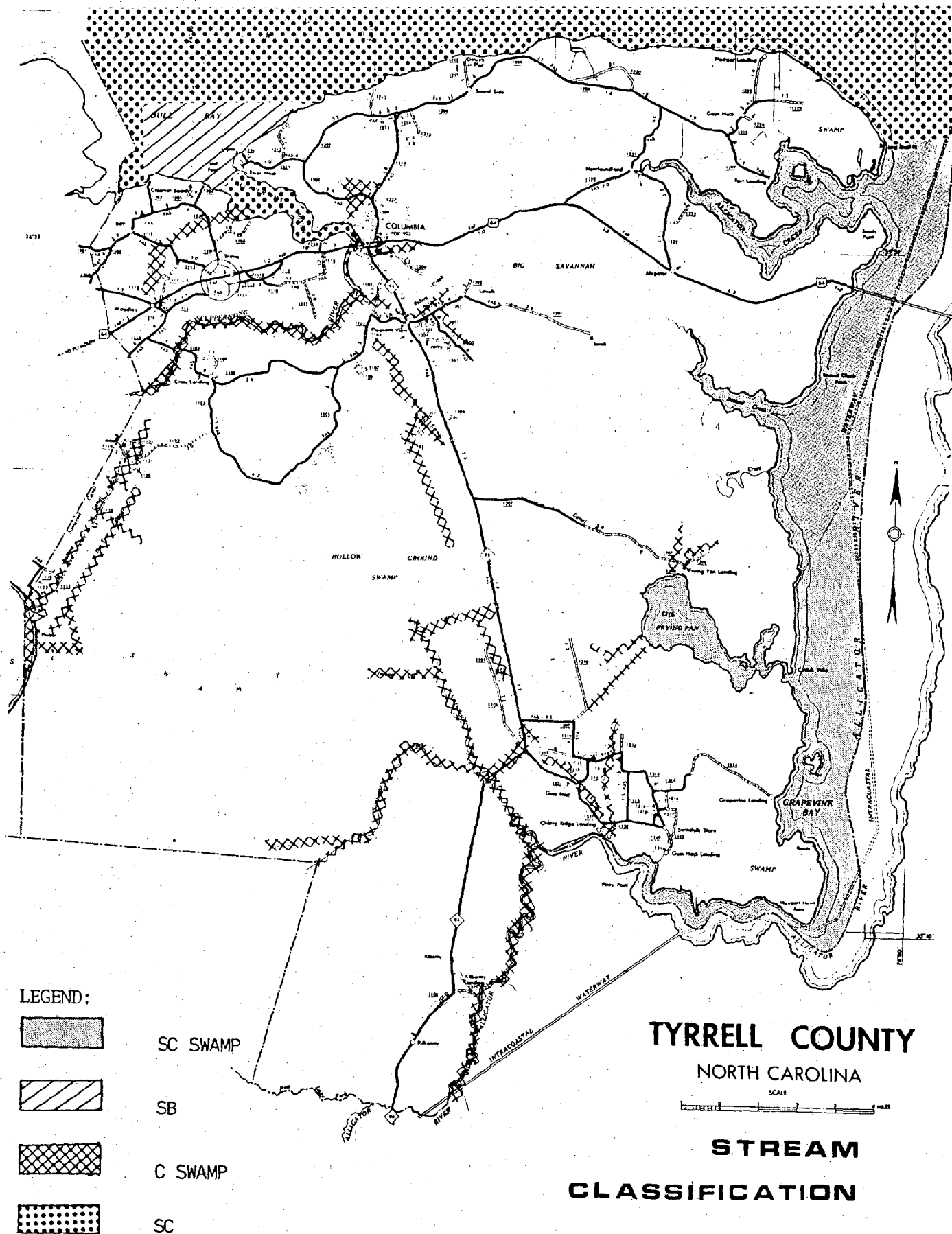
Class C

Fishing, boating, wading, and any other usage except for bathing or as a source of water supply for drinking, culinary, or food-processing purposes.

Class D

Agriculture, industrial cooling, and process water supply, fish survival, navigation and any other uses except Class A, B, or C uses.

S stands for salt water.



Wildlife

A moderate population of the white-tailed deer occurs throughout the county, and a very few number of black bear are present in the dense swamp-land in the vicinity of N.C. 94 between Kilkenny and Columbia. Most of the county is considered to be suitable for bear habitat. Currently, however, large acreages of forested lands are being cleared for agricultural purposes. This practice will seriously reduce the carrying capacity of the cleared areas for the black bear. Hunting for bear is presently prohibited by county law. All small game species are present, including quail, squirrel, rabbits, dove, woodcock, snipe, raccoon and opossum. Highest populations are found in those portions of the county which contain agricultural lands. Wildcat and foxes are common. Mink, raccoon and otter are common furbearers; muskrats, however, are not as abundant as in other counties in the northern Coastal Plain. The higher populations occur in drainage ditches. Waterfowl do not occur in large numbers. Some wood ducks are present throughout the county, and small numbers of several other species of ducks occupy the Alligator River and Albemarle Sound. A moderate population of Canada geese is present on these larger bodies of water.

Maps of Certain Wildlife Habitat Types and Freshwater Fisheries

The wildlife habitat types as delineated on the county map are only those vegetative types which are considered to be of particular importance and which warrant special consideration in land use planning. The types shown are bog and pocosin, wooded swamp, and shallow fresh marsh. Special consideration of these habitats is indicated for several reasons. These areas are "fragile" in that they are subject to alteration by man's activities. They are in relatively short supply and are commonly found only in the Coastal Plain. They are of high value as they provide essential

habitat for certain forms of wildlife--waterfowl and black bear being two examples in point. Also, these habitats afford sanctuary or some other key habitat component which contributes to the survival and abundance of those wildlife forms which are common to other adjoining habitats.

The watercourses and lake that are shown on the map are not intended to represent all of the fishery habitat which exists. Only the more important areas of fisheries habitat are shown, including both inland and estuarine waters which are of primary importance to the freshwater and anadromous species for spawning, spawning runs, or day-to-day occupancy. Some indication of such "multiple use" is demonstrated by application of more than one symbol to some watercourses. Areas of high usage by fishermen are also plotted. Most of these waters have been inspected and characterized by the Wildlife Resources Commission's fish biologists. Three ecological types of streams exist in Tyrrell County as shown by the numbers on the map.

Characteristics of each ecological type stream are summarized in Table 20.

Fish

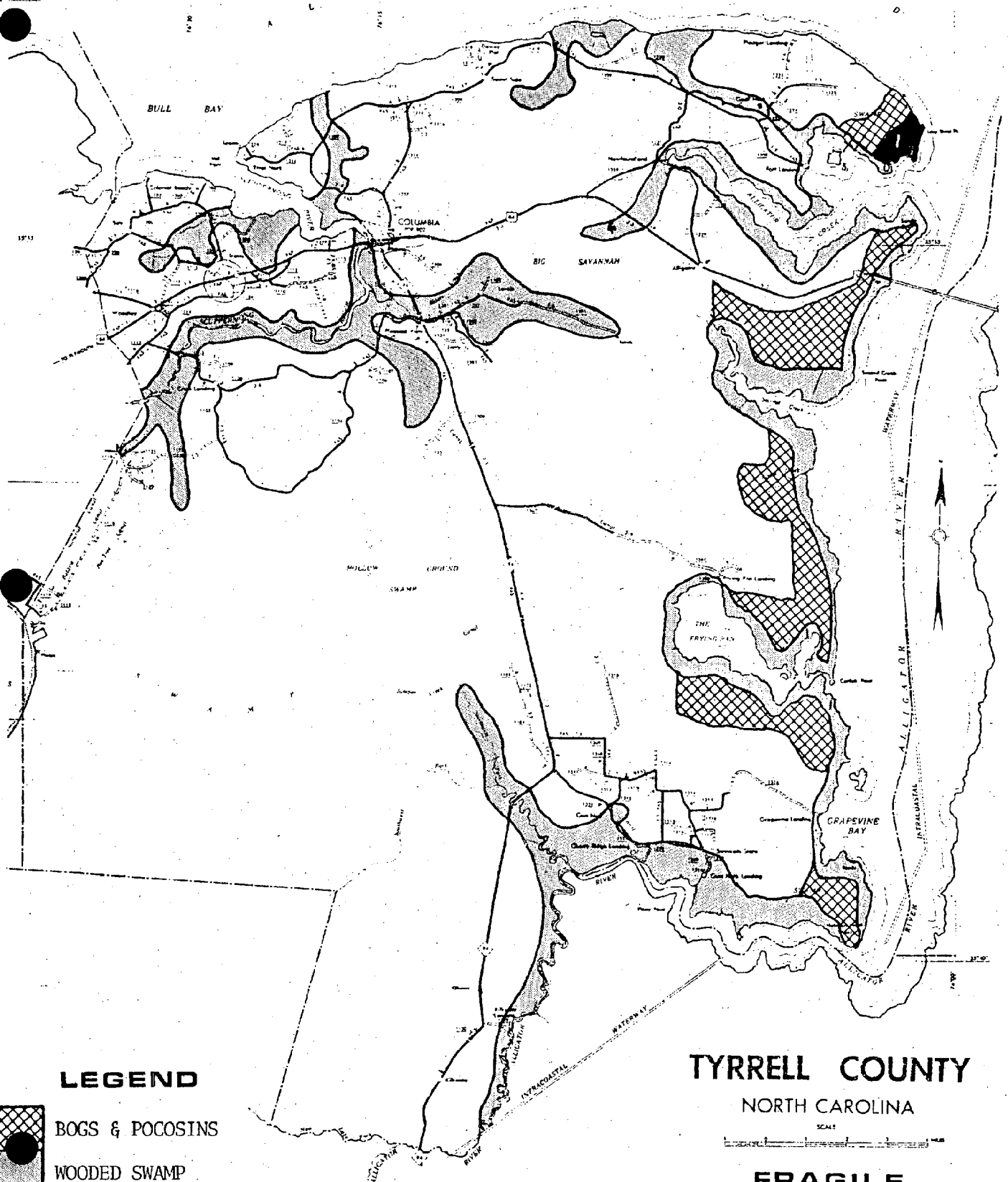
White perch and other panfishes comprise over 70 percent of the catch. Catfish, crappie and redbreast are next in fisherman-take. Largemouth bass, although it ranks first in preference as a gamefish, comprises only about 4 percent of the catch, while striped bass makes up only about 3 percent.

Rare and Endangered Species

The American alligator occurs along the Alligator River. Proximity to Albemarle Sound would indicate that the Atlantic and short-nose sturgeons occur. There are no recent records for the bald eagle; however, it has been reported for adjacent Hyde and Washington Counties. Habitat for the eagle appears suitable.

Non Existent Resources

No sand dunes, ocean beaches or shorelines, complex natural areas, unique geologic formations, registered national landmarks, archeological or historic sites are known at this time.



LEGEND



BOGS & POCOSINS
 WOODED SWAMP
 SHALLOW FRESH MARSH

TYRRELL COUNTY

NORTH CAROLINA

SCALE
 0 1 2 3 4 5 6 7 8 9 10

**FRAGILE
 HABITAT**

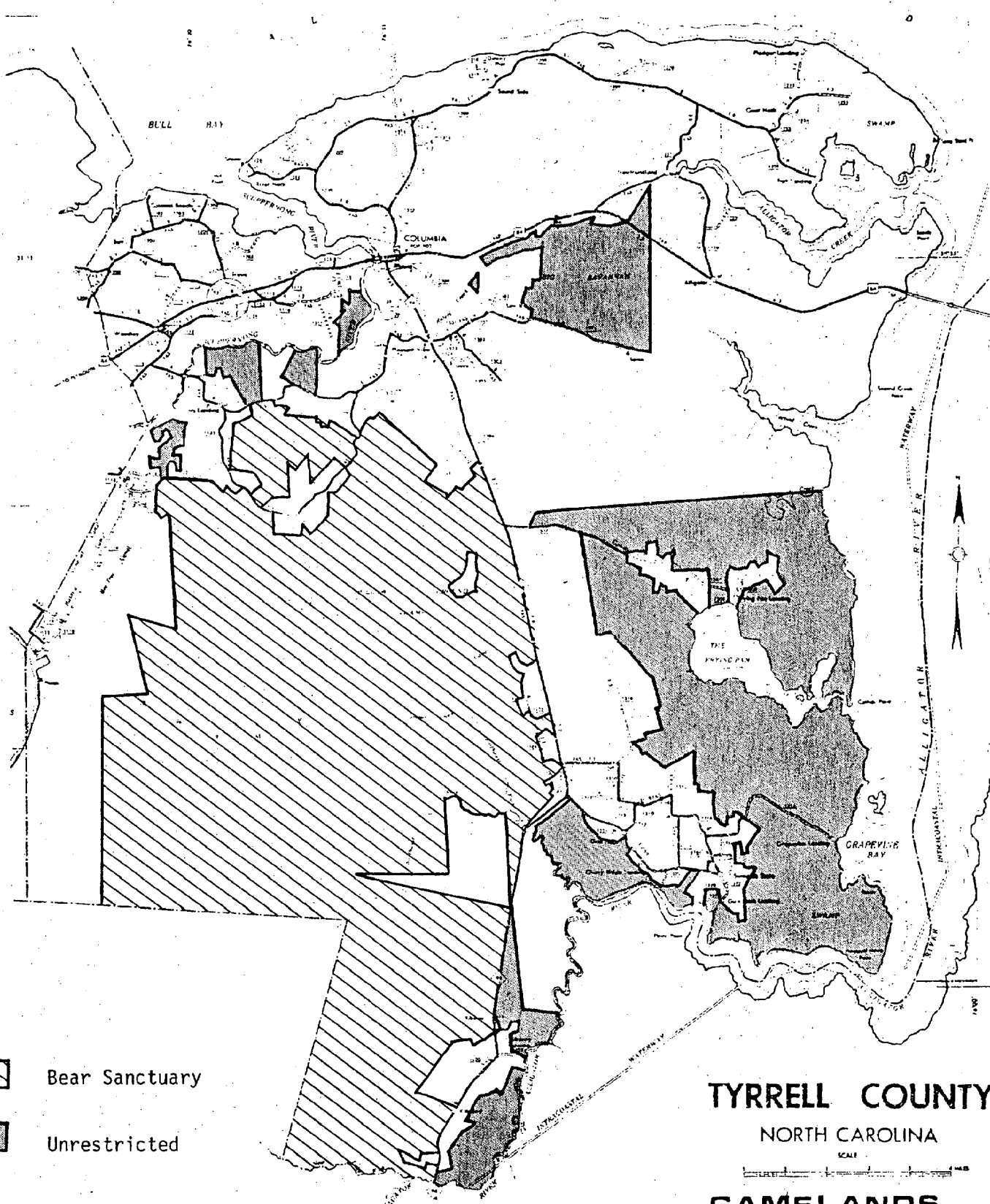
N. C. Wildlife Resources Commission
 April 1975

TABLE 19
TYRRELL COUNTY
WILDLIFE

GAME SPECIES	ESTIMATED MAN DAYS OF RECREATIONAL PURSUIT PROVIDED (1972-1973)
<u>Big Game</u>	
Deer	29,416
Bear	1,100*
Turkey	0
<u>Waterfowl</u>	
Ducks	462
Geese	5,500
<u>Other Game</u>	
Squirrel	1,973
Rabbit	4,784
Dove	760
Quail	326
Raccoon	13,780
Fox	1,720
Woodcock	1,311
Opossum	4,548
Wildcat	200
Clapper Rail	0

*Estimate of potential. Bear hunting currently prohibited by statute.

Source: Wildlife and Land Use Planning with Particular Reference to Coastal Counties. N. C. Wildlife Resources Commission, 1975.



TYRRELL COUNTY

NORTH CAROLINA

GAMELANDS

(130,121 total acres)

TABLE 20

ECOLOGICAL TYPE CLASSIFICATION
OF NORTH CAROLINA STREAMS

	<u>WIDTH</u>	<u>DEPTH</u>	<u>FLOW</u>	<u>TEMP.</u>	<u>TURB.</u>	<u>BOTTOM</u>	<u>ALK. pH</u>	<u>FAUNA</u>	<u>OTHER</u>
1 Dace Trickle	0-5'	Shallow few pools	0-1 cfs	Varies	Clear	Sand, gravel boulders	Varies	Dace, Shiners	Most Headwater Piedmont and Coastal streams
* 4 Largemouth Pickereel	Over 10'	Mod. deep pools	Over 5	Cool	Clear	Predomin- antly sand	10 6	L.M.B. Suckers, Bullheads	Mod. sized upper Piedmont and some Coastal Plain streams
* 10 Tidal	Over 20'	Deep	Over 10	Warm	Varies	Sand, muck, silt	Varies	Bass, Cat- fish, W. Perch, various anadromous species	Coastal streams influenced by tide
12 Dredged	0-50	Shallow, no pools	0-100 cfs	Warm	Varies	Sand, silt		Shiners, small centrarchids	Coastal Plain and some piedmont streams

*Tyrrell County Streams

Source: Wildlife Resources Commission

Areas with Resource Potential

Agricultural Lands

The areas with resource potential include productive and unique agricultural land that consists of prime agricultural soils, potentially valuable agricultural lands with moderate conservation efforts, and other productive or unique agricultural lands.

Productive farmland is generally defined as land suited and available for producing food, forage, fiber, and oilseed crops. Examples of productive farmland are cropland, pastureland, rangeland, forest land and other land that is not urban built-up or water. Productive farmland has the soil quality, growing season and moisture supply needed to economically produce significant and sustained crop yields when treated and managed according to modern farming methods, including water management.

Unique farmland, in addition to other productive farmland is land that is suited and available for the production of specific high-value food and fiber crops. Examples of such crops are citrus, olives, cranberries, fruit and vegetables.

Once drained, much of Tyrrell County yields good farmland or forest acreage. Although unique soils do not exist in the county, a great deal of time, effort, and money has been invested in bringing the productive lands into operation. An excellent example of such an investment is the Gum Neck drainage project where the whole community has been diked and drained in order to control the water table.

The Soil Management Map shows that the best agricultural land is in the northern section of the county and that other productive agricultural land is located in central and southern sections.

Outdoor Recreation Lands

Pettigrew State Park, located on the west border of Tyrrell County, includes all of Lake Phelps. Development around the lake is imminent.

Mineral Resources

A mineral resource is a concentration of an element, a chemical compound, or a rock such that a usable mineral commodity can be extracted from it without regard to profit. Mineral resources include undiscovered deposits as well as identified deposits that cannot be recovered now.

The types of mineral resources in this region with recognized economic value today are limestone, phosphate, and sand. One or more of these exists in nearly every county to some degree. However, for most of the coastal plain, detailed geologic data has not been developed.

Today in Tyrrell County, no mining is going on and none is expected. There are poor deposits of shell, marle, and obviously sand is available. The Department of Transportation has 2 borrow pits along N. C. 64 (2 others have been sold). The pits have been used for fill material during road construction.

Forest Resources

The 1970 Census estimates that 18% of the employed people in the county work in agriculture, forestry, and fishing, (see previous section, p. 13). Although it is difficult to estimate the exact impact of the forestry industry on the county, the industry certainly is not going to go under. If current trends

continue, the industry might even pick up. The South is expected to become the leader in forestry.

The most current information on forestry is in the Forest Statistics for the Northern Coastal Plain of N. C. 1974, United States Department of Agriculture Forest Service Resource Bulletin SE-30. This report highlights the principal findings of the fourth inventory of the timber resources in the 23 county Northern Coastal Plain of N. C. The inventory was started in July, 1973 and completed in May, 1974. Three previous inventories, completed in 1937, 1955, and 1963, provide statistics for measuring changes and trends over the past 37 years. The report emphasizes the trends since 1963.

The inventory is to measure and evaluate the timber resource to help provide a basis for the forest policies and programs and the orderly development and use of the resource. Because the sampling procedure was intended primarily to furnish inventory data for the region, individual county estimates have limited and variable accuracy. As county totals are broken down by various subdivisions, the possibility of error increases and is greatest for the smallest item.

The information shows extent and condition of the forest lands, volume of timber and rates of timber growth and removal.

The following list is a summary of the regional changes since 1963.

- Area of commercial forest land has decreased by more than 3%.
- 61% of the total land area is classified as commercial forest land.
- Both the areas of commercial forest land owned by farmers and forest industries have declined by 15% or more.
- Only 20% of the commercial forest is less than 60% stocked.
- Area occupied by saw timber stands has decreased by one million acres.
- Volume of softwood growing stock has decreased by 3% due to increased removals.
- Removals of softwood growing stock exceeded growth by 19%.
- Annual removals have increased by more than 50%.

In Tyrrell County about 85% of the forest land is commercial forest and the forest industry owns about 18% of that. Removals of timber have not exceeded growth (as of 1974). It appears that Tyrrell is in a good position to continue its forestry operations from either a county or regional viewpoint.

TYRRELL COUNTY FOREST RESOURCES

Area - By Land Class - 1974

	All Land	Forest Land				Nonforest Land
		Total	Commercial Forest	Unproductive Forest	Productive Reserve	
Acres	249,600	216,555	213,411	2,605	539	33,045

Area of Commercial Forest Land By Ownership Class - 1974

All Ownership	National Forest	Misc. Federal	State	County & Municipal	Forest Industry	Farmer	Miscellaneous Private	
							Corporate	Individual
213,411					39,428	17,398	5,800	150,785

Area of Commercial Forest By Forest Type Group 1974

All Type Groups	Forest Type Group								
	White Pine Hemlock	Spruce Fir	Longleaf Slash	Loblolly Shortleaf	Oak Pine	Oak Hickory	Oak Gum Cypress	Elm/Ash Cottonwood	Maple Beech
213,411				87,276	30,589	8,698	86,848		

Area of Commercial Forest Land By Stand Size Class 1974

All Stands	Stand Size Class			
	Sawtimber	Poletimber	Seedling	Non-Stocked Areas
213,411	79,014	61,619	64,514	8,264

Area of Commercial Forest Land, By Site Class 1974

All Classes	1	2	Site Class 3	4	5
213,411		2,900	16,527	125,264	68,720

Area of Commercial Forest Land By Stocking Classes of
Growing Stock Trees - 1974

Stocking Percentage

All Classes	Over 130	100-130	60-99	16.7-59	Less Than 16.7
213,411	11,600	66,978	72,782	53,787	8,264

SOURCE: Forest Statistics for the Northern Coastal Plain of N. C., 1974.

Volume of Sawtimber and Growing Stock on Commercial Forest Land By Species Group - 1974

Sawtimber					Growing Stock				
A11 Species	Pine	Other Softwood	Soft Hardwood	Hard Hardwood	A11 Species	Pine	Other Softwood	Soft Hardwood	Hard Hardwood
890,962	449,193	89,404	246,153	56,212	295,497	140,124	24,281	115,316	15,776

Net Annual Growth of Sawtimber and Growing Stock on Commercial Forest Land By Species Group-1973

Sawtimber					Growing Stock				
All Species	Pine	Other Softwood	Soft Hardwood	Hard Hardwood	All Species	Pine	Other Softwood	Soft Hardwood	Hard Hardwood
41,185	24,931	3,475	10,737	2,042	10,684	5,186	908	4,055	535

Annual Removals of Sawtimber and Growing Stock on Commercial Forest Land By Species Group-1973

Sawtimber					/	Growing Stock				
All Species	Pine	Other Softwood	Soft Hardwood	Hard Hardwood	All Species	Pine	Other Softwood	Soft Hardwood	Hard Hardwood	
11,120	5,497	--	5,623	--	3,171	1,232	--	1,939	--	

COMMUNITY FACILITIES

Community Water and Sewer Systems

Columbia has the only central water and sewer services. The service areas are shown on the following maps. The town and development immediately outside the town are the only service areas. The water supply is obtained from one 300 gallon per minute (gpm) well and there is one back-up well. The treatment plant operates at 300 gmp but has a design capacity of 432 gpm. Elevated storage is provided by a 200,000 gallon storage tank. The system was built in 1964 and as of 1971 35-40,000 gallons per day were being used. The plant is capable of producing 180,000 gallons per 10 hour day and is therefore being used at only 20% capacity.

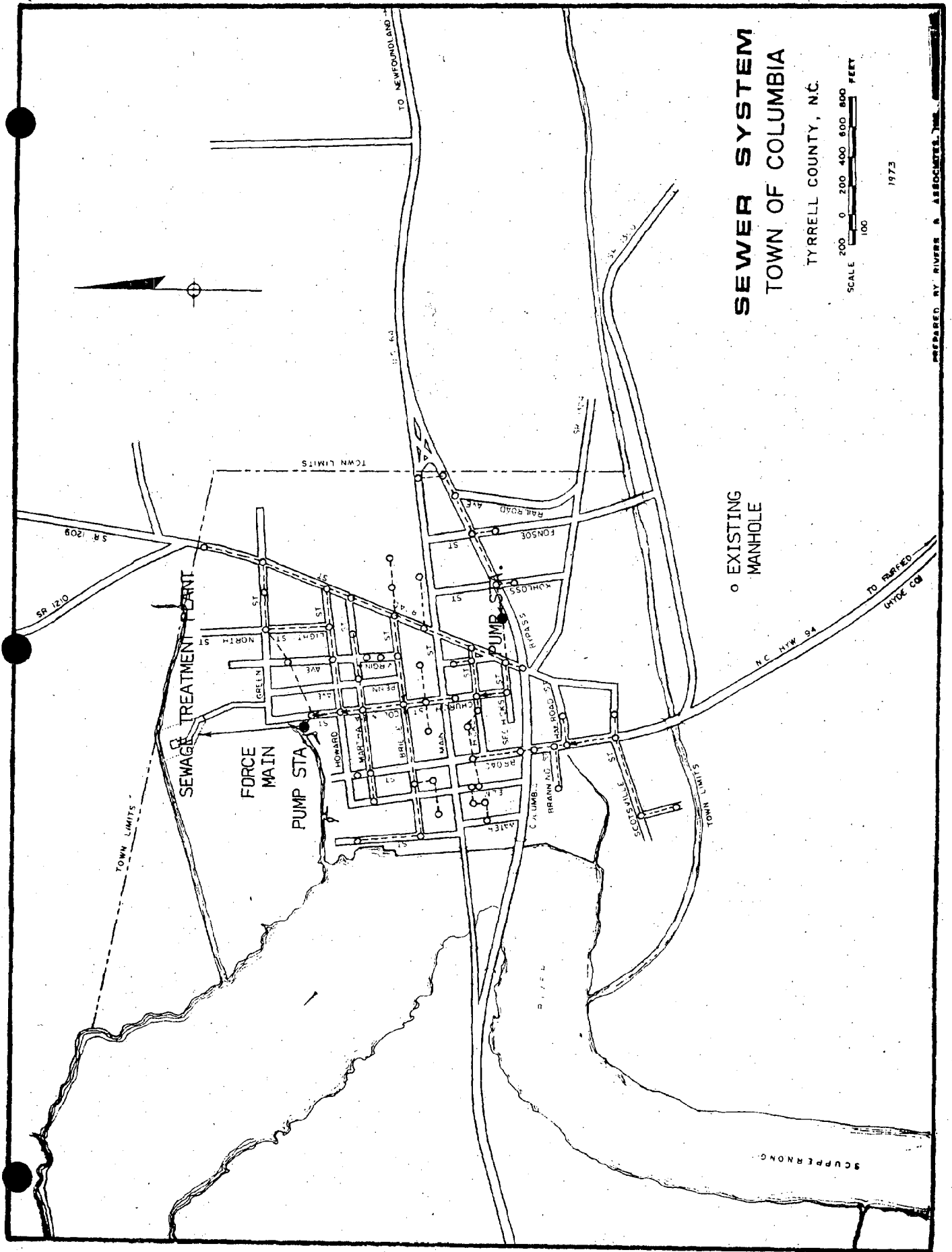
Columbia also operates the only sewerage system. It was designed for a population equivalent of 1,500 including approximately 142,000 gallons per day (GPD) of domestic waste with a biochemical oxygen demand (BOD) of 200 parts of oxygen per million parts of water, plus 7,500 GPD of fish processing waste at the same BOD. The plant is running at little more than half capacity and was designed for ease of expansion.

A county-wide water system has been proposed recently. Wells and treatment plant would be located near Woodley.

Roads and Schools

There are but two "primary" highways in Tyrrell County: U.S.64 and N.C.94. The former is an east-west artery while the latter provides north-south movements from Columbia to Hyde County. Both carry traffic volumes far below their capacity. Both roads were built before modern road design standards were developed in N.C.; however, both still need upgrading for safety. Increased development in Dare County may eventually overload Route 64.

Both the high school and elementary school expect 1980 enrollments to change very little. Present facilities are adequate for the student population. However, a new auditorium seems to be a high priority as there is no comparable structure in the whole county and kindergarten facilities need to be expanded.



1973

1. *Chlorophyll a* (Chl *a*)

2. *Chlorophyll b* (Chl *b*)

3. *Chlorophyll c* (Chl *c*)

4. *Chlorophyll d* (Chl *d*)

5. *Chlorophyll e* (Chl *e*)

6. *Chlorophyll f* (Chl *f*)

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8. *Chlorophyll h* (Chl *h*)

9. *Chlorophyll i* (Chl *i*)

10. *Chlorophyll j* (Chl *j*)

11. *Chlorophyll k* (Chl *k*)

12. *Chlorophyll l* (Chl *l*)

13. *Chlorophyll m* (Chl *m*)

14. *Chlorophyll n* (Chl *n*)

15. *Chlorophyll o* (Chl *o*)

16. *Chlorophyll p* (Chl *p*)

17. *Chlorophyll q* (Chl *q*)

18. *Chlorophyll r* (Chl *r*)

19. *Chlorophyll s* (Chl *s*)

20. *Chlorophyll t* (Chl *t*)

21. *Chlorophyll u* (Chl *u*)

22. *Chlorophyll v* (Chl *v*)

23. *Chlorophyll w* (Chl *w*)

24. *Chlorophyll x* (Chl *x*)

25. *Chlorophyll y* (Chl *y*)

26. *Chlorophyll z* (Chl *z*)

27. *Chlorophyll aa* (Chl *aa*)

28. *Chlorophyll ab* (Chl *ab*)

29. *Chlorophyll ac* (Chl *ac*)

30. *Chlorophyll ad* (Chl *ad*)

31. *Chlorophyll ae* (Chl *ae*)

32. *Chlorophyll af* (Chl *af*)

33. *Chlorophyll ag* (Chl *ag*)

34. *Chlorophyll ah* (Chl *ah*)

35. *Chlorophyll ai* (Chl *ai*)

36. *Chlorophyll aj* (Chl *aj*)

37. *Chlorophyll ak* (Chl *ak*)

38. *Chlorophyll al* (Chl *al*)

39. *Chlorophyll am* (Chl *am*)

40. *Chlorophyll an* (Chl *an*)

41. *Chlorophyll ao* (Chl *ao*)

42. *Chlorophyll ap* (Chl *ap*)

43. *Chlorophyll aq* (Chl *aq*)

44. *Chlorophyll ar* (Chl *ar*)

45. *Chlorophyll as* (Chl *as*)

46. *Chlorophyll at* (Chl *at*)

47. *Chlorophyll au* (Chl *au*)

48. *Chlorophyll av* (Chl *av*)

49. *Chlorophyll aw* (Chl *aw*)

50. *Chlorophyll ax* (Chl *ax*)

51. *Chlorophyll ay* (Chl *ay*)

52. *Chlorophyll az* (Chl *az*)

53. *Chlorophyll aza* (Chl *aza*)

54. *Chlorophyll abz* (Chl *abz*)

55. *Chlorophyll acz* (Chl *acz*)

56. *Chlorophyll adz* (Chl *adz*)

57. *Chlorophyll aez* (Chl *aez*)

58. *Chlorophyll afz* (Chl *afz*)

59. *Chlorophyll agz* (Chl *agz*)

60. *Chlorophyll ahz* (Chl *ahz*)

61. *Chlorophyll aiz* (Chl *aiz*)

62. *Chlorophyll ajz* (Chl *ajz*)

63. *Chlorophyll akz* (Chl *akz*)

64. *Chlorophyll alz* (Chl *alz*)

65. *Chlorophyll amz* (Chl *amz*)

66. *Chlorophyll anz* (Chl *anz*)

67. *Chlorophyll aoz* (Chl *aoz*)

68. *Chlorophyll apz* (Chl *apz*)

69. *Chlorophyll aqz* (Chl *aqz*)

70. *Chlorophyll arz* (Chl *arz*)

71. *Chlorophyll asz* (Chl *asz*)

72. *Chlorophyll atz* (Chl *atz*)

73. *Chlorophyll auz* (Chl *auz*)

74. *Chlorophyll avz* (Chl *avz*)

75. *Chlorophyll awz* (Chl *awz*)

76. *Chlorophyll axz* (Chl *axz*)

77. *Chlorophyll ayz* (Chl *ayz*)

78. *Chlorophyll azz* (Chl *azz*)

79. *Chlorophyll azaa* (Chl *aza*)

80. *Chlorophyll abz* (Chl *abz*)

81. *Chlorophyll acz* (Chl *acz*)

82. *Chlorophyll adz* (Chl *adz*)

83. *Chlorophyll aez* (Chl *aez*)

84. *Chlorophyll afz* (Chl *afz*)

85. *Chlorophyll agz* (Chl *agz*)

86. *Chlorophyll ahz* (Chl *ahz*)

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91. *Chlorophyll amz* (Chl *amz*)

92. *Chlorophyll anz* (Chl *anz*)

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95. *Chlorophyll aqz* (Chl *aqz*)

96. *Chlorophyll arz* (Chl *arz*)

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101. *Chlorophyll awz* (Chl *awz*)

102. *Chlorophyll axz* (Chl *axz*)

103. *Chlorophyll ayz* (Chl *ayz*)

104. *Chlorophyll azz* (Chl *azz*)

105. *Chlorophyll azaa* (Chl *aza*)

106. *Chlorophyll abz* (Chl *abz*)

107. *Chlorophyll acz* (Chl *acz*)

108. *Chlorophyll adz* (Chl *adz*)

109. *Chlorophyll aez* (Chl *aez*)

110. *Chlorophyll afz* (Chl *afz*)

111. *Chlorophyll agz* (Chl *agz*)

112. *Chlorophyll ahz* (Chl *ahz*)

113. *Chlorophyll aiz* (Chl *aiz*)

114. *Chlorophyll ajz* (Chl *ajz*)

115. *Chlorophyll akz* (Chl *akz*)

116. *Chlorophyll alz* (Chl *alz*)

117. *Chlorophyll amz* (Chl *amz*)

118. *Chlorophyll anz* (Chl *anz*)

119. *Chlorophyll aoz* (Chl *aoz*)

120. *Chlorophyll apz* (Chl *apz*)

121. *Chlorophyll aqz* (Chl *aqz*)

122. *Chlorophyll arz* (Chl *arz*)

123. *Chlorophyll asz* (Chl *asz*)

124. *Chlorophyll atz* (Chl *atz*)

125. *Chlorophyll auz* (Chl *auz*)

126. *Chlorophyll avz* (Chl *avz*)

127. *Chlorophyll awz* (Chl *awz*)

128. *Chlorophyll axz* (Chl *axz*)

129. *Chlorophyll ayz* (Chl *ayz*)

130. *Chlorophyll azz* (Chl *azz*)

131. *Chlorophyll azaa* (Chl *aza*)

132. *Chlorophyll abz* (Chl *abz*)

133. *Chlorophyll acz* (Chl *acz*)

134. *Chlorophyll adz* (Chl *adz*)

135. *Chlorophyll aez* (Chl *aez*)

136. *Chlorophyll afz* (Chl *afz*)

137. *Chlorophyll agz*

III

CURRENT PLANS, POLICIES, AND REGULATIONS

CURRENT PLANS, POLICIES, AND REGULATIONS

Local

Plans and policies often have significant implications for land use. The following items are related to the planning process.

1964

Overall Economic Development Program, Area Redevelopment Planning Board

Tyrrell County was designated a depressed area by the Area Redevelopment Administration. The County set up a Planning Board of eleven people which investigated economic problems facing the county. The board made specific recommendations on needed adjustments in Tyrrell County including:

1. A concerted effort must be made to develop to its fullest potential the resources available to this area.
2. Limited sources of local risk capital for new ventures.
3. Limited existing facilities for small industry are inadequate.
4. The area does not have a large pool of trained skilled workers.
5. No adequate facilities for tourist transients.
6. The physical appearance of the area must be improved to present a more pleasant atmosphere for prospective industry looking for a desirable location.
7. The need for training in new skills for anticipated industry must be met.

The board investigated potential resources and developed a program for achievement including specific action steps and the following goals (starred items have been accomplished.)

Priorities of Tyrrell County's Goals

Listed below, in numerical order of the priority are the different segments of our county economy which, in our opinion, if the recommendations made therein are enacted and carried through would revitalize the entire county economically.

1. Appoint a county manager to implement this and other programs.

2. Develop industry to utilize our national resources of timber. In this connection we request technical assistance to determine the feasibility of this and other industry.
3. We request technical assistance to determine potential for tourist and recreation development.
4. Develop adequate housing facilities, including medium price range housing. (Senior citizens housing, Slum clearance and urban renewal, low cost public housing, and rest or nursing home).
- *5. Establish a community owned hospital.
6. Develop overall flood control, drainage and shore erosion control project for resource conservation and development.
7. Develop adequate facilities for consolidating county offices.
8. A complete standard soil survey of Tyrrell County is needed as a basis of sound planning.
9. A ground water survey of Tyrrell County needs to be made.
- *10. Education. We believe that the number of "drop-outs" and the outward flow of our young people would decrease if a greater emphasis by our public schools was extended and broadened to include "Trade Training" and "Industrial Arts."

1971

Economic Data on Tyrrell County - VEPCO
(Virginia Electric Power Company)

A short summary of labor force statistics and pertinent data on county facilities.

1971

Operation Discovery, East Carolina University Regional Development Institute.

This was a unique program organized to alleviate the county's deteriorating population and economic conditions. The project developed a master plan for economic improvement by focusing the attention of 25 state agencies on the county for 3 intensive days of field work. The final recommendations were reported to the County Commissioners. No action has been taken to date.

1972

Reconnaissance Survey - Division of Community Assistance

A short report showing the need for comprehensive planning to address the problems of housing, declining population, wastewater treatment, etc., and proposing a 3 year planning program for the county. No action taken.

1972

Outdoor Recreation Potential, Soil
Conservation Service.

Appraisal of Tyrrell County resources indicates there are opportunities for developing recreational enterprises. The types of recreation having potential for development in Tyrrell County are summarized as follows:

Vacation cabins, cottages and homesites have medium potential for future development.

Picnic and field sports areas have low potential for future development.

Camping grounds for vacation campers have medium potential and transient campgrounds low potential for future development.

Natural, scenic, and historic areas have medium potential for development.

Vacation farms have medium potential for development with the potential expected to decrease.

Hunting areas for small game, big game, and water fowl all have high potential for future development.

Fishing waters have medium potential for future development.

Water sports areas have a medium potential for development.

Shooting preserves have a low potential for development.

Riding stables have low potential for development.

Golf courses have low potential for development.

In 1973 the Tyrrell County Planning Board was organized "to undertake a comprehensive and continuous planning program." Although the Board's budget is small, a subdivision ordinance is being administered. However, because there is no inspection program, "on the ground" enforcement is not assured.

The Federal Flood Insurance Program is in effect throughout the county. The State Building Code was adopted as required but no inspection program has been organized and the county has not hired a building inspector.

Septic tank regulations are administered by the District health department and sanitarian. Because of the poor drainage characteristics of the soil throughout the county, septic tanks do not work very well anywhere. However, if enough filter line is used, most septic systems are operational. Gum Neck and Goat Neck have severe problems due to the high water table and ponded effluent frequently occurs.

Two grants which may affect land use have recently been awarded to the county. The community development grant will be used for program planning and management, for removal or upgrading of substandard homes, and for a multi-purpose center for public health, social services, medical clinic offices and space for other multi-purpose community needs such as workshops and meeting rooms. Under Title X of the 1975 Public Works and Economic Development Act money has been allocated to repair, rehabilitate and renovate the hospital, school, and county offices.

State and Federal Plans, Policy and Regulations

(These will be supplied to the County by the N. C. Department of Natural and Economic Resources.)

The county has no transportation plan of its own but the State Seven Year Improvement Program includes widening and improving U.S. 64 in parts of Tyrrell County.

The county does not have its own recreation plans and the Statewide Comprehensive Outdoor Recreation Plan makes no proposals for future recreation facilities in Tyrrell County.

Tyrrell County has no utilities extension policies, prior land use plans or policies, zoning ordinances, flood ordinance, historic districts, nuisance regulations, dune protection ordinances, sedimentation codes, or environmental impact ordinance.

IV

PUBLIC PARTICIPATION ACTIVITIES

- A. Land Use Issues
- B. Goals and Objectives

LAND USE ISSUES

The major land use issues in Tyrrell suggest the old question of whether the glass is half empty or half full. Problems to one person are possibilities for another. The county is simultaneously experiencing many of the development problems a larger, growing county would have as well as other problems resulting from a small, declining population and a poor economy.

Population

The county is the smallest in population in the state (3,806) and is too small to enjoy the benefits of economies of scale. This hampers the school budget, the solid waste disposal program, water and sewerage services, police protection and a myriad of other affairs. With a further decline in population predicted, the ability of the county to provide basic services may be severely restricted. Although fewer people may reside in the county, the expenditures and facilities needed for each person can be expected to increase in response to people's expectations of a higher standard of living. Furthermore the number of acres of land needed to supply each person's requirements will probably rise as a result of increases in buying power and corresponding increased consumption of resources per person, i.e. indoor plumbing, washing machines, dryers, cars, and other appliances. These in turn require more power plants, sewerage and water treatment plants, better roads, expanded government facilities, more land for garbage disposal and recreation. In short, each person will indirectly need more land to supply his or her needs. Such situations already exist in the county in the form of open dumping and sewage disposal problems, and will not be improved by a population change in either direction. However, the situation is not unique to Tyrrell.

The population is expected to continue its 30 year decline. The higher portion of senior citizens has implications for the health facilities besides all the associated problems of people on fixed incomes. The loss of those between 35 and 45 years of age means a loss of the county's best wage earners.

Housing Characteristics and Conditions

Adequate housing stock is an important community resource. The condition and supply of housing influences the economic and social character of an area. Newcomers or visitors are discouraged from settling in the area if housing is poor or unavailable.

Substandard housing perpetuates negative, defeating community feelings of worthlessness and apathy. Such housing is evidence of the people's inability to solve a very basic problem--that of adequate shelter.

Adequate shelter--those houses offering protection from severe weather and providing decent living conditions--is in short supply in Tyrrell. At a minimum, 50% of the housing is deficient in some manner.

Income is an important factor in determining sufficiency of housing stock. People can afford to buy housing that costs about twice their yearly income, or rent housing at approximately 25% of their monthly income. In Tyrrell County the median income is \$4,307. This means fewer than half the people can spend as much as \$8,614 on buying homes or \$71.00 per month for rent. These figures are for people making exactly \$4,307. Three hundred fifty-five families in Tyrrell County are below poverty level and are even more severely limited in their selection of housing.

Taking into consideration overcrowded conditions and the lack of plumbing, housing in Tyrrell County is at the very minimum 54% deficient, deficient.

Between 1960 and 1970, 260 new units were built. However because many of the units existing in 1960 were in poor condition, at least some of these were no longer in existence as of 1970 (fallen down, burned, torn down, etc.). Thus the net housing stock increased less than the 260 new units would at first seem to indicate.

The 1960 census figures, showing sound, deteriorated, or dilapidated housing, should be used carefully. After the 1960 census was compiled, a number of houses were found to be wrongly classified as in better condition than they actually were. Taking the 1960 figures as they appear would show that at least 608 units (deteriorating and dilapidated) were deficient in some manner; i.e. 52% of the housing was deficient according to the 1960 census. This figure must be taken as an absolute minimum.

Several characteristics should be considered when determining adequacy of housing. Overcrowded conditions and plumbing facilities are objective types of information (compiled for the 1970 census) which can be used to arrive at minimum estimates of housing conditions in the county as of 1970.

If a house lacks plumbing--be it toilet facilities, hot and cold running water, or bathing facilities--the house is not truly providing adequate shelter. In addition, such a house is likely to be in a poor state of repairs. Low values may be an indication of poor housing.

Overcrowded conditions create more wear and tear on a house causing faster deterioration and higher maintenance costs. Overcrowding is often associated with large families of low income who cannot afford maintenance. Such a building does not provide adequate shelter.

Low values and low rent may be indications of poor housing. This indicator should be used more cautiously than the others. The value of a house reflects workmanship and quality of materials: the lower the value (relative to others in the area) the poorer the quality. Poor quality results in rapid deterioration and higher maintenance costs--costs often borne by people whose income is generally low already.

Standard housing is all but unavailable for purchase or rental. Mobile homes have therefore increased dramatically over the past five years. Such units do not generate tax dollars to the extent that conventional homes do yet they generate similar costs to local government: the education of children, police protection, and social services.

TABLE 21
TYRRELL COUNTY
GENERAL HOUSING CHARACTERISTICS
1970

1322 Year-Round Units

873 owner occupied
566 lack some plumbing
169 units are overcrowded
(more than 1.01 person/room)
161 units (of the above 169 units) have all plumbing

TABLE 22
TYRRELL COUNTY
VALUE OF HOUSING

<u>Owner Occupied</u>		<u>Renter Occupied</u>	
<u>Value of Unit</u>	<u># of Units</u>	<u>Rent</u>	<u># of Units</u>
5,000	247	\$30	54
\$5,000-9,999	127	30-39	17
10,000-14,999	73	40-59	31
15,000-19,999	32	60-79	9
20,000-24,999	11	80-99	
25,000-34,999	4	100-149	
35,000 +	6	150 +	
		No Rent	76

*Figures do not include homes on lots larger than 10 acres, or on lots also having businesses.

SOURCE: U. S. Census of Housing, 1970.

TABLE 23
TYRRELL COUNTY
GENERAL HOUSING CHARACTERISTICS
1960

1322 Housing Units

1161 Occupied Units

809 owner occupied

352 renter occupied

714 Sound Units

452 units with complete plumbing

8 lack only hot water

254 lack other plumbing

364 Deteriorating Units

17 have all plumbing

347 lack some plumbing

244 Delapidated Units

242 Units have overcrowded conditions

(more than 1.01 persons/room)

Source: U. S. Census, 1960.

Economy

A poor economic environment lowers everyone's standard of living. The county's very low per capita income (98th of the 100 counties in the State) encourages a continuing population loss. If people cannot make a decent living, they will move elsewhere if possible. Even within Region R, an economically poor region, Tyrrell ranks far below other counties in median income, percentage of families below poverty level, and percentage of persons below poverty level.

On a questionnaire distributed to county boxholders, the people have shown development to be the most severe problem in the county and the most important area for public spending. With 44% of the population below poverty level, it is difficult to justify inaction on economic development programs.

The lack of economic development is evident by the number of people below poverty level and the run down appearance of houses throughout the county, including Columbia. New enterprises are not attracted to the area because of the lack of transportation facilities and the usual infrastructure needed to support new business.

Natural Resources

Conservation of productive natural resources and protection of important natural environments are major concerns to all people in Tyrrell.

Tyrrell County citizens are well aware of their reliance upon the agriculture, forestry, fish and recreation resources. Any depletion of the resource base would be a blow to the county's unvaried economy.

Recreation based business (marinas, vacation cabins and campgrounds, hunting bridges) and private camps or vacation homes may expand in Tyrrell as people become disillusioned by oceanfront crowds and prices. Of course, deterioration of wildlife habitat, water quality and scenic amenities would jeopardize existing resource oriented businesses and discourage new entrepreneurs.

Many of the citizens have already expressed during committee meetings concerns about the massive land clearing operation and the effect on fishing and on the black bear habitat.

Poorly managed housing development not only diminishes scenic quality but also lowers property values. Already developments along the Albemarle Sound Shore have been ill planned with inadequate roads; very small, poorly drained lots, and no provision for parking or open space.

Unregulated residential and commercial development have marred the countryside. Strip commercial development is incompatibly mixed with residential lots along U. S. 64 creating congested traffic patterns and a high risk of accidents.

Because land drainage is absolutely essential in utilizing the full potential of the soil for both farming and forestry, management and regulation of drainage programs is a dominant issue in Tyrrell. Furthermore, most of the houses have individual wells and septic tanks and because of the poor drainage characteristic of the soil, contamination of the county's water resource may be occurring. Drainage programs may have negative side effects such as salt water intrusion into the water supply aquifer, land subsidence, and water pollution from chemical treatments of the land (e.g. fertilizer, pesticides, etc.).

Future large scale agricultural production of truck crops, cattle and hogs may encourage processing plants to locate in the county. Such development, if unsupervised, may create some unpleasant problems such as traffic hazards, odors, or further secondary development problems.

Historic and Cultural Resources

Because there are no state or national historic sites nor any known sites of significant cultural value, these were not considered to be major land issues.

GOALS AND OBJECTIVES

Public Participation

The planning procedure has been quite different under the Coastal Area Management Act. Finding the most land use plans sat on a shelf, the General Assembly decided to inform and involve as many citizens as possible in the process of developing a plan. The legislature felt that if a wide spectrum of people became dedicated to seeing the process through, then the plan would work. For this reason citizen participation was a major emphasis of this initial planning effort.

For Tyrrell County, continuous citizen participation efforts had never before been organized. The county Planning Board appointed a seven-member committee to develop a citizen participation program for the county. This committee wrote news articles, sent letters and helped organize county-wide meetings. From these meetings and from a survey of public opinion, county goals were developed and further refined by the Board of Commissioners.

If any plan is to work it must be based on good information and the hopes and needs of the people. During the series of public meetings a good sampling of Tyrrell's people came together several times to express their feelings on what direction the county should be taking. Also, the public opinion survey was prepared and mailed to all boxholders in the county. The results from the returned survey and from the meetings were used to define and arrange in priority the major problems facing the county. The following tables show the ten most severe problems and areas for funding as expressed in the questionnaire. The full results of the questionnaire are included in the appendix and the original questionnaires are on file at the county courthouse in Columbia.

The citizen participation report sent to the Coastal Resources Commission is included in Appendix B.

SELECTED QUESTIONNAIRE RESULTS

The 10 most severe problems:

Responses as % of 161 questionnaires.

	<u>No Problem</u>	<u>Slight or Moderate</u>	<u>Severe</u>
1. Is Industrial Development Adequate?	14.4%	20.5%	65.1%
2. Is Unemployment a Problem?	13.1	23.5	63.4
3. Adequate Employment Opportunities?	10.9	26.5	62.6
4. Are Recreation Facilities Adequate?	11.1	30.5	58.3
5. Is Housing Available?	8.3	35.4	56.3
6. Is Garbage Disposal Adequate?	20.9	23.0	56.1
7. Are Medical Facilities & Staff Adequate?	9.9	39.5	50.7
8. Do Citizens Participate?	11.1	43.1	45.8
9. Is Garbage Collection Adequate?	25.0	29.3	45.7
10. Are Tourist Facilities Adequate?	17.6	39.7	42.6

* * * * *

The 10 most important areas for funding:

	<u>No Funds</u>	<u>Some Funds</u>	<u>More Funds</u>
1. New Employment Opportunities	8.5	14.2	77.3
2. Industrial Development	25.6	17.0	67.4
3. Health and Medical Care	5.4	30.6	63.9
4. Solid Waste Disposal	5.1	33.8	61.0
5. Solid Waste Collection	8.0	32.8	59.1
6. Help to Find Jobs	12.2	30.7	57.1
7. Assist to Old and Poor	5.6	37.3	57.0
8. Enforce Building Standards	12.3	31.2	56.5
9. Job Training	12.1	31.9	56.0
10. Public Recreation Program	12.7	31.3	56.0

Goals

After identifying major problem areas, ten goals were developed. Included with each goal are objectives--possible ways of achieving the end results (the goal). These goals and objectives, as adopted by the County Commissioners, are intended to guide policy--they are not a legally binding set of rules.

The goals are the foundation of the Tyrrell County Plan and for the various programs that will implement the plan. Goals set the tone and direction for action. These goals are statements with which most people in Tyrrell would agree.

The usefulness of these goals depends on the willingness of the people to be informed and involved. Explicit goals help the citizen judge the decisions of the government. The people need to know that governmental decisions are leading to a desirable "somewhere"; that they are not duplicating or nullifying other actions, nor merely "keeping house". Goals are the standards that help the citizen make this judgment.

However, careful judgment must also be exercised in following the goals and objectives. Elected representatives are expected to bring more information to the decision process than would the "average" citizen and this detailed information may often result in actions not directly in line with the goals. Such decisions should be carefully explained so that the public can determine the appropriateness of the decision. Economic constraints will also affect the implementation of these goals.

The following goals have been adopted by the Tyrrell County Planning Board and Tyrrell County Board of Commissioners.

TYRRELL COUNTY GOALS

1. TO WEIGH EVERY GOVERNMENTAL DECISION IN THE BALANCE OF THESE GOALS AND IN THE LIGHT OF THE PLANS WHICH FOLLOW FROM THESE GOALS.
2. TO STOP THE POPULATION DECLINE BY ENCOURAGING THE IMPROVEMENT OF THE COUNTY, ESPECIALLY AS A PLACE OF TRADE, AGRICULTURAL PRODUCTION, AND RECREATION OPPORTUNITIES.
 - A. Establish an economic development commission.
 - B. Protect prime agricultural land from interfering uses.
 - C. Encourage the development of year-round recreation based businesses.
3. TO RECOGNIZE THE IMPORTANCE OF SUPPORTING COLUMBIA IN AN EFFORT TO REVITALIZE THE TOWN AS THE COUNTY'S CENTER OF BUSINESS.
4. TO SEEK MAXIMUM PARTICIPATION BY TYRRELL COUNTY CITIZENS IN THE DECISIONS WHICH WILL AFFECT THEIR LIVES: SPECIFICALLY, TO DEVELOP PROGRAMS WHICH WILL INFORM CITIZENS IN A TIMELY MANNER OF ISSUES FACING THE COUNTY.
5. TO PROVIDE AN ENVIRONMENT IN WHICH EVERY RESIDENT MAY HAVE THE OPPORTUNITY TO SECURE ADEQUATE, DECENT, SAFE AND SANITARY HOUSING.
 - A. Direct residential growth into specific areas.
 - B. Limit the density of homes in rural areas.
 - C. Enact a housing code.
 - D. Establish a housing authority to provide low-income housing.
 - E. Improve deteriorated areas by strict enforcement of State Building Codes and Housing Code.
6. TO PROMOTE THE MANAGEMENT AND USE OF ALL NATURAL RESOURCES ACCORDING TO THE CAPABILITY OF THE RESOURCE.
 - A. Prepare and use a water resource development and management plan so the county can --
 - Improve drainage conditions including ditch maintenance and new drainage programs.
 - Provide additional water supply for domestic, agricultural, and industrial needs.
 - Establish ample water-based recreation opportunities.
 - Protect streams, lakes, rivers and sounds.
 - Promote waterways for commercial and recreational navigation needs.
 - Properly manage and protect the shoreline and flood plain lands.

- B. Limit unnecessary destruction of vegetation.
- C. Clean up eye-sores such as dumps and junk cars, and trash.
- D. Require industry and business to protect the natural resources.
- E. Encourage the continued protection of wildlife habitat.
- F. Encourage the gamelands system.
- G. Preserve the rural character of the county.

7. TO IMPROVE RECREATIONAL OPPORTUNITIES

- A. Provide a system of parks, beaches, playgrounds, and boat ramps.
- B. Develop recreational facilities and organized recreational programs.
- C. Organize a recreation commission to oversee programs.
- D. Encourage recreational enterprises.

8. TO PROVIDE THE MOST EFFICIENT QUALITY GOVERNMENT SERVICES

- A. Manage water and sewer services to encourage quality development.
- B. Increase police protection for county and town.
- C. Begin a solid waste management program.
- D. Develop programs which will identify the health, medical, and welfare needs of the county.
- E. Encourage cooperation and pooling of resources between the town and county.
- F. Seek state and federal programs to assist the county in attaining each of these 10 goals.

9. TO PROVIDE FUNCTIONAL AND ATTRACTIVE TRANSPORT ROUTES

- A. Discourage strip commercial or residential development and billboards.
- B. Encourage the use of the intra-coastal waterway.

Alternatives

Consideration was given to various alternative actions which the county might take. For instance the questionnaire shows some people think the county should encourage a large population increase and should not be concerned at all with regulating private property to protect natural resources. Many people deplore the number of people on welfare while at the same time taking a stand against new business. But without new employment, the population will probably continue to decline and the economy will continue to be tight. Other people would like to start county-wide garbage collection and recreation programs but don't want taxes to increase.

Although black and white issues such as "more people vs fewer people" can be discussed, the resolution usually involves some compromise. In Tyrrell's situation some economic development is needed to stabilize the population; some private property rights must be regulated to protect the public good; some taxes must be raised to provide garbage collection. But there is no reason to go overboard in any direction for these programs. This plan is an attempt to outline a moderate program for the county which takes into account the highly valued rural life style enjoyed by Tyrrell citizens.

ESTIMATED DEMAND

- A. Population and Economy
- B. Future Land Needs
- C. Community Facilities Demand

POPULATION AND ECONOMY

Population

The Planning Board chose the population projection which predicts a slightly lower population for the next ten years.

Projected Tyrrell County Population

<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>
3806	3600	3700	4000

Sources: 1970 Census of Population. Statistical Analysis System
NCSU for N. C. Office of State Planning, 1975.

Tyrrell County citizens heartily appreciate the uncrowded countryside. However, over the last 30 years the population has dropped 30% and people feel that is just too much. Most residents would be happy with a stabilized population.

Considering that the county citizens at one time numbered about 5,500 people, it would seem likely that 4,000 people (at today's standard of consumptive living) could be accommodated in Tyrrell County once more. There is certainly available land acreage and ground water, although septic tank feasibility is limited.

The carrying capacity issue should be considered here. Carrying capacity refers to the capability of the land or water to handle human development without damage to the natural resources. In Tyrrell County the issue is not nearly so important as in those counties with fragile salt water resources and greater populations. This is because little, if any, population growth is anticipated in Tyrrell for the foreseeable future. However, redevelopment and improvement of present living conditions will continue. Any new development requiring water and sewer will need to locate near Columbia where the facilities are capable of handling considerably greater demands. With the trend towards rural living and vacation or retirement-recreation homes, clearly the most vulnerable areas are those along the

Sound Shore and near other water bodies. Rigid enforcement of existing sanitation codes is mandatory if water quality is to be protected. The District Sanitarian believes water quality degradation would occur today if vacation homes were occupied continuously.

What seasonal population exists seems to be intra-county movement rather than a large immigration. There are no migrant worker camps in Tyrrell.

Economy

Long-term projections of Tyrrell's population are not overly optimistic. Although many people would like to see more economic development encouraged (and more people) without aggressive action by either public or private agencies, such development will be slow. As stated earlier, First Colony Farms does not appear to be greatly affecting the number of people in Tyrrell County or the local economy.

TABLE
POPULATION PROJECTIONS
TYRELL COUNTY

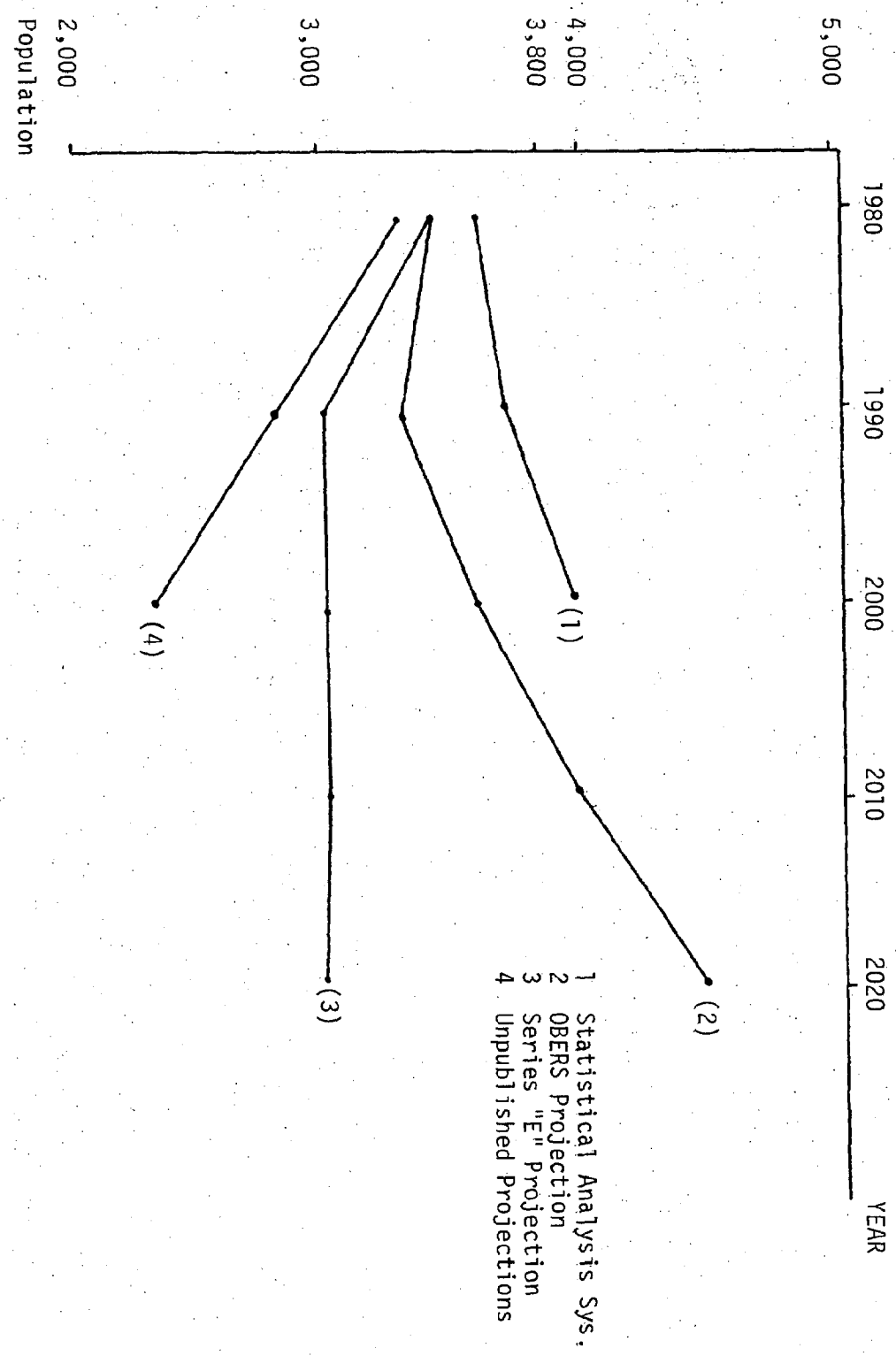


TABLE 21

COMPARISON OF FOUR POPULATION PROJECTIONS

TYRRELL COUNTY

SOURCE	Projected County Population (in thousands)			
	1980	1990	2000	2010
Reproduced from Region R Water and Sewer Study Based on OBERS Projections	3.4	3.3	3.6	4.0
Reproduced from Region R Water and Sewer Study Based on Series "E" Population Projections	3.4	3.0	3.0	3.0
Statistical Analysis System by N.C.S.U. for the Office of State Planning	3.6	3.7	4.0	
Unpublished Projections Supplied by the Office of State Planning	3.3	2.8	2.3	

FUTURE LAND NEEDS

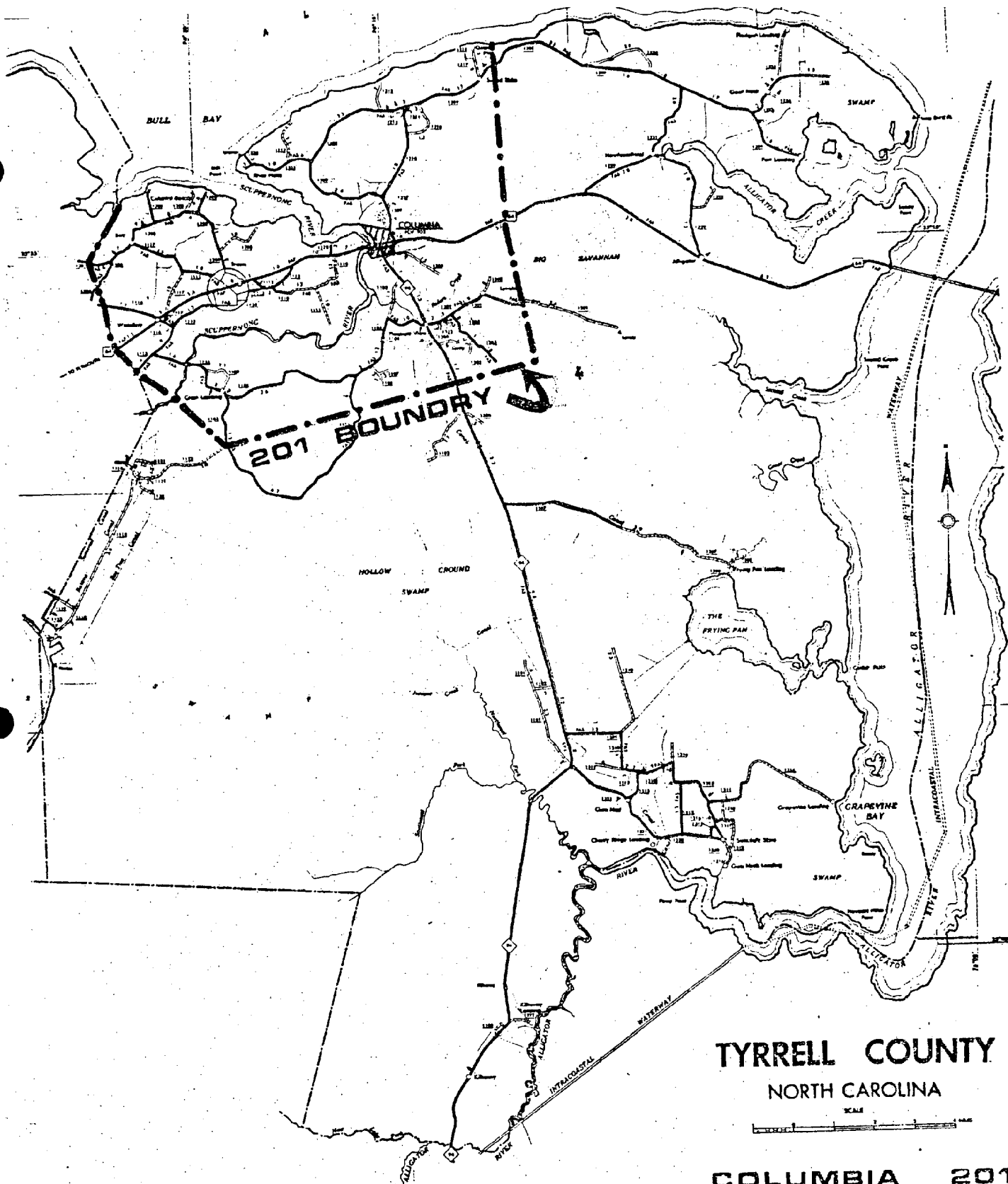
In view of the historic population decline, land demand will be determined by increased consumption per person, resulting from our higher standards of living. Greater consumption - rather than more people - means that land demand will not be for residential housing as much as it will be for development and redevelopment of public service facilities. The few additional people are expected to settle mostly in the Rural and Community class areas. If any industrial development occurs, it will probably be natural resource oriented and therefore located in the Rural class.

COMMUNITY FACILITIES DEMAND

Any new demands for services in Tyrrell County will be generated by a higher standard of living, not by growth. Therefore, the costs of any new or improved services will be borne by the present taxpayers.

Water and sewer facilities are of major importance in terms of demand and cost. In Tyrrell County the very poor soil conditions and low quality water supply have encouraged people to investigate the possibility of a county-wide water system. This facility would be financed partly by grants and partly by a local bond referendum. Unfortunately, having a water system does not alleviate the problem of poorly working septic tanks. Therefore, sanitation codes must be strictly enforced to prevent water pollution.

The Columbia water system is more than adequate but sewerage facilities have been plagued by breakdowns. A sewage treatment facilities plan is being conducted by Williams and Works Associates. This study when completed will determine the feasibility of expanding the sewerage system and improving it and the treatment plant. The plan will include recommendations for financing the proposed improvements. The area being considered is shown in the following map.



The water system in Columbia is working far below capacity. Expansion policy is to extend water and sewer lines on request at the expense of the customer. The town is currently conducting an Annexation Study which should discuss predicted expenses in the area to be annexed and the town's ability to cover these costs.

The superintendent of schools has stated that the county's school plan predicts an increase of fewer than 20 students by 1980. However, a new auditorium is needed; funds for which appear to be scarce. Kindergarten facilities need to be expanded.

Other facilities are not expected to experience heavy demands over the next ten years. However, basic repairs and better maintenance are universally needed. Currently planned and financed renovation of the courthouse, agriculture building, school and hospital will be a great improvement.

Further consideration of recreation programs and facilities is an important issue according to the citizen meetings' responses and the questionnaire results. Solid waste management including landfill sites selection also rates as a high priority item. These programs appear to be of such priority that they will most likely be initiated soon.

VI

PLAN DESCRIPTION

- A. Land Classification
- B. Allocation of Population

LAND CLASSIFICATION

The Land Classification System

The North Carolina Land Classification System covers five types of land: developed, transition, community, rural, and conservation. Each of these classes is defined in the CAMA Guidelines and all land in the county meets one of the five definitions.

The five classes are used to identify the current use and the anticipated use of all land. However, in Tyrrell County, few changes in land use are expected over the next ten years. Therefore the land has been classified according to the existing use of land (which is expected to be much like the future use).

By using the Land Classification Map the county shows where growth will occur and where the county's resources will be conserved.

As a statement of local policy consistent with statewide needs and goals, the county land classification map will serve as a basic tool for coordinating numerous policies, standards, regulations, and other governmental activities at the local, state and federal level. The classification system provides a guide for public investment and a framework for budgeting and planning for construction of community facilities such as water and sewer systems, schools, and roads. Attention will be focused on valuable natural resources. Finally, the system can help provide guidance for a more equitable distribution of the land tax burden.

The classification system allows a variety of land uses so that frequent changes in maps are not necessary. However, the county's land classification map must still be updated every 5 years.

The Five Classes of Land

Developed

Purpose: The Developed class identifies developed lands where existing population density is moderate to high and where there are a variety of land uses which are presently provided with essential public services. Consequently, the developed class is distinguished from Transition areas where significant growth and/or new service requirements will occur. Continued development and redevelopment should be encouraged to provide for the orderly growth in the developed area.

Description: Developed lands are areas with a minimum gross population density of 2,000 people per square mile. At a minimum, these lands contain existing public services including water and sewer systems, educational systems, and road systems -- all of which are able to support the present population and its accompanying land uses including commercial, industrial, and institutional.

Location: Columbia is the only area which functions as a developed center in Tyrrell County. Although the Town's population is small (890) and declining, Columbia does support the required minimum density within its jurisdiction and has the required public services although the full capacity of those services has not been used.

Relationship to Goals and Objectives: Columbia is recognized as the county's center of business and government. Redevelopment and revitalization of the town is considered important to the economic and social well-being of the county, (goals 2 and 3). Moderate to high density development and the accompanying services will lessen the human development impact on natural environments while providing safe and sanitary living conditions (goals 5 and 6).

Transition

Purpose: The Transition class identifies lands where new moderate to high density growth is to be encouraged and where any such growth that is permitted by local regulations will be provided with the necessary public services.

There are no transition lands in Tyrrell County.

Conservation

Purpose: The Conservation Class identifies land which should be maintained essentially in its natural state and where very limited or no public services are provided. These lands are necessary to maintain a healthy environment and needed to provide for the public health, safety or welfare.

Description: 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 represent are too valuable to endanger by development.

Such lands at a minimum should 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) Hazards areas
 - (a) Floodways
 - (b) Ocean erosive areas

- (c) Inlet lands
- (d) Estuarine erosive areas
- 3) Other
 - (a) Publicly owned forest, park, and 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

In addition to the above named types of land, the county may include other areas to be maintained in an essentially natural state which are needed to implement their stated policy objectives.

Location: All of the conservation lands in Tyrrell County are associated with water bodies. These lands include surface waters, wetlands, and erosion.

Relationship to Goals and Objectives: Attention to resource capability is addressed in three Tyrrell County Goals (6, 7, 10).

Community

Purpose: The Community Class identifies existing and new clusters of low density development not requiring major public services.

Description: The Community class includes existing clusters of one or more land uses such as a rural residential subdivision or a church, school, general store, industry, etc. (Cluster is defined as a number of structures grouped together in association or in physical proximity - Webster's Dictionary).

This class will provide for all new rural growth when the lot size is ten acres or less. Such clusters of growth may occur in new areas, or within existing community lands.

In every case, the lot size must be large enough to safely accommodate on-site sewage disposal and, where necessary, water supply so that no public sewer services will be required now or in the future, other limited public services such as public road access and electric power should be provided in the community class.

Location: Several community areas exist, mostly along the Albemarle Sound Shore where soils with moderate limitations are found.

Goat Neck on S.R. 1223 is classified as community but further development should not be encouraged. Goat Neck technically falls under the definition of "community." However, the community is located in a severely swampy area. Privys are very frequent and septic tank fields are often flooded. These potential health problems are further compounded by the closely spaced houses. Designation of this area as "community" implies that extensive public services are not necessary. Such is not the case.

Other areas classified as community include Colonial Beach (SR 1203), Bull Bay (SR 1202), Travis (SR 113 and U.S. 64), Scuppernong Village (SR 1226), Albemarle Shores and Rhodes Haven (SR 1212), Va-Lee Beach (SR 1213), Delshelvia subdivision (east of SR 1219), and Rider's Creek (south of SR 1301), and that part of Sound Side Community near Delshelvia and along SR 1209.

Relationship to Goals and Objectives: In protecting the rural character of the county (Goal 6) by directing residential growth to certain areas (Goal 5), the county hopes to protect the natural resources while assuring adequate building sites. In order to do this, designation of "community" areas will serve as a statement to all potential builders that these areas are safe to build in, appropriate for septic tanks, and will NOT be receiving much more in the way of government initiated services, specifically designed for that area. (Goal 6 and 8).

Rural

Purpose: The Rural Class identifies lands for long-term management for productive resource utilization, and where limited public services will be provided. Development in such areas should be compatible with resource production.

Description: The Rural Class includes all lands not in the Developed, Transition, Community and Conservation classes.

Location: The vast majority of land in Tyrrell County has been designated rural in conformance with the class descriptions and the county goals.

Relationship to County Goals and Objectives: Retaining the rural character of the county is of primary concern to the majority of citizens in Tyrrell who have expressed their thoughts in Goal 6.

Allocation of Population

In determining how each parcel of land was to be classified in Tyrrell County. The present use of land is used to determine if the property is Developed, Transition, Community, Rural, or Conservation. Because the population is expected to continue its historic decline, assigning population densities to the different classes is difficult. However, in view of the recent changes in migration trends which show people moving back into rural areas, it may be safe to say most people will prefer first to live scattered throughout the countryside; next to live in the community areas; then, perhaps, to live in or near Columbia. Waterfront development will continue to be attractive. More detailed population allocations would be inappropriate and misleading.

VII

POTENTIAL

AREAS OF ENVIRONMENTAL CONCERN

POTENTIAL
AREAS OF ENVIRONMENTAL CONCERN

The most important part of the Coastal Area Management Act is the designation of and management program for Areas of Environmental Concern (AEC). The Coastal Resources Commission has developed guidelines according to which Areas of Environmental Concern are delineated. Following these guidelines the counties are to identify and describe each area within the county which may be an AEC, describe the land uses to be allowed within each AEC, and describe the relationship between the AEC and the surrounding land. The Commission will then review the county's findings and will designate the final Areas of Environmental Concern so that all coastal counties will have plans compatible with each other.

After these first steps, a permit letting system will be instituted to regulate each AEC. Within these areas any development must conform to the particular requirements for that AEC as well as to the county's land use plan before a permit can be issued and construction can begin.

Where two or more AEC's overlap, the more restrictive requirements shall determine which land uses are acceptable. In no case shall any uses be allowed which would result in any contravention or violation of any rules, regulations, or laws of the State of North Carolina or of Tyrrell County or Columbia. Neither shall any development be allowed in any AEC which would have a substantial likelihood of causing pollution of the waters of the State to the extent that such waters would be closed to the taking of shellfish under standards set by the Commission for Health Services pursuant to G. S. 130-169.01.

This section describes each kind of area of environmental concern which is found in Tyrrell County, the AEC's location and extent, appropriate land uses, and how the AEC is considered on the Land Classification Map.

Tyrrell County does not have the following Areas of Environmental Concern: low tidal marshlands; small surface water supplies; special aquifers areas; complex natural areas; unique geologic formations; historic places; registered natural landmarks; sand dunes; ocean beaches and shorelines; coastal inlet erosion lands; or ocean erodible areas.

Coastal Wetlands - Other Coastal Marshlands

Description:

Coastal Wetlands (which are considered in two categories: (1) low tidal marshlands and (2) other coastal marshlands which have different significance and policy implications) are defined as "any salt marsh or other marsh subject to regular or occasional flooding by tides, including wind tides (whether or not the tide waters reach the marshland areas through natural or artificial water-courses), provided this shall not include hurricane or tropical storm tides. Salt marshland or other marsh shall be those areas upon which grow some, but not necessarily all, of the following salt marsh and marsh plant species: Smooth or salt water Cordgrass (Spartina alterniflora); Black Needlerush (Juncus roemerianus); Glasswort (Salicornia spp.); Salt Grass (Distichlis Spicata); Sea Lavender (Limonium spp.); Bulrush (Scirpus spp.); Saw Grass (Cladium Jamaicense); Cat-Tail (Typha spp.); Salt-Meadow Grass (Spartina Patens); and Salt Reed Grass (Spartina cynosuroides)." Included in this statutory definition of wetlands is "such contiguous land as the Secretary of NER reasonably deems necessary to affect by any such order in carrying out the purposes of this Section." (G. S. 113-230 (a))

Location and Extent:

The majority of the wetlands occur along the Alligator River and its tributaries. The major wetland is located on Long Shoal Point. In total, about 850 acres of wetlands are located on 15 sites.

The majority of the wetlands in Tyrrell are in little danger from development. Most occur in completely unpopulated areas but remain subject to the pressures of drainage, clearing for farmland, or forest management.

Land Classification: Conservation

Appropriate Land Use:

The highest priority for these areas is to guard the biological, economic, and aesthetic values of the marshes.

Second priority is given to development which requires water access and cannot function elsewhere, such as ports, docks, and marinas. Any such development will be allowed only if each of the following conditions have been met.

1. Need for the project can be justified by the projected land use demands and by community development objectives as stated in this plan.
2. Feasible alternatives regarding location and design have been adequately considered and judged to be unacceptable.
3. Location of the facility consider coastal, physical and biological systems.

In no case shall the allocation exceed the capacity of the marshland system to sustain losses without harm to the estuarine ecosystem unless the losses would be offset by a clear and substantial benefit to the public.

All of the wetlands have been mapped as "conservation" areas on the Land Classification Map.

Estuarine Waters

Description. Estuarine waters are defined in G.S. 113-229 (n) (2) as, "all the water of the Atlantic Ocean within the boundary of North Carolina and all the waters of the bays, sounds, rivers, and tributaries thereto seaward of the dividing line between coastal fishing waters and inland fishing waters, as set forth in an agreement adopted by the Wildlife Resources Commission and the Department of Conservation and Development filed with the Secretary of State entitled 'Boundary Lines, North Carolina Commercial Fishing-Inland Fishing Waters, revised March 1, 1965,'" or as it may be subsequently revised by the General Assembly.

Significance. Estuaries 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 Land Uses. Conservation of estuarine waters is to be the highest priority.

Second priority shall be given to the development of navigation channels, the use of bulkheads to prevent erosion, and the building of piers or wharfs provided that:

1. No other feasible alternative exists
2. The uses will not be detrimental to the biological and physical estuarine functions and public trust rights. "Detrimental uses" are those which directly or indirectly:

- a) block or impair existing navigation channels,
- b) increase shoreline erosion,
- c) deposit spoils below mean high tide,
- d) cause adverse water circulation patterns,
- e) violate water quality standards, or
- f) cause degradation of shellfish waters.

Land Classification: Lands adjacent to estuarine waters are classified as Conservation along the Alligator and Rural, Community, or Conservation along the Scuppernong River and Albemarle Sound. The surface waters themselves are classified as Conservation.

State Parks

Description: Pettigrew State Park, including Lake Phelps, lies partially within Tyrrell County along the Washington-Tyrrell boundary. Although the park is in a rural farming section of the county, development along the Lake Shore may adversely affect the park. The canals leading from the lake to the Scuppernong River are important to the fishing industry.

Appropriate Land Use: The State of North Carolina is responsible for all uses of land and water within the State Parks and is developing a management policy specifically for Lake Phelps.

Land Classification: The lake and park are classified as Conservation and the surrounding land is classified as rural.

Areas that Sustain Remnant Species

Description: Areas that sustain remnant species are those places that support native plants or animals, rare or endangered, within the coastal area. Such places provide habitat conditions necessary for the survival of existing populations or communities of rare or endangered species within the county.

The continued survival of certain native plants and animals cannot be assured unless the relatively few well defined areas providing necessary habitat conditions are protected from development or land uses that might alter these conditions. These habitats and the species they support provide a valuable educational and scientific resource.

Unfortunately, delineation of specific habitat for the American Bald Eagle and American alligator is not beyond the qualitative description stage. The best information is available through the N. C. Wildlife Resources Commission which has delineated prime wildlife habitat for North Carolina (see Fragile Habitat map p.) Before this proposed Area of Environmental Concern can become final, more specific information is needed.

Location and Extent: The American alligator and possibly the bald eagle may be found along the Alligator River. Protection of the wooded swamps along the shoreline and perhaps other prime wildlife habitat areas will be necessary to preserve these remnant species.

Appropriate Land Uses: Lands within the AEC shall not be planned for uses or kinds of development that will unnecessarily jeopardize the habitat conditions responsible for the continued survival of the respective plants or animals.

Land Classification: Conservation and Rural

Certain Public Trust Areas

Description: 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 acquired rights by prescription, custom, usage, dedication or any other means. In determining whether the public has acquired rights in artificially created bodies of water, the following factors shall be considered: (i) the use of the body of water by the public; (ii) the length of time the public has used the area; (iii) the value of public resources in the body of water; (iv) whether the public resources in the body of water are mobile to the extent that they can move into natural bodies of water; (v) whether the creation of the artificial body of water required permission from the State; and (vi) the value of the body of water to the public for navigation from one public area to another public area.

Location and Extent: Tyrrell County has a lake, streams, rivers, canals, and sounds which are public trust areas. Some of these water bodies are the Scuppernong River and the Alligator River and its major tributaries. These waters are to be preserved and managed to protect their biological, economic, and aesthetic values and the public rights of navigation and recreation.

Appropriate Uses: Any land use which interferes with the public right of navigation, or other public trust rights, which the public may be found to have in these waters, shall not be allowed. The development of navigational channels, drainage ditches, the use of bulkheads to prevent erosion, and the building of piers or wharfs are examples of land uses appropriate within public trust waters provided that such land uses will not be detrimental to the biological and physical 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 public trust waters.

Land Classification: All surface water is classified as conservation.

Natural Hazard Areas - Estuarine and River Erodible Areas

Description: Such areas are defined as the area above ordinary high water where excessive erosion has a high probability of occurring. In delineating the landward extent of this area a 25-year recession line has been determined using the Soil Conservation Service, Tyrrell County Shore Erosion Inventory.

Location and Extent: Albemarle Sound Shore, Alligator River and Creek Shores, and the Frying Pan Shores, are all considered erosion areas. This totals approximately 90 miles of shoreline.

Appropriate Land Uses: The main objective in managing erosion areas is to insure that development will be compatible with the dynamic nature of the erodible lands, thus minimizing the likelihood of significant loss of property.

Where shoreline protection construction has not been completed, recreation, rural, and conservation are the only appropriate land uses.

Where the shoreline has been stabilized permanent or substantial residential, commercial, institutional, or industrial structures are acceptable.

Land Classification: The erodible areas along the Albemarle Sound are prime lands for development in the county. However, the erosion area has been classified as Conservation.

VIII

IMPLEMENTATION

IMPLEMENTATION

The county has at least six possible ways of putting this plan into action:

1. Using the Land Classification System.
2. Controlling development in areas of environmental concern.
3. Purchasing land.
4. Providing services and programs.
5. Taxing.
6. Regulations.

Using the Land Classification System and controlling development in areas of environmental concern are two actions which the State of North Carolina requires the county to take. Both of these are described in the previous sections of this article. The other four are discussed here.

Government purchases of land may affect how other land is used. An example of this is a state or local park. Once a park is bought, recreational businesses may be encouraged - horse stables, rental equipment, campgrounds, etc.; or perhaps new vacation homes will be built near the park as is happening on Lake Phelps. The location of the county's new multi-purpose center may affect traffic, parking and noise, or may encourage more building.

When the government provides services and programs, land uses can be affected. For example, if Tyrrell County decides to build a water system, you can pretty well guess that most new houses will be built along the water lines. When the county organizes an economic development

program, many changes can happen in Tyrrell: new businesses, more people, new homes, and so on.

Taxes also affect how land will be used. If a farmer's taxes are too high, he may not be able to make a profit; instead of farming, he turns his land into a subdivision and retires. The county can grant farmers - and some others - tax breaks to encourage them to keep their land in production.

Finally, the county can directly control land use by enacting certain laws. In 1972 Tyrrell County adopted a Subdivision Ordinance which helps the county make sure that roads are safe, that lots are large enough and properly laid out, and that the rights of a buyer are protected. There are many other laws the county could use including one requiring an environmental impact statement from large developers, a zoning ordinance which would help protect farmland, and minimum housing codes which would make landlords repair their houses.

It is up to the citizens and elected officials to decide which of these methods are best for Tyrrell. It is important to understand that all four are being used right now but without considering their effect on land uses.

The following actions will assist the county in continuing a comprehensive planning program:

1. Qualify as an agency for letting of permits for minor developments in AECs in accordance with the CAMA.
2. Consult the land use plan when making land use decisions.
3. Prepare a Capital Improvements Budget update it annually and key it to the land use plan, particularly the land classification map.
4. Construction of water and sewerage systems should be consistent with the plan, especially the land classification map.
5. Maintain close communication with large enterprises in order to update the assess long-range plans.
6. Hire a building inspector to enforce the Building Code and other ordinances as adopted (Minimum Housing Code, Zoning Ordinance).
7. Consider a zoning ordinance to manage development along the U. S. 64 corridor and the Albemarle Sound Shore.
8. Further investigate the importance of selected natural systems in Tyrrell, especially wooded swamps and floodplains.
9. Formally review and revise the plan every five years.

X

CITY-COUNTY PLAN RELATIONSHIP

INTERPRETATION OF TOWN/COUNTY PLANS

It is nearly impossible to analyze Tyrrell County without considering Columbia as well. Columbia acts as the focus of the whole county serving as government seat, business center, and main residential community. County policy directly affects Columbia's appearance and economy. For instance, placement of the new multi-purpose center or building a water system that by-passes Columbia will certainly affect the town.

Citizen Participation meetings were held in Columbia and were open to all interested people. Problems of land development were discussed with the town as well as the county in mind.

COLUMBIA LAND USE PLAN

A. Present Conditions

Population

Economy

Existing Land Use

B. Constraints

Land Potential

Community Facilities

C. Current Plans and Policies

D. Public Participation

E. Estimated Future Demand

Population

Economy

Future Land Needs and Community Facilities Demand

F. Plan Description

G. Potential Areas of Environmental Concern

H. Implementation

Columbia, the seat of government for Tyrrell County, is situated on the east bank of the Scuppernong River. "Elizabeth" was the name of the town from 1793 to 1801. In 1863, Union troops sacked and burned Columbia but it was not until the 1930's that the citizens finally tore down the stop-gap buildings thrown up after the invasion. Despite relatively new buildings the town still looks tired and though it seems a friendly little place, it offers few incentives to newcomers or high school graduates in encouraging them to remain in the area.

A. PRESENT CONDITIONS

Population

Columbia's 1974 population was estimated at 890 people by the Office of State Planning. This is a slight decline from the 1970 census count of 902 people. The 1960 population was 1099 which indicates the town has experienced a loss of 18% of its population during the last decade. During the same period the county experienced a decline of 15.8%. The town has a higher percentage of Negro residents (52.3%) than does the county (43.3%).

TABLE 26
TOWN OF COLUMBIA
NUMBER OF PERSONS BY AGE & SEX 1970

<u>AGE</u>	<u>MALES</u>	<u>FEMALES</u>	<u>TOTAL</u>	<u>PERCENT OF TOTAL</u>
Under 5	29	35	64	7.10
5 - 14	89	89	178	19.73
15 - 20	48	53	101	11.20
21 - 24	19	32	51	5.65
25 - 34	28	26	54	5.99
35 - 44	35	34	69	7.65
45 - 54	58	76	134	14.86
55 - 64	56	59	115	12.75
65+	49	87	136	15.77

343 (38.027%) Total Population Under 21

136 (15.078%) Total Population 65 and Over

472 (52.328%) Negro Population

TABLE 27

TOWN OF COLUMBIA HOUSING STATISTICS

Average number of persons per household	2.973
Average number of persons per Negro household	4.428
Number of occupied & vacant year-round housing units	345
Number of owner occupied units	201 (66.777%)
Number of occupied housing units with 1.01 or more persons per room (overcrowded)	44 (14.618%)
Number of occupied housing units with 1.51 or more persons per room (severely overcrowded)	21 (6.977%)
Number of occupied housing units lacking complete plumbing	87 (28.904%)
Negro housing units lacking complete plumbing	68
Number of occupied units lacking a toilet	58 (19.420%)

Economy

Columbia is largely residential along with a few government offices, small businesses, and one fish processing plant. The businesses are service oriented; general merchandise stores, service stations, a bank, grocery stores, hotel, restaurants, etc.

The downtown area is losing establishments. Many buildings stand empty. Waterfront buildings are presently a liability to the whole town because of their unkept condition but renewal of the area could produce a real asset.

Existing Land Use

Most of the town is developed as single family residential. There are two small apartment houses. A central business district is located near the waterfront and includes the courthouse and other government offices. Business establishments are attracted to the U.S. 64 By-pass. Both the elementary and high schools are located outside the town limits as are the industries (lumber yards, farmers exchange, garment plant). The town is drained by two major open ditches which drain into the Scuppernong River. Because of the proximity to the River, the town has several sections which are much too wet for development.

B. CONSTRAINTS ON DEVELOPMENT

Facing Columbia are several natural and man-made constraints on development. These constraints pose practical and economic limits--not absolute constraints--considering society's engineering expertise.

Land Potential

Soils

Columbia has poorly drained soils which create construction problems. The town has experienced difficulty in maintaining its sewer lines which often collapse

due to pockets of "quick sand" or highly shifting subsoils.

Hazards

All of Columbia is designated as within the 100-year flood prone area of the Scuppernong River. This means the town has one chance in one hundred of being flooded each year.

Three oil storage facilities are located in Columbia.

Fragile Areas

The town is located on the east bank of the Scuppernong River which is both public trust water and estuarine water.

Community Facilities

Columbia relies on groundwater and has two 300-gallon per minute (gpm) wells within the town limits. Water is supplies to all town residents and to a limited extent, north south, and east of the town. The general policy seems to be to extend services when requested with the customer paying all building costs.

Columbia owns and operates its own water and sewer facilities. The water treatment plant operates at 300 gpm but is designed for 432 gpm. Elevated storage is provided by a 200,000 gallon storage tank. The plant is running at about 20% capacity. The distribution system utilizes 6" and 8" mains.

The sewage treatment plant is designed for a population equivalent of 1,500 which includes approximately 142,500 gpd of domestic waste at a Biochemical Oxygen Demand (BOD) of approximately 200 parts per million (ppm) and 7,500 GPD from the fish processing plant. The sewage treatment plant was designed to be easily expanded to double its present capacity.

School facilities are a county function.

C. CURRENT PLANS AND POLICIES

The town has no previous firsthand planning experience. By virtue of regional planning and county initiated planning, Columbia has been "studied" before. Few changes have resulted from such studies.

The town has none of the plans, policies, or regulations which the Coastal Resources Commission is concerned with.

201 Facilities Planning is reportedly beginning soon.

D. PUBLIC PARTICIPATION ACTIVITIES

Public participation activities were conducted jointly with town and county residents.

For the identification of major land use issues, please refer to the previous section, page 101.

The previously discussed population and economic trends are most visible in Columbia. Poor appearances, deteriorating housing, unpaved streets, empty houses, all indicate a declining population and poor economic situation.

Conservation or protection of natural resources does not rate top priority. However, it seems people are interested in the town but are stymied or frustrated in trying to do something.

E. ESTIMATED FUTURE DEMAND

Population

Columbia has been losing population since 1940. This decline is expected to continue for 3 reasons: response to the lack of basic job opportunities, a high percentage of the population past child-bearing age, and a very small percentage of young children.

Economy

Columbia depends on a service related economy which will be adversely affected by the declining population.

Actions taken by the county are certain to affect Columbia. The housing program should benefit the town as could the location of the county's multi-purpose center.

Future Land Needs and Community Facilities Demand

Unless the population trend is reversed, little expansion of facilities or residences can be anticipated. However, Columbia is a developed area and, in spite of poor soils, the obvious place for new urban development is adjacent to the town because of its ability to service the area with water and sewerage systems.

Such development would probably benefit both the town and the county provided any growth that does occur is properly managed to guard against overburdening the town or county in any manner.

The need for land to allow urban expansion is not as great as is the need for proper management and upkeep of already developed land. The town should concentrate on planning to encourage good development and redevelopment within its present service area. This planning should attempt to upgrade appearances, facilities, and the economy.

The town should consider the ramifications of ill-planned development at its doorstep. The coming annexation study should provide more information on such development.

F. PLAN DESCRIPTION

Columbia is classified as "developed" under the Land Classification System.

G. AREAS OF ENVIRONMENTAL CONCERN

Columbia borders on the Scuppernong River which is both estuarine and public trust water. Redevelopment of the waterfront, despite its AEC status, should take priority.

H. IMPLEMENTATION

The town has already begun a planning program. With the hiring of a town manager, the annexation study, and the capital improvements budget, the town has begun to address the constraints which have previously hampered its healthy development.

Further coordination between the county and the town would help all citizens, especially in the areas of economic development, housing, recreation, and community appearance.

XII

APPENDICES

- A. Questionnaire Results
- B. Public Participation Report
- C. Bibliography

TYRRELL COUNTY

Board of Commissioners

To: The Head of Household

Please thoughtfully fill out this questionnaire and return it by mail in the enclosed, stamped envelope by June 6 or drop it off at the County Coordinator's Office in the Columbia Courthouse.

Coastal Area Management is an extremely important issue and your views are very much needed. If there is another person in the household over 18 who wishes to fill out a separate questionnaire, he or she may pick up another copy in the County Coordinator's Office.

Thank You.

QUESTION

What is the one biggest problem or issue facing Tyrrell now?

In your opinion, which of the following should the county adopt as its goal for county population growth during the next 10 years? (circle one)

- 14% 1. Remain the same size (3,700)
- .7% 2. Reduce population (we will continue to lose population if we continue our present course of action).
- 47% 3. Small increase (to about 5,000)
- 39% 4. Large increase (over 8,000)

Have you written to the aldermen, county commissioners, or planning board members in the last year? 8% yes 92% no

Would you like to attend one of the above meetings? 72% yes 28% no

If you had \$70,000 to invest in Tyrrell, what type of investment do you think would be profitable?

SECTION I

1. Which place do you live in?

<u> </u> Frying Pan	<u> </u> Bulls Bay	<u> </u> Kilkenny
<u> </u> Scotia	<u> </u> Cross Landing	<u> </u> Sound Side
<u> </u> Creeks	<u> </u> Goat Neck	<u> </u> River Neck
<u> </u> Colonial Beach	<u> </u> Newfoundland	<u> </u> Town of Columbia
<u> </u> Fort Landing	Other <u> </u>	

2. What is your occupation?

3. Which Township do you live in?

<u>11%</u> Alligator	<u>51%</u> Columbia
<u>14%</u> Gum Neck	<u>0</u> South Fork
	<u>24%</u> Scuppernong

4. Are you a male or female? 68% male 32% female

5. Are you white 80% black 20% other 0

6. How old are you? years old

7. Do you live on a farm? yes no

8. How many people in your immediate family, including yourself, are living in your house all the time? number of people.
(Do not include boarders, renters, temporary guests, etc.)

9. How long have you lived in Tyrrell County? years.

10. What was the last grade or class you completed in school?

11. Please check the blank which comes closest to your total household income before taxes last year:

16%	1 () under \$2,000	14%	5 () \$8,000 to \$9,999
12%	2 () \$2,000 to \$3,999	17%	6 () \$10,000 to \$15,000
10%	3 () \$4,000 to \$5,999	20%	7 () over \$15,000
13%	4 () \$6,000 to \$7,999		

12. Are you presently (circle one) 1. ^{59%}employed 2. ^{9%}unemployed 3. ^{23%}retired
4. ^{6%}full time homemaker 5. full time student 6. other (specify) 3%

13. Do you work in Tyrrell 75% or another county? (specify) 25%

SECTION II

Check the place you would like to live:

1. 8% Near downtown
2. 90% Away from downtown but within the town limits
3. 40% Outside the town limits but within a short drive to town
4. 28% Outside the town limits with more than a 5 minute drive to town
5. 13% As far away from a town as possible

SECTION III

Please check one.

	(1) No Problem	(2) Slight Problem	(3) Mod. Problem	(4) Severe Problem
1. Is police protection adequate?	23%	26%	25%	25%
2. Is fire protection adequate?	49	24	18	10
3. Is water pollution a problem?	26	25	26	22
4. Are water services adequate?	52	14	18	16
5. Are sewerage services adequate?	38	18	15	29
6. Is garbage collection adequate?	25	16	14	46
7. Is garbage disposal adequate?	21	14	9	56
8. In general is county government responsive to your needs?	22	29	22	27
9. Is the Town of Columbia government responsive to your needs?	31	21	20	29
10. Is the elementary school adequate?	46	23	18	13
11. Is the high school adequate?	42	19	26	13
12. Are the vocational education programs adequate?	58	18	13	10
13. Is the public library adequate?	60	21	13	6
14. Is the appearance & condition of the houses acceptable to you?	25	30	26	21
15. Are the cultural opportunities (drama, music, art, etc.) adequate?	46	18	14	22
16. Are the kindergarten programs adequate?	53	18	15	14
17. Are the adult education programs adequate?	44	19	22	15
18. Are the tourist facilities adequate?	18	16	24	43

19. Is the availability of adequate housing a problem?	8	15	20	56
20. Are there adequate employment opportunities?	11	10	17	63
21. Is unemployment a problem?	13	8	15	63
22. Is industrial development adequate?	14	8	13	65
23. Are recreation facilities adequate?	11	10	20	58
24. Do citizens participate in community decisions?	11	18	25	46
25. Is there community pride and spirit?	24	20	27	28
26. Are medical facilities and staff adequate?	10	17	22	51
27. Is assistance to elderly people adequate?	17	22	27	35
28. Are child care or kindergartens adequate?	40	19	22	19
29. Are youth counseling services adequate?	19	23	28	31
30. Is assistance to the poor adequate?	32	20	20	28
31. Other (specify) _____				

SECTION IV

Please check the column where you feel local government should spend public money.

	(1) No Public Funds	(2) Less Funds	(3) Same Funds	(4) More Funds
1. Crime prevention and control	2%	1%	42%	54%
2. Control of organized crime	9	3	43	45
3. Health and medical care	8	8	31	64
4. Assistance to old and poor	1	4	37	57
5. Retirement benefits	7	2	44	47
6. Water pollution	2	2	45	50
7. Solid waste disposal	2	3	34	61
8. Solid waste collection	4	4	33	59
9. Public kindergarten	5	6	57	32
10. Public education	1	4	47	49

11. Community colleges & technical institutes	<u>15</u>	<u>2</u>	<u>36</u>	<u>47</u>
12. Development of new employment opportunities	<u>6</u>	<u>2</u>	<u>14</u>	<u>77</u>
13. Job training for adults	<u>8</u>	<u>4</u>	<u>32</u>	<u>56</u>
14. Help in finding jobs	<u>9</u>	<u>4</u>	<u>31</u>	<u>57</u>
15. Regulations to control land use	<u>15</u>	<u>11</u>	<u>39</u>	<u>35</u>
16. Planning for preservation of wildlife areas	<u>6</u>	<u>6</u>	<u>40</u>	<u>49</u>
17. Development of tourist attractions	<u>13</u>	<u>7</u>	<u>28</u>	<u>51</u>
18. Develop agricultural production and marketing	<u>8</u>	<u>3</u>	<u>37</u>	<u>52</u>
19. Industrial development	<u>15</u>	<u>1</u>	<u>17</u>	<u>67</u>
20. Purchase new land for public parks	<u>21</u>	<u>5</u>	<u>28</u>	<u>46</u>
21. Further development of forests and parks for public use	<u>15</u>	<u>4</u>	<u>31</u>	<u>49</u>
22. Development of public recreational facilities and programs	<u>10</u>	<u>3</u>	<u>31</u>	<u>56</u>
23. Support for libraries and museums	<u>7</u>	<u>6</u>	<u>46</u>	<u>41</u>
24. Preservation of historic sites	<u>13</u>	<u>6</u>	<u>45</u>	<u>36</u>
25. Public water system	<u>9</u>	<u>5</u>	<u>38</u>	<u>48</u>
26. Waterfront renewal	<u>17</u>	<u>4</u>	<u>30</u>	<u>50</u>
27. Enforcement of good building standards	<u>10</u>	<u>2</u>	<u>31</u>	<u>57</u>
28. Housing assistance	<u>13</u>	<u>3</u>	<u>28</u>	<u>56</u>
29. Other (specify) _____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

SECTION V

If you had the opportunity to choose the community in which you would live, how important would the following characteristics be in making your decision?

	None	Slight	Moderate	Great
1. A good place to raise children	_____	_____	_____	_____
2. Quality of water and air	_____	_____	_____	_____
3. Quality of medical facilities	_____	_____	_____	_____
4. Quality of schools	_____	_____	_____	_____
5. Job opportunities	_____	_____	_____	_____
6. Friendliness of the community	_____	_____	_____	_____
7. Religious worship	_____	_____	_____	_____
8. Climate	_____	_____	_____	_____
9. Shopping facilities	_____	_____	_____	_____
10. Size of population	_____	_____	_____	_____
11. Racial integration	_____	_____	_____	_____
12. Recreational facilities	_____	_____	_____	_____
13. Near to family and relatives	_____	_____	_____	_____
14. Opportunity for a voice in community affairs	_____	_____	_____	_____
15. Wide variety of clubs and organizations	_____	_____	_____	_____
16. Cultural opportunities	_____	_____	_____	_____

SECTION VI

Check the blank that indicates what size community you would like to live in.

1. 23% In the country away from any city or village
2. 32% In or near a small town under 1,000 like Columbia.
3. 36% In or near a small town (under 10,000 people or about the size of Washington, N.C.)
4. 7% In or near a small city (10,000 to 50,000 people or about the size of Greenville, N.C.)
5. 1% In or near a medium sized city (50,000 to 200,000 people or about the size of Raleigh, N.C.)
6. 1% In or near a metropolitan area (over 200,000 people or about the size of Charlotte, N.C. or Norfolk, Va.)

SECTION VII

Please check whether you AGREE OR DISAGREE with each statement about economic development and environmental development and environmental protection in this county.

	(1) AGREE	(2) DISAGREE
1. This county has enough economic development	15%	85%
2. More industry brought into the county will improve the quality of life in the county.	73	27
3. New industry locating in the county should be required to protect natural resources.	89	11
4. Some type of control should be placed on mobile homes.	67	33
5. A person should be able to do anything he wants on his land regardless of how it affects his neighbors.	14	86
6. A danger exists when development occurs very rapidly.	76	24
7. Economic development is more important than environmental protection.	19	81
8. We would be better off if we controlled growth so it occurred at a slow pace.	62	38
9. We have enough people living in the county now.	21	79
10. Some industries are not worth the problems they bring with them.	79	21
11. We must plan our development so as to leave something for future generations.	95	5
12. If I had a choice between more jobs and clean air and water, I would choose more jobs.	32	68
13. If industry produced goods at higher cost and did not pollute, I would be willing to pay for those goods.	71	29
14. Pollution from agriculture should be regulated.	89	11
15. Other (specify)...		

SECTION VIII

Check the blank that indicates how you feel about moving away if you had the opportunity.

1. 23% I would never consider leaving.
2. 64% I would move if I had to but would be reluctant to leave here.
3. 7% It makes no difference to me whether I live here or in another community.
4. 4% I would probably be more satisfied living in another community.
5. 2% I would really like to leave this community if I had the opportunity.

SECTION IX

1. In your opinion, which of the following suggestions for locating structures and mobile homes on waterfront property do you agree with if any:

- 53% 1. Require that all construction or location of mobile homes on waterfront property take place 100 feet inland from waters edge.
- 16% 2. Require that all construction or location of mobile home on waterfront property take place 50 feet inland from waters edge.
- 18% 3. No requirements pertaining to setback from waters edge.
- 14% 4. Any suggestions you may have pertaining to this question _____

2. Which of the following suggestions for retention of existing trees along waterfront property do you agree with if any:

- 20% 1. Require that all healthy trees 100 feet inland from waters edge be retained.
- 19% 2. Require that all healthy trees 50 feet inland from waters edge be retained.
- 11% 3. Require that (circle one) 75% or 50% of all healthy trees 100 feet inland from waters edge be retained.
- 20% 4. Require that (circle one) 75% or 50% of all healthy trees 50 feet inland from waters edge be retained.
- 17% 5. No requirements for retention of any existing trees along waterfront property.
- 13% 6. Suggestions you may have pertaining to this question _____

3. If in your opinion you feel the county would benefit from industry locating here, what type would you like to see. (specify) _____

4. Where should industrial sites be located in Tyrrell County? (Circle)

- 45% 1. Located in Columbia and fringe area
33% 2. Scattered throughout the county
11% 3. Existing communities (Gum Neck, Scuppernong, Sound Side, etc.)
5% 4. Other suggestions (specify) _____

5. Where should residential development be located in Tyrrell County? (Circle)

- 29% 1. Located in Columbia and fringe area
55% 2. Scattered throughout the county
11% 3. Existing communities (Gum Neck, Scuppernong, Sound Side, etc.)
5% 4. Other suggestions (specify) _____

6. Where should commercial development be located in Tyrrell County? (Circle)

- 46% 1. Located in Columbia and fringe area
36% 2. Scattered throughout the county
12% 3. Existing communities (Gum Neck, Scuppernong, Sound Side, etc.)
4. Other suggestions (specify) _____

7. In general are there any other comments or concerns you have about future development in your community which was not covered in this questionnaire. (Please specify)

If you have any questions concerning this questionnaire or if we can assist you in any way, please call the County Coordinator or Planner's Office at 796-7051 or 2551.

APPENDIX
PUBLIC PARTICIPATION SUMMARY
TYRRELL COUNTY

1. Evaluation of your Public Participation Program

- A. Does your land use planning depend on the local planner for direction or does citizen involvement offer direction?

Particular emphasis and direction comes from the citizens, but organization and structure are provided by the planner. "The planner does much of the work because few others have the time needed to get such a new project underway." Floyd Patrick, Planning Vice-Chairman.

- B. Unique features of your public participation program that might be useful to other communities.

A teacher's workshop was conducted with John Buck from ECU to inform high school educators of the issues and of the chance to involve their students.

The nominal group process was used as a method to help the lay person go through the steps of problem definition and solution. This process was used to arrive at issues and goals statements.

- C. How did you develop your Public Participation Program?

The county commissioners and planning board appointed a citizens resource committee selected to have a representative from each township. The committee discussed the Public Participation handbook suggestions and modified them to fit Tyrrell situation.

- D. Do you consider your public involvement a success? Please explain.

Having started at point zero we have taken the first two steps: people are informed and some are doing something. But a "success" can only be judged over the long run and the county program will be successful only if the effort is encouraged, continued, and expanded under local leadership and initiative.

Many people still feel a good deal of resentment towards the planning effort. "They feel what they do with their land is nobody else's business. They wouldn't fill out the questionnaire and they won't come to meetings because they hope that if they ignore the situation it will all go away." Mildred Walker.

Richard Reed, "It seems that 166 people have gotten involved by answering the questionnaire. That's about 7% for this county. When San Bernadino, California conducted a questionnaire survey they were very happy with a 3% return."

Participation in general government has never before been an organized movement in Tyrrell. Usually it is limited to individuals or small groups "button-holing" various county commissioners on a current crisis. Until CAMA came along, land-use management was simply not seen as an issue. Even now those who have become concerned about land-use issues still have trouble convincing

others of problems which may (or may not) come in the future. The problems in Tyrrell stem most often from lack of growth and not from too much growth. Little has happened in this county - and people expect little to happen in the future. So they do not participate in the numbers which one would expect from a county like Dare. Yet, they are concerned: concerned about their declining population, their housing shortage, and the high rate of unemployment. Because of these concerns, many people have said they welcomed the chance to become more aware of governmental tasks and responsibilities.

The people who have gotten involved here criticized others' lack of involvement. And they feel this stems from people's (and society's) tendency to react rather than act. Those people who have been actively involved feel the extension of the deadline and the draft plan may help to get others involved at least in refining the final document.

- E. List some key citizens in your public participation program: names, phone numbers.

Margaret Ann Griffin, Chairman, Citizen's Resource Committee	796-8971
Bert Davenport, Chairman, County Planning Board	796-6241
Floyd Patrick, Vice-Chairman, County Planning Board	796-8781
Joseph Landino, County Commissioner	796-3901
Claude Jones, Citizens Resource Committee	796-8541
Mildred Walker, Township Committee Member	796-8861

2. Steps taken to inform local citizens about the CAMA program

- A. Newspaper
- B. Radio
- C. Television
- D. Bulletins, Leaflets, Newsletters
- E. Other Methods

The absence of any county-based media has been a large obstacle facing the CAMA program in Tyrrell (no newspaper, radio, or TV station located in the county). Thus, there is no way to keep the people informed of new developments short of direct person-to-person contact or massive mail campaigns. The Coastland Times (Tyrrell circulation about 280) has frequently run articles submitted by the planner, but there is enough information available to have articles included in every issue (bi-weekly).

The Agriculture Extension program has worked well to inform people in extension homemakers clubs and by frequent articles in the monthly newsletter.

The major information program was carried out through meetings with clubs, organizations, and through general county-wide sessions. The planner attended approximately 26 meetings (as indicated in monthly reports) to explain the purpose and requirements of the Act. Further effort was organized according to townships. But the township committees have been only partially effective. Good results have come from Scuppernong and Gum Neck Townships and, in the absence of any response from the remaining three townships, we must rely on the suggestions from Scuppernong and Gum Neck.

Peggy Griffin, Chairman of the Citizens Resource Committee, wrote an open letter to the Tyrrell Citizens which stated the issues the county would be facing. Included in this letter (mailed to approximately 1235 boxholders) were dates for township meetings. After the township meetings, a questionnaire was mailed to all boxholders and another series of meetings was held. Posters and news articles announced all meetings. All mailings went on county commissioners stationery.

3. Opportunities for citizens to provide input into land use planning

A. Personal interviews

Throughout the planning process, the planner has conducted numerous personal interviews with citizens of the county.

B. Surveys

A questionnaire on county issues was mailed to approximately 1235 boxholders. It was to be returned in a stamped, enclosed envelope.

C. Workshops and public meetings

Betsy Warren and David Stick held a special workshop with County Commissioners, department heads, and other government people in Tyrrell, to explain CAMA. All county-wide meetings have been publicized by posters, newsletter announcements, and articles in The Coastland Times.

4. Quality and quantity of feedback from the public

A. Approximate percentage of community providing input.

Approximately 7% of the adult population (2262) answered the questionnaire. Approximately 2% are involved regularly in meetings.

B. Are all ethnic groups and social strata involved?

Economic Improvement Council and Senior Citizens' organizations were contacted and involved in the issues and goals statement process. A special effort was made to include the black community and good representation was obtained from Scuppernon township.

C. Resident non-voters were given the same opportunities to participate in the planning process as were voters.

As non-residents constitute a rather small percentage of county property owners, no specific efforts were made to gain their participation.

D. Future participation activities planned

Future public participation activities will include more use of high school students and more open meetings to discuss the draft plan.

E. How are you reflecting the responses you are receiving into the land use plans?

The actual land classification rests not only on the capability of land but also on the desires of the people. These people have been very straight forward on what they want (open county-side) and what they don't want (high density development). Citizen response from the nominal group process has been incorporated practically verbatim in the issues and goals section of the plan.

Best thing that has resulted from these meetings is that people have gotten together to talk about problems in general.

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