# GATES COUNTY LAND USE UPDATE

**Prepared with assistance from the Albermarle Commission**

**November 1987**

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# 1986
# GATES COUNTY
# LAND USE PLAN UPDATE

U.S. DEPARTMENT OF COMMERCE NOAA
COASTAL SERVICES CENTER
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CHARLESTON, SC 29405-2413

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Adopted
October 5, 1987

Certified By CRC
December 5, 1987

## Gates County Planning Board

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Prepared with assistance from the ALBEMARLE COMMISSION

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# ESTABLISHMENT OF INFORMATION BASE

This ***1986 Gates County Land Use Plan Update*** relies heavily on the previous land use planning documents prepared in cooperation with the N. C. Division of Coastal Management. ***The 1976 Gates County Land Use Plan***, the initial Gates County CAMA Land Use Document, provides a basis for measuring changes in most of the base studies. This plan provided a great amount of base study information concerning the population, economy, and physical land use constraints. ***The 1980 CAMA Land Development Plan Update for Gates County*** presented the County's first attempt to articulate local policies concerning specific land use issues. This document proved valuable in helping to focus the planning process toward policy development.

Base information data was taken from a variety of State, Federal, and Local sources. Specific quantitative data concerning land use and development changes were obtained from records maintained by local county officials; particularly the records from the Gates County Tax Supervisor's office and the office of the Gates County Building Inspector.

Interviews were conducted with the Gates County Manager, the County Building Inspector, the County Water System Supervisor, the Superintendent of Schools, and various public officials. The County Manager was particularly useful in supplying information to fill the gaps in local records.

Monthly meetings were held with the Gates County Planning Board. Meetings were advertised in the local newspaper in an effort to solicit citizen participation. A questionnaire was prepared and distributed through the school system, at nutrition sites for the elderly, and at community stores at the various crossroads communities in the county.

## PREVIOUS POLICY ACHIEVEMENTS: GATES COUNTY

### Development Issues

**Issue: Pollution of the Chowan River**

**1981 Policy Statement:**

" ... to cooperate with other local units of governments and with state and federal agencies in efforts to identify sources of pollution which result in the annual algae bloom and its inherent problems. "

**Achievements:**

Efforts to identify sources of pollution affecting the Chowan River have generally not required any involvement of local government officials.

## Issue: Impact on US 13 from Four-laning US 17

**1981 Policy Statement:**

None.

**Achievements:**

None

## Issue: Loss of Productive Agricultural Lands to Urbanization

**1981 Policy Statement:**

None.

**Achievements:**

None.

## Issue: Commercial Forest Lands

**1981 Policy Statement:**

None.

**Achievements:**

None.

## Issue: Commercial Fisheries

**1981 Policy Statement:**

None.

**Achievements:**

None.

## Issue: Off-Road Vehicles

**1981 Policy Statement:**

None.

**Achievements:**

None.

**Issue: Hurricane and Flood Evacuation Plan**

**1981 Policy Statement:**

None.

**Achievements:**

None.

**Issue: Merchants Mill Pond**

**1981 Policy Statement:**

"...to support the state's plan for Merchants Mill Pond.

**Achievements:**

The County recently had an opportunity to support the State in its effort to acquire additional lands for Merchants Mill Pond State Park through condemnation.

**Issue: Types of Development to be Encouraged and Capacity of the County Wide systems to Service New Development**

**1981 Policy Statement:**

" It has been the unofficial policy of Gates County to encourage new development within the county. However, it shall be the policy of Gates County henceforth to encourage single-family subdivisions of five or more homes in or near existing communities where water lines are of sufficient size to accommodate them. Individual new homes will be served by existing water lines where available. While mobile homes and mobile home parks are neither encouraged or discouraged, any new such development must conform to the County's mobile home park ordinance and the water system rules and regulations. Small, non-water intensive industries are actively encouraged to locate in or near existing communities so they may also br served by existing water lines . When a new industry considers a site more suitable where no water lines exist, it must bear the cost of providing a water line from such a site to the nearest 6 inch water line. The county especially encourages new industries which use forest or agricultural products."

**Achievements:**

Gates County has established an Economic Development Agency and has identified a selection of available sites of varying sizes suitable for development and served by existing water lines.

**Issue: Redevelopment of Developed Areas**

**1981 Policy Statement:**

None.

**Achievements:**

None.

**Issue: Commitment to State and Federal Programs**

**1981 Policy Statement:**

"... to continue its commitment to state and federal programs in the area (i.e., channel maintenance, dredge and fill operations, highway improvements and erosion control."

**Achievements:**

Compliance with many federal and state programs are mandatory and therefore the County must comply. The County will cooperate and shall remain committed to federal and state programs that, in the opinion of the County Commissioners, will have no adverse effect on county residents or county resources.

**Issue: Water Access**

**1981 Policy Statement:**

None.

**Achievements:**

None.

# PRESENT CONDITIONS

## SUMMARY OF PRESENT CONDITIONS

From 1930 to 1970, Gates County's population declined steadily. The post-depression years and the rapid mechanization of the farming and forestry industries eliminated many job opportunities traditional to Gates County's rural economy. Residents, particularly the young adults, left the county in search of gainful employment. From 1970 to 1980, population has increased slightly as improved prices for farm products has encouraged young people just entering the job market to remain in Gates County and try to build a future. Employment in the Tidewater area of Virginia has also been expanding rapidly offering Gates County residents job opportunities within easy commuting distance.

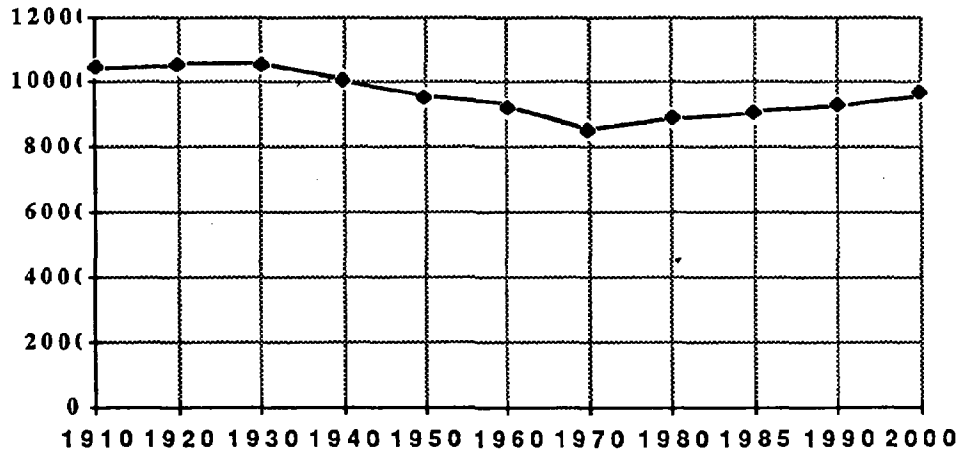
School-age and Family-forming age groups, to important population segments, have declined steadily since 1970. The decline in these age groups when coupled with the decline in the County fertility rate makes internal population growth unlikely during the planning period.

Age groups that have shown growth are the elderly, persons over 65 years and the Dependency group. These two groups have special needs that often require governmental assistance.

There are no major manufacturing employers in Gates County. The only manufacturing employer in the County is Dalure Fashions in Gatesville which employs less than 100 persons. For the most part Gates County residents must look to other counties or to other states for job opportunities.

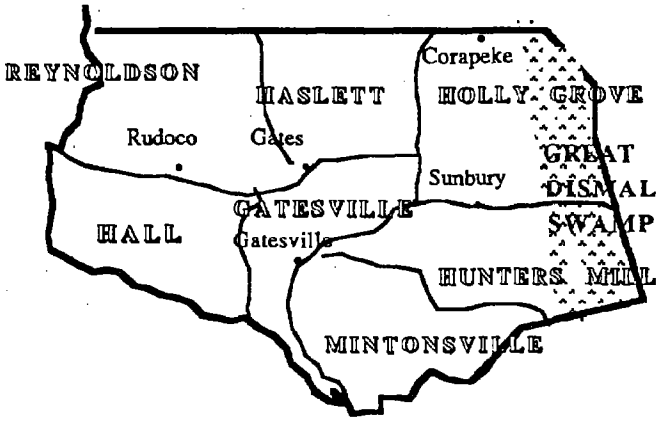
The entire 1983 Economic Output in Gates County was only $37,000,000 when measured in 1983 dollars. When measured in constant 1967 dollars the total output is only $12,382,000 or only a 19% increase during the sixteen years since 1967. Most of the constant dollar increase has occurred since 1980.

GATES COUNTY POPULATION: 1910 - 2000




SOURCE: US BUREAU OF CENSUS & NC OFFICE OF MANAGEMENT AND BUDGET

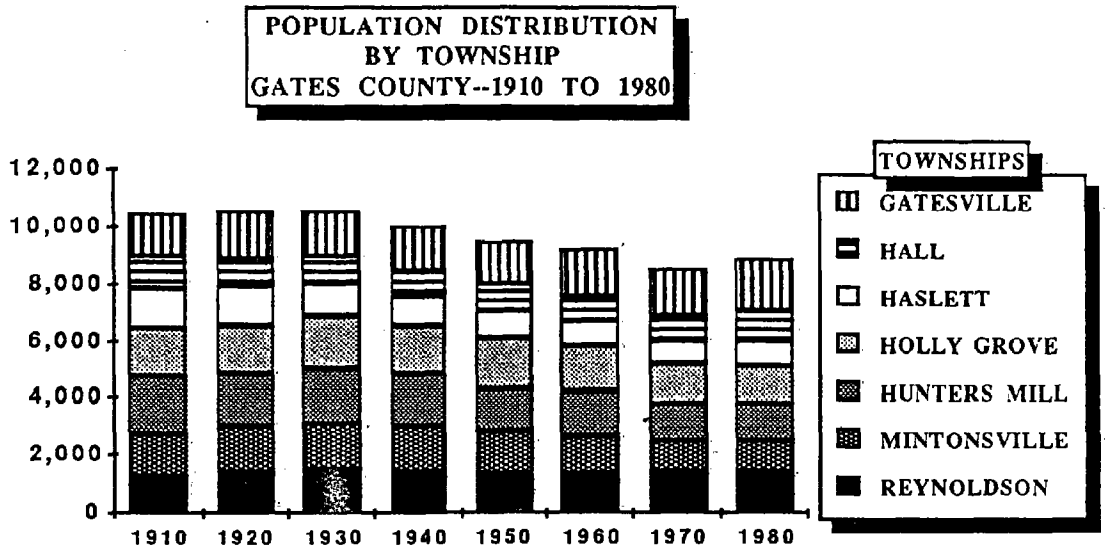
## POPULATION




Since 1900, population growth in Gates county has alternated between increases and decreases. From 1900 to 1930, the population of the county increased by 138 persons or 1.3%. From 1930 to 1970 was a period of population decline for Gates County. Population during this period decreased by 2,027 persons or 19.2%. After 1970, the population of Gates County has gradually increased. The 1980 census recorded Gates County population as 8,875 persons. The lowest population recorded this century was 8,524 in 1970, and the highest in 1930 when 10,551 persons resided in Gates County.

Population projections by the Department of Budget and Management indicate a gradual increase in population throughout the rest of the decade and into the next century. (The table below demonstrates Gates County's growth patterns.)

## GEOGRAPHIC DISTRIBUTION




*Source: US Bureau of Census*

While the county's population is fairly evenly distributed among the seven townships in the county, there has been a noticeable shift in settlement patterns. Since 1910, the Hunters Mill township, which occupies the lower right corner, of the county has shown a consistent decline in population and in its proportion of the county population. The Gatesville and Reynoldson townships, on the other hand, have shown a consistent pattern of growth in both actual

population and in their proportional share of the county population. Gatesville Township is located in the middle of the county, while Reynoldson Township is located in the upper left corner of the county.

The other townships have varying growth patterns. Holly Grove and Minstonsville townships, both fluctuated in population in the early years of the 1900's. However, for the last fifty years, both have lost in population. Their proportional share of the the county's population has fluctuated over the years ending in decline for both townships. Holly Grove is located in the upper right corner of the county and Mintonsville in the lower right corner. Hall Township has consistently declined in population throughout the century except from 1970 to 1980. Because of this recent increase, Hall has increased in its proportion of the county's total population. Haslett Township, in the upper middle of the county, has constantly decreased in population since 1910 but its proportion of the county's total population has fluctuated slightly from year to year.

GATES COUNTY:
POPULATION CHANGE BY TOWNSHIP 1910-1980

| | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 |
|---|---|---|---|---|---|---|---|---|
| REYNOLDSON | 1,295 | 1,469 | 1,548 | 1,465 | 1,369 | 1,391 | 1,459 | 1,472 |
| MINTONSVILLE | 1,420 | 1,510 | 1,585 | 1,571 | 1,452 | 1,287 | 1,045 | 984 |
| HUNTERS MILL | 2,060 | 1,893 | 1,937 | 1,812 | 1,539 | 1,568 | 1,339 | 1,339 |
| HOLLY GROVE | 1,672 | 1,686 | 1,799 | 1,646 | 1,751 | 1,599 | 1,367 | 1,336 |
| HASLETT | 1,406 | 1,386 | 1,143 | 1,053 | 929 | 904 | 767 | 839 |
| HALL | 1,123 | 968 | 996 | 950 | 944 | 847 | 949 | 1,098 |
| GATESVILLE | 1,479 | 1,625 | 1,543 | 1,563 | 1,571 | 1,658 | 1,598 | 1,807 |
| GATES COUNTY | 10,455 | 10,537 | 10,551 | 10,060 | 9,555 | 9,254 | 8,524 | 8,875 |

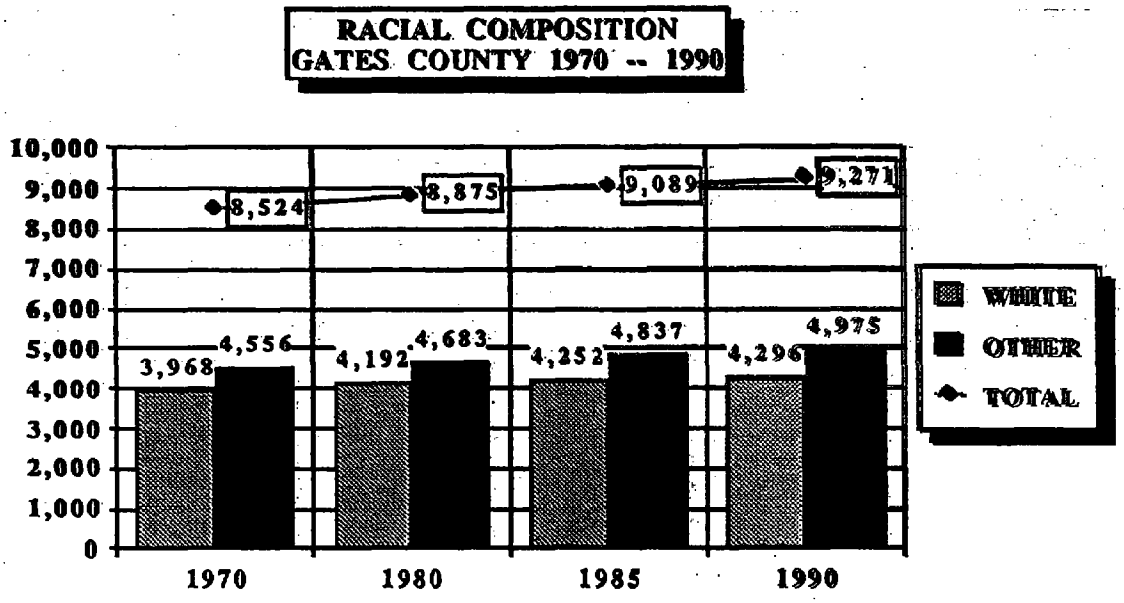
Source: US Bureau of Census

U.S. Highway 158 serves all the townships of the county. Hall, Reynoldson, and Haslett townships are served by U.S. Highway 13. Holly Grove, Hunters Mill, and Mintonsville, while not served by U.S. Highway 13 are served by several N.C. Highways. N.C. Highway 32 serves Holly Grove, Gatesville, and Mintonsville. Gatesville and Haslett, as well as, Mintonsville and Hunters Mill are served by N.C. Highway 37.

## POPULATION COMPOSITION

As is shown in the sections that follow, there are some significant and noticeable trends developing in the composition of Gates County's population. The racial composition is becoming less homogeneous as the number of non-white residents increases. The number of residents who are 60 years of age or greater continues to increase and to account for a greater share of the population. The number of school age residents has generally remained static and is projected to continue this trend into the near future. The number of females participating in the labor force is increasing, thus following the national trend of greater female participation.

The sections that follow present information on the following specific components of the county's population: Racial composition, Age group distributions, Labor force composition, Sex distribution, and household composition.




*Source: NC Office of Budget & Management*

## RACIAL COMPOSITION

The non-white population in Gates County increased in population from 1970 to 1980 but had declined in its proportion of the county's total population. In 1970, non-white residents accounted for 53.5% of the county population and numbered 4,556 persons; by 1980, the number of non-white residents had declined by 0.7% and made up 52.6% of the county population and numbered 4,694 persons. Projections provided by the N.C. Department of Budget and Management indicate that this trend will continue at least through the five-year period covered by this document. The 1990 projections estimate that 4,975 non-whites will reside in Gates County and will account for 53.7% of the county population.

GATES COUNTY
RACIAL COMPOSITION OF THE POPULATION: 1970 - 1990

| | 1970 | % of County | 1980 | % of County | 1985 | % of County | 1990 | % of County |
|---|---|---|---|---|---|---|---|---|
| WHITE | 3968 | 46.55% | 4192 | 47.23% | 4252 | 46.78% | 4296 | 46.34% |
| OTHER | 4556 | 53.45% | 4683 | 52.77% | 4837 | 53.22% | 4975 | 53.66% |
| TOTAL | 8524 | 100.00% | 8875 | 100.00% | 9089 | 100.00% | 9271 | 100.00% |

Source: NC Office of Management and Budget

## AGE GROUPS

The following sections discuss those age segments of the population that generally require special or more frequent types of services both from the private and from the governmental sectors and that in their own way create certain types of development and service demands.

The age groups discussed here are as follows:

### *The School Age ( 5-19 year old sector)*

This group naturally creates the demand for educational and recreational facilities and services.

### *The Family Forming Group ( 15-35 year old sector)*

This group is generally responsible for new household formations and new offspring,thus creating demands for new housing facilities and forming the base for future internal population growth.

### *The Potential Labor Force ( 16 years and older)*

This group is usually responsible for all the goods and services produced in an area: however, not everyone in this group participates in the work force.

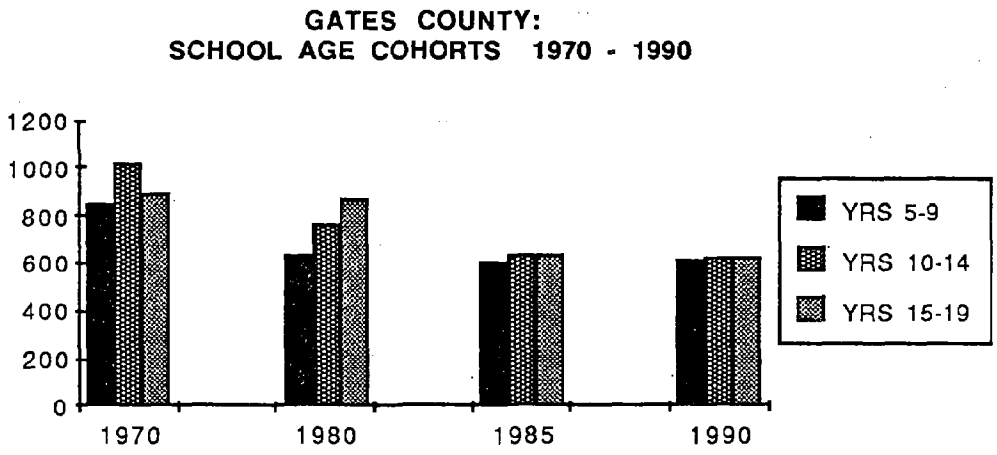
### *The Elderly ( 65 years or older)*

This group spans the greatest number of years and could be segmented further into additional age groups ranging from aged to infirm, with each having very specialized and critical needs.

### *The Dependency Sector ( under 16 and over 65)*

This group, only generally, measures those persons who are considered dependent on someone else for the major portion of their personal needs and economic support. There are, of course, persons under 16 years of age and over 65 that are self-sufficient; however, they generally are not numerous, and there are many persons not in these age groups that are, in some ways dependent on outside support

## SCHOOL AGE COHORTS




Source: NC Office of Management and Budget

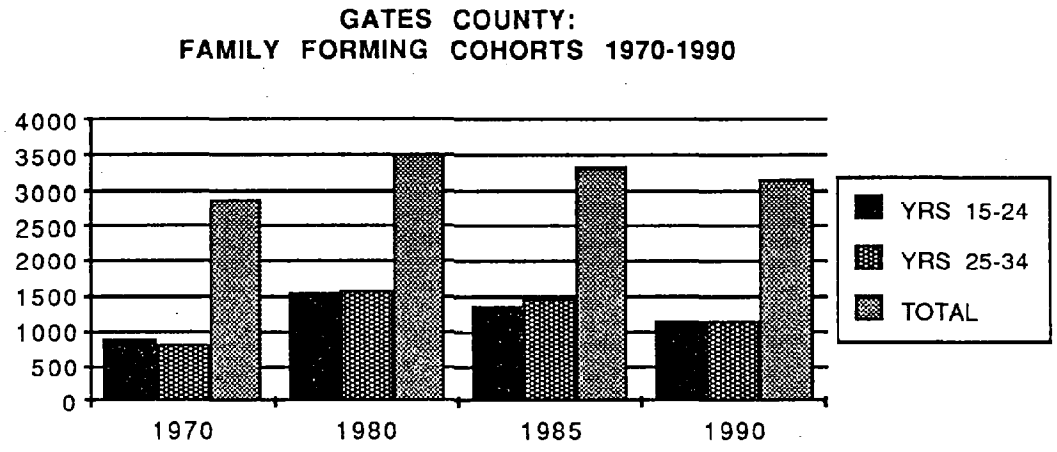
Projections indicate a decline in the school-age, population cohorts (5 to 19 years old) during the planning period. The persons in this cohort numbered 2766 in 1970; by 1980, the number of school age children had declined to 1868 persons and is estimated to be 1862 by 1990. The table below shows the number of persons within the age group and the groups percentage share of the total population.

GATES COUNTY SCHOOL-AGE COHORTS 1970 - 1990

| COHORT | 1970 | % of County | 1980 | % of County | 1985 | % of County | 1990 | % of County |
|---|---|---|---|---|---|---|---|---|
| YRS 5-9 | 853 | 30.84% | 635 | 28.00% | 603 | 31.99% | 611 | 32.81% |
| YRS 10-14 | 1016 | 36.73% | 760 | 33.51% | 642 | 34.06% | 622 | 33.40% |
| YRS 15-19 | 897 | 32.43% | 873 | 38.49% | 640 | 33.95% | 629 | 33.78% |
| TOTAL | 2766 | 100.00% | 2268 | 100.00% | 1885 | 100.00% | 1862 | 100.00% |

Source: NC Office of Management and Budget

## FAMILY-FORMING AGE GROUP




Source: NC Office of Management and Budget

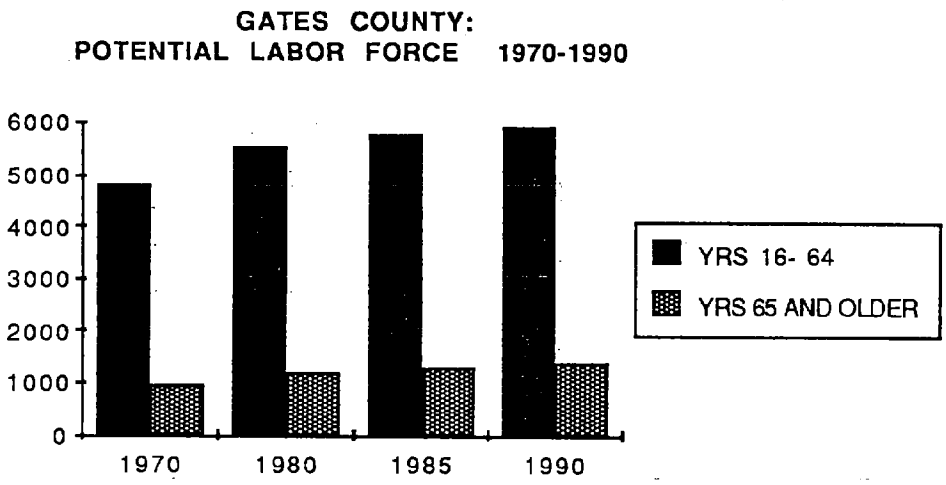
This cohort showed positive and substantial growth during the 1970 to 1980 decade. Present population estimates projections for the future indicate a decline in this cohort after 1980.

GATES COUNTY: FAMILY FORMING COHORTS 1970 - 1990

| COHORTS | 1970 | % of County | 1980 | % of County | 1985 | % of County | 1990 | % of County |
|---|---|---|---|---|---|---|---|---|
| YRS 15-24 | 897 | 51.94% | 1531 | 51.94% | 1375 | 51.94% | 1160 | 49.85% |
| YRS 25-34 | 830 | 48.06% | 1599 | 48.06% | 1483 | 48.06% | 1167 | 50.15% |
| TOTAL | 1727 | 100.00% | 3130 | 100.00% | 2858 | 100.00% | 2327 | 100.00% |

Source: NC Office of Management and Budget

## POTENTIAL LABOR FORCE




**Source: NC Office of Management and Budget**

The potential labor force generally includes all persons over 16 years of age. Of course, not all of these persons actually participate in the work force. Many are enrolled in school; many are over 65 years of age and are retired; many are physically unable due to handicaps or poor health; and many, particularly in agricultural areas such as Gates County, are females who work on the farm or in the home but are not counted as participating in labor the force.

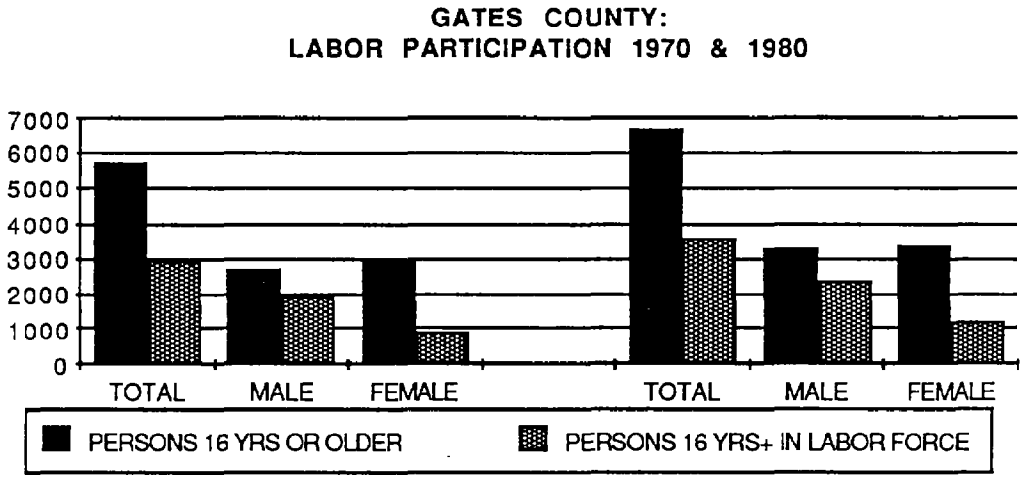
The potential labor force in Gates County grew at a much faster rate during the past census decade than did the population as a whole; the population increased by only 4.1% while the potential labor force increased by more than 16%. The 16 years or older group accounted for 67.7% of the 1970 population of Gates County and numbered 5773 persons. By 1980, this group accounted for 76.0% of the county's population and numbered 6743 persons. By 1990, the potential labor force is projected to increase to 7319 persons and 78.9% of the population.

GATES COUNTY POTENTIAL LABOR FORCE: 1970-1990

| COHORTS | 1970 | % of County | 1980 | % of County | 1985 | % of County | 1990 | % of County |
|---|---|---|---|---|---|---|---|---|
| YRS 16- 64 | 4804 | *83.21%* | 5525 | *81.94%* | 5795 | *81.40%* | 5909 | *80.74%* |
| YRS 65 + | 969 | *16.79%* | 1218 | *18.06%* | 1324 | *18.60%* | 1410 | *19.26%* |
| TOTAL | 5773 | *100.00%* | 6743 | *100.00%* | 7119 | *100.00%* | 7319 | *100.00%* |

**Source: NC Office of Management and Budget**

## LABOR PARTICIPATION




Source: US Bureau of Census

Labor force participation grew faster than the potential labor force. The number of persons actually working or seeking employment and living in Gates County increased by 634 persons or approximately 21.6%. Labor participation among male residents decreased from 71.3% in 1970 to 70.8% in 1980. Labor participation among females on the other hand increased from 34.42% in 1970 to 36.41% in 1980.

The number of females in the labor force increased from 963 persons in 1970 to 1230 persons in 1980, a increase of 267 persons or almost 27.7%. The number of males in the labor force increased from 1967 persons in 1970 to 2334 in 1980, an increase of 367 people or 18.6%. However, the total number of males 16 and over increased by 542 or 19.6%, thus resulting in an actual decline in the labor participation rate. The increase in female participation in the Gates county labor force is typical of the national trend toward more females and a greater proportion of women working outside of the home.

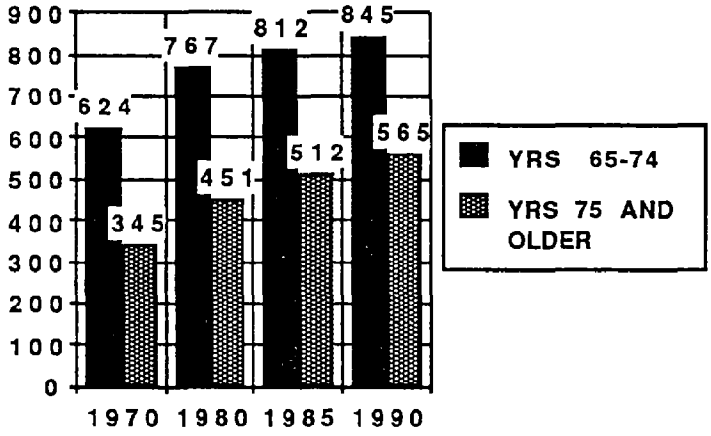
GATES COUNTY CIVILIAN LABOR FORCE PARTICIPATION: 1970-1990

| | 1970 | | | 1980 | | |
|---|---|---|---|---|---|---|
| | TOTAL | MALE | FEMALE | TOTAL | MALE | FEMALE |
| PERSONS 16 + | 5726 | 2756 | 2970 | 6676 | 3298 | 3378 |
| PERSONS 16 YRS+ IN LABOR FORCE | 2930 | 1967 | 963 | 3564 | 2334 | 1230 |
| LABOR FORCE PARTICIPATION RATE | 51.17% | 71.37% | 32.42% | 53.39% | 70.77% | 36.41% |

Source: US Bureau of Census

## ELDERLY

GATES COUNTY:
ELDERLY PERSONS 1970-1990




Source : NC Office of Budget and Management

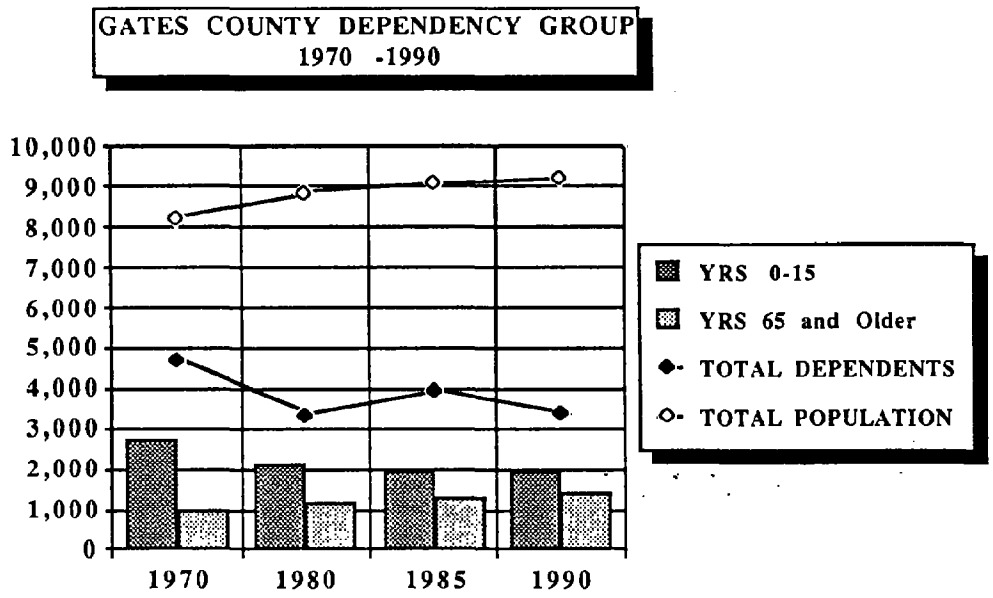
The elderly age group is the fastest growing segment of the Gates County population. In 1960, this group accounted for only 9.7% of the county's population. By 1980, this group comprised 13.7% of the county population and is projected to increase to 15.2% of the population by 1990, with the greatest growth occurring in the over-75-years-old segment.

GATES COUNTY ELDERLY POPULATION: 1970-1990

| | 1970 | % of County | 1980 | % of County | 1985 | % of County | 1990 | % of County |
|---|---|---|---|---|---|---|---|---|
| YRS 65-74 | 624 | 7.56% | 767 | 8.64% | 812 | 8.93% | 845 | 9.11% |
| YRS 75 AND OLDER | 345 | 4.18% | 451 | 5.08% | 512 | 5.63% | 565 | 6.09% |
| TOTAL | 969 | 11.74% | 1218 | 13.72% | 1324 | 14.57% | 1410 | 15.21% |

Source: NC Office of Management and Budget

## DEPENDENCY GROUP




Source: NC Office of Management and Budget

The dependency group is the population sector that typically derive a major portion of their economic support from sources other than direct participation in the labor force. For the most part,this group includes dependent children under 16 years of age and persons over 65 years who are retired and draw a major portion of their income from governmental transfer payments, such as Social Security, and from pension programs. The dependency ratio is the ratio of persons not in these age ranges to those that are.

Theoretically, the lower the dependency ratio the more self-sufficient is the area. This measurement provides a general indication of the number of additional persons that must be supported by the overall economy. This measurement, however, usually under counts the number of persons who may be in need of financial assistance or social services since it is based strictly on ages of individuals and not on specific economic or social conditions.

As the table indicates, the number of persons in the dependent age category has been declining steadily since 1970, and is presently at its low ebb. The 1990 projections indicate only a slight increase of one tenth of a percent of the population in this segment. The dependency ratio indicates that there is approximately one dependent resident for every two non-dependents. This is a decline since 1970 when the ratio was number one dependent for every 1.25 non-dependents.

GATES COUNTY DEPENDENCY COHORTS

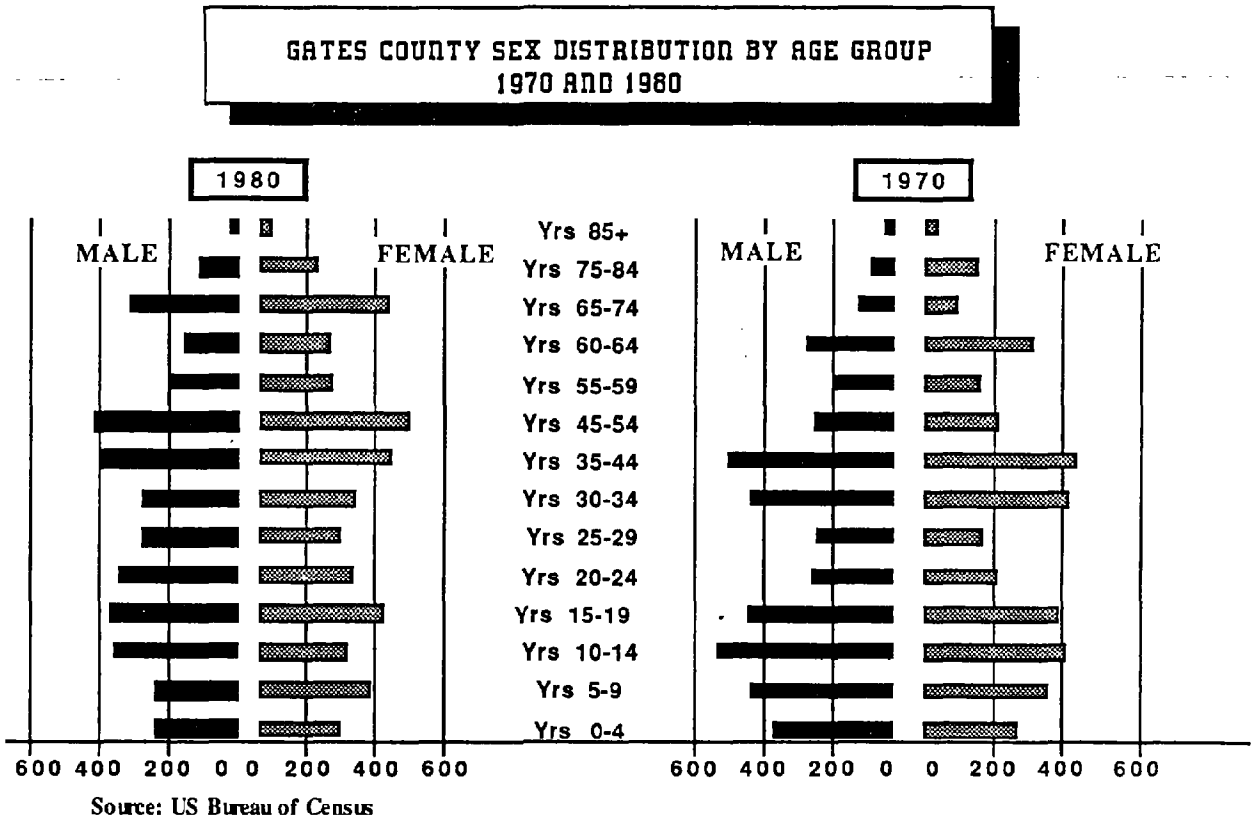
| COHORTS | 1970 | % of County | 1980 | % of County | 1985 | % of County | 1990 | % of County |
|---|---|---|---|---|---|---|---|---|
| YRS 0-15 | 2751 | 33.33% | 2132 | 24.02% | 1970 | 21.67% | 1952 | 21.05% |
| YRS 65 and Older | 969 | 11.74% | 1218 | 13.72% | 1324 | 14.57% | 1410 | 15.21% |
| TOTAL DEPENDENTS | 3720 | 45.07% | 3350 | 37.75% | 1970 | 21.67% | 3362 | 36.26% |
| TOTAL POPULATION | 8254 | 100.00% | 8875 | 100.00% | 9089 | 100.00% | 9271 | 100.00% |
| DEPENDENCY RATIO: | 1.22:1 | | 1.64:1 | | 1.76:1 | | 1.76:1 | |

Source: NC Office of Management and Budget

## SEX DISTRIBUTION

The ratio of men to women in Gates County is approximately one male to 1.004 females, a percentage population split of 49.9% males and 50.1% females. Population projections from the N.C. department of Budget and Management indicate a slightly less even distribution by 1990, with males accounting for 50.63 of the population and females for 49.37.

The population pyramids below present an overall view of the Gates County population as it was distributed by sex, and age in 1970 and how it was distributed in 1980.




Source: US Bureau of Census

## GATES COUNTY: ECONOMY

The following section analyzes the Gates County economy in terms of total county output, total personal income, employment, and entrepreneurship.

### TOTAL COUNTY OUTPUT:

the measurement, in dollars, of the total earnings produced in Gates County and does not include earnings of county residents working outside of the county or payments received by county residents through government transfer payments such as Social Security. The output measurement, however,
does include social insurance contributions made by persons working in Gates County and interest, rent, and dividends received by county residents.

### TOTAL PERSONAL INCOME:

measures all of the income received by residents of Gates County. This measurement includes earnings received by county residents working outside the county and adjustments to earnings of persons working in Gates County but residing outside of the county. Government transfer payments received by residents of the county are counted in the income total, but social security contributions are not.

### EMPLOYMENT:

Employment measurements include labor force growth, participation and composition, employment distribution by industry and job classification, the commuting work force, and job growth within the county.

### ENTREPRENEURSHIP:

Entrepreneurship is simply the measure of growth in local business activity. This includes the growth in sales in the county, the increase or decrease in business establishments, and new job creation and payroll growth in the local business sector.

### TOTAL COUNTY OUTPUT

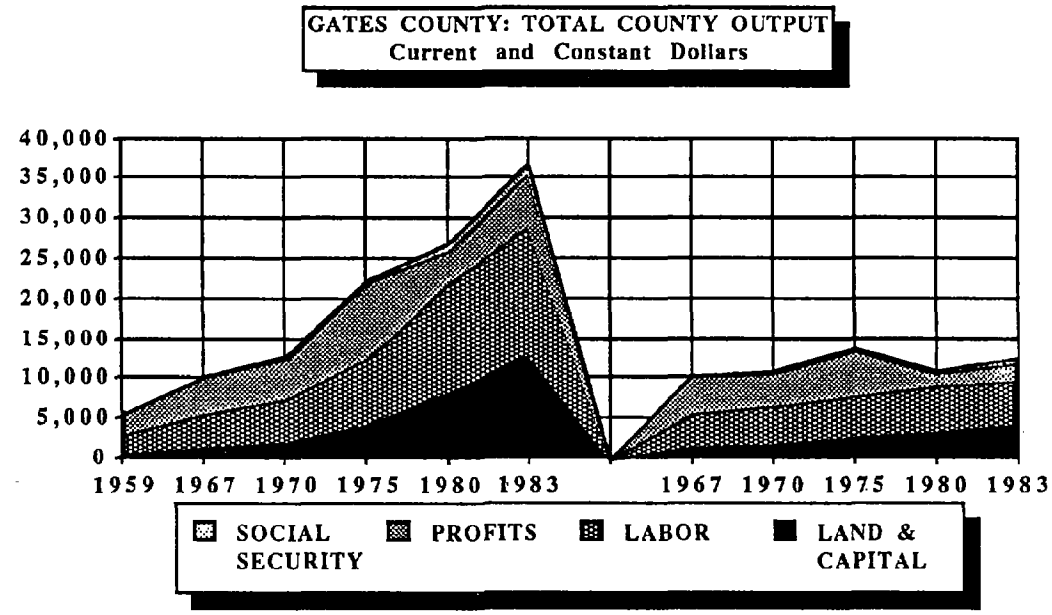
Total County Output of a given area is the sum of all dollars paid to the four factors of production: labor, land, capitol, and profits.

**Labor + land + capitol + profits = Total County Output**

Labor, land, and capital are consumption factors; and profits are the residual or value added through local entrepreneurial activities. The following sections discuss these four factors and present historic data concerning their growth and the shift in the proportion each contributes to the county's overall production.

The data used in these sections were compiled by the Bureau of Economic Analysis, U.S. Department of Commerce, and are available on an annual basis from 1965 to 1983 and at three-year intervals prior to 1965. For the purposes of this study, data for the years 1959, 1967, 1970, 1975, 1980, 1983 will be used. These years roughly approximate five-year intervals for trend identification and include Census years for cross references (1970 &1980), the latest

year for available information (1983), and the earliest year for which Consumer Price Index information is available (1967).




*Source: US Bureau of Economic Analysis*

This analysis looks at output data from two perspectives: Total County Output as expressed in current dollars and Total County Output expressed in constant 1967 dollars. Constant dollar measurements describe the value of the total county output in what economist call real terms, as current dollars are adjusted to the purchasing power of dollars in some preceding index year, in this case 1967 dollars. The Consumer Price Index information used to adjust this data was provided by the N.C. Office of Budget and Management.

GATES COUNTY : TOTAL COUNTY OUTPUT ($ 1,000 )

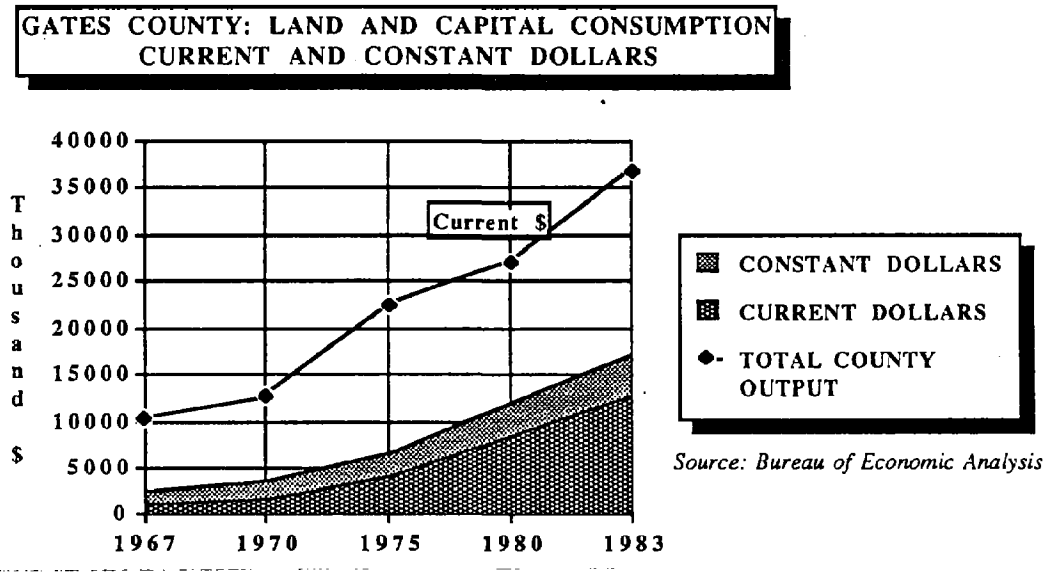
| | (current dollars) | | | | | | (constant dollars) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1959 | 1967 | 1970 | 1975 | 1980 | 1983 | 1967 | 1970 | 1975 | 1980 | 1983 |
| LAND & CAPITAL | 565 | 1326 | 1965 | 4238 | 8571 | 12996 | 1326 | 1689 | 2628 | 3472 | 4357 |
| LABOR | 2569 | 4207 | 5528 | 8153 | 13489 | 45819 | 4207 | 4752 | 5055 | 5465 | 5301 |
| PROFITS | 2297 | 4625 | 4916 | 9496 | 4106 | 6832 | 4625 | 4226 | 5888 | 1663 | 2291 |
| SOCIAL SECURITY | 86 | 243 | 321 | 582 | 982 | 1292 | 243 | 276 | 361 | 398 | 433 |
| TOTAL COUNTY OUTPUT | 5517 | 10401 | 12730 | 22469 | 27148 | 66939 | 10401 | 10943 | 13932 | 10998 | 12382 |

**Source: US Bureau of Economic Analysis**

The graphs and tables present comparisons of the change in Gates County's total county output from 1967 to 1983 as expressed in current and 1967 dollars. As can be seen, there are some striking differences. The double digit inflation rate in recent years has taken its toll in the purchasing power of the dollar. The total county output expressed in constant dollars is less than half of its current dollar value and less than its constant value in 1975.

The most obvious and notable trends indicated by the data are the greater dependence of the county's output on the land and capital factor and the steep increase and decrease of the profit sector. The labor sector has remained rather constant when viewed in real terms with a slight gain since 1975.

## LAND AND CAPITAL




*Source: Bureau of Economic Analysis*

The Bureau of Economic Analysis provides data on income received in the county that is derived through rents, dividends, and interest. This data is used here as the estimate of land and capital consumed or generated in production in Gates County. There is a separation problem with this data. It is impossible to determine from the data available whether all of the interest, rents, or dividends received as income in the county actually represents the investment of land and capital in the county or investments at some other place. There is also no way to identify the amount of rents and interest used in production in Gates County that is supplied by firms and individuals outside of the county.
For the purposes of this study it is assumed that a balancing out takes place. The amount of investment coming in to the county from non-residents is treated as equal to the amount of rents, interest, and dividends earned by county residents through investments outside of the county, thus making the earnings in the county through this factor equal to the amount consumed in the county's output.

This assumption makes the figures expressed highly questionable, and they should not be viewed as absolutely accurate. They are sufficient, however, to identify trends in the overall county economy in terms of growth and of the changes in compositional factors.

As can be seen in the following table, land and capital have shown the greatest increase of all the production factors. In 1967,the value of the land and capital used in the Gates County output was only $1,326,000; by 1983, its value had increased by 970% to $14,201,000 when measured in current dollars. In real terms, the consumption of land and capital increased somewhat less, but still a substantial 258%, for an average growth rate of 8.3% for each year of the 16-year period from 1967 to 1983.

GATES COUNTY
LAND AND CAPITAL CONSUMPTION: 1967, 1970, 1975, 1980, 1983

| | 1967 | 1970 | 1975 | 1980 | 1983 |
|---|---|---|---|---|---|
| CURRENT DOLLARS | 1,326 | 1,965 | 4,238 | 8,571 | 12,996 |
| CONSTANT DOLLARS | 1,326 | 1,689 | 2,628 | 3,472 | 4,357 |
| TOTAL COUNTY OUTPUT | 10,401 | 12,730 | 22,469 | 27,140 | 36,930 |
| LAND AND CAPITAL AS A PERCENT OF TOTAL OUTPUT (CURRENT DOLLARS) | 12.75% | 15.44% | 18.86% | 31.58% | 35.19% |

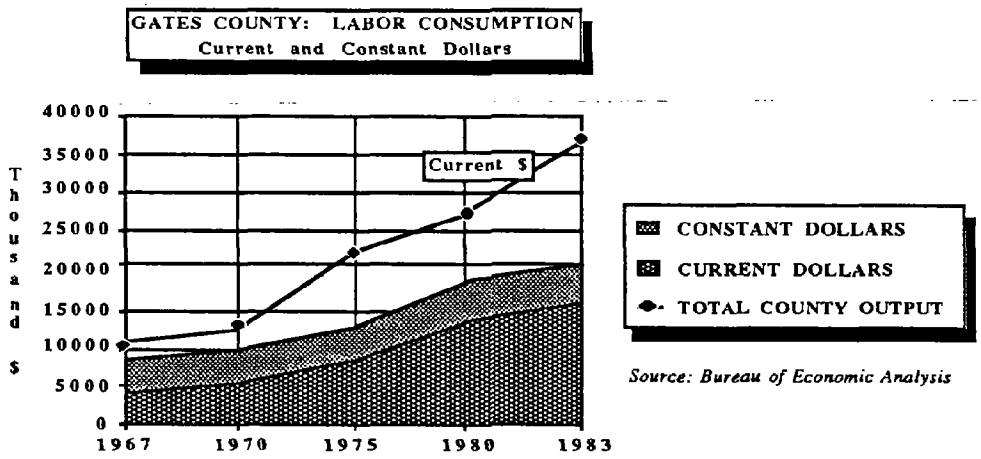
AVERAGE ANNUAL INCREASE ( % IN CONSTANT DOLLARS): 8.30%

TOTAL INCREASE: 1967 - 1983 ( % IN REAL TERMS): 239%

Source: US Bureau of Economic Analysis

The growing importance of capital is a world-wide phenomenon and not peculiar to Gates County. Production increases are more and more dependent on the expansion of production facilities and improved technology and equipment which increase land and capital requirements.

## LABOR




*Source: Bureau of Economic Analysis*

Labor is represented by the total wages and salaries paid to persons working in Gates County. This includes wages earned by persons working, but not living in Gates County. For the purposes of this study, it is assumed that all wages earned in Gates County is from production in the county.

Thus, if a travelling salesman headquartered in Gates makes sales to other parts of the country of products produced in still other regions of the country, his wage is still counted as Gates County production.

The cost of labor has not been a significant factor in the erosion of the profit factor. In real terms, labor increased by 1.43% annually between 1967 and 1983. Compositionally, labor has decreased slightly: in 1967 labor comprised 40.4% of total county output, and in 1983 it accounted for 38.8%.

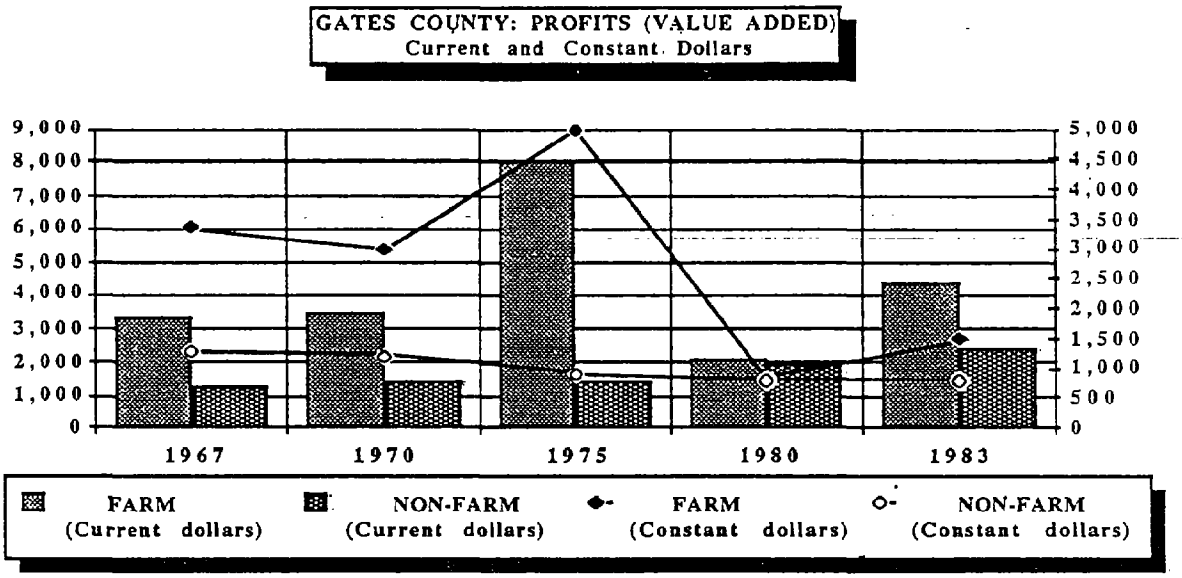
GATES COUNTY: LABOR CONSUMPTION

| WAGES AND SALARIES | 1967 | 1970 | 1975 | 1980 | 1983 |
|---|---|---|---|---|---|
| CURRENT DOLLARS | 4,207 | 5,528 | 8,152 | 13,489 | 15,810 |
| CONSTANT DOLLARS | 4,207 | 4,226 | 5,055 | 5,465 | 5,301 |
| TOTAL COUNTY OUTPUT | 10,401 | 12,730 | 22,469 | 27,140 | 36,930 |
| LABOR AS A % OF TOTAL OUTPUT (CURRENT DOLLARS) | 40.45% | 43.42% | 36.28% | 49.70% | 42.81% |

| AVERAGE ANNUAL INCREASE ( % IN CONSTANT DOLLARS) | TOTAL INCREASE: 1967 - 198 ( % IN REAL TERMS) |
|---|---|
| 14.50% | 26% |

Source: US Bureau of Economic Analysis

## PROFITS




Source: US Bureau of Economic Analysis

The Bureau of Economic Analysis provides data on what is termed proprietor's income. This represents the profits collected by business establishments operating in the county. These profits represents the value added to intermediate products used or traded in local business activities.

The steep up-and-down curve of the profit sector reflects to a great degree the county's reliance on the agricultural sector as its main source of production. The profit data represent proprietor's earnings and the major portion of county proprietors are farmers.

The steep upturn in the profit sector from 1965 to 1975 marks the remarkable improvement in the prices paid for farm commodities during that period. This is particularly evident in the 1970 to 1975 time period when farm prices experienced their greatest gains. The steady decline since 1975 reflects the erosion of farm income through the inability of farm prices to keep pace with rising production costs, particularly increased capital costs, such as the increased cost of new

machinery and higher interest rates. This cost squeeze creates the need for larger production units and thus increased land costs in the form of land prices and land rents.

The table below presents the same information contained in the previous tables on the changes in production factors and also separates the farm and non-farm proprietors. As can be seen in the table, the value added by entrepreneurial efforts is Gates County has fluctuated. Total profits are down in real terms but have increased in current terms. In real terms profits decreased by an estimated $2,234,000 or over 50% from 1967 to 1983. In current terms however there was an increase of 47%. Profits fell from a high of 44.5% of total output in 1967 to a low of 15.1% in 1980.

GATES COUNTY: PROFITS (VALUE ADDED)

| PROPRIETORS INCOME | 1967 | 1970 | 1975 | 1980 | 1983 |
|---|---|---|---|---|---|
| FARM (Current dollars) | 3,352 | 3,477 | 8,040 | 2,115 | 4,423 |
| NON-FARM (Current dollars) | 1,293 | 1,439 | 1,456 | 1,991 | 2,409 |
| TOTAL PROFITS | 4,645 | 4,916 | 9,496 | 4,106 | 6,832 |
| PROPRIETORS INCOME | | | | | |
| FARM (Constant dollars) | 3,352 | 2,989 | 4,985 | 857 | 1,483 |
| NON-FARM (Constant dollars) | 1,293 | 1,237 | 903 | 807 | 808 |
| TOTAL PROFITS | 4,645 | 4,226 | 5,888 | 1,664 | 2,291 |
| AVERAGE ANNUAL INCREASE | -4.30% | | | | |
| TOTAL INCREASE: 1967 - 1983 | 47.70% | | | | |
| TOTAL OUTPUT | 10,401 | 12,730 | 22,469 | 27,140 | 36,930 |
| TOTAL PROFIT AS A PERCENT OF TOTAL OUTPUT (CURRENT DOLLARS) | 44.66% | 38.62% | 42.26% | 15.13% | 18.50% |
| FARM PROFITS AS A PERCENT OF TOTAL COUNTY OUTPUT(CURRENT$) | 32.23% | 27.31% | 35.78% | 7.79% | 11.98% |
| NON-FARM PROFITS AS A PERCENT OF TOTAL COUNTY OUTPUT(CURRENT$) | 12.43% | 11.30% | 6.48% | 7.34% | 6.52% |

Source: US Bureau of Economic Analysis

## SOCIAL SECURITY

Social Security has been included as a separate portion of total county output strictly as an accounting measure. The Bureau of Economic Analysis list social security as a separate item and does not assign it to the particular output sector( land, capital, labor, and profits)that made the contribution. It obviously represents production so has been included in the total output tables.

## OUTPUT SUMMARY

There has been very little value added as the result of entrepreneurial activities in the county since 1967. Much of the potential profits have been consumed by additional capital costs. A part of the problem is the county's reliance on agriculture as its primary basic industry.

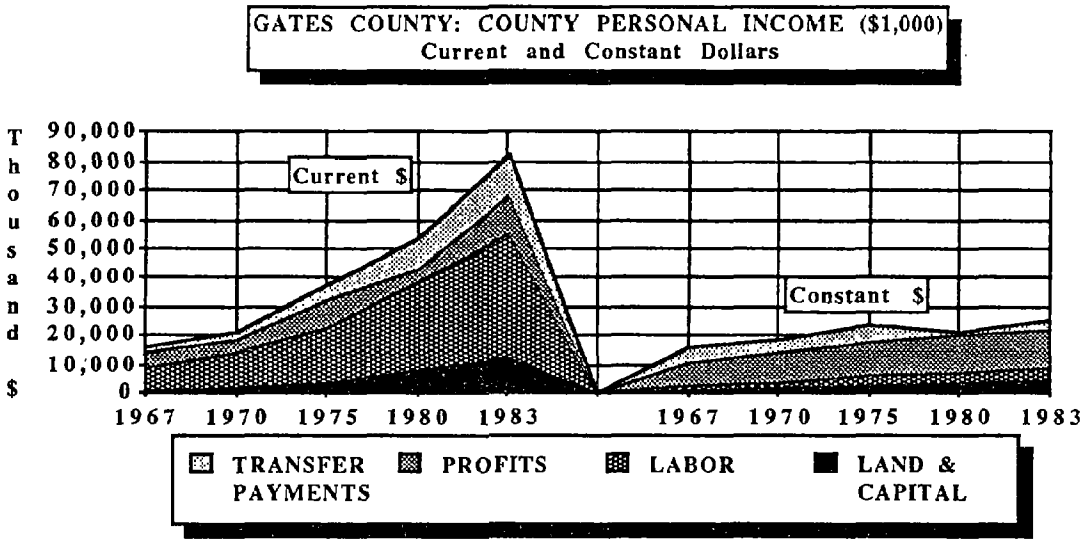
Agriculture is an extractive industry as are fishing, forestry, and mining; these industries are extreemly volatile and susceptible to international economic trends and technological

improvements in production methods and equipment. Farm land represents a finite resource in Gates County which cannot be expanded. Increased production in this sector must rely on increased utilization of this resource either through the cultivation of lands presently not in cultivation, increased production from existing lands now being farmed, or improved farm prices for farm commodities. Of these options, improved farm prices offers the greatest possibility of improved county output. This is the one option over which the farmers in Gates County have no control. The cultivation of marginally productive lands generally does not provide any great economic advantage unless accompanied by improved prices.

It is doubtful that any great technological improvement will occur that will give the Gates County farmer an advantage over other farmers in the world. Technological improvements generally provide less productive areas of the world with a better means of competing with the American farmer and generally result in lost jobs in the farming sector, fewer farmers and larger farms, and greater capital requirements.

Increased county output will most likely require less reliance on the agriculture sector and the expansion or introduction of less restricted types of industries, such as manufacturing or wholesale and retail trade. Increased development of tourism and commercial activities in the trade sectors offers the best possibility of taking advantage of the abundant water resources in the county.

## TOTAL PERSONAL INCOME




*Source: Bureau of Economic Analysis*

Total personal income is a measure of all incomes received by residents of Gates County, regardless of where it is produced. This data include earnings of residents commuting to work outside of the county and government transfer payments,such as social security or military retirement pensions. These two categories of income are added to the total county output data to provide the total income. Deducted from this total are the earnings of non-resident wage earners working in Gates County and social security contributions. The data on income are presented in a similar form as that of total county output with comparisons of income in constant as well as current dollars.

As shown in table below, total personal income has steadily increased both in constant dollars as well as in current dollars. In real terms, incomes have increased by 3.14% annually since 1967. Labor still accounts for the lion's share of the County's total personal income. Government transfer payments and interest, dividends, and rents are the two fastest growing segments of income earnings in the county, accounting for 17% and 18.7% respectively of the county's 1983 total personal income. Proprietors incomes generally reflect the volatility of farm product prices. In real terms, proprietors incomes peaked in 1975 a period of rapidly escalating prices for farm products.

GATES COUNTY : TOTAL PERSONAL INCOME ($1,000)

| | *Current Dollars* | | | | | *Constant Dollars* | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1967 | 1970 | 1975 | 1980 | 1983 | 1967 | 1970 | 1975 | 1980 | 1983 |
| INTEREST, DIVIDENDS, AND RENTS | 1,326 | 1,965 | 4,238 | 8,571 | 12,996 | 1,326 | 1,690 | 2,627 | 3,473 | 4,756 |
| SALARIES & WAGES | 8,219 | 12,164 | 18,858 | 30,437 | 42,426 | 1,659 | 2,075 | 3,624 | 4,329 | 4,722 |
| PROPRIETORS INCOME | 4,625 | 4,916 | 9,496 | 4,106 | 12,996 | 8,219 | 10,459 | 11,697 | 12,333 | 13,119 |
| TRANSFER PAYMENTS | 1,659 | 2,414 | 5,845 | 10,685 | 14,316 | 4,625 | 4,227 | 5,887 | 1,664 | 3,157 |
| TOTAL PERSONAL INCOME | 15,829 | 21,459 | 38,437 | 53,799 | 82,734 | 4,625 | 4,227 | 5,887 | 1,664 | 25,754 |
| AVERAGE ANNUAL GAIN | 26.42% | | | | | 3.41% | | | | |

Source: US Bureau of Economic Analysis

## EMPLOYMENT

The Gates County labor force increased from 3,020 persons to 3,380 persons between 1977 and 1983. The number of county residents employed increased by 420 persons.

GATES COUNTY: EMPLOYMENT CHANGE 1970-1983

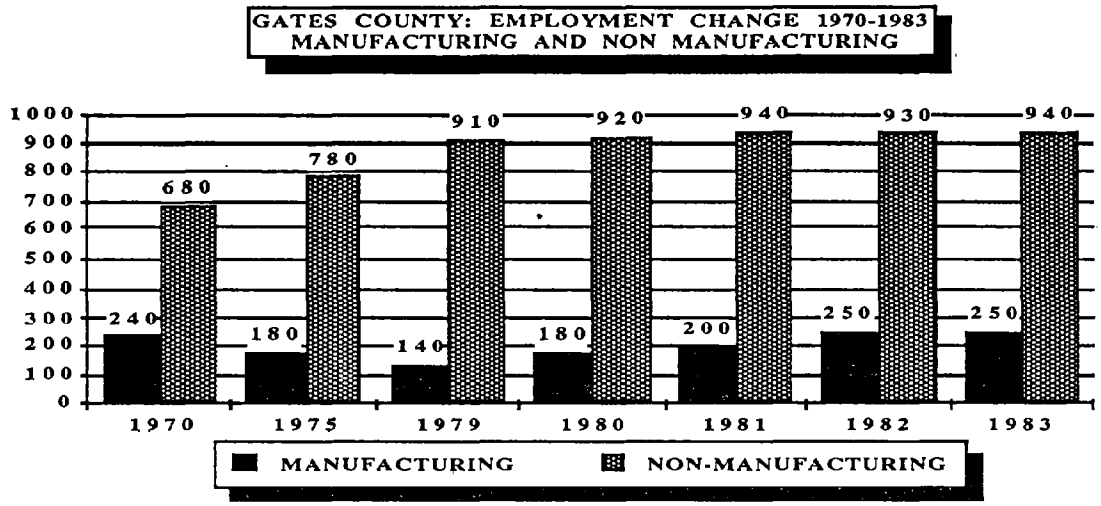
| | 1970 | 1975 | 1979 | 9801 | 981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|
| MANUFACTURING | 240 | 180 | 140 | 180 | 200 | 250 | 250 |
| NON-MANUFACTURING | 680 | 780 | 910 | 920 | 940 | 930 | 940 |
| CONSTRUCTION | 0 | 10 | 10 | 10 | 10 | 0 | 0 |
| TRANS.,COMM, AND PUBLIC UTILITIES | 40 | 40 | 40 | 40 | 30 | 20 | 20 |
| RETAIL AND WHOLE SALE TRADE | 160 | 210 | 230 | 240 | 240 | 260 | 270 |
| FINANCE, INSURANCE,REAL ESTATE | 60 | 90 | 120 | 140 | 140 | 140 | 150 |
| SERVICES | 60 | 40 | 80 | 70 | 80 | 100 | 100 |
| GOVERNMENT | 360 | 390 | 430 | 420 | 440 | 410 | 400 |
| TOTAL EMPLOYMENT | 920 | 960 | 1050 | 1001 | 140 | 1180 | 1190 |

Source: US Bureau of Economic Analysis

The number of unemployed residents declined by 60 persons to just 160, for an average annual unemployment rate of less than 5%.

Employment in the county also grew substantially during the 1977 to 1983 period, increasing by 19% or 190 new jobs, with manufacturing accounting for a major portion of the new job growth. Other employment sectors with new job opportunities include finance, insurance, and real estate, services, and wholesale and retail trade. Declining

employment sectors were transportation, and construction. The table provides a listing of Gates County employment trends from 1977 to 1983

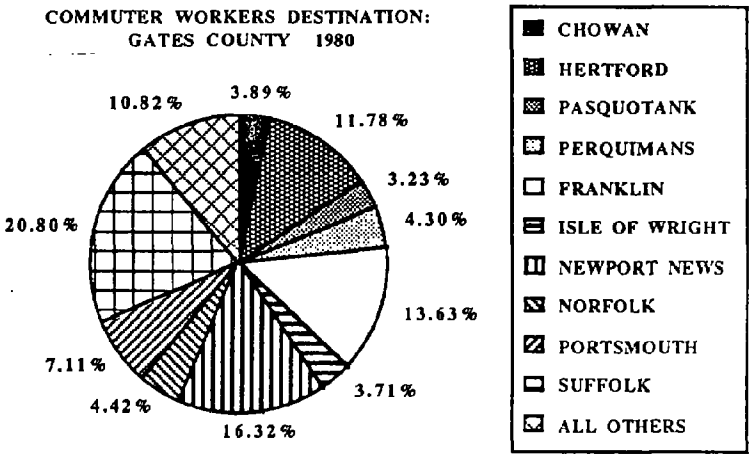



Source: US Bureau of Economic Analysis

## COMMUTERS

Gates County residents commuting outside of the county to work are the county's most valuable exports. Commuting workers accounted for 34.7% of the county's total personal income during 1983.

By comparison, wage and salary incomes for persons employed in Gates County accounted for 20.6% of the county's total personal income.




Source: US Bureau of Census

In 1980, 1179 Gates County residents commuted outside the county for employment. Most of the Gates County commuting labor force is employed in the Tidewater Virginia Metropolitan District. Most Gates County commuters working in the state are employed in Hertford County. The following table lists the commuting patterns of Gates County residents.

COMMUTING PATTERNS
GATES COUNTY 1980

| COUNTY/CITY | OUT-COMMUTERS | IN-COMMUTERS |
|---|---|---|
| BERTIE, NC | 17 | 6 |
| CAMDEN, NC | 17 | |
| CHOWAN, NC | 65 | 21 |
| FORSYTHE, NC | 13 | |
| GASTON, NC | | 4 |
| HERTFORD, NC | 197 | 89 |
| PASQUOTANK, NC | 54 | 63 |
| PERQUIMANS, NC | 72 | 41 |
| PITT, NC | 17 | |
| WAYNE, NC | 17 | |
| WILSON, NC | 17 | |
| TOTAL IN-STATE | OUT 486 | IN 224 |
| OUT OF STATE COMMUTERS | | |
| STRATFORD, CT. | 6 | |
| RICHLAND, S.C. | 14 | |
| CHESAPEAKE | 31 | |
| FRANKLIN | 228 | |
| ISLE OF WRIGHT | 62 | |
| NEWPORT NEWS | 273 | |
| NORFOLK | 74 | |
| PORTSMOUTH | 119 | |
| RICHMOND | 4 | |
| SMYTH | 7 | |
| SOUTH HAMPTON | 12 | |
| SUFFOLK | 348 | 41 |
| VIRGINIA BEACH | 9 | |
| TOTAL OUT OF STATE | 1187 | 41 |
| TOTAL | OUT 1,673 | IN 265 |
| NON COMMUTING WORKERS | | 1,334 |
| PERSONS WORKING IN COUNTY | | 1,599 |
| EMPLOYED RESIDENTS | | 3,007 |
| WORKPLACE NOT REPORTED | | 438 |

Source: US Bureau of Census

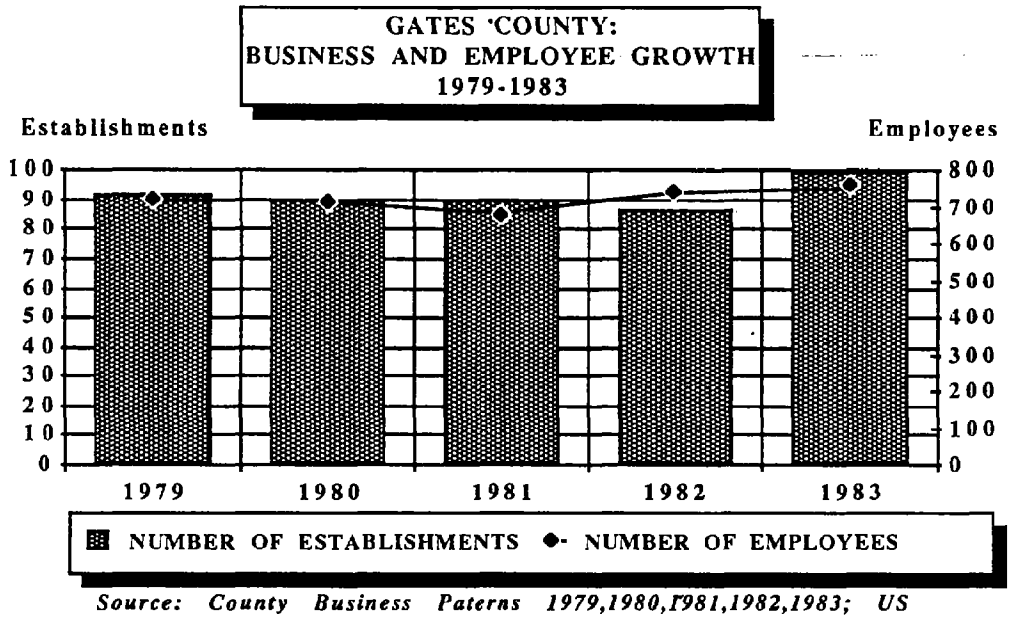
## ENTREPRENEURSHIP

GATES COUNTY:
BUSINESS ESTABLISHMENTS, EMPLOYEES, AND PAYROLL 1979-1983

| | 1979 | 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|
| NUMBER OF ESTABLISHMENTS | 92 | 90 | 90 | 87 | 100 |
| NUMBER OF EMPLOYEES | 720 | 714 | 684 | 743 | 761 |
| 1ST QUARTER PAYROLL($1,000) | 1,304 | 1,477 | 1,556 | 1,542 | 1,720 |
| ANNUAL PAYROLL | 5,747 | 6,551 | 6,676 | 6,995 | 7,446 |

Source: County Bussiness Patterns 1979,1980,1981,1982,1983

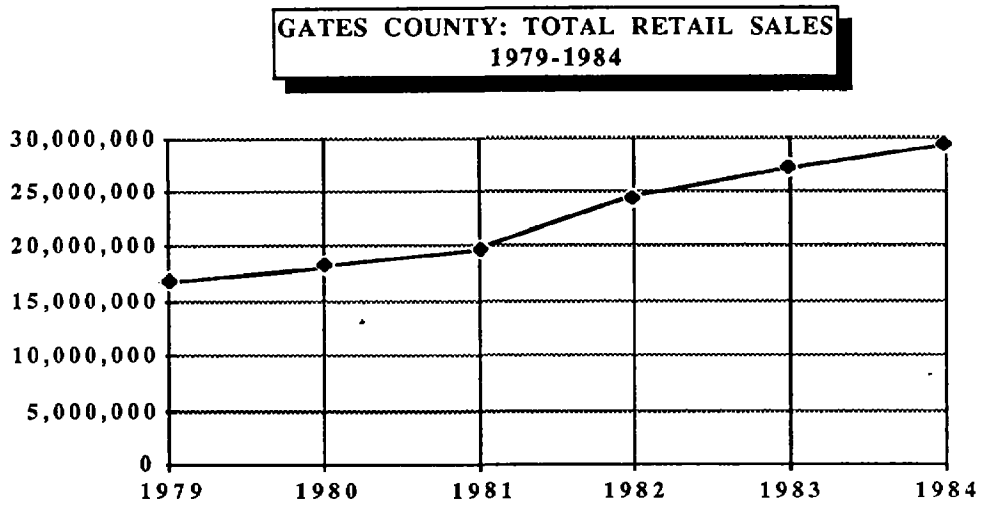
The number of business establishments has remained rather constant in Gates County. The number of establishments with payrolls grew by just eight establishments from 92 in 1979 to 100 in 1983, a sharp increase in view of the 1982 decline to only 87 businesses. Employment in these establishments has remained generally constant, increasing only slightly from 720 in 1979 to 761 in 1983. The annual payroll during this period grew by almost 30% , increasing from $5,747,000 in 1979 to $7,446,000 in 1983. The graph below and the table above show the trends in new business starts and growth changes as reported by the US Bureau of Census for the years 1979 to 1983.




*Source: County Business Paterns 1979,1980,1981,1982,1983; US*

## RETAIL SALES

Retails sales in Gates County increased by almost 74% between 1979 and 1984. Sales in 1979 were $16,917,585; by 1984 retail sales reached $29,405,604. The average annual increase during this period was less than 10% per year or approximately the annual inflation rate for the period. The effects of inflation is demonstrated by the buying patterns during this period. Durable goods whose purchase could be postponed to a later date, such as automobiles, often were.




Source: NC Department of Revenue; Division of Tax Research

In 1978, 2% sales tax items, which include motorized vehicles such as automobiles, trucks, airplanes, and boats, accounted for 12.1% of total county sales. By 1981-1982, at the height of the recession and when the inflation rate was hovering near 16% to 17% , these sales dropped to less than 5% of total county sales. In contrast, food sales during these years increased from 26.3% to approximately 31% of total county sales.

GATES COUNTY TOTAL RETAIL SALES 1979 - 1984
SALES TAX COLLECTIONS

| | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 |
|---|---|---|---|---|---|---|
| SALE TAX 1% | 1,338,966 | 1,515,486 | 1,503,709 | 1,856,662 | 2,344,723 | 2,543,853 |
| SALE TAX 2% | 2,054,422 | 1,356,029 | 1,009,442 | 1,188,601 | 1,543,989 | 2,458,321 |
| APPAREL | 0 | 213 | 215 | 9,488 | 1,382 | 1,023 |
| AUTOMOTIVE | 3,234,607 | 3,249,445 | 3,674,896 | 4,328,975 | 4,764,628 | 4,701,240 |
| FOOD | 4,444,686 | 5,462,307 | 6,152,242 | 7,555,289 | 8,350,064 | 9,341,801 |
| FURNITURE | 218,806 | 203,457 | 222,209 | 257,501 | 328,031 | 348,146 |
| GEN.MERCHANDISE | 3,165,869 | 3,072,521 | 3,351,260 | 5,121,831 | 5,896,236 | 6,082,336 |
| BUILDING MAT. | 426,529 | 285,447 | 251,648 | 157,149 | 386,994 | 366,370 |
| UNCLASS | 2,033,700 | 3,137,035 | 3,622,211 | 3,984,073 | 3,552,874 | 3,562,514 |
| TOTAL | 16,917,585 | 18,281,940 | 19,787,832 | 24,459,569 | 27,168,921 | 29,405,604 |

Source: NC Department of Revenue; Division of Tax Research

# EXISTING LAND USE

## Development Patterns

The Gates County landscape is typically rural. Large expanses of forests, cultivated fields, and pasture land are dotted with single- family residential units. Residential units, for the most part, are located with direct driveway access to the State's paved, secondary road system. Small areas of greater residential and commercial development occur at various crossroad locations throughout the county.

The occurrence of these small community concentrations is more frequent in Gates County than in many adjacent counties, primarily due to the greater overall size of the county, to the county's much more extensively developed secondary road system, and to the failure of any of its communities to develop as a strong employment center. There are few manufacturing establishments in Gates County and no major commercial centers. The largest community and only incorporated town in Gates County is its county seat, Gatesville (1980 population 363).

### COUNTY AREA, DENSITY, AND HIGHWAY MILEAGE: GATES COUNTY AND REGION R COUNTIES, 1984

| | AREA/ SQUARE MILES | DENSITY | PRIMARY | SECONDARY | TOTAL RURAL MILEAGE |
|---|---|---|---|---|---|
| GATES | 338.25 | 26.8 | 84.12 | 278.79 | 362.91 |
| CAMDEN | 240.49 | 24.4 | 44.36 | 149.51 | 193.87 |
| CHOWAN | 181.55 | 70.2 | 53.63 | 189.59 | 243.22 |
| CURRITUCK | 255.59 | 49.3 | 70.75 | 168.37 | 239.12 |
| DARE | 390.79 | 39.2 | 147.44 | 102.65 | 250.09 |
| HYDE | 624.22 | 9.5 | 89.40 | 186.18 | 275.58 |
| PASQUOTANK | 228.00 | 125.6 | 48.05 | 222.51 | 270.56 |
| PERQUIMANS | 246.40 | 39.4 | 31.64 | 270.76 | 310.16 |
| TYRRELL | 406.82 | 9.9 | 46.34 | 144.37 | 190.71 |
| WASHINGTON | 331.63 | 44.1 | 66.82 | 223.15 | 289.97 |

Source: 1984 *Profile, North Carolina Counties, Update,* Office of State Budget and Management

## DOMINANT LAND USES

As one would expect in an almost completely rural county with 338 square miles of land area and a population density of less than 25 persons per square mile, land uses in Gates County are overwhelmingly forestry and agricultural. Wide expanses of wooded swamp areas form the eastern and western boundaries of the county. To the east, the Great Dismal Swamp forms a four-and-a-half mile band in Gates County along the Pasquotank County line. This band of swamp comprises approximately 17% of all county lands. To the east and the south, the flood plain of the Chowan River claims a two-and-a-half to three mile swath of wooded swamp extending twenty- five miles from the Virginia line to the Chowan County line. This swampy flood plain accounts for roughly 18.5% of Gates County's total acreage. Most of these swamp lands are unusable for agricultural purposes.

## MAJOR LAND USE CATEGORIES: GATES COUNTY

AREA IN THOUSANDS OF ACRES

| | | THOUSAND ACRES | % OF TOTAL |
|---|---|---|---|
| ALL AREA | LAND | 219.3 | 97.86 |
| | WATER | 4.8 | 2.14 |
| | TOTAL | 224.1 | 100.00 |
| ALL LAND AREA | FORESTRY | 165.6 | 76.98 |
| | CROPLAND | 46.6 | 21.67 |
| | URBAN/BUILT-UP | 2.9 | 1.35 |

SOURCE: *Profile North Carolina Counties, 1981*, North Carolina Office of State Budget and Management

### FORESTRY LANDS

According to the North Carolina Forestry Service, forest lands comprised 154,927 acres or approximately 71.6% of the county's total acreage in 1984. The wooded swamps along the county's eastern and western borders accounted for 60,000 acres or roughly 39% of these forest lands. Slightly more than 92% of forest lands in Gates County are being managed for commercial production. The commercial forests are almost entirely controlled, either through lease or fee simple ownership, by large corporate entities such as Weyerhauser or Union Camp. For the most part, the forests are well managed with reforestation being an important management practice. The volume of saw timber has actually declined in recent years. Stumpage measurements by the North Carolina Forestry Service indicate increases in annual growth in both saw timber and pulp wood.

### AGRICULTURAL LANDS

After forestry, agriculture is the most frequent use of land in Gates County. According to the 1982 Census of Agriculture, there were 67,985 acres in farms. This is a slight decline from 1978 when 73,861 acres were in farm land. Total cropland measured 42,246 acres in 1982, with harvested cropland numbering 39,395 acres. Cropland and land in farms are not the same not all land in farms is dedicated to the production of crops.

The number of farms in the county continues to decline, while farm acreage continues to increase. From 1969 to 1982, the land in farms decreased from 86,312 acres to 67,985 acres; the number of farms decreased from 612 to 282 while the average size of farms increased from 141 acres to 241 acres.

FARMS AND LAND IN FARMS, 1969 TO 1982

| | 1982 | 1978 | 1974 | 1969 |
|---|---|---|---|---|
| FARMS | 282 | 386 | 431 | 612 |
| LAND IN FARMS(acres) | 67,985 | 73,861 | 82,858 | 86,312 |
| AVERAGE FARM SIZE | 241 | 191 | 192 | 141 |
| HARVESTED CROPLAND | 39,395 | 42,122 | 44,095 | 44,265 |

*Source: 1982 Census of Agriculture, US Bureau of Census; North Carolina Agricultural Statistics, 1984; North Carolina Crop and Livestock Reporting Service*

## FARM PRODUCTS

Corn, soybeans, and peanuts are the three main cash crops in Gates County. The number of acres and their distribution among these three cash crops remained fairly constant from 1977 to 1982, with corn production consuming the primary portion of harvested cropland, followed by soybeans and then peanuts.

Livestock production is primarily poultry and hogs when measured by the head. More farms are engaged in hog production, but their livestock is fewer in number.

### CROP AND LIVESTOCK PRODUCTION: GATES COUNTY, 1977-1983

| CASH CROPS | 1977 | 1978 | 1982 | 1983 |
|---|---|---|---|---|
| CORN | 19,500 | 23,437 | 18,199 | 16,000 |
| SOYBEANS | 11,400 | 10,365 | 12,365 | 12,500 |
| PEANUTS | 7,400 | 7,472 | 6,309 | 7,050 |
| LIVESTOCK | | | | |
| POULTRY(Head) | | 1,959,620 | 2,453,500 | |
| HOGS (Head) | 29,500 | 37,169 | 24,250 | 26,700 |

*Source: 1982 Census of Agriculture, US Bureau of Census; North Carolina Agricultural Statistics, 1984; North Carolina Crop and Livestock Reporting Service*

## RESIDENTIAL LANDS

Housing in Gates County is primarily conventional single-family homes, duplexes, or mobile homes located on individual lots. The County has not been under any intense development pressures over the past twenty-five years. The total number of housing units in the county increased by only 707 units from 1960 to 1980. This is an annual average of only 35 units per year. However, 98% of these housing additions occurred between 1970 and 1980 at an annual rate of 69.3 units. The major change in Gates County's residential development over the last twenty-five years has been the increasing use of mobile homes as a source of housing. The reasons for the increasing reliance on mobile homes as a housing resource were generally noted in the 1980 Land Use Update for Gates County.

The reasons listed in this 1980 report were as follows:

1) **Rising cost of conventionally built homes**
2) **Improved mobile home size**
3) **Improved quality of mobile homes**
4) **Improved and longer-term financing availability.**

These reasons are as great a factor today as they were in 1981. Mobile homes, since 1960, have accounted for almost 57% of all new housing units in the county.

## RESIDENTIAL TRENDS SINCE 1980

Available county records indicate that new housing starts this decade have not reached the 63 units per year recorded during the 1970 to 1980 decade; however, housing starts during the last six months of 1985 and through March 10, 1986, show a considerable increase in housing activity.

Available county records show that between 1980 and 1983 housing starts numbered approximately thirty units per year with the majority of the units during these years being conventional "stick built" homes. Records are a bit skimpy between 1982 and July 1985, but during July 1985, Gates County employed a full-time building inspector who now keeps accurate and current records. Between July 1, 1985, and March 10, 1986, there were seventy-eight permits issued for housing units; sixty-five of these permits were for mobile homes.

HOUSING UNITS: GATES COUNTY 1960, 1970, 1980

| | 1960 | 1970 | 1980 |
|---|---|---|---|
| CONVENTIONAL HOUSING UNITS | 2,448 | 2,354 | 2,815 |
| MOBILE HOMES | 8 | 116 | 409 |
| TOTAL HOUSING UNITS | 2,456 | 2,470 | 3,224 |
| % MOBILE HOMES | 0.3 | 4.7 | 12.7 |

*Source: US Bureau of Census: 1960,1970,1980 and Gates County Permit Record*

The increasing use of mobile homes has caused significant concern among Gates County residents and local government officials. Depressed property values and an increased public service use without compensating tax base increases are the most noted reasons for concern. Most of the development pressures from mobile homes are occurring around the Corapeake area in northeastern Gates County near the Virginia line. Much of the mobile home development in this area of the county can be attributed to the difference in locally imposed development costs between Suffolk, Virginia, and Gates County. Costs for development of a mobile-home lot in Suffolk will typically run $1,500 higher than in Gates County. Gates County also has the attraction of less costly water service and property taxes.

MOBILE HOME DISTRIBUTION BY TOWNSHIP: GATES COUNTY-1980

| | TOTAL HOUSING UNITS | MOBILE HOMES | MOBILE HOMES PERCENTAGE |
|---|---|---|---|
| GATESVILLE | 623 | 68 | 10.9% |
| HALL | 438 | 78 | 17.8% |
| HASLETT | 315 | 57 | 18.1% |
| HOLLY GROVE | 516 | 53 | 10.3% |
| HUNTERS MILL | 471 | 49 | 10.4% |
| MINTONSVILLE | 358 | 33 | 9.2% |
| REYNOLDSON | 503 | 7 | 14.1% |
| GATES COUNTY | 3,224 | 409 | 12.7% |

*SOURCE: US CENSUS OF HOUSING-1980, US BUREAU OF CENSUS*

## COMMERCIAL USE

There is very little commercially developed land in Gates County. Small grocery stores, restaurants, service stations, and agricultural services make up the bulk of these uses. Most commercial uses are located in the several small crossroad communities in Gates County. Between 1980 and March 1986, only 6 building permits were issued for new commercial space.

## LAND USE COMPATIBILITY PROBLEMS

Land use compatibility problems have been generally described as those situations in which one person's use of his land negatively affects his neighbors' full enjoyment of their land. This

definition has generally been broadened to include the general public's enjoyment of public lands as well. As can be seen, land use compatibility problems are largely perceptual differences based on the values of the beholder. The 1980 Land Use Update for Gates County did not list any compatibility problems. The low development density in the county and its typically rural nature have fostered a high degree of tolerance among its residents toward what are typically thought of as incompatible land uses. This is particularly true of agricultural uses. No one seriously complains of the nuisances of odors from large livestock operations or from the seasonal burning of field stubble. These nuisances are traditional to the way of life in Gates County. However, if livestock operations continue to grow in size and in number of animals in confinement and if fields get larger and seasonal burnings become much greater conflagrations, the tolerance of these residents is likely to diminish.

The most serious capability problem involves mobile home concentrations. County residents are not disturbed a great deal by the occasional siting of mobile homes that are generally widely spaced and scattered among similarly spaced conventional housing. However, concentrations of mobile homes or mobile homes located in closely spaced half-acre subdivision lots do create substantial concern among county residents.

## Major Problems Resulting from Unplanned Growth

The lack of intensive development and the lack of any large concentrations of development have allowed Gates County to escape any major problem resulting from unplanned growth. Most notable problems are the construction of residential units on lots that do not meet the Health Department's minimum standards for septic tank use or construction permitted on flood plain lands that do not meet current Federal Emergency Management Agency (FEMA) regulations. Most of this construction occurred before the Health Department had minimum standards and before FEMA ever existed.

These problems should not occur again since the county has employed a full-time building inspector to enforce state building codes and flood plain regulations. The county has adopted subdivision regulations to insure that residential lots are adequately sized.

## Areas Likely to Experience Land Use Changes

The area most likely to experience change in Gates County is in northern Gates County near the Virginia State line. Most recent development pressures have occurred in the Corapeake area, in the northeastern section of the county, just south of Suffolk, Virginia.

Development pressures are primarily from mobile home developments. The differences in developmental costs and land costs between rural Gates County and the Tidewater SMSA are such that many of the lower-income residents working in the Tidewater region choose to establish residence in Gates County. Mobile home development, such as is occurring in this region of Gates County, creates a burden on community facilities and services that are not offset by a corresponding increase in tax revenues.

# AREAS OF ENVIRONMENTAL CONCERN

The Coastal Resources Commission has designated four categories of environmental concern in the twenty coastal counties included in the North Carolina Coastal Area Management Act:

1) **The Ocean Hazard System**
2) **The Estuarine System**
3) **Public Water Supplies**
4) **Natural and Cultural Resource Areas**

Only one of these four categories, the Estuarine System, pertains to Gates County. The Estuarine System category contains four components designated as areas of environmental concern: **Estuarine Shorelines, Public Trust Waters, Coastal Wetlands,** and **Estuarine Waters.** All four of these components are present in Gates County.

## PUBLIC TRUST WATERS

Public Trust Waters are all waters and submerged lands in the twenty county coastal region where the public has rights of use including rights of navigation and recreation. The Coastal Area Management Act more specifically identifies Public Trust Waters as:

1) *All waters of the Atlantic Ocean and the lands thereunder from the mean high water mark to the seaward limit of State jurisdiction;*

2) *All natural bodies of water subject to measurable lunar tides, and all lands thereunder the mean high water mark.*

3) *All navigable natural bodies of water, and all lands thereunder, except privately owned lakes to which the public has no access;*

4) *All water in artificially-created bodies of water containing 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 navigation rights;*

5) *All waters in artificially-created bodies of water in which the public has acquired rights by prescription, custom, usage, dedication, or any other means.*

Public trust waters in Gates County essentially include all navigable streams in the county. The major components of this category in Gates County are the Chowan River, Merchant's Millpond, Bennet's Creek, Cole Creek, Sarem Creek, and Taylor's Millpond.

## ESTUARINE WATERS AND ESTUARINE SHORE

### *CHOWAN RIVER*

The most notable fragile area in Gates County is the Chowan River Basin. The waters of this basin have been declared *"nutrient sensitive"*, and wastewater discharge permits have been severely curtailed for most development in the Chowan Basin. . Approximately two-thirds of the county is drained by this basin. The Chowan River has been declared estuarine for its entire length and represents all estuarine waters in Gates County and establishes the county's estuarine shore.

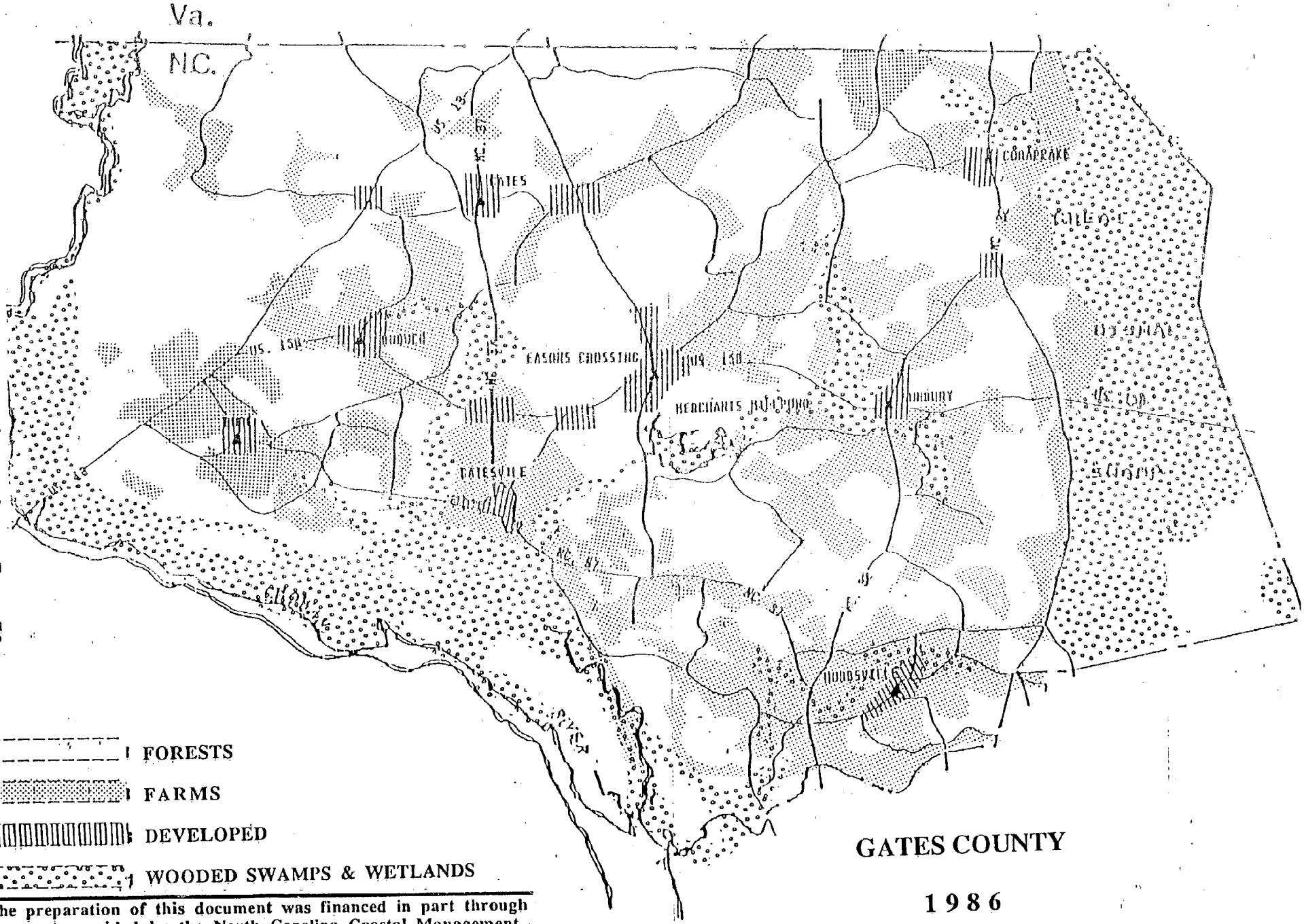
## FRAGILE AREAS

### *MERCHANTS MILL POND*

Merchants Mill Pond State Park is a unique natural area containing a great diversity of aquatic and wetland plants, outstanding tree types, and an abundance and diversity of animal life. The Mill Pond contains approximately 3,000 acres and is located between Gatesville and Sunbury. Approximately 2,000 acres have been purchased by the State and attempts are now being made by the State to purchase additional lands.

### *THE GREAT DISMAL SWAMP*

The Great Dismal Swamp comprises an approximate three-mile band along the entire eastern boundary of Gates County. The area contains an abundance of wildlife and of aquatic and wetland plants. It also contains abundant peat deposits that could become a valuable economic resource.




# GATES COUNTY

# 1986

# EXISTING LAND USE

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

# GATES COUNTY: ESTIMATED DEMAND

## HOUSING DEMAND

Population projections provided by the North Carolina Office of Budget and Management indicate an increase of 775 persons by 1995, increasing the 1980 county population from 8,875 to 9,650 persons. Age distribution projections indicate that 1,410 persons will be 65 years of age or older, an increase in this age group of 192 persons. The elderly population will account for 14.6% of the county population in 1995 as compared to 13.7% in 1980.

Elderly persons are more likely to be living alone than any other age group. In 1980, there were 319 one-person, elderly households in Gates County. Roughly one-third of all elderly households were one-person households. Average persons per dwelling unit among the elderly was 1.29 persons per dwelling unit. Persons per dwelling unit in the remainder of the population was 3.94 persons per unit with 7,657 persons living in 1,444 housing units. Assuming that these same housing ratios among both elderly and non-elderly households will hold through 1995, 1,093 housing units will be needed for the elderly residents and 2,095 units needed for non-elderly residents; yielding a need for an additional 295 housing units by 1995. Housing production in Gates County over the past five years has been yielding an annual average of slightly more than 30 units.

## PUBLIC FACILITY DEMAND

Based on an estimated water usage of 100 gallons per day per person, water service demands will increase by 77,500 gallons per day by 1995. This additional water demand is well within the treatment capacity of the existing Gates County water treatment facility and water supply. This new demand, however, will cause daily consumption to exceed existing storage capacity. Additional storage facilities will probably be needed during the planning period.

The water treatment plant is totally automatic and has a treatment capacity of 1,000 gallons per minute. The system has a storage capacity of 500,000 gallons in two elevated tanks. The plant is currently operating at 66% capacity based on a 12-hour day.

The only limitation to the system is its storage capacity. Engineering and water system management specialists recommend storage for at least a 24-hour supply. The water plant is now pumping 450,000 gallons per day; storage barely covers the 24-hour needs of the system.

## SCHOOLS

Enrollment in all Gates County Schools is now below capacity of existing facilities. School age cohort estimates indicate a declining enrollment during the planning period. No additional classroom space will be needed because of increased enrollment. However, the improvements called for during the recent evaluation by the NC State Department of School Planning should be considered.

## SEASONAL DEMANDS

Seasonal population demands do not significantly affect Gates County public facilities.

## FUTURE LAND NEEDS

An estimated 295 new housing units will be needed by 1995; assuming a minimum lot size of 43,560 square feet per unit, an additional 101 acres of land will be needed for new housing units

# CURRENT PLANS AND POLICIES

Gates County relies on six basic regulatory tools to control development in the county:

1) *Mobile Home and Mobile Home Park Ordinance*
2) *North Carolina Building Code*
3) *Gates County Subdivision Regulations, 1986*
4) *Emergency Phase of the National Flood Insurance Program*
5) *Rules and Regulations of the Gates County Water System*
6) *County Health Department Septic Tank Permits*

The County does not attempt to control land use by assigning particular uses to particular lands.

## REGULATIONS

### *Mobile Home and Mobile Home Park Ordinance*

The Gates County Mobile Home and Mobile Home Park Ordinance, adopted in 1973, is the County's first attempt at imposing locally mandated development controls. This ordinance establishes specific development standards for siting mobile homes, including minimum lot size, yard dimensions, access, and public utility services. The ordinance does not identify particular areas for mobile home development; the emphasis of the ordinance is orderly development rather than any spatial arrangement.

### *North Carolina Building Code*

In July of 1985, the County employed its first full-time building inspector to enforce all elements of the North Carolina Building Code. The Building Code, of course, regulates all new construction and the installation of electrical, plumbing, and mechanical services, as well as mobile home installations. Gates County is in the 100 mph wind velocity zone. Construction and mobile home installation standards for this zone are enforced.

### *Gates County Subdivision Regulations, 1986*

In January 1986, Gates County adopted subdivision regulations. This ordinance like the mobile home park ordinance, emphasizes orderliness of development.The ordinance, in addition to assigning decision-making responsibilities, establishes applications and permit procedures and amendment and appeal mechanisms; it defines the term subdivision and establishes minimum development standards including lot size, set backs, lot width, yard dimensions, access, roadway standards, drainage requirements, and public facility services.

### *Emergency Phase of the National Flood Insurance Program*

Gates County is participating in the Emergency Phase of the National Flood Insurance Program and enforces the required precautionary regulations required by this program. The County uses the Special Flood Hazard Boundary Maps provided by the Federal Emergency Management Agency and imposes specific construction standards in these flood hazard areas. The County is scheduled to enter the regular phase of the flood insurance program in 1987.

## POLICIES

### *Rules and Regulations of the Gates County Water System*

The Rules and Regulations of the Gates County Water System, in addition to governing the operation of the system, formally state the County's policy concerning waterline extensions and expansion of water services. The system generally provides water service to all areas of the county. These Rules and Regulations indirectly impose some spatial guidance for development intensity, as the heavier users of water must be serviced by larger sized water lines. These rules also provide a method of controlling development timing by imposing limits to the number of customers of various use intensities that can be served by a specific size water line.

### *County Health Department Septic Tank Permits*

The County Health Department, in addition to the subdivision regulations and the Mobile Home Park Ordinance, regulates development density in Gates County. The regulations of this agency establish minimum lot sizes and minimum soil conditions for the installation of on-site sewage disposal systems of less than 3;000 gallons. The minimum lot size for septic tank approval in the county is 15,000 square feet for lots served by public water and 20,000 square feet for those using on-site water supplies. These standards are county-wide minimums and are contingent on certain soil conditions and drainage characteristics of the building site.

## PLANS

### *CAMA Land Use Plan for Gates County, 1976*

The 1976 CAMA Land Use Plan was the initial county land use plan prepared under the Coastal Area Management Act. The plan provides valuable base data for referencing changes in land uses, development patterns, and development trends in Gates County. The plan also provides a land classification scheme for the county.

### *1981 CAMA Land Development Plan Update for Gates County, North Carolina,* The Ferren Planning Group, Greenville, NC

The CAMA Land Development Plan Update for Gates County was the first five-year update of the 1976 CAMA Land Use Plan. The plan describes the changes that took place in the county during the five years following the 1976 plan, updates the land classification map, and formally articulates county policy concerning specific development issues.

### *Gates County Soil and Water Conservation District Long Range Plan,* Gates County Soil and Water Conservation District.

This plan provides valuable data concerning the use of non-developed lands in the county. In Gates County, this represents most of the county's land area. The plan provides an inventory of the agricultural and forested areas of the county, their productive potential, and their inherent weakness. The plan also includes a general soils map of the entire county and addresses the county's water management, erosion, and drainage problems.

## STUDIES

***Comprehensive Water and Sewer Study for Gates County,***
Rivers and Associates, 1970

This study provide valuable information concerning the geological structure underlying Gates County and the availability of quality ground water supplies. The study also provides a cost estimate for providing water and sewer services for the county and establishes minimum usage criteria for feasible operations of the system. This plan stresses development of water and sewer services for several of the small crossroads communities in the county.

***County-Wide Water System Study,***
Rivers and Associates

This is a follow-up study for providing water service in the county. This plan establishes the feasibility of providing water service on a county-wide basis rather than by the more limited and segmented approach used in the first study.

# DEVELOPMENT CONSTRAINTS: LAND SUITABILITY: GATES COUNTY

## SOILS:

The soils in Gates County can best be described as flat to gently rolling and generally wet. The elevations in the county are the highest in the Albemarle Region, with most of the county ranging from 30 feet to 40 feet above sea level. Deep sandy soils with superior internal drainage occur in the north central portion of the county near the Virginia border and along the Suffolk escarpment in the eastern portion of the county bordering the Great Dismal Swamp. A band of gently rolling sand approximately two miles wide lies along the northern reaches of the Chowan River, this band extends intermittently to the Chowan County line along the Rivers flood plain.

These two areas of soils account for approximately 22% of the County's total acreage. The soils in the remaining 78% of the county are generally characterized by a seasonally high water table, frequent flooding and poor drainage.

## SOIL ASSOCIATIONS

Soils occurring together regularly in repeated patterns over a particular piece of the landscape form soil groupings called soil associations. The soils in Gates County have been grouped into seven soil associations. Four of these associations account for approximately 89% of the county's total acreage.

The largest of these four major associations, the ***LENOIR-CRAVEN-DUNBAR*** association, consists of somewhat poorly drained to moderately well drained upland soils with gray sandy surface layers over firm to very firm sandy clay or clay subsoils. The better drained Craven soils of this association generally occur in areas of greatest local relief along stream or river banks. Slopes are generally slight ranging from 0% to 10% with the greatest relief occurring along the banks of rivers and streams. Depth to water is shallow in these soils and cause severe limitations for septic tank filter fields. This association comprises most of the upland area of the county and approximately 39% of all the land area.

Another of these major soil associations, the ***COXVILLE-MYATT-RAINS*** association, occurs as nearly level flats or depressions on the upland plain. These soils are poorly drained with deep to moderately deep gray friable surface layers over gray and yellow friable to firm sandy clay loam to sandy clay subsoils. Slopes of these soils are usually less than two percent. These soils are quickly saturated and water drains from the surface very slowly. Depth to water table is shallow and flooding is frequent. Septic tank limitations are rated as severe. This association accounts for 14% of the county's total acreage.

A third major soil association in Gates County is the ***PONZER-DOROVAN-DARE*** association. These are deep organic Histosols with the organic surface layers lying over mineral subsoils ranging from sands to clay. These soils occur in broad flat pocosin like areas and in the flood plains of the major rivers. These soils are very poorly drained and are inundated for most of the year. These soils are the swamp areas of the county and, of course, have severe limitations for any type of use. This association accounts for 18% of the total acreage in the county.

The final major soil association is the ***WAGRAM-NORFOLK-GOLDSBORO.*** These are deep well drained moderately permeable soils with gray sandy surface layers over friable, yellowish brown to mottled yellowish brown and gray clay loam subsoils.

These are upland soils found in the higher elevations of the county, generally in the north central region of the county extending southward from the Virginia State line and in the east central portion of the county along the Suffolk scarp. The slopes of these soils generally range from 0% to 10%. Depth to water table ranges from moderately deep to shallow. Septic tank limitations are rated only slight in the Wagram and Norfolk soil series which make up approximately 80% of this association, but are rated severe in the Goldsboro soils. The Wagram-Norfolk-Goldsboro association makes up approximately 18% of the county's land area.

The remaining three soil associations account for only 11% of the county's total acreage. The largest of these is the ***JOHNSON-BIBB*** association, which occurs in the flood plains of the minor creeks and tributaries of the major drainage systems in the county. These are alluvium deposits that are very poorly drained to poorly drained with black to gray surface layers over gray stratified sand and sandy loam or silt sub surface layers. The water table is high in these soils, flooding is frequent, and septic tank limitations are rated as severe. This association accounts for 6% of the county's total acreage.

The second of these smaller associations is the ***LAKELAND-CHIPLEY-PACTOLUS*** association. These soils generally occur as sandy rims along the eastern sides of North-South flowing rivers. This association occurs in Gates County as a wide continuous band of rolling sand, approximately two miles in width, along the eastern side of the upper reaches of the Chowan River from the Virginia line to Eure. This association extends from Eure intermittently as a sandy rim along the swampy alluvium deposits of the Chowan River flood plain. These soils are well drained to moderately well drained soils with thick sandy surface layers over friable, gray sandy subsurface layers. The depth to water table is generally shallow in the Pactolus soils which make up approximately 15% of this association. Septic tank limitations are rated as severe for this soil series.

The sandy textures of the Lakeland and Chipley soils provide very little filtering or absorptive capacity for septic tank filtering fields. Septic tanks in these soils run the risk of contaminating the ground water supply or nearby surface waters. This soil association makes up approximately 4% of the total land acreage in Gates County.

The last of these three minor associations, the ***PLUMMER-TORHUNTA-PORTSMOUTH*** association, generally occurs as upland depressions in relatively small fringe areas in four separate parts of the county. This soil association is characterized by poorly drained to very poorly drained soils with moderately thick, dark gray to black surface layers over friable, gray sandy loam to sandy clay loam subsoils. The subsoils are generally formed in loamy textured marine and fluvial sediments. Slopes in these soils are usually less than 2%. Depth to water table is shallow and septic tank limitations are severe. This association makes up approximately 1% of the soils in the county.

## SOIL LIMITATIONS

Most soils in Gates County present some hazards to development. The most frequently occurring limitations rated as severe are the shallow depth to watertable and frequent flooding. The Lakeland and Chipley soils while presenting only moderate to slight limitations to development present a different sort of development consideration in that they are excessively porous offering very little filtering capacity for septic tank effluent.

## SEPTIC TANK LIMITATIONS

Severe septic tank limitations affect 78% of the soils in the county and low filtering capacity create other hazards in another 4%. Soil conditions in the county often require extra expense and efforts to support development. The Department of Health requires minimum lot sizes of either 20,000 sq.ft. or 40,000 sq.ft. for single-family homes is the county.

In many cases, just these large lot sizes are not sufficient to gain Health Department approval, and extensive excavation or drainage systems are required.

## SUMMARY OF CHARACTERISTICS

The preceding soil descriptions have indicated the general location and the primary characteristics of each soil association and generally reflect the characteristic of the major soil type within each association. There are individual soils found in these associations that do have characteristics substantially different than those of the association as a whole. In the table below: septic tank limitations; light industry limitations; and limitations for streets and roads have been listed for each major soil type in each association. This table and the preceding maps provide only general information and are not suitable for planning individual tracts of land. The local Soil Conservation Officer and the local County Sanitarian must be consulted for any site specific land evaluations. The soil survey for Gates County is now being prepared, and most of the field work has been completed. This document will contain site specific soil information for all lands in the county.

SOIL LIMITATIONS:GATES COUNTY

| % of County | Soil Association | % in Assoc. | LIMITATIONS Septic Tank | Light Industry | Roads & Streets |
|---|---|---|---|---|---|
| 18% | | | | | |
| | Wagram- | 40% | Slight | Mod | Slight |
| | Norfolk- | 25% | Slight | Slight | Slight |
| | Goldsboro | 20% | Mod to Sev | Mod to Sev | Mod to Sev |
| 39% | | | | | |
| | Lenoir- | 45% | Severe | Severe | Sev to Mod |
| | Craven- | 25% | Severe | Severe | Severe |
| | Dunbar | 15% | Severe | Mod to Sev | Moderate |
| 1% | | | | | |
| | Plummer- | 45% | Severe | Severe | Severe |
| | Torhunta- | 25% | Severe | Severe | Severe |
| | Portsmouth | 15% | Severe | Severe | Severe |
| 4% | | | | | |
| | Lakeland- | 45% | Slt to Mod | Moderate | Slight |
| | Chipley | 25% | Moderate | Moderate | Moderate |
| 54% | | | | | |
| | Ponzer- | 65% | Vr. Severe | Vr. Poor | Vr. Severe |
| | Pamlico | 10% | Vr. Severe | Vr. Poor | Vr. Severe |

## SOIL EROSION

Due to the flat topography of the county, sheet and rill erosion is not a major problem, However it is not non existent. In 1980 the Soil Conservation Service estimated that erosion was a problem affecting approximately 5,088 acres of cropland in Gates County with annual

soil losses slightly exceeding three tons per acre. These 5,088 acres represent approximately 9.5% of the cropland in Gates County.

## SHORELINE EROSION

In 1975, the U.S. Soil Conservation Service published a report, ***Shoreline Erosion Inventory***, that described the extent of erosion along the shores of the Albemarle and Pamlico Sound and the major rivers and streams emptying in to these sounds. The shoreline erosion along the Chowan River in Gates County was not included in this study.

## WATER RESOURCES

Water is the most noticeable and the most abundant natural resource in Northeastern North Carolina. While massively abundant and economically important, these resources for the most part are salty and hence unusable for consumption, the Chowan River is estuarine throughout its entire length in the county. The water used by Gates County residents comes from groundwater supplies.

Generally speaking, the ground water supplies are as extensive as of the surface waters. Three stratified aquifers underlie much of the region and contain massive quantities of water. These ground water resources, while tremendous, suffer in usability because of their direct interface with the saltwater in the area and its frequent intrusion into these ground water supplies. The intrusion of saltwater into these underground aquifers is a major concern in Gates County.

## WATER SUPPLY

The availability of water in any place at any particular time is dependent upon the interaction of various components of what is generally known as the Hydrologic Cycle. The components of the cycle include:

(1) climatic factors, such as rainfall and temperature in the area;

(2) vegetation or groundcover, as these affect the rate of moisture evaporation;and

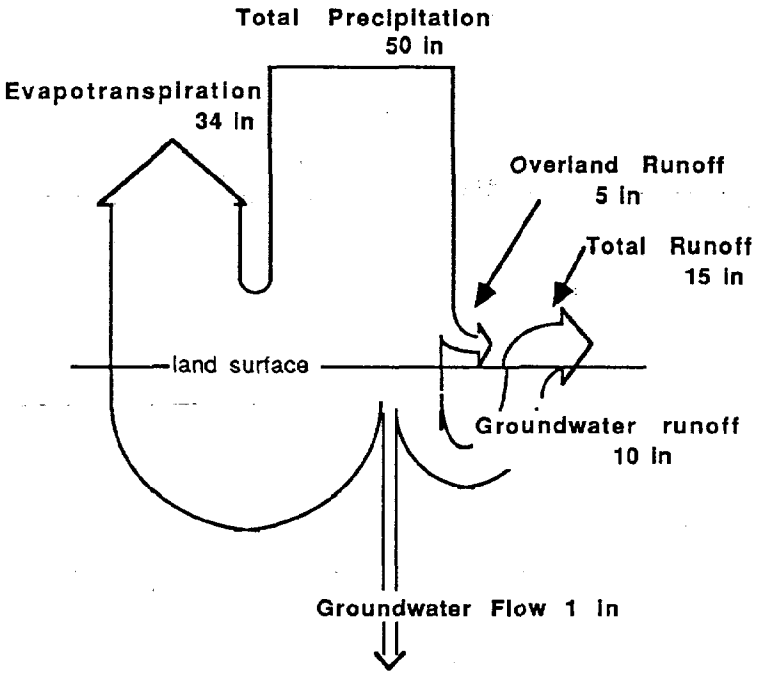
(3) surface waters and groundwater, since they represent both moisture that is entering an area in the form of stream flow and moisture stored in surface reservoirs and underground aquifers.

The interaction of these components keeps in constant motion the circulation of the **Hydrologic Cycle.** Heat from the sun causes the evaporation of surface moisture and the transpiration of moisture from living plants. This evaporated moisture is carried by the winds until it cools and condenses and returns to the earth as precipitation. Once on the earth, gravity takes over and moves the water either above or beneath the ground toward the ocean.

## WATER BUDGET

This cyclical movement can be expressed as a profit-and-loss statement where profit or loss is the difference in the moisture entering the area as steam, ground-water flow, and precipitation (income) and the water leaving the area, through evaporation, transpiration, and as surface or ground-water runoff (outflow). Profits would be recorded as increases in water stored in surface reservoirs or as increases in ground-water storage. This P/L statement is generally referred to as a water budget : water entering the county either through stream flow or as rainfall minus water lost through transpiration, evaporation, and stream run-off yields water stored either as ground water or as surface water supplies(reservoirs).

## OUTFLOW




Because of the extremely high watertable, characteristic of Gates County and almost all of the counties in the Albemarle; very little of the precipitation falling in the area can be retained as additional soil moisture or ground water. Except for the winter months, the soils are perpetually at or near the saturation point.

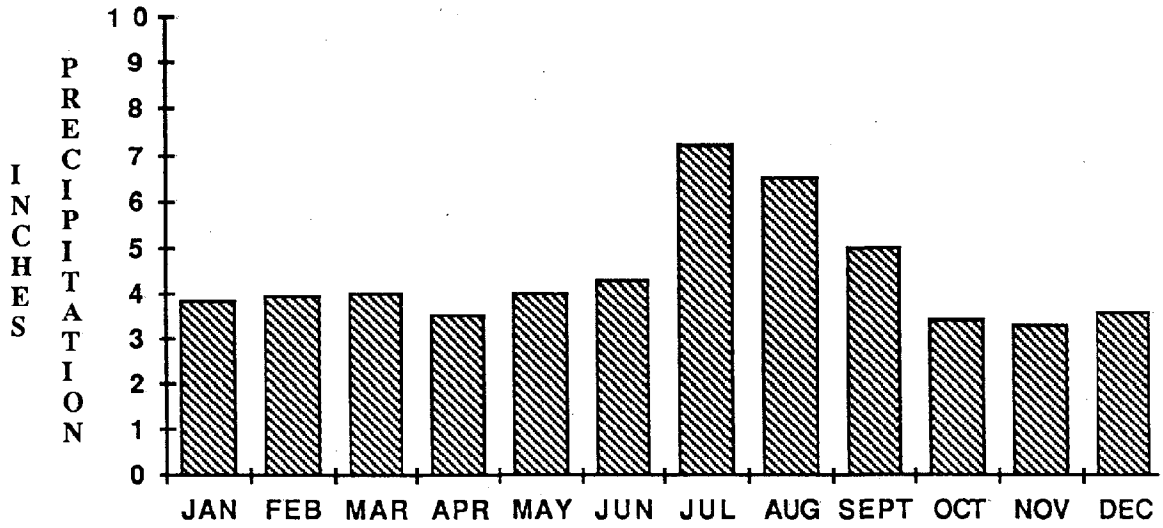
What generally happens is that the shallow waterways and streams widen quickly to contain the run-off; after they recede, the excess ground-water then seeps into these streams becoming surface run-off.

## PRECIPITATION

The base of the county's water budget is the amount of rainfall in the area. The annual rainfall in most of the county averages from 48"to 50". On the southern tip of the county, annual rainfall averages 46" to 48"

Monthly precipitation data collected at Elizabeth City, NC, from 1910 to 1960 indicate that the precipitation in the area is least during the months of April, October, and November, and greatest during the summer months of July, August, and September.

AVERAGE PRECIPITATION: ELIZABETH CITY, NC, 1910-1960

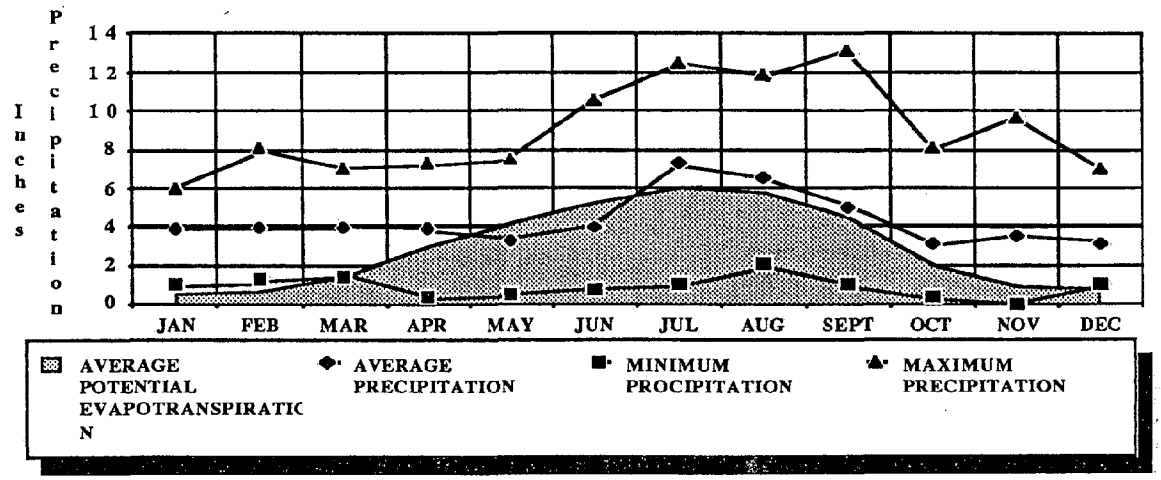



*Source: Water Systems of Northeast North Carolina, H.B. Wilder, et al*

## EVAPOTRANSPIRATION

Evapotranspiration is a term developed to express the total amount of moisture discharged into the atmosphere through the evaporation of surface water and the transpiration from living plants. In such areas as Gates County, where large land areas are devoted to the cultivation of crops and forests, the transpiration rate can be quite high, particularly during the growing season. The graph below shows the comparative monthly precipitation and evapotranspiration rates as measured at Elizabeth City, NC. The shaded area in the graph

MAXIMUM, AVERAGE, AND MONTHLY PRECIPITATION AND CALCULATED AVERAGE EVAPOTRANSPIRATION AT ELIZABETH CITY,NC, 1931-1960




represents periods of moisture deficit. As can be seen by the graph, a shortage or deficit of

moisture in the county is most likely to occur during the growing season months of May, June, and the early part of July. Annually, evapotranspiration consumes approximately 34" of the annual 50" or roughly two-thirds of the county's annual precipitation.

## AQUIFERS

Two major aquifers supply water to Gates County residents. The upper sandy aquifer averages about 200 feet in thickness and in many places in the county lies within 20 feet of the surface.

The lower sandy aquifer comprises the remainder of the water supplies and is under some artesian pressure. Several wells in Gates County, particularly in the Gatesville and Hobbsville areas have surface flows.

Depth to saltwater generally ranges from 400' to 600'. Saltwater intrusion occurs most frequently in the southeastern portion of the county, near Hobbsville, in wells that are over 400' deep.

Maximum yield of ground water in the county has been estimated at 1,000,000 gallons per day per square mile.

## WATER QUALITY

Shallow wells in the county typically yield soft water with a low PH. Wells deeper than 100' generally yield moderately hard waters with excessive amounts of fluoride. Deep wells yield very soft water, with very high PH values and excessive fluoride concentrations. Potable water can be obtained at a variety of depths in the county and is generally long lasting. There are some shallow wells with depths to water of less than 10 feet that have been used continually since near the turn of the century and that are still producing good flows of water.

## SURFACE WATER

Only 2% of the total surface of Gates County is water(4,800 acres out of 224,000). Most of this surface water area is in the Chowan River, which forms the western boundary of the county. Merchant's Mill Pond accounts for approximately 2,000 acres of the county's surface waters.

The Chowan River and all its tributaries have been designated as "nutrient sensitive waters" by the NC Department of Environmental Management. The overload of nutrients in the waters create large algae blooms that often reach from shore to shore. These blooms generally occur in summer months. As nutrient sensitive waters, the amount of nutrients allowed to be discharged into these waters have been severely reduced to back ground levels.

## WATER RECHARGE AREAS

Major groundwater recharge areas are the large expanses of swamp areas and pocosins in the County: the Great Dismal Swamp, located in the eastern quarter of the county; Merchants Mill Pond, located near Gatesville in the central portion of the county; Black Mingle Pocosin, located in the north central part of the county; and White Oak Pocosin, located in the northwest quadrant of the county.

## MAN MADE HAZARDS

The most prevalent man-made hazards in Gates County are the general hazards and dangers associated with the county transportation network and with storage depots for fuel, chemicals, fertilizers, and grains.

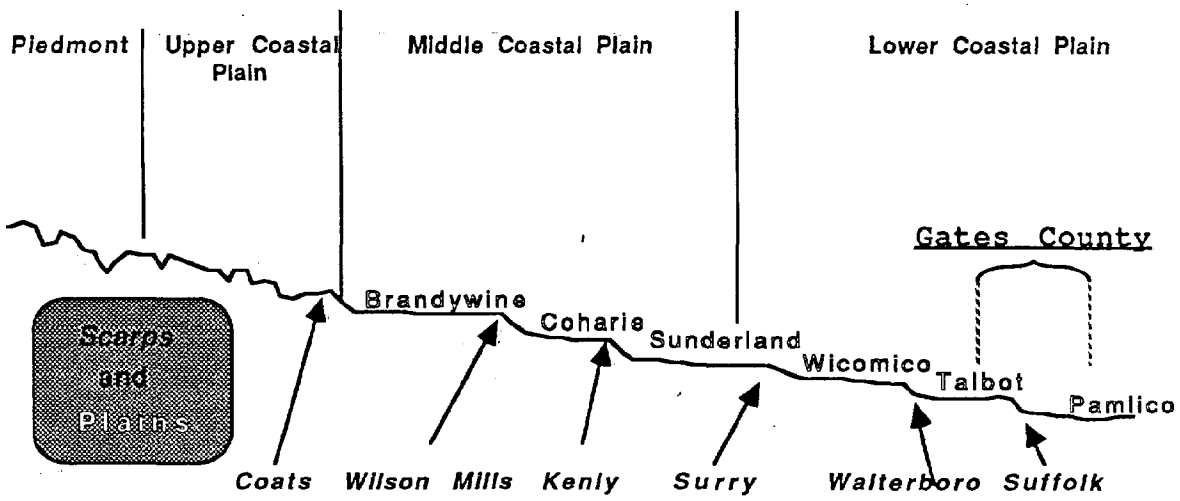
Traffic volumes along Gates County's roads are generally well below the design highway volumes of the road network. Narrow pavement and shoulder width and poor surface quality are the most frequently mentioned hazards associated with the county highway system. Major arterial highways-- US 13, US 158, NC 32, and NC 37-- all have pavement widths of 24 feet or less. These highways frequently traverse swamp areas in the county where shoulder widths are less than 5 feet.

Storage depots are generally located at or near crossroad communities, but an occasional grain elevator or fertilizer storage facility maybe found at scattered sites in the county.

## PHYSIOGRAPHY

Gates County lies within the Pamlico and the Talbot Plain sections of the Lower Atlantic Coastal Plain. The Suffolk scarp, which separates these two plains, crosses Gates County generally along the western edge of the Great Dismal Swamp in the eastern portion of the county. The portion of the county lying in the Pamlico plain is primarily the Dismal Swamp. The Talbot Plain physiography places the county at slightly higher elevations then its neighboring counties in the Albemarle Region. The figure below, illustrates the stair-step physiography of the Coastal Plains region, and locates Gates County along this progression.

### COASTAL PLAIN SUBDIVISIONS: PLAINS and SCARPS




## TOPOGRAPHY

Gates County is a combination of broad, nearly level to gently rolling coastal plains cut by moderately deeply cut widely spaced streams which empty into the Chowan River or in to the Dismal Swamp. Elevations in the county are usually below fifty feet above mean sea level. The highest elevation in Gates County is just 78' in the north central portion of the county. Slopes in the county seldom exceed 12%; however, slopes in excess of 12% can be found generally along stream banks. A wide continuous band of gently rolling sand is found along the upper reaches of the Chowan River in the county. This band is approximately two miles wide and extends from the Virginia line south to Eure. This sand extends intermittently from Eure south and west along the flood plain of the Chowan river to the Chowan County line. In the

south and western portion of the county this band of sandy soils is separated from the Chowan River by approximately three miles of deep, woody swamp.

## DRAINAGE

Two major drainage basins carry run-off from Gates County. The Pasquotank River and the Chowan River drainage basins. That portion of Gates County lying east of the Suffolk Escarpment, which serves as the basin divide, drains into the Pasquotank River via the Great Dismal Swamp. The remainder of the county lies in the Chowan River Basin.

There are few major streams in the county. Bennets Creek and Sarem Creek contain the longest and most extensive drainage network. Much of the drainage is accomplished through rather short streams or constructed water ways that feed directly into the wide swampy flood plain of the Chowan river and into the Great Dismal Swamp. Agriculture drainage systems are quite extensive and provide much of the drainage for Gates County.

## GEOLOGY

Surfacial sands and clays of the recent Pliestocene and post-Miocene periods cover the entire county. These upper deposits generally range from 15' to 40' thick, thickening from west to east. Local deposits of much greater thickness have been found in the northwestern portion of the county. The thinnest surface layers are generally found in the southeastern portion of the county. The Suffolk scarp, located slightly northeast of Hobbsville and Sunbury, occurs as fossil beach ridges. The height of these ridges is generally less than 15 feet.

This surfacial layer is underlain by the Upper Yorktown formation. This formation generally consists of darker blue to gray clays with deposits of marl, gravel, shells, and impure limestone. The Upper Yorktown ranges in thickness from less than 100' in the western part of the county to more than 150' in the eastern part of the county.

The Lower Yorktown formation underlies the Upper Yorktown and generally consists of blue to gray clays, sandy clays, phosphatic quartz sand, and impure limestone. The Lower Yorktown ranges in thickness from 30' to 180', with the greater thickness normally appearing in the southern portion of the county.

The lower Yorktown formation is underlain by the Beaufort formation, which consists largely of glauconitic sands underlain by iron-stained sands and red clays. The thickness of the Beaufort formation ranges from 150' to 400', thickening from west to east.

The Pee Dee formation lies under the Beaufort formation and forms the geologic base for the area. This formation consists primarily of interbedded gravel, sand, silt, and clays. The thickness of this formation ranges from 300' to 700' generally thickening from west to east.

# CONSTRAINTS TO DEVELOPMENT: GATES COUNTY CAPACITY OF COMMUNITY FACILITIES

## WATER SERVICE

Water service poses no constraints to development at this time. The county has an abundant supply of high quality water and a distribution system that provides water to all areas of the county.

Water is pumped from deep wells penetrating the lower sandy aquifer. This water is of extremely high quality. For several years the only treatment needed was the removal of excess fluoride in the water. Most systems have to add fluoride. Recent changes in water quality standards will allow Gates County to pump water untreated to its customers. Very few systems in this country are able to sell raw, untreated water to their customers.

The Gates County Water System began operation in April 1980. By June 30, 1980, some 1,431 customers had connected to the system; since that time the system has grown to 2,190 customers, adding approximately 100 customers per year.

GATES COUNTY WATER SYSTEM:
CUSTOMERS AND MONTHLY USAGE, 1980 TO 1986

| DATE | CUSTOMERS | NUMBER of GALLONS SOLD(Millions) | % CHANGE |
|---|---|---|---|
| June 30,1980 | 1431 | 4.680 | |
| June 30,1981 | 1401 | 5.657 | 20.87 |
| June 30,1982 | 1601 | 6.056 | 7.05 |
| June 30,1983 | 1981 | 8.319 | 37.37 |
| June 30,1984 | 2039 | 11.359 | 36.54 |
| June 30,1985 | 2126 | 12.266 | 7.98 |
| June 30,1986 | 2190 | 11.287 | -8.13 |
| | | 1980 to 1986 % CHANGE | 141.17 |

SOURCE: Records of the Gates County Water System

In addition to this usage, the Gates County Water System supplies the Chowan County Water System with more than 2,000,000 gallons per month.

The water plant consists of three wells that are 1,000 feet apart and that operate on a staggered rotation so that two are always in operation. The water treatment plant is totally automatic and has a treatment capacity of 1,000 gallons per minute. The system has a storage capacity of 500,000 gallons in two elevated tanks. The plant is currently operating at 66% capacity based on a 12-hour day.

The only limitation to the system is its storage capacity. Engineering and water system management specialists recommend storage for at least a 24-hour supply. The water plant is now pumping 450,000 gallons per day; storage barely covers the 24-hour needs of the system.

The 141% growth during the past six years is due in large part to the large water purchases by the Chowan Water System and through the connection of existing residents to the system, rather than to any large population growth in Gates County. While the County population is

not expected to increase a great deal during the planning period, the need for increased storage should still be considered.

## SCHOOLS

The Gates County School System consists of two primary schools, Buckland and Sunbury Schools, housing grades K-4; two elementary schools, Gatesville and T. S. Cooper, serving grades 5-7; Central Junior High, serving grades 8 and 9; and Gates County High School. The schools currently do not exceed optimum capacity levels, and projections prepared by the North Carolina Division of School Planning indicate that these facilities have sufficient space at least through 1990.

### SCHOOL CAPACITY AND USE: GATES COUNTY, 1984

| SCHOOL | GRADES | TEACHER STATIONS | NUMBER TEACHERS | OPTIMUM CAPACITY | CURRENT USE | TEACHER/ STUDENT RATIO |
|---|---|---|---|---|---|---|
| Buckland | K-4 | 18 | 17 | 396 | 320 | 1:19 |
| Sunbury | K-4 | 17 | 14 | 286 | 233 | 1:16 |
| Gatesville | 5-7 | 11 | 13 | 242 | 222 | 1:17 |
| T.S. Cooper | 5-7 | 10 | 12 | 220 | 166 | 1:13 |
| Central Jr. H. | 8-9 | 24 | 18 | 528 | 301 | 1:17 |
| Gates Co. H.S. | 10-12 | 23 | 14 | 506 | 389 | 1:28 |
| Totals | | 103 | 88 | 2178 | 1631 | 1:18 |

SOURCE: NORTH CAROLINA DIVISION OF SCHOOL PLANNING

Projections prepared by the North Carolina Division of School Planning indicate a total 1990 enrollment in the Gates County School System of 1,588 students, a slight decline from the present enrollment of 1,631 students and substantially less than the capacity of present school facilities

## CONDITION OF FACILITIES

In 1984 the Gates County School System was visited by a special facility evaluation committee from the State Department of Education.

This evaluation resulted in the following recommendations:

### Buckland School:

"Correct code violation and all other deficiencies. Expand the media center and make necessary renovations for energy conservation. Facility should be made accessible for handicapped students. Maintain, refurbish, expand as needed for medium-range use".

### Sunbury School

"Correct code violation. Maintain for health and safety until facility can be replaced or students housed elsewhere."

### Gatesville Elementary

"Correct code violations. Maintain for health and safety until facility can be replaced or students housed elsewhere."

T S Cooper

"Correct code violations and all other deficiencies. Expand administrative area; maintain, expand as needed for long-range use. Modify facilities to make accessible for handicapped persons."

Central Junior High School

"Correct code violations, maintain, expand, refurbish, and renovate as needed for medium-range use. Expand administrative area and provide teachers lounge."

Gates County High

"Correct code violations and all other deficiencies. Maintain, expand, and renovate as needed for long-range use. Expand administrative area, provide guidance suite. Relocate assistant principal's office. Expand cafeteria and provide weight room and band facility. Maintain, refurbish, expand, or renovate as needed for long-range use."

**Source: Report prepared for Gates County Schools by the Division of Planning and Research for Division of School Planning**

Except for Sunbury School all schools in Gates County have wastewater treatment facilities operating in non-compliance with their discharge permits.

## ROADS

According to the ***1984 PROFILE OF CAROLINA COUNTIES***, there were 363.39 miles of primary and secondary roads in Gates County. Roughly 99% or 360 miles of road were considered rural, and only 3.32 miles were classified as municipal. Approximately 70% of all roads in the county are paved.

In the North Carolina Transportation Improvement Plan for the years 1985 through 1994, only 1.4 miles of Gates County roads are even considered for improvement. This short segment of roads to be improved consists of the repaving of U.S. Highway 13 from the Chowan River Bridge to the intersection with U. S. 158. No schedule has been set. Scheduling is subject to availability of funds.

The road system appears to be adequate since traffic demands in the county are quite low. The heaviest traveled road in the county is U. S. Highway 13. According to 1985 average daily traffic counts published by the Department of Transportation, only one segment of highway in Gates County has an average daily traffic flow of 5,000 cars. This segment runs from the Chowan River Bridge along U. S. 13 to its intersection with SR 137. The heaviest traffic flow along U. S. 158 is 2,000 cars per day. Most major road segments have traffic flows of less than 2,000 cars per day.

The highway pattern in Gates County consists of three major arteries running north and south ( US 13, NC 32, and NC 37) and one major artery, US 158, crossing the county east to west. North and south routes to and from the Tidewater Region of Virginia, generally have the heaviest traffic volumes.

# CONTINUING PUBLIC PARTICIPATION IN PLANNING MATTERS

Gates County recognizes its responsibility toward keeping its citizens informed of all issues concerning the county. The County Commissioners also recognize the political reality of educating the public in regard to the issues being decided. It is the County's policy to encourage attendance by the public at all meetings of its various boards and committees. The County encourages coverage of all issues by various media representatives and invites active public participation in all issues.

During the preparation of this land use plan update, Planning Board Meetings were held on a regularly scheduled date(the third Thursday of each month), and public notices were placed in the local newspaper. A questionnaire was circulated county-wide, soliciting public responses on a variety of planning issues. A cjopy jof this questionaire and a summary of the results appears in ***Appendix 1*** of this document.

The county will rely on public discussion and media coverage to present the various facets, impacts, and costs associated with the various policy issues. Expert assistance will be sought to educate and to give guidance both to the general public and to the Board of Commissioners on issues whenever the Board feels such assistance is required.

# GATES COUNTY: RESOURCE PROTECTION

## ISSUE: CONSTRAINTS TO DEVELOPMENT: AEC's

### FINDING:

The Estuarine System is the only category of Areas of Environmental Concern under state permitting jurisdiction located in Gates County. Other areas of environmental concern include Fragile Areas, identified previously as the Great Dismal Swamp and Merchants Millpond.

Of greatest concern is the Chowan River, its shoreline, and the deep wooded swamps and wetlands that border the river. The Chowan is the only esruarine body of water located in Gates County and,except for Public Trust Waters, the Chowan and its attendent wetlands and shore represent all the AEC's in the County

### PREVIOUS 1981 POLICY:

The previous Land Use Plan Update did not develop policies for AEC categories; it developed policies instead for specfic environmental problems such as the pollution of the Chowan River:

> " ... to cooperate with other local units of governments and with state and federal agencies in efforts to identify sources of pollution which result in the annual algae bloom and its inherent problems. "

### CURRENT 1986 POLICY:

**"Gates County totally supports the efforts of the Division of Coastal Management in efforts to prevent the further degradation of the Estuarine Resources of Gates County. Gates County has during the process of this Land Use Plan Update adopted numerous policies and developed various strategies in order to assist in these efforts . The County has adopted policies concerning the use of "Best Management Practices "in forestry and agriculture. The County has developed various regulatory measures to mitigate the impacts caused by new development on these areas of environmental concern. Gates County is commited to the protection of its resources and will take what actions it deems desirable and financially feasible to protect its resources as the need arises."**

### IMPLEMENTATION STRATEGIES:

The County has recently adopted subdivision regulations governing the entire county. One of the requirement of this ordinance is that a certificate be placed on the face of the plat acknowledging wheather the subdivision is located totally or partially within as AEC and requiring a CAMA permit before any construction of improvements may begin.

The County has contracted with the Division of Archives and History for a complete inventory of historically significant structures and sites to be prepared.

The County has requested a map from the Division of Archives and History pjointing out the general location of archeologically sensitive areas within the county. A copy of this map is included in ***Appendix 2*** of this document

## ISSUE: CONSTRAINTS TO DEVELOPMENT: SOIL LIMITATIONS

### FINDING:

Except for the Wagram and Norfolk soils, principally located in the northern part of the county, all of the soils in Gates County present some limitations to development. Approximately 72% of the land area in the county has limitations ranging from severe to moderate for light industry development and street and road construction. The primary limitation is the extreme wetness of the soils, either because of a high water table or because of frequent flooding.

Slopes in excess of 12% do exist in the county. These generally occur along creek banks. Erosion is not a major problem in the county, but is present and affects approximately 5,100 acres of cropland, roughly 10% of the county's total cropland.

### PREVIOUS 1981 POLICY:

None

### CURRENT 1986 POLICY:

***"It shall be Gates County's policy to minimize development on soils which may create hazards to health and safety."***

### IMPLEMENTATION STRATEGIES:

The County will coordinate its subdivision permitting process with the U.S. Soil Conservation Service and seek that agency's assistance for proper soils management.

The County shall require that all developments on soils with limitations rated as severe be built using the most responsible construction design and management techniques possible.

The County shall cooperate with the NC Sedimentation Control Commission to regulate erosion control standards on construction projects in subdivisions that clear, alter, or excavate land in excess of one acre.

## ISSUE: CONSTRAINTS TO DEVELOPMENT: FLOOD PRONE AREAS

### FINDING:

Flooding is a severe problem in approximately 40% of the county. The affected areas exist primarily in the flood plain of the Chowan River, along the major drainage ways feeding into the River, and in the Dismal Swamp. Depression-like areas, while not as large or continuous as the flood plains, intermittently exist in the upland plain area of the county.

### PREVIOUS 1981 POLICY:

None in the previous CAMA Plans

### CURRENT 1986 POLICY:

**"In order to reduce any unnecessary damages to lives and property because of flooding, it is the present policy of Gates County to regulate development in those areas of the county that lie within the 100-year Flood Hazard Areas, as designated on the Flood Hazard Boundary Maps provided by the Federal Emergency Management Agency."**

### IMPLEMENTATION STRATEGIES:

The County is participating in the emergency phase of the Federal Flood Insurance Program. All necessary legislation for the program has been adopted, and all regulations are being enforced.

The Gates County Subdivision Regulations shall require that permanent elevation monuments be installed in all major subdivisions in order to facilitate the enforcement of flood plain regulations during the permanent phase of the Federal Flood Insurance Program.

The Gates County Subdivision Regulations require that a full contour drawing be prepared for all subdivisions containing more than 25 lots.

## ISSUE: SEPTIC TANK SUITABILITY

### FINDING:

Approximately 72% of the land area of Gates County is covered with soils which exhibit moderate to severe limitations for septic tank usage. The primary limiting factor is the extreme wetness of the soils, either because of the seasonally high water table or because of frequent flooding or both. Another 4% of the county's land area has soils that drain excessively fast, with very little filtering or absorptive capacity. Septic tanks draining into these soils pose threats of pollution to the ground water and to nearby surface waters.

## PREVIOUS 1981 POLICY:

None stated in the previous CAMA Plan

## CURRENT 1986 POLICY:

**"It shall be the policy of Gates County to avoid any further contamination of the ground waters or the surface waters in the county through negligent or faulty construction and placement of septic systems and agricultural lagoons."**

## IMPLEMENTATION STRATEGIES:

Permits for installing septic systems must be obtained from the County Health Officer, who shall investigate the proposed site and make an assessment as to soil suitability, space requirements, construction requirements, and placement of the proposed system.

The county will work closely with the U.S. Soil Conservation Service and the Division of Environmental Management to coordinate the construction and placement of all agricultural lagoons in the county.

The county shall require that all requests for Subdivision Permits be submitted to the County Health Officer and to the Soil Conservation Service for review and comment before the Planning Board takes any action.

## ISSUE: FRESHWATER, SWAMPS, AND MARSHES

## FINDING:

Swamps and Marsh lands comprise approximately 40% of the County's total land acreage. These lands are primarily in use as forests, with occasional agricultural use. These lands present constraints to any type of development because of almost constant inundation. These lands are integral components of the county drainage system, functioning as retaining basins for excess surface runoff.

In the Chowan River Basin, these swamps and marshes are traversed by streams and waterways that have been declared nutrient sensitive by the N.C.Department of Environmental Management. These lands are heavily forested by Gum and Cypress trees, which create a heavy loading of nitrogen and phosphorous into the Chowan Basin. The naturally occurring high levels of nutrients because of this forestation reduce the dissolved oxygen content of these waters, thus making them extremely susceptible to additional nutrient loads from urban or agricultural uses.

## PREVIOUS POLICY:

"It has been the policy of Gates County to cooperate with other local units of governments and with state and federal agencies in efforts to identify sources of pollution which result in the annual algae bloom and its inherent problems." *(CAMA LAND DEVELOPMENT PLAN UPDATE FOR GATES COUNTY, NORTH CAROLINA. FERRIN PLANNING GROUP, 1980).*

## CURRENT POLICY:

**"Same as previous policy."**

## IMPLEMENTATION STRATEGIES:

Gates County shall work with the N.C. Department of Environmental Management to avoid, if possible, the location of any point source of nutrient loading in the Chowan River Basin. If avoidance is not possible, the county will cooperate in efforts, as far as practical, to mitigate the impact of the point source.

## ISSUE: CULTURAL AND HISTORIC RESOURCES

## FINDING:

At present the following six buildings and sites in Gates County are listed on the National Register:

**The Old Gates Courthouse**
**Elwood Plantation**
**Merchant's Mill Pond**
**Buckland**
**The Robert Carter House**
**The Freeman House**

Two additional sites have been nominated, but are not yet on the Register:

**The Savage House**
**The Joseph Freeman House**

## PREVIOUS 1981 POLICY:

None stated in the 1980 CAMA Plan

## CURRENT 1986 POLICIES:

**"It shall be the policy of Gates County to preserve and protect to the maximum extent practical significant cultural and historic resources."**

## IMPLEMENTATION STRATEGIES:

The County will encourage and support the efforts of local historic preservation activities, particularly the conducting of a complete inventory of all historically and culturally significant sites in the county.

## ISSUE: MANMADE HAZARD AND NUISANCES

### FINDING:

The most prevalent manmade hazards in Gates County are related to the county transportation network: the points of access and egress to this network; the intersection of various components of the network; and the circulation within the network.

The manmade hazards second in frequency of occurrence and degree of distribution within the county are storage facilities for fuel, fertilizer, chemicals, and grain. Livestock operations can be nuisances, particularly if located in close proximity to more densely developed residential areas.

### PREVIOUS 1981 POLICY:

None stated in previous plan.

### CURRENT 1986 POLICY:

***"It shall be the policy of Gates County to place adequate controls on development so as to mitigate potential threats to public health and safety from manmade hazards."***

### IMPLEMENTATION STRATEGIES:

It shall be the policy of Gates County to work with the N.C. Department of Transportation to control the number, width, and intervals of the points of access and egress to the road system in the county and to maintain proper traffic controls in the street and road system to safeguard the life and property of residents and users.

It shall be the policy of Gates County to encourage necessary precautions at all storage sites of hazardous materials to ensure that nearby residents and the general public are adequately warned of the dangers involved and, if possible, restricted from close contact with the storage facility.

## ISSUE: PROTECTION OF POTABLE WATER SUPPLY: & THE USE OF PACKAGE TREATMENT PLANTS

### FINDING:

There are no package treatment plants now operating in Gates County.

All waters in Gates County that drain into the Chowan River have been declared Nutrient Sensitive by the Division of Environmental Management. The stated policy for the Chowan River Basin is that no point source discharges will be permitted in this basin.

All package treatment plants permitted in Gates County must discharge into the Pasquotank River Drainage Basin.

All areas of the county are served by the Gates County Water System. The water from the deep wells of this system is not threatened by septic effluent or discharge from package treatment plants

PREVIOUS 1981 POLICY:

None stated

CURRENT 1986 POLICY:

**"Subdivision or mobile home parks using package treatment plants shall meet the same density requirements as all other subdivisions."**

IMPLEMENTATION STRATEGIES:

The Gates County Planning Board shall enforce the existing provisions of the County's Subdivision Regulations and its Mobile Home Park Ordinance.

## ISSUE: STORM WATER RUNOFF: RESIDENTIAL USES

FINDING:

Surface runoff from residential areas is not a significant problem in Gates County at this time. The county is primarily rural, with the largest and only incorporated area being Gatesville with a population of less than 500 persons. Almost all residential uses are located on lots of one-half acre or more, with all having lot coverage of less than 50%. Additional drainage is often required to lower the water table for septic tank approval. These drainage ditches do collect surface runoff, but because of the almost level terrain in the county, they often function as holding ponds rather than storm sewers.

PREVIOUS 1981 POLICY:

None stated in the previous CAMA Plan.

CURRENT 1986 POLICY:

**"It shall be the policy of Gates County to regulate residential subdivisions in order to prevent the overburdening of existing waterways and drainage systems by excessive surface runoff."**

IMPLEMENTATION STRATEGIES:

It is the policy of Gates County to require that a drainage plan be submitted for all major subdivision plats before approval is granted.

## ISSUE: STORM WATER RUNOFF: AGRICULTURAL DEVELOPMENT

### FINDING:

Agricultural runoff is the major non-point source contributor of additional nutrient loading in the Chowan River Basin. (How much and to what extent runoff of agricultural development in Gates County contributes to the problem has not been determined.) Indications are that there is non-point source loading from agricultural activities in Gates County.

The Soil Conservation Service is accepting applications from farmers in the Chowan River Basin to participate in a cost sharing grant program to reduce the impacts of agricultural runoff in the Chowan River Basin. Last year 27 farmers in Gates County had an allocation of $50,000 to continue this effort.

### PREVIOUS 1981 POLICY:

"It has been the policy of Gates County to cooperate with other local units of governments and with state and federal agencies in efforts to identify sources of pollution which result in the annual algae bloom and its inherent problems. Gates County shall continue this policy even though little or none of the pollution problem is believed to originate from Gates County. This policy is considered in the best interest of Gates County residents because of the Chowan River's value to the county as a natural resource and for its recreational potential for the residents of Gates County." *(CAMA LAND DEVELOPMENT PLAN UPDATE FOR GATES COUNTY, NORTH CAROLINA, FERRIN PLANNING GROUP, 1980.)*

### CURRENT 1986 POLICY:

***"It shall be the policy of Gates County to encourage farm operations in Gates County to avail themselves of this grant assistance and, to the maximum extent practical, to incorporate the Best Management Practices Program recommended by the U.S. Soil Conservation Service into their farming operations."***

### IMPLEMENTATION STRATEGIES:

Gates County shall use what means it deems reasonable and necessary to encourage local farmers to use the BMP as suggested by the US Soil Conservation Service.

## ISSUE: STORMWATER RUN-OFF - COASTAL WETLANDS

### FINDING:

There are no Coastal Wetlands in Gates County. This is not an issue. The Chowan River is classified as an inland river from 300 yds. south of the US 17 Bridge outside of Windsor north to the Virginia Line. All wetlands and swamps in Gates County are inland swamps.

## PREVIOUS 1981 POLICY:

"It has been the policy of Gates County to cooperate with other local units of governments and with state and federal agencies in efforts to identify sources of pollution which result in the annual algae bloom and its inherent problems. Gates County shall continue this policy even though little or none of the pollution problem is believed to originate from Gates County. This policy is considered in the best interest of Gates County residents because of the Chowan River's value to the county as a natural resource and for its recreational potential for the residents of Gates County." *(CAMA LAND DEVELOPMENT PLAN UPDATE FOR GATES COUNTY, NORTH CAROLINA, FERRIN PLANNING GROUP, 1980.)*

## CURRENT 1986 POLICY:

**It shall be the policy of Gates County to encourage farm operations in Gates County to avail themselves of this grant assistance and, to the maximum extent practical, to incorporate the Best Management Practices Program recommended by the U.S. Soil Conservation Service into their farming operations.**

## IMPLEMENTATION STRATEGIES:

Gates County shall use what means it deems reasonable and necessary to encourage local farmers to use the BMP as suggested by the US Soil Conservation Service.

## IMPLEMENTATION STRATEGIES:

None

## ISSUE: FLOATING HOME AND MARINA DEVELOPMENT

## FINDING:

The county does not consider floating homes an issue at this time. The County, however, would be supportive of a marina development on the Chowan River providing its waste disposal system could be permitted.

## PREVIOUS 1981 POLICY:

None.

## CURRENT 1986 POLICY:

**"Not an issue."**

## IMPLEMENTATION STRATEGIES:

None

## ISSUE: DEVELOPMENT OF ESTUARINE ISLANDS

### FINDING:

Not an issue.

### PREVIOUS 1981 POLICY:

None

### CURRENT 1986 POLICY:

*"Not an issue."*

### IMPLEMENTATION STRATEGIES:

None

# GATES COUNTY: RESOURCE PRODUCTION AND MANAGEMENT

## ISSUE: PRODUCTIVE AGRICULTURAL LAND

### FINDINGS:

According to the Long Range Program, published by the Gates County Soil and Water Conservation District, approximately 57,000 acres in Gates County can be considered Class 1 and Class II soils, both of which are suitable for cultivation. This is roughly 26% of the county's land area and 16% more acres than there were harvested in 1981,the most productive farming year since 1979.

The total harvested cropland acreage has diminished since 1981, declining by roughly 25% from 48,900 to 36,200. This decline seems to reflect the decreased profitability of agricultural products rather than the loss of productive farm land.

Any development of rural lands diminishes the land for continued agricultural use, and generally the most desirable land for development is also the most desirable for productive agricultural use. While some productive agricultural lands, no doubt, have been lost to residential development, development pressures have not been severe and pose no unreasonable or unmanageable threat to the county's productive farm lands.

While erosion is a slight problem in Gates County, there is no evidence of a significant loss of productive agricultural lands due to negligent farming practices. The US Soil Conservation Service regularly provides educational workshops to keep farmers informed of Best Management Practices needed to control erosion and maintain fertility.

### PREVIOUS 1981 POLICY:

"The loss of productive agricultural land in Gates County is due to the changing economy rather than urban development. While Gates County encourages investment in modern farm technology, where feasible, it does not consider it necessary to adopt a policy in that regard." *(1980 CAMA UPDATE)*

### CURRENT 1986 POLICY:

***"Gates County does not feel that its productive agricultural lands are threatened by any unreasonable or unmanageable growth,nor by negligent farming practices. It shall be the policy of the County, however, to encourage land owners to keep their lands in productive agricultural use."***

### IMPLEMENTATION STRATEGIES:

The County will use preferential tax treatment to encourage land owners to keep their lands in productive agricultural use.

The County will encourage the use of "Best Management Practices" recommended by the Gates County Soil Conservation District as an ongoing program to maintain land productivity.

## ISSUE: COMMERCIAL FOREST LAND

### FINDINGS:

Approximately 71% of the total land area in Gates County is forest land. In 1984, some 145,500 acres or 94% of total forest land was commercially active; approximately 92% of this commercial acreage was under either corporate ownership or corporate lease.

The estimated volume of saw timber and pulp wood in Gates County is 887,000 MBF (thousand board feet) saw timber and 277 MCF (thousand cubic feet) of growing stock. The volume of saw timber has declined in recent years, and stumpage measurements indicate significant increases in annual growth for both saw timber and pulp wood.

Urban development pressures do not significantly threaten the commercial forests in Gates County. Conversion of forest land to agricultural production is not a factor at present. The amount of total forest land in Gates County has remained almost constant over the past five years. The commercial forests are well managed, and reforestation is a regular management practice.

### PREVIOUS 1981 POLICY:

"Because the County does not consider protection of these forest lands a priority consideration, it has chosen not to adopt a policy at this time."( 1980 CAMA Update)

### CURRENT 1986 POLICY:

***"Same as above."***

### IMPLEMENTATION STRATEGIES:

None

## ISSUE: EXISTING AND POTENTIAL MINERAL PRODUCTION

### FINDINGS:

Sands in the Beach Sand area of Gates County along the northern reaches of the Chowan River are the only known potential mineral resource in Gates County. This resource is not actively mined and is not threatened by urban development.

Residential or urban types of development are almost impossible in this Beach Sand area because the low filtering capacity and high porosity of these soils make them unsuitable for septic tank installation. Effluent perks too rapidly for filtration to take place.

## PREVIOUS 1981 POLICY:

"No existing or potentially marketable deposits of any mineral have been identified in Gates County. Therefore, no policy statement on this issue is needed." *(1980 CAMA UPDATE)*

## CURRENT POLICY:

**"Same as above."**

## IMPLEMENTATION STRATEGIES:

None needed

## ISSUE: COMMERCIAL AND RECREATIONAL FISHERY

## FINDINGS:

As a productive resource, commercial fishing in Gates County does not provide great potential. A few local residents do engage in the annual herring season. Typically, 50 to 60 fishermen from Gates County stake out herring nets each year.

Recreational fishing is popular in Gates County and provides some potential as an economic asset. Recreational fishing licenses sold in Gates County have numbered between 850 to 1250 annually over the past 10 years, with approximately half of these licenses being sold to state fishermen. The number of licenses sold vary greatly from year to year, and no clear growth trend is evident.

## PREVIOUS 1981 POLICY:

"Although no policy statement on this issue is considered necessary, the County passively encourages commercial fishing." *(1980 CAMA UPDATE)*

## CURRENT 1986 POLICY:

**"Same as previous plan."**

## IMPLEMENTATION STRATEGIES

None needed.

## ISSUE: OFF-ROAD VEHICLES

## FINDINGS:

Off-Road vehicles are a necessary and ever present occurrence in Gates County. Tractors, combines, cottonpickers, and four-wheel drive vehicles are essential tools for modern farming operations.

While these vehicles frequently use the public road system and often create obstacles to traffic, their use of the road system is necessary and an accepted practice in most counties in the state. Motorist are aware of their use of the public thoroughfares in rural areas and should take the necessary precautions.

## PREVIOUS 1981 POLICY:

"Off-road vehicles in Gates County are used off-the-road on private property, generally during hunting season. They pose no threat to the environment of Gates County, therefore no policy statement is considered necessary." *(1980 CAMA UPDATE)*

## CURRENT 1986 POLICY:

**"It shall be the policy of Gates County to urge operators of off-road vehicles to use the necessary precautions, the required safety equipment, and common courtesy to make traveling on public thoroughfares less dangerous and more convenient to other motorists and to the operators themselves."**

## IMPLEMENTATION STRATEGIES:

The County will work with the State Highway Patrol and local agricultural agencies to inform local operators of the proper equipment needed and necessary precautions to be taken while using the State Road System.

## ISSUE: RESIDENTIAL AND COMMERCIAL LAND DEVELOPMENT IMPACT ON ANY RESOURCE

## FINDINGS:

Residential and commercial development has been rather limited in Gates County. Farm land, commercial forest lands, the swamps, and the shoreline are not threatened.. New residential permits have averaged less than 35 per year since 1980, and there have only been six permits issued for non-residential space since 1980. More recently, however, there has been an increase in new residential construction; seventy-eight new residential permits have been issued during the past nine months. Sixty-five of these permits were for mobile homes.

However, the significant growth in the Tidewater Region and the comparatively low cost of land and taxes in Gates County has caused some local concern about increased development pressures near the Virginia state line.

Gates County does not believe that land use zoning is needed at this time. Performance controls, such as subdivision regulations and mobile home park ordinances,seem sufficient to control development.

## PREVIOUS 1981 POLICY:

None

## CURRENT 1986 POLICY:

**"It shall be the policy of Gates County to use the existing development controls that it now has to regulate the development impacts on the county's resources. In the event that these controls seem insufficient, the County shall adopt what additional controls it deems necessary."**

## IMPLEMENTATION STRATEGIES:

The County Building Inspector shall continue to enforce the North Carolina Building Code, The Gates County Mobile Home Park Ordinance, and the County's Subdivision Regulations.

The County will rely on the North Carolina Departments of Health and Environmental Management to enforce regulations concerning waste water disposal in the county

## ISSUE: INDUSTRIAL IMPACT ON ANY RESOURCE

## FINDINGS:

The major industries in Gates County are farming and forestry. Both are being managed to maintain future productivity. Industrial development impact on resources is not an issue in Gates County. The only major manufacturing operations in the county is Dalure Fashions with 70 employees, located in Gatesville. This plant at Gatesville causes no negative impact on any resource.

## PREVIOUS 1981 POLICY:

None

## CURRENT 1986 POLICY:

**"This is not an issue."**

## IMPLEMENTATION STRATEGIES:

None needed.

## ISSUE: PEAT AND PHOSPHATE MINING IMPACT ON ANY RESOURCE

## FINDING:

Presently, neither peat nor phosphate mining are taking place in the county. If this should become an issue in the future, steps will be taken at the appropriate time to address this issue.

## PREVIOUS 1981 POLICY:

None

## CURRENT 1986 POLICY:

**This is not an issue.**

## IMPLEMENTATION STRATEGIES:

None needed.

# GATES COUNTY: ECONOMIC AND COMMUNITY DEVELOPMENT

## ISSUE: TYPES AND LOCATIONS OF DESIRED INDUSTRIES

### FINDINGS:

Residents of Gates County are not anxious to become a major industrial center; however, they do recognize moderate industrial growth as a desirable growth policy. Gates County has recently organized an Industrial Development Commission. One of the first activities undertaken by the Commission was to publish a brochure entitled ***WHERE THE GOOD LIFE BEGINS***, which describes the facilities and attractions Gates County has to offer prospective industries.

The Gates County Industrial Development Commission is now attempting to identify and select suitable industrial sites of varying sizes. The Commission has developed a set of site standards to guide them in their selection. The standards developed include:

1) Soil Suitability, including soil strength, permeability, and depth to water table.
2) Availability of nearby water service
3) Proximity to larger water lines
4) Access to all-weather paved roads
5) Size and availability of the site.

The Commission has also identified the following attributes it desires in prospective industries:

1) Small to Medium Size
2) Labor intensive
3) Non-water intensive
4) Clean, non-polluting
5) Capable of using available skills of county residents
6) Able to use large female work force in the county

### PREVIOUS 1981 POLICY:

"Small, non-water intensive industries are encouraged to locate in or near existing communities.... The county especially encourages new industries which would use forest and agricultural products " (*1980 CAMA Land Development Plan Update for Gates County*).

### CURRENT 1986 POLICY:

**"It shall be the policy of Gates County to provide assistance and support to the Gates County Industrial Development Commission in their efforts to attract industrial employment to Gates County."**

## IMPLEMENTATION STRATEGIES:

The County will assist the Gates County Industrial Commission in organizing and perpetuating a Committee of One Hundred.

The County will select and catalog a list of desirable industrial sites in a variety of sizes.

## ISSUE: LOCAL COMMITMENT TO PROVIDING SERVICES

## FINDINGS:

Water service is the only public service provided by Gates County that is paid for by user fees. All other county services are available and provided to all county residents.

"Rules and Regulations of the Gates County Water System" dictates the county's policy toward the expansion of this service. Developments that cannot be served by existing lines are required to install their own lines.

Restrictions are placed on the number of users that can be located along the various sized lines. In some ways, such restrictions help to guide growth since the greatest amount of growth can best be accommodated by the larger water lines.

Roads, schools, solid waste collection, and other services provided by the county have sufficient capacity to accommodate growth expected over the next ten years.

## PREVIOUS 1981 POLICY:

"The county manager will continue to administer the Rules and Regulations of the Gates County Water System" (*1980 CAMA Land Development Plan Update for Gates County*).

## CURRENT 1986 POLICY:

***"The County is committed to providing the highest quality and greatest quantity of public services that its tax revenues will allow. These services that are financed through County revenues shall be made available equally to all citizens. Public services supported through user fees shall be extended to serve where economically feasible and self supporting. Any development that will create burdens on the existing service system without providing compensating revenues shall be discouraged."***

## IMPLEMENTATION STRATEGIES:

The County Manager shall continue to administer the the rules and regulations of the county water system.

## ISSUE: TYPES OF URBAN GROWTH PATTERNS DESIRED

### FINDINGS:

Gates County residents do not particularly desire any urban growth, regardless of its pattern. In every land use plan and update prepared for Gates County, it has been the expressed desire of Gates County to maintain and preserve the uncomplicated rural character of the county.

Gates County has several factors working in its favor that assist in maintaining the rural character of its development:

1) Low population densities leave an abundance of space for scattered single-family residential development.

2) Soil limitations and subdivision regulations limit the size of lots to a minimum of 20,000 square feet.

3) The extensive paved secondary and primary road system in the county provides more than adequate all-weather access to scattered rural type developments.

4) The availability of public water service to all areas of the county encourages an even distribution of development .

5) The Rules and Regulations of the Gates County Water System controls the number of users that can be served by the differently sized water lines in the System.

Development may tend to concentrate in or near existing crossroad communities since these communities are served by larger water lines. Allowable development densities, however, are the same for all areas of the county.

### PREVIOUS 1981 POLICY:

"Gates County residents have, through survey results, stated that they wish to preserve the rural character of Gates County " (***1980 CAMA Land Development Plan Update for Gates County***).

### CURRENT 1986 POLICY:

**"The County will limit development to that which can be accommodated by existing water lines."** .

### IMPLEMENTATION STRATEGIES:

The County Manager will continue to administer and enforce diligently the "Rules and Regulations of the Gates County Water System."

The County shall enforce the minimum lot size requirements of its present subdivision regulations.

Subdivision densities shall not increase through the use of package treatment plants.

Should development pressures increase in particular areas, the county will consider zoning controls, large lot agricultural zones, and whatever other regulations it deems necessary to maintain its preferred rural character.

## ISSUE: REDEVELOPMENT OF DEVELOPED AREAS

### FINDINGS:

The developed communities in Gates County are very small, and generally most buildings being used are well maintained. There are, however, a number of vacant buildings that have suffered from neglect and a few occupied dwelling units in each community that could stand some repairs and improvements.

Concentrated areas in need of redevelopment are very small and generally do not create any great eyesores in the communities.

### PREVIOUS 1981 POLICY:

None

### CURRENT 1986 POLICY:

***"It will be the County's policy to do what is practical to ensure that all county residents have decent, safe, and sanitary housing."***

### IMPLEMENTATION STRATEGIES:

The county will consider requesting a planning assistance grant from the Division of Community Assistance to assess the extent of needed redevelopment and its location.

The County Building Inspector shall enforce all applicable regulations of its North Carolina Building Code.

## ISSUE: COMMITMENT TO STATE AND FEDERAL PROGRAMS

### FINDINGS:

Gates County currently uses several federal and state programs. It is difficult to see how the county tax base could maintain existing services and facilities without state and federal assistance. Gates County, however, claims the right to pick and choose the non-mandatory federal or state programs in which it shall participate and to express its criticism of mandatory programs it does not feel are in the best interest of its residents.

### PREVIOUS 1981 POLICY:

"It shall be the policy of Gates County to continue its commitments to state and federal programs. . ." (*1980 CAMA Land Development Plan Update for Gates County* ).

CURRENT 1986 POLICY:

**"The County shall continue to cooperate on all state and federal actions that would benefit the residents of Gates County and shall let their objections be known should it feel that state and federal policies are not in the best interest of its citizens."**

IMPLEMENTATION STRATEGIES:

Support the North Carolina Department of Transportation in their efforts to upgrade US 13, US 158, NC 32 and 37 in Gates County.

## ISSUE: CHANNEL MAINTENANCE AND BEACH NOURISHMENT

FINDINGS:

This is not an issue in Gates County.

PREVIOUS 1981 POLICY:

None

CURRENT 1986 POLICY:

**None**

IMPLEMENTATION STRATEGIES:

None needed

## ISSUE: ENERGY SITING AND DEVELOPMENT

FINDINGS:

Gates County considers very remote the possibility that an energy facility would be located in Gates County. The water discharge from such facilities would not be permitted in the Chowan River Basin and the water needs could not be supplied from the Pasquotank River Basin.

PREVIOUS 1981 POLICY:

". . . No policy on this issue is considered necessary. However, should this become an issue in the future, a policy will be developed at the appropriate time" ***(1980 CAMA Land Development Plan Update for Gates County).***

CURRENT 1986 POLICY:

***Same as in previous plan.***

## IMPLEMENTATION STRATEGIES:

None needed

## ISSUE: TOURISM, WATERFRONT ACCESS, AND ESTUARINE ACCESS

## FINDINGS:

The Gates County waterfront consists of about three miles of deep, wooded swamp along the Chowan River. Septic tanks cannot be permitted in most of the area. It lies within the flood plain, it contains an AEC, and it contains 404 wetlands. The likelihood of any development occurring along the waterfront is severely limited.

Tourism in Gates County is not a major factor in the local economy. Attractions include fishing and hunting, local historical sites, and Merchant's Millpond State Park.

Merchant's Millpond State Park is basically undeveloped and is not a major tourist attraction. However, the master plan for the park proposes facilities to accommodate 1,750 day users and 800 overnight users per day.

The North Carolina Department of Wildlife now maintains a public boat ramp at the end of unimproved State Road 1111. The only other existing public access point to the Chowan River is at the end of State Road 1131 (the discontinued segment of old US 13 across the river from Winton, North Carolina).

## PREVIOUS 1981 POLICY:

"Where access is available, it is available to the public. Therefore, Gates County considers it unnecessary to adopt a policy on water access" (***1980 CAMA Land Development Plan Update for Gates County***).

## CURRENT 1986 POLICY:

**None**

## IMPLEMENTATION STRATEGIES:

None needed

## ISSUE: TYPES OF DENSITIES, LOCATION OF ANTICIPATED RESIDENTIAL DEVELOPMENT AND SERVICES NECESSARY TO SUPPORT SUCH DEVELOPMENT

## FINDINGS:

Development densities are controlled by the Health Department and the Gates County Subdivision Regulations. For development not controlled by the Subdivision Regulations, the minimum lot size in the county is one acre This lot minimum is uniform all over the county and controls septic tank installations of less than 3,000 gallons. The Department of Environmental Management controls developments with greater waste water discharges; however, the minimum lot size will not be less than one acre.

The Gates County Subdivision Regulations require minimum lot sizes of not less than one acre. This is also a uniform policy enforced in all portions of the County.

Water service is available to all portions of the county. No new extensions are planned. All new development must provide for their own water supply, either by developing their own or by tapping on to the County System. New subdivisions wishing to use County Water Service must install their own water lines to serve their developments.

## PREVIOUS 1981 POLICY:

None

## CURRENT 1986 POLICY:

**"Gates County will continue to use its existing regulations to control development densities and extensions of water service."**

## IMPLEMENTATION STRATEGIES:

Gates County will continue to enforce the provisions of its Subdivision Regulations.

The County Manager will continue to enforce and administer the "Rules And Regulations of the Gates County Water System".

The County will continue to rely on the County Health Officer to regulate the densities of development not covered by existing County regulations.

# STORM HAZARD MITIGATION, POST-DISASTER RECOVERY PLAN

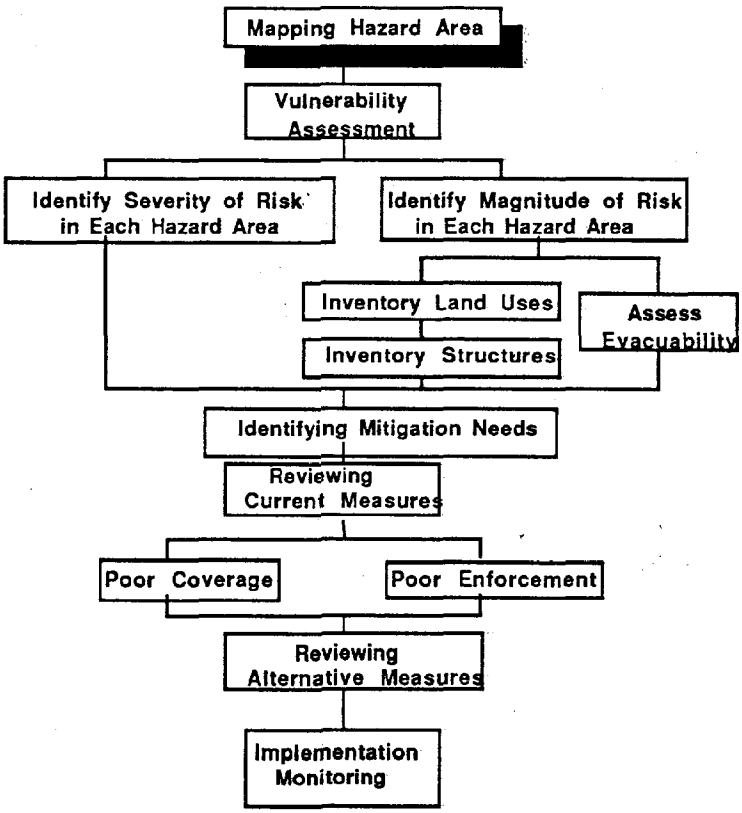
The purpose of this section is two fold:

1) to assist the county in managing development in those areas most likely to suffer damages from a severe storm or hurricane and

2) to reduce the risk to life and property from future hurricanes.

High winds, flooding, intense wave action, and coastline erosion are the four physical forces of a severe storm or hurricane that create threats to life and property. Flooding claims the most lives during severe storms or hurricanes; high winds cause the most property damage. Only by identifying those areas in the county most likely to suffer damage from any of these forces or combination of these forces can a community develop a meaningful storm mitigation plan.

Using the planning scenario recommended in ***BEFORE THE STORM: Managing Development to Reduce Hurricane Damages***, by McElyea, Brower,and Godschalk, the community can identify the areas most likely to sustain storm damages and make a vulnerability assessment of the identified storm hazard area. The vulnerability assessment includes the severity and magnitude of risk in each storm hazard area. The following chart taken from ***BEFORE THE STORM*** outlines the procedure and the sequence of steps used in the storm hazard mitigation process.



## STORM HAZARD AREA

The following Composite Hazard Map indicates those areas in Gates County most likely to sustain damage from flooding and other water related hazards, such as wave action and shore erosion. The map is a composite of the flood hazard areas indicated on Slosh Maps prepared by NC Division of Emergency Management and of identified Areas of Environmental Concern located in the county. All of the county is assumed to be susceptible to wind damage, so this area is not mapped.

## VULNERABILITY

Vulnerability of an area is measured by both the severity and magnitude of risk. The severity ranking is based on the number of physical forces likely to affect a particular identified storm hazard area. The rankings suggested by McElyea, Brower, and Godschalk is a scale from 1 to 4. Areas likely to receive damage from all four physical forces of a hurricane are ranked as 1; those receiving only wind damage are ranked as 4. The magnitude of risk is based on the population and the number and value of developed properties in the storm hazard areas.

### Severity of Risk

The table below ranks the severity of risk associated with the identified storm hazard areas in the county and the physical forces affecting the different areas.

## RISK TABLE FOR HAZARD AREAS

| HAZARD AREA | EXPOSURE TO DAMAGING FORCES | | | | |
|---|---|---|---|---|---|
| | SEVERITY RANK | EROSION | WAVE ACTION | FLOODING | HIGH WIND |
| PUBLIC TRUST WATERS | 4 | | | + | + |
| FLOOD HAZARD AREA | 3 | 0 | | + | + |
| REST OF COMMUNITY | 4 | | | | + |

*Exposure Level: (+) High, (0 ) Moderate, (#) Low*

### Magnitude of Risk

As the Risk Table shows, severe storms and hurricanes most seriously affect the special flood hazard areas in the county. The boundaries of these designated areas are only temporary. Gates County is in the emergency phase of the National Flood Insurance Program. The Federal Emergency Management Agency has notified the County that elevation maps for the regular phase of the Program are being prepared and should be available before the end of the year. The county sustains damages from high winds, flooding and erosion. Damage to property from flooding will be negligible as most of the flood hazard areas are located in deep wooded swamps essentially uninhabited. Property damage is much more likely to be inflicted by wind damage. The most recent storm damage suffered in Gates was in 1985 when a series of tornados touched down in

the county. According to the county manager wind damage from these tornados was estimated at $5,000,000, with much of the damage being timber losses.

### Flood Hazard Areas

The special flood hazard areas designated by FEMA in Gates County are the wooded swamps and marsh areas along the Chowan River and the bottom land surrounding the major creeks and streams in the county. These areas are essentially undeveloped except for an occasional abandoned agricultural building. Forests and forestry are the primary land uses and activities in these areas. Occasional flooding will not damage the forests and will cause only minor inconveniences or delay to most forestry activities.

### Public Trust Waters

Public trust waters are the only areas of environmental concern in the county. Merchants Mill Pond State Park is one component of this AEC category that could be greatly altered by severe storm flooding. However, storms and flooding are natural occurrences that, no doubt, had a great deal of influence on the development of the Mill Pond; so to say that Mill Pond would be damaged may be the wrong terminology. The worse that could happen to the pond is that it would again be altered.

### The Rest of the Community

High winds cause most of the property damage in Gates County, simply because they affect all properties. Damage is of two types: 1) direct wind damage, and 2) indirect wind damage from downed trees, wind-born debris, and downed utility lines. Wind damage potential increases almost exponentially as the number of mobile homes in the county increases.

### Evacuability

There are no evacuation problems in Gates County. The county has no Emergency Management Evacuation Plan at this time; however, an Emergency Management Cordinator has recently been employed to prepare such a plan.

## POLICY STATEMENTS: STORM HAZARD MITIGATION

**ISSUE: Mitigation of Storm Damage From High Winds , Flooding, Wave Action, and Erosion**

### FINDINGS:

County areas affected by the various storm hazards are as follows:

| Hazard | Area Affected |
|---|---|
| High Wind | Entire County |
| Flooding | 100-year Flood Hazard Area Public Trust Waters |
| Erosion | Shorelines of Public Trust Waters |
| Flood Hazard Areas | |

The greatest collective damage is from wind damage because the whole county is affected. Most seriously affected developed areas are those with property improvements in flood plains areas. Greatest risk potentials are the Flood Hazard Areas.

## CURRENT 1986 POLICY:

> *"It will be the policy of Gates County to enforce all controls and regulations it deems necessary to mitigate the risk of severe storms and hurricanes to life and property."*

## IMPLEMENTATION STRATEGIES:

### 1) High Winds

Gates County will follow and support the N.C. State Building Codes and their requirements regarding design for high velocity winds. The County also supports requirements for mobile homes such as tiedowns that help reduce wind damage. Gates County enforces construction and mobile home installation standards for 100-mph winds.

### 2) Flooding

Gates County will support the hazard mitigation elements of the National Flood Insurance Programs. Gates County, which is in the regular phase of this program, supports regulations regarding elevation and flood-proofing of buildings and utilities. The county also supports CAMA and 404 Wetland Development Permit processes.

### 3) Wave Action and Shoreline Erosion

These are not issues.

## POST DISASTER AND RECOVERY PLAN

Gates County proposes the following Disaster Recovery Plan as a general outline of the procedures the County will follow in the event of a major disaster. The plan includes a timetable for carrying out recovery activities and a list of personnel who will be responsible for each component of the plan.

## PURPOSE:

This plan has been developed to provide for an orderly and coordinated recovery and reconstruction of areas of Gates County suffering the effects of a major disaster. The underlying goals of this plan are to minimize the hardships to affected residents, to restore and initiate reconstruction in a timely manner, and to reduce or eliminate any bottlenecks in securing Federal or State Disaster Assistance.

## ORGANIZATION:

The Board of County Commissioners will function as the Gates County Recovery Task Force. The mission of the task force is to direct and control recovery activities and to formulate recovery policies as needed.

## SUPPORT TEAM:

The County Commissioners will designate the following Recovery Support Team to assist in the implementation of this plan. The mission of the support team is to provide personnel and resources for the implementation of recovery activities as directed by the Recovery Task Force.

### SUPPORT TEAM COMPOSITION AND RESPONSIBILITIES:

**Gates County Manager:** To manage, control, and coordinate the efforts of the support team.

**Sheriff:** To provide additional surveillance in the disaster area; to locate obstructions to traffic; and to advise the County Manager of the location of downed transmission lines, ruptured water lines, etc.

**Tax Supervisor:** To provide and direct personnel in carrying out damage assessment; to prepare damage assessment reports for the Recovery Task Force; and to revise property records.

**Building Inspector:** To assemble personnel and to conduct a survey of structural conditions in the disaster area; to coordinate actions with the Tax Supervisor, and to prepare structural damage reports and classifications of damages.

**Social Services Director:** To provide personnel to assist in finding shelter for persons who are homeless; to assist applicants in requesting aid from various state and federal agencies providing disaster relief.

**County Health Officer:** To conduct damage assessment of on-site water supplies and sewage disposal systems; to prepare damage reports; and to make recommendations concerning restoration and reuse of on-site systems.

**Water Service Director:** To conduct assessment of public utilities; to assemble personnel for clean up; and to organize and direct the restoration of public utility service.

## SCHEDULE OF ACTIVITIES

Recovery activities will consist of two types: preplanned activities that can begin immediately or as soon as is reasonably possible after the storm has passed; and long-term, permanent reconstruction activities that will be begun once the extent of the damage is known.

## IMMEDIATE ACTION:

1) Declare a moratorium on all repairs and development

2) Begin clean-up and debris removal

3) Coordinate the restoration and repair of electrical service to affected areas

4) Begin Emergency repairs of essential public facilities

5) Maintain additional surveillance and extra security measures in affected areas

6) Deploy assessment teams

7) Prepare assessment reports

These immediate actions should be completed within ten days of the storm event.

## LONG TERM RECONSTRUCTION ACTIONS:

8) Evaluate, classify, and map damages

9) Review of moratorium decision

10) Establish priorities for public facilities repair

11) Submit damage report to State and Federal agencies

12) Notify affected property owners of damage classifications and required repairs

13) Lift moratorium on repairs not requiring permits

14) Lift moratorium on siting of replacement mobile homes

15) Lift moratorium on conforming structures requiring major repairs

16) Assist affected property owners with damage registration and filing request for disaster relief

17) Negotiate with property owners needing improvements to on-site water and sewage systems

18) Lift moratorium on repairs and new development

The duration of the reconstruction and recovery period will depend on the nature and extent of the storm damage. Repairs of minor structural damages should be able to commence within two weeks of the storm event.

## DAMAGE ASSESSMENT

As soon as possible after the storm, the assessment teams will be deployed to measure the extent and nature of the damages and to classify structural damages to individual structures. The inspection teams will consist of the County Building Inspector, the County Health Officer, and the Director of the County Water System.

The assessment will not be detailed, but will provide an initial overview of the scope of storm damages, an inventory of affected properties, and preliminary assessments of the extent of damages to individual structures. Detailed inspections are being sacrificed in an effort to save time in beginning restoration activities and in securing disaster relief from various State and Federal Agencies offering financial assistance.

## DAMAGE CLASSIFICATIONS

Structural damages will be classified in the following manner:

| | |
|---|---|
| **Destroyed** | if estimated repair costs exceed 75% of assessed value |
| **Major Repairs** | if estimated repair costs exceed 30% of assessed value |
| **Minor Repair** | if estimated repair costs are less than 30% of assessed value |

## RECONSTRUCTION DEVELOPMENT STANDARDS

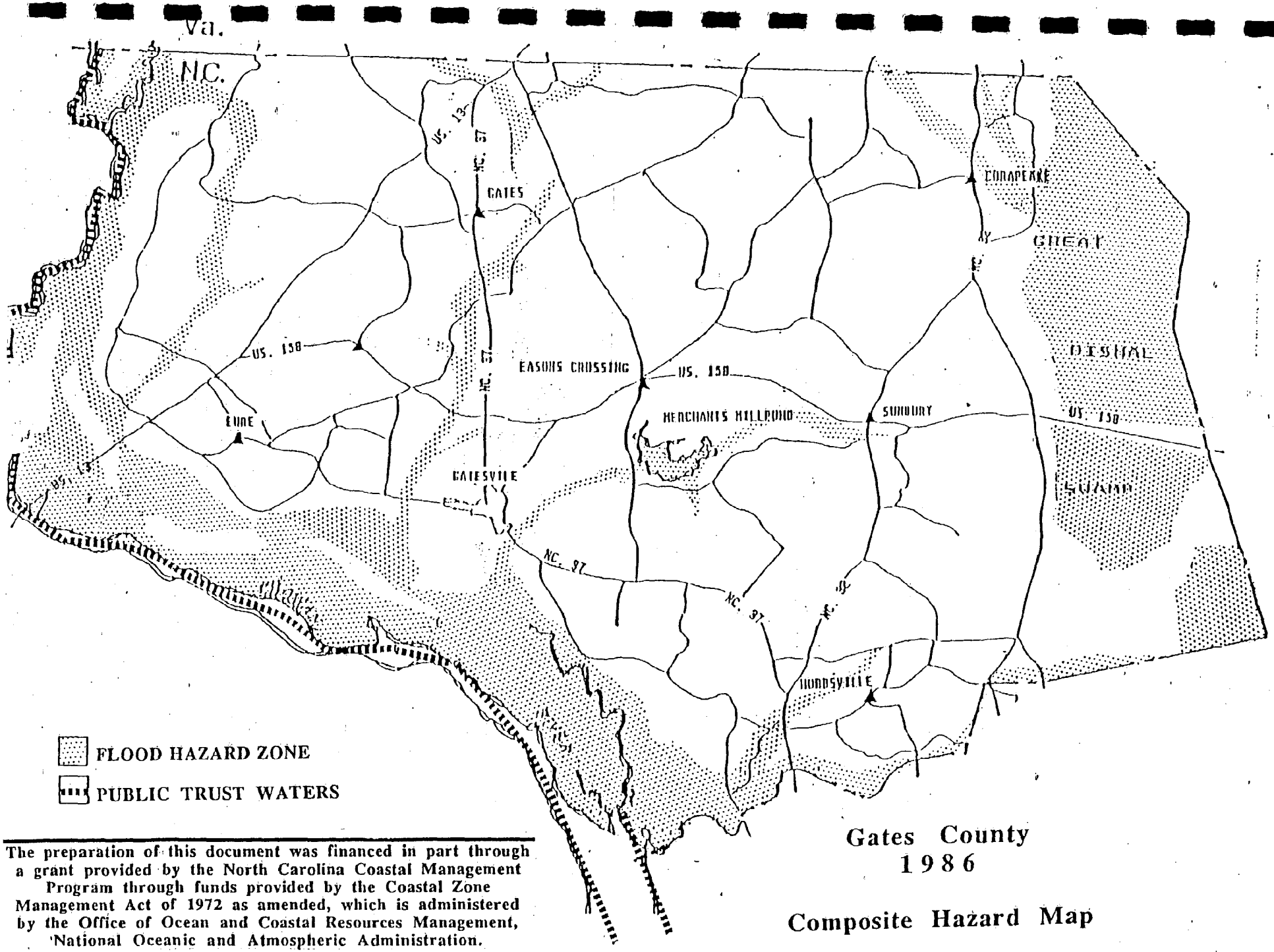
In general, all units requiring major repairs and all new construction shall comply with all development regulations in force at the time repair or new construction is initiated. This shall include compliance with all provisions of the building code governing construction in 100 mph wind velocity zones, all regulations concerning development in designated Special Flood Hazard Areas, and all Health Department Regulations regarding on-site septic systems.

The lone exception to this general rule concerns the application of development restrictions on affected residential lots smaller than one acre (the minimum lot size required by the County Health Department). Where structures on these substandard sized lots have been classified as either "destroyed" or requiring "Major Repair" as a result of the storm damage, the County shall make a determination concerning reconstruction and reuse with or without improvements to the on-site disposal system on a case basis.

## DEVELOPMENT MORATORIA

The immediate development moratoria will remain in effect until the assessment reports are completed and the scope and nature of the storm damage has been fully reviewed by the County Commission. The County Commission at that time may rescind or extend the duration of the moratoria based on their assessment of the situation. Such decisions of the Commission may affect all or any portion of the county.

The purpose of the immediate moratoria is basically to relieve the work burden of the support team during the initial phase of the recovery period.




The preparation of this document was financed in part through a grant provided by the North Carolina Coastal Management Program through funds provided by the Coastal Zone Management Act of 1972 as amended, which is administered by the Office of Ocean and Coastal Resources Management, National Oceanic and Atmospheric Administration.

# Gates County
# 1986

## Composite Hazard Map

# LAND CLASSIFICATION SYSTEM AND MAP: GATES COUNTY

The land classification system presented here provides the mechanism for implementing the county's development policies according to geographical areas of the county. The Gates County land classification system is based on the standardized CAMA land classification system. Through this system, the local government designates general geographical areas of the county for preferred types of development and for preferred and anticipated levels of growth.

The policy statements and implementation strategies stated in this plan are then applicable to areas of the county containing resources that have been identified for protection or development. The land classification system is not a regulatory instrument, but a general application guide for the county's growth policy.

Land Classification Map

The land classification map provided here gives local governments and the general public a convenient reference for identifying those geographic areas of the county designated for specified types, levels, and patterns of development.

## Land Classes

The CAMA land classification system contains five broad development classifications: developed, transitional, community, rural, and conservation. This system emphasizes the timing of development of growth rather than the establishment of severe use restrictions.

## Land Classes

**Developed:**

The statutory purpose of the developed classification is "to provide for continued intensive development of existing cities" [NCAC 15: 7B .0204 (d)(1)(A)]. The regulations also establish specific qualifying densities for this district as well as specific land use characteristics. There are no areas classified as developed in Gates County.

**Transition:**

The stated purpose of the transition class is "to provide for future intensive urban developments on lands that are suitable and that will be provided with necessary urban services " [NCAC 15: 7B .0204 (d)(2)(A)]. The discussions in the regulations go on to mention that transition areas can be provided with public water and sewer service.
There are no areas in Gates County designated as Transition.

**Community:**

CAMA regulations define the community district as mixed use, low-intensity, clustered development generally associated with rural crossroads communities.

In Gates County, the areas designated as community are all existing crossroads communities that exhibit clustering; this is essentially all land areas with more than three adjacent minimum-sized lots of record. The minimum lot size in the county is one acre.

These areas include all existing crossroads and platted subdivisions not included in the developed or transitional classifications.

**Rural Service:**

The stated purpose of the rural district is "to provide for agricultural, forestry, mineral extraction, and various low-intensity uses on large sites including low density dispersed residential uses."...[NCAC 15: 7B .0204 (d)(4)(A)].

The regulations indicate that development in these areas will use on-site water supplies and waste-water disposal systems. The County has made public water available to all of the county; therefore, the county has created a rural service sub-district to provide public water to the type development described in the CAMA rural classification. The rural service district covers most of the county.

**Conservation:**

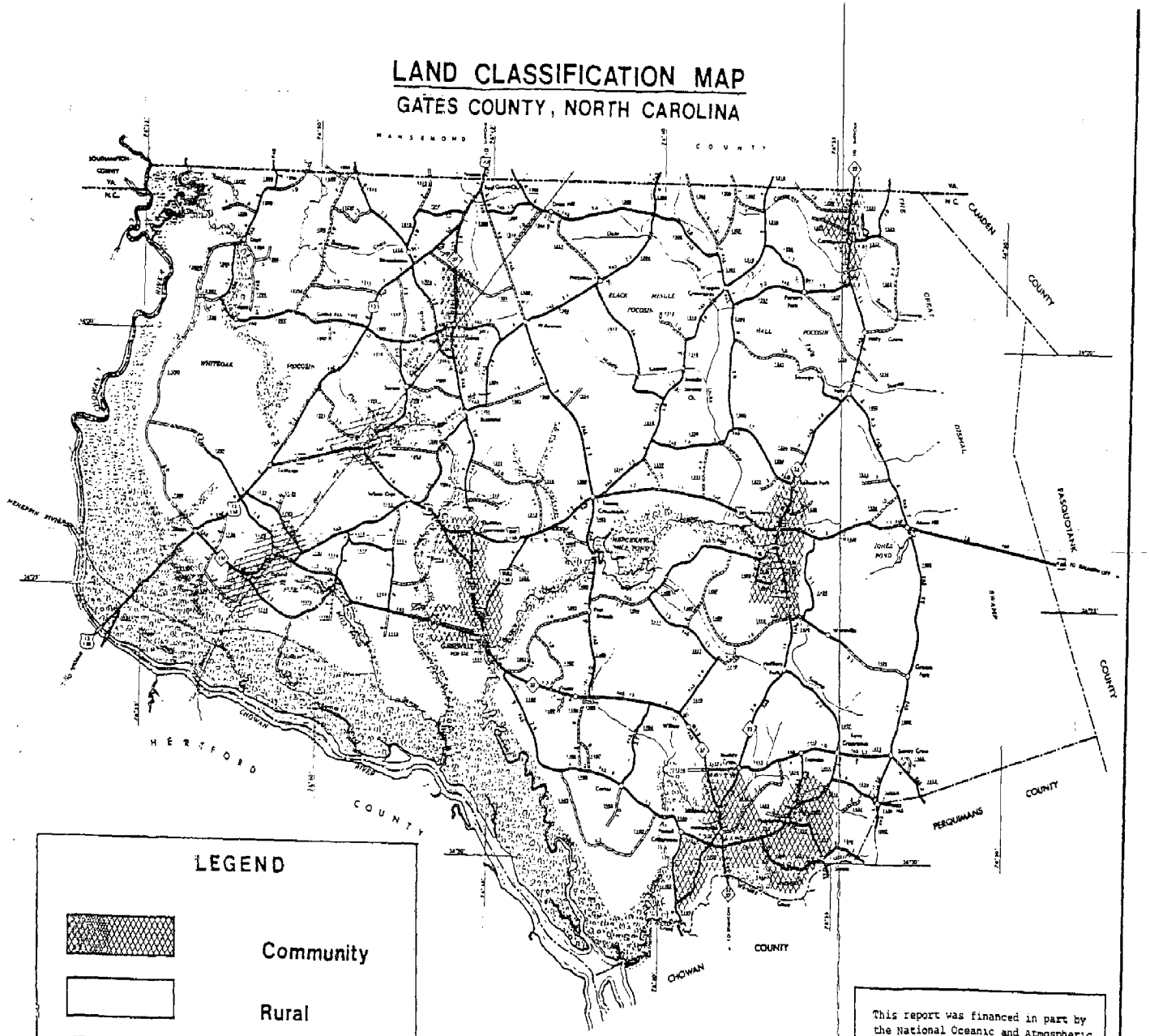
The stated purpose of the conservation class is "to provide for effective long-term management and protection of significant, limited, or irreplaceable areas" [NCAC 15: 7B .0204 (d) (5)(A)].

In Gates County, conservation areas include all areas of environmental concern designated by CAMA, all 404 wetlands, all Storm Hazard Areas identified on the Composite Hazard Map, and all areas below the 100-year flood elevation.
All land uses that can be permitted under the existing regulations of the various state, federal, and local governmental agencies with jurisdiction are allowed in the conservation district.

The Great Dismal Swamp is under federal control over which the county has no jurisdiction; therefore no land classification area is assigned

# LAND CLASSIFICATION MAP

## GATES COUNTY, NORTH CAROLINA




This report was financed in part by the National Oceanic and Atmospheric Administration, the Coastal Plains Regional Commission, and the State of North Carolina; and meets the requirements of the North Carolina Coastal Area Management Act of 1974, as amended.

## RELATIONSHIP BETWEEN LOCAL POLICIES AND LAND CLASSIFICATION

All policies developed during this planning process and formally stated in this document have consistently emphasized the County's intent of relying on existing local development regulations and on the various state and federal agencies with jurisdiction.

The land classification system provided in this document makes no restrictions on land use. Any development is permitted on any site if such development complies with existing local regulations and with the various permit requirements of the state and federal agencies with jurisdiction.

## INTER-GOVERNMENTAL COORDINATION

The Gates County land use update also establishes the policies and the land classification system for the Town of Gatesville.

## OPINION SURVEY: GATES COUNTY C.A.M.A. LAND USE UPDATE

The following survey is to gather opinions from a sampling of Gates County residents concerning specific land use issues. This survey is totally confidential and we request that you do not sign your name to this document. We do,however, need to know the general location of your residence. Please do not omit your zip code or the township information requested.

### OPINION SURVEY

1. In which township do you live? (Circle One)

| | | |
|---|---|---|
| 65 a. Gatesville | 49 b. Hall | 66 c. Haslett |
| 16 d.Holly Grove | 18 e. Hunters Mill | 9 f Mintonsville |
| 17 g Reynoldson | | |

2. What is your zipcode?

3. What is your sex, race, age group, and marital status?

| | | | |
|---|---|---|---|
| 133 WHITE | 108 BLACK | | |
| 85 MALE | 133 FEMALE | | |
| 164 MARRIED | 26 SINGLE | 18 DIVORCED | 20 WIDOWED |

Age Group (circle One)

| | | |
|---|---|---|
| 8 a 15-19 | 7 d 30-39 | 15 g. 60-64 |
| 7 b 20-24 | 46 e 40-54 | 26 h. 65-70 |
| 28 c 25-29 | 7 f 55-59 | 20 i. 75+ |

4. How large is your household?

| | |
|---|---|
| 14 1 person | 37 2 persons |
| 115 3 or 4 people | 56 5+ persons |

5. How long have you lived in Gates County?

25 less than 5 years

23 5-10 years

194 more than 10 years

6. Do you live in a mobile home? 57 yes 183 no

7. Where are you employed?

69 a. Gates County
41 b. Adjacent Counties
47 c. Tidewater
42 d. Unemployed
46 e. Retired

8. Are you self employed? 17 yes 183 no

9. Do you farm? 17 yes 217 no

10. Is farming your primary source of income? 18 supplemental ? 61

11. How many acres do you farm
154 a). none; 21 b).1-100; 4 c).100-300;
2 d) 300-500; 3 e).500+

12. Where do you get your drinking water?
53 a.Public water system 186 b.well 5 c.other

13. What type of sewage disposal system do you use?
3 a. Public sewer 218 b.Septic system 24 c. other

14. Have you had any problem with your septic system in the past 5 years?
48 a.yes; 197 b. no

15. Has your home site ever been flooded?
16 a. yes 226 b. no

16. Do you carry flood insurance on your home and its contents?
59 a. yes 174 b. no

17. What type growth would you like to see occur in Gates County?
34 a. residential 11 b. seasonal homes 32 c. commercial
85 d. industrial 17 e. none 73 f. other

18. Where do you do most of your shopping?

51 a. Gates County 103 b. Adjacent counties 72 c.Tidewater area

19. Where do you most often shop for the items listed below?
Choose from one of the following for each item:
A. Gates County
B. Edenton
C. Elizabeth City
D. Virginia
E. Ahoskie
F. Other(Please list)

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| Automobiles | 28 | 1 | 86 | 74 | 16 | 8 |
| Furniture | 6 | 4 | 76 | 100 | 20 | 3 |
| Clothing | 3 | 2 | 97 | 88 | 22 | 2 |
| Building Materials | 14 | 3 | 99 | 52 | 30 | 3 |
| Groceries | 86 | 1 | 79 | 39 | 17 | 1 |
| Heating & Plumbing Equipment | 56 | 2 | 83 | 35 | 19 | 5 |
| Entertainment | 20 | 1 | 66 | 76 | 17 | 4 |
| Dine Out | 21 | 1 | 81 | 71 | 22 | 3 |
| Farming Supplies | 48 | 2 | 40 | 17 | 9 | 27 |

How would you rank the following answers to the statement:

Improved Economic growth in Gates County can best be accomplished by:

Rank answers from 1 to 5, with 1 being the favored response

a 113 Increasing manufacturing employment in the county
b 58 Increasing the number of tourists and summer residents in the county
c 42 Increasing population growth
d 92 Increasing the number of businesses in the county
e 55 Increasing farming activities

Which of the following activities will best enable Perquimans County to achieve economic growth? Rank answers from 1 to 3

| 1 | 2 | 3 | |
|---|---|---|---|
| 127 | 37 | 38 | a. Expand the county's market area |
| 46 | 19 | 10 | b. Increase the population in the existing market area |
| 76 | 68 | 58 | c. Increase disposable income within the present market area |

What is your opinion on the following statements? Choose one of the following for each statement.

1. Slightly agree
2. Strongly agree
3. Slightly disagree
4. Strongly disagree

| 1 | 2 | 3 | 4 | | |
|---|---|---|---|---|---|
| 34 | 155 | 7 | 19 | A. | Gates County needs more manufacturing industries. |
| 57 | 80 | 38 | 43 | B. | Tourism and second home development should be promoted. |
| 53 | 124 | 21 | 15 | C. | Gates County should provide additional sites where the public has access to the county's waterways without crossing private property. |
| 48 | 110 | 30 | 23 | D. | Gates County should use code enforcement and other means to eliminate dilapidated and deteriorated housing in the community. |
| 46 | 104 | 33 | 27 | E. | Gates County should provide some means to protect residential areas from the nuisance and hazards of large livestock operations. |
| 57 | 96 | 36 | 20 | F. | Existing livestock operations should be protected from the intrusion of residential subdivision development. |
| 38 | 118 | 28 | 30 | G. | The location, size, and development of mobile home parks should be controlled. |

| | | | |
|---|---|---|---|
| 60 | 71 | 33 | 45 |
| 55 | 87 | 32 | 39 |

| | | | |
|---|---|---|---|
| 59 | 199 | 26 | 29 |

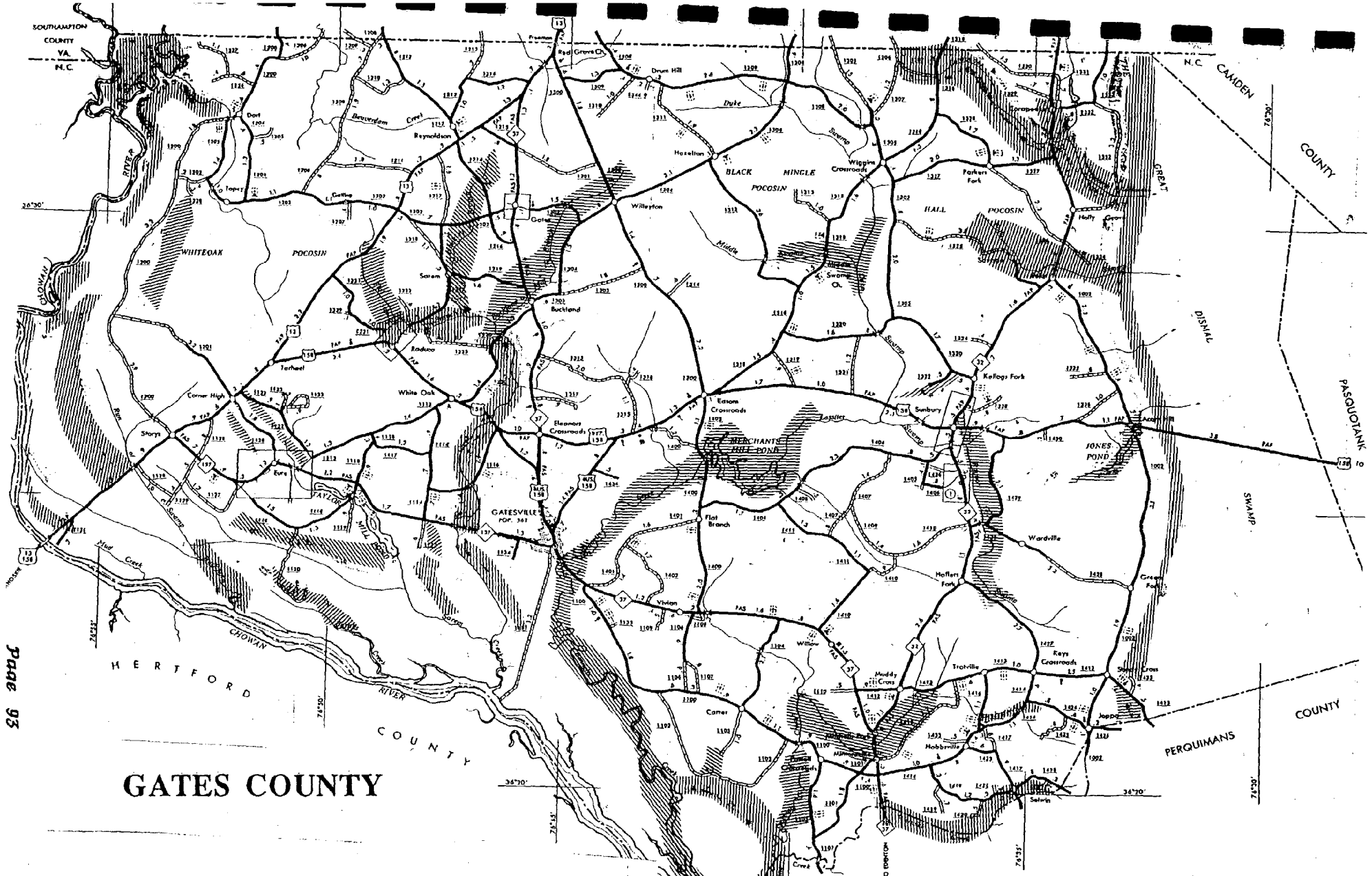
H. Gates County should adopt zoning regulations.

I. New development in the county should occur near existing populated areas such as Gatesville and Sunbury

J. New development in the county should occur anywhere along US Highways 13 and 158.

PLEASE FEEL FREE TO MAKE COMMENTS OR TO EXPRESS ANY OF YOUR CONCERNS ABOUT PERQUIMANS COUNTY.

## APPENDIX 2 Archeologically Sensitive Areas Map




# GATES COUNTY

Archeologically Sensitive Areas

The preparation of this document was financed in part throug a grant provided by the North Carolina Coastal Management Program through funds provided by the Coastal Zone Management Act of 1972 as amended, which is administered by the Office of Ocean and Coastal Resources Management, National Oceanic and Atmospheric Administration.

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