

GATES COUNTY, NORTH CAROLINA



CAMA CORE LAND USE PLAN UPDATE 2003-2004

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COMMUNITY PLANNING COLLABORATIVE, INC.

GATES COUNTY, NORTH CAROLINA
~2003-2004 CORE CAMA LAND USE PLAN UPDATE ~

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EXECUTIVE SUMMARY

- The Gates County 2003-2004 CAMA Core Land Use Plan Update (Update) seeks to help position the County to continue its proactive stance toward land use planning. This Update builds from the County's current land use plan and considered concepts from similar plans developed by neighboring and/or similar jurisdictions.
- The Update was organized according to the outline in the Coastal Area Management Act (CAMA) Technical Manual for land use planning.
- The Update has been reviewed by the State Division of Coastal Management (DCM) staff for consistency with State rules and the County has, to the best of its ability, addressed State review comments.
- The County believes the Update meets the substantive requirements of the 2002 LUP Guidelines and that there are no conflicts evident with either State or Federal law, or the State's Coastal Management Program.
- The Coastal Area Management Act of 1974 (CAMA) establishes a cooperative program between local governments and the State. Land use planning lies at the center of local government's involvement. Land Use Planning Guidelines were adopted by the State to help localities prepare local plans. Gates County's land use plan update, when reviewed and certified by the North Carolina Coastal Resources Commission (CRC), will become part of the North Carolina Coastal Management Plan for the protection, preservation, orderly development, and management of the coastal area of North Carolina.
- Land use planning is one of the ways a community looks into the future. The land use plan will look ahead to the next 10 to 20 years. It will be reviewed and updated every five years.
- Gates County, while recognized by many people as a slow paced, rural, and natural resource-rich county, is also facing growth issues as it attracts more people who chose to favor its lifestyle. With about 10,500 permanent residents, the County's peak population during the summer does not grow markedly, although day-tripper visits to the County's attractions (such as Merchants Mill Pond State Park) bring people into the County.
- The Update is one of the major tools Gates County will use to manage growth and development. The Update will help the County ensure that new development and new land uses, as well as redevelopment initiatives, are compatible with its rural atmosphere and with the desires and aspirations of its residents and property owners. The Update will help the County plan for essential services to meet the

needs of its permanent and visiting population. Moreover, the Update will help Gates County protect the essential natural resources that help define the community's life style.

- The Update will provide a solid foundation for day-to-day and long range functions. Day-to-day functions relate to the County's administration of its growth and development management ordinances and guidelines, and public understanding and use of these tools for decisions regarding their own property with respect to land use and development. For the Planning Board and Board of Commissioners, the Update will be a policy and decision guide on matters concerning land use and development in Gates County. The policies, objectives, and future land use map included in the Update will help guide the County's decisions about ordinances such as zoning (being developed) and development design guidelines (being considered). The Update will also be used as the Board of Commissioners makes decisions on the County's capital and annual operating budgets and the allocation of financial and personnel resources.
- The County's residents and property owners played a major role in the development of the Update, its goals, policies, and objectives, and the future land use map. The County, and the planning process, benefited greatly from the efforts of the Gates County Planning Board which was available for meetings on a monthly basis for over two years beginning in early 2003 through the end of 2004. All Planning Board meetings were open to the public. In addition, opportunities for citizens to participate in the planning process included: an initial public input session; a future land use planning public input session; Board of Commissioners and Planning Board meetings; and, presentations at neighborhood and civic association meetings. The County made review copies available to the public, and distributed copies to neighboring localities.
- The Update was developed in two phases. **Phase I** consists of two basic components:
 1. **Description of County concerns and aspirations and a County planning vision.** Chapters in Phase I: analyze the growth and development issues in Gates County that emerged during the citizen participation process; and, describe a planning vision for the County that provides a foundation for effective land use and development goals, policies, and objectives.
 2. **Analysis of existing and emerging trends.** Phase I chapters also: provide the technical basis for policy development with respect to trends and forecasts of population, housing, and local economy; discuss opportunities and limitations presented by the County's natural systems as well as its assets and some of the resources Gates County may use to meet its goals; and, examine existing land uses and recent trends and provides information on community facilities.

An analysis of land suitability for development synthesizes the information contained in the chapters comprising this component.

Phase II of the Update also consists of two basic components:

1. **Land use goals, policies, and objectives.** The County's land use and development goals, policies, and objectives are found in **Chapter IX Plan for the Future**. Goals, policies, and objectives for nineteen (19) issue areas evolved from the County's planning vision and provide direction for implementing the Update. The Update's issue areas include five management topics identified by the CRC (Public Access, Land Use Compatibility, Infrastructure Carrying Capacity, Natural Hazard Areas, and Water Quality). The Update's issue areas also include fourteen local areas of concern regarding development and redevelopment activities, community appearance, community infrastructure, public health and safety, transportation, solid waste management, intergovernmental relations, Chowan River Shoreline, and commercial and industrial development. The land use and development goals and policies related to these issues provide guidance on decisions, programs, initiatives, and projects to help the County implement the Update.
 2. **Tools for managing development.** This Phase II component identifies tools for managing development. It outlines Gates County's strategies and action plan for implementing the Update's policies: development and/or amendment of ordinances; implementation (or continuance) of land use and development related programs and initiatives; capital investments; and, funding resources to achieve identified goals.
- The Update includes an analysis to determine the consistency of Gates County's land use policies and the future land use map with the goals of the Coastal Area Management Act and the Coastal Resources Commission's land use management topics. The analysis concludes that there is a high level of consistency.

Chapter I: Introduction

A. This is Gates County, North Carolina

Gates County, located in northeastern North Carolina, is bounded to the east by Pasquotank and Camden Counties, to the south by Perquimans, Chowan, and Hertford Counties, to the west by Hertford County, and to the north by Suffolk, Virginia. See EXHIBIT I-A. Gatesville is Gates County's largest town and is the County seat. Gates County has a total area of 345.69 square miles, with 340.67 square miles of land area. The County's average temperature in January is 41° F and the average July temperature is 79° F. The average rainfall is 48 inches. The elevation of Gates County is 40 feet above sea level.

Gates County boasts a diverse and impressive natural environment. On the east side of Gates County, the Great Dismal Swamp is home to a variety of game and wildlife and is one of the largest nature preserves in the United States. The Chowan River flows along the County's west side. Early Native American inhabitants of the area included the Nottoway, Meherrin, and Nansemond Indians who found the area ideal. Today, along the County's swamps, pocosins, and creeks, the rich farm land is capable of producing large crops of peanuts, corn, soybeans, and cotton.

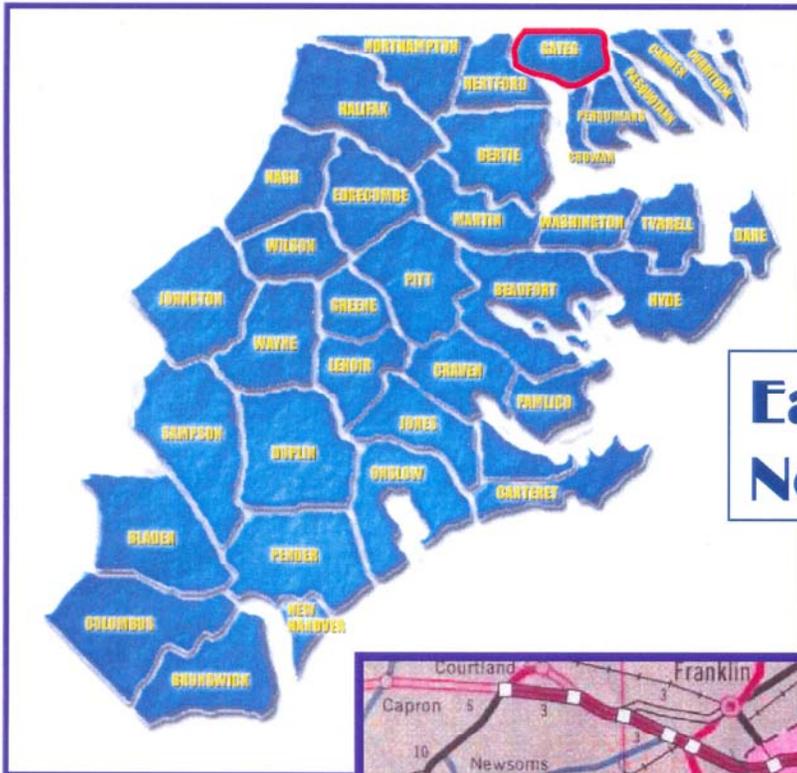
The County's population grew by 13% from 9,305 persons in 1990 to 10,516 persons in 2000. The State estimates the County's 2002 population to be 10,720 persons.

B. Purpose and Authority to Plan

The Coastal Area Management Act of 1974 (CAMA) establishes a cooperative program of coastal area management between local governments and the State. Land use planning lies at the center of local government's involvement. Subchapter 7B – Land Use Planning Guidelines of the North Carolina Administrative Code, October 1989, were promulgated for the purpose of assisting localities with the preparation of land use plans and sets forth standards for their review. Land use plans are to be updated every five years and submitted for State review.

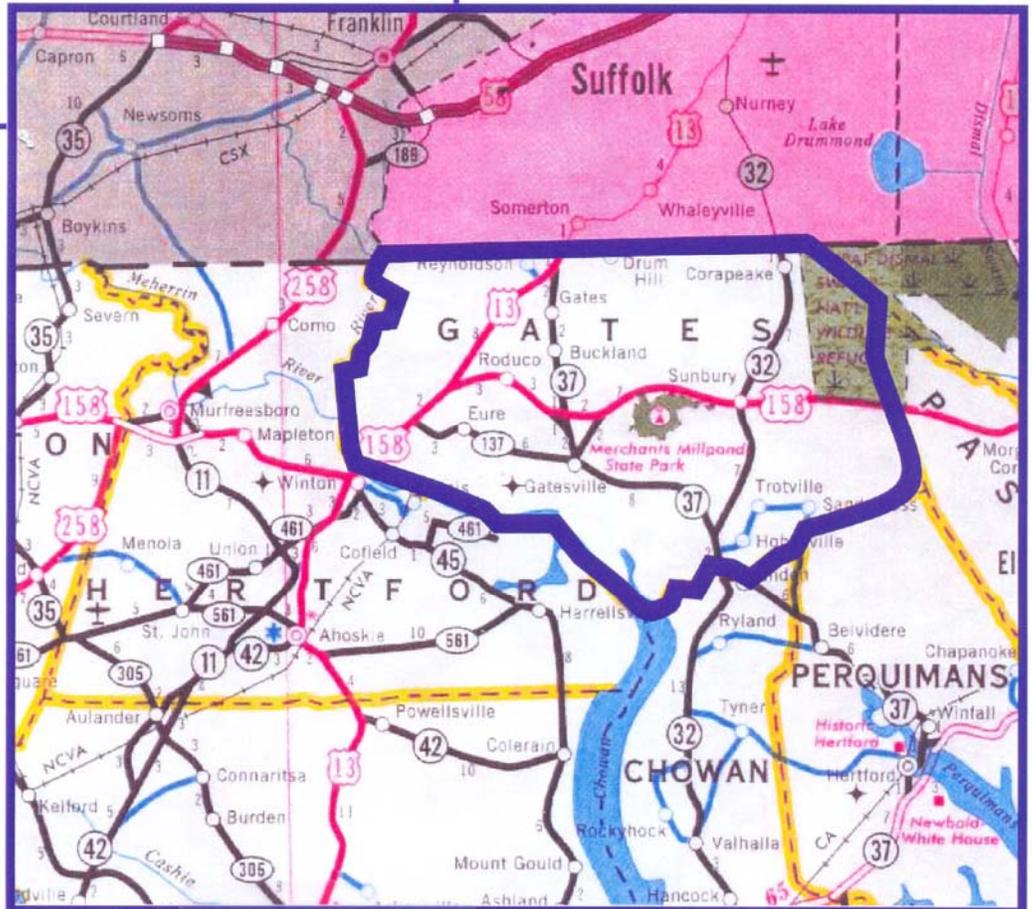
This land use plan update, when certified by the North Carolina Coastal Resources Commission (CRC), will become part of the North Carolina Coastal Management Plan for the protection, preservation, orderly development, and management of the coastal area of North Carolina.

EXHIBIT I-A GATES COUNTY, NORTH CAROLINA REGIONAL SETTING



**Eastern
North Carolina**

Gates County



Land use planning is one of the ways a community looks into the future to determine how it wants to be and what it wants to look like. The land use plan will look ahead to the next several years. One of the key elements of the plan is citizen participation. This ensures that the plan is truly designed by the community for the community. A land use plan can describe how a community desires to develop physically, economically, and socially. The plan functions much like a road map, conveying to community leaders citizens' plans and hopes for the future of the community.

C. Planning Methodology

The Gates County Planning Board served as the body responsible for guiding the CAMA land use plan update effort. The Planning Board received assistance from the Gates County planning staff and the planning consulting firm Community Planning Collaborative, Inc.

The Planning Board met on a monthly basis as needed throughout the project period on the fourth Tuesday of each month. Meetings were held at the Gates County Courthouse Building in the Board of Commissioners Meeting Room in Gatesville at 3:00 p.m. unless otherwise advertised. Meetings were open to the public and meeting times advertised in the local news media. In addition to the Planning Board's orientation meeting and the initial public information meeting, subsequent meetings of the Planning Board focused on review and discussion of information gathered and analyses made. The Planning Board reviewed draft materials prepared by the planning consultant, assists in defining land use and development issues and concerns, and provides general input. The Planning Department staff served as the local coordinators of the CAMA land use plan update project.

D. Citizen Participation and Intergovernmental Coordination

According to 15 A NCAC Subchapter 7L, local governments receiving Department of Environment and Natural Resources (DENR) funding for Coastal Area Management Act (CAMA) land use plan preparation, shall develop and implement a citizen participation plan. Local governments shall employ a variety of educational efforts and participation techniques to assure that all socioeconomic segments of the community and non-resident property owners have opportunities to participate during CAMA land use plan development. Examples are surveys or questionnaires, informational brochures or material, community outreach, and public information meetings.

At the start of the CAMA land use plan update process, the Board of Commissioners adopted a citizen participation plan to be implemented—and amended as necessary—during the update process. Interested citizens have opportunities to participate in the development of the CAMA land use plan update through oral and written comments as provided for in the citizen participation plan. Copies of informational CAMA land use plan update materials are to be provided at all

meetings of the Planning Board. The citizen participation plan is available to the public throughout the planning process. It is the intent of Gates County to involve, inform, and educate a broad cross-section of the populace. It is the intent of the County to have a continuous public participation process that achieves these purposes.

Gates County recognized the importance of providing citizens with opportunities to participate in the planning process. The County also recognized that citizen participation and citizen education must be made available on a continuing basis. During and after the CAMA land use plan update project, the County would like to educate citizens with respect to the importance of land use planning and its effect of their quality of life; listen to citizens concerning issues important to them; create opportunities to collaborate with citizens to achieve community consensus; and, create a base of citizen support for implementing the land use plan update. The County relied primarily on public meeting opportunities, informational materials, questionnaires, and the news media to solicit citizen input and participation throughout the process and to report on progress with respect to the land use plan update.

Copies of the draft land use plan update were provided for review and comments to the counties of Pasquotank, Perquimans, Chowan, Camden, and Hertford. A copy was also provided to the City of Suffolk, Virginia. No written comments were received within the specified 45-day review period, although representatives from Chowan and Perquimans counties acknowledged via telephone or e-mail receipt of the plan and complimented its content, format and thoroughness.

Chapter II: Concerns and Aspirations

This chapter provides general guidance and direction for the development of the Gates County Land Use Plan Update. Determining concerns and aspirations is one of the points where the County's citizen participation process is directly linked to the land use planning process. The citizen participation plan provides opportunities for stakeholders to express their concerns and aspirations. Assessing the County's concerns and aspirations includes the identification of existing and emerging conditions and key issues important to Gates County. Several issues--labeled by the State as management topics--must also be addressed according to CAMA guidelines.

The vision statement is also a major component of the planning process. The vision depicts in words what Gates County is striving to become and serves as the starting point for the creation (and implementation) of the land use plan update. It recognizes trends and driving forces that will affect the County during the planning period and acknowledges the concerns, opinions, and values identified by stakeholders and citizens. Vision statements blend priority issues, driving forces, citizen values, and the preferences of the County. The vision helps to guide the development of the planning information base, short-term and long-term policies, the future land use plan map, and the plan's implementation strategies. The vision also helps to describe the desired general physical appearance and form Gates County will take and forms the basis of the County's land use plan objectives.

A. Existing and Emerging Conditions

Descriptions of existing and emerging conditions follow. These broad themes and trends provided background and context for the identification of planning issues discussed later in this chapter.

Many of the issues identified in the County's 1993 Plan continue to warrant attention although some have been or are being addressed through State laws and initiatives and local actions. For example, confined animal feeding operations are regulated. The County continues to operate its own water system and relies on the State help to monitor the protection of water supply aquifers. The County has adopted amendments to its subdivision ordinance requiring a one acre minimum lot size.

Today, as in 1993, some of the central issues influencing this Update and some of the dominant growth related conditions that influence land use, development, water quality, and other environmental concerns include: the County's one-acre minimum lot size requirement; the concentration of businesses and commercial development in the Town of Gatesville, and the villages of Sunbury, Gates, Hobbsville, Corapeake, and Eure; the increasing number of mobile homes and manufactured homes as opposed to site built homes being located in the County; the general lack of industrial development in the County, spill-over development from Virginia; hazardous materials

storage facilities, public access, and the poor soil conditions in the County that make development problematic.

Gatesville is the County's only incorporated town. Some residential growth is occurring adjacent to Gatesville, and the villages, but most of the residential development is occurring in more rural areas such as Willeyton area in the northern part of the County. With the exception of the villages noted above which have mixed land uses and town-like characteristics and various crossroads, Gates County is characterized by lands devoted to open spaces, conservation, agriculture, forests, and waters bodies and streams.

1. Population Changes

The County's population grew by about 13% from 1990 to 2000. Gates County borders Suffolk, Virginia which is a part of Virginia's Hampton Roads region. The Hampton Roads region of Virginia is growing in population and there is spill over growth in localities like Gates County as many people seek the passive nature of rural areas in which to live and commute to the cities of Hampton Roads for work. Management of resources can become more complicated as more persons use facilities.

2. Housing Trends

Housing patterns and types are generally established in Gates County and the region. A vast majority (+/- 95%) of Gates County remains undeveloped. Relatively recently several new subdivision developments have been built, particularly in the Willeyton area. Several other developments have been proposed. Single family detached homes still represent the vast majority of housing found in Gates County and the region. The number of manufactured homes and modular homes continues to increase.

3. Land Development

Land development in Gates County and the region during the planning period should not exceed the capability of the land to support it. There are still vast areas that could be developed in various areas of Gates County. In the past ten years, several subdivisions have been developed in Gates County. The residential development pattern for Gates County is established but with the amount of land that remains undeveloped, redevelopment proposals in developed areas are not likely.

The County's commercial areas are also established, primarily in the Town of Gatesville and the villages of Sunbury, Corapeake, and Gates. Isolated commercial development is also found along US 158, US 13, State Route 37, and State Route 32.

4. Water Quality

In Gates County and the region, water quality protection and issues related to uses that could negatively impact water quality continue to be at the fore front. Contamination from storm water runoff and/or septic tank system problems or failures is a threat.

5. Economic Conditions

Generally, Gates County has a limited economic base consisting primarily of service type businesses geared to the needs of the County's permanent population. The County's businesses appear to be diverse, successful, and generally well maintained.

6. Natural Resource Related Industries

Gates County's natural resources feature a large portion of the Great Dismal Swamp, the Chowan River, and the Merchants Mill Pond State Park. Given the relatively unspoiled nature of Gates County, there are vast natural areas remaining which attract tourists although the amount of tourism has not seemed to create any industries related to the tourism industry. Wood products and the commercial/industrial enterprises that stem from this resource are prominent in the County. The County's largest non-government employer is a lumber company.

7. Transportation

The County has a good system of through highways including US 158, US 13, NC 32, NC 37, and NC 137. Some deterioration caused by heavy traffic, storm damage, and heavy equipment has been noted along some of the County's secondary roads.

8. Potable Water

Potable water is supplied by the Gates County water system and is--or can be made--available to all parts of the County. The County's water system is paid for and self sufficient from a funding standpoint. Wastewater is removed through septic tank systems. No plans to construct a central sewer system (collecting and treating waste at a central plant) have been developed.

9. Public Policies

Currently, Gates County is revising its subdivision ordinance and contemplating development of a county wide zoning ordinance. The County employs a professional planner to enforce land use related ordinances and regulations and relies on State and Federal agencies and programs to assist with land use management. The land use plan update process will allow the County to reassess its future land use and development patterns. This in turn may lead to zoning and perhaps the study of other

mechanisms such as design standards and the requirement of smart growth practices in development and redevelopment proposals.

10. Public Safety

Public safety issues in Gates County primarily revolve around the transportation system. Gates County benefits from the efforts of the Sheriffs Department and a system volunteer fire and rescue departments.

B. Management Topics and Issues, Problems, and Assets

CAMA guidelines require a description of land use and development related issues in terms of the Coastal Resources Commission's major management topics: **public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.** Growth and development issues identified are cognizant of these management topics. Issues identified by Gates County include:

Commercial and Industrial Development
Community Appearance
Chowan River Shoreline
Development Design Standards
Federal Properties and Programs
Growth Management
Intergovernmental Relations
Public Safety
Redevelopment
Residential Development
Septic Tank Use
Solid Waste Management
Storm Water Management
Transportation

Management topics and County issues are examined relative to problems or obstacles that may prevent the County from addressing issues. Problem statements are not intended to state or imply solutions; that comes later in the planning process. Issues are also examined relative to assets that may be available to assist Gates County. Assets are opportunities or resources (features, facilities, organizations, and programs) that can be cited by the plan to help the County address issues.

1. Commercial and Industrial Development

The issue facing the County is how (within its means) to support the placement of commercial and industrial development in areas where such activities already occur or can be reasonably accommodated by public facilities and the County's natural

systems and to encourage local support and patronage of County businesses. This issue is related to the following State management topic: land use.

Problems or obstacles that may inhibit the County from addressing this issue:

- business closures/failures;
- divergent/conflicting interests within the business community; and,
- local, regional, and/or national economic downturns.

Features, facilities, organizations, and programs that may assist the County include:

Citizens, local elected and appointed leadership, and the business community will work together to address this issue.

2. Community Appearance

The issue facing the County is how to remain aesthetically pleasing while maintaining its rural atmosphere and its open spaces and natural areas. This issue is related to the following State management topic: land use compatibility.

Problems or obstacles that may inhibit the County from addressing this issue:

- lack of development design standards;
- private initiatives that may be contrary to County goals; and,
- lack of local (County) financial and technical resources.

Features, facilities, organizations, and programs that may assist the County include:

Citizens, local elected and appointed leadership, and the development community will work together to address this issue. The County will use its police powers to ensure desirable development patterns within its borders.

3. Chowan River Shoreline

The issue facing the County is how to preserve and protect this resource and ensure future generations are able to enjoy its beauty and can continue to use it for passive and active recreation and leisure activities. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of local (County) financial and technical resources;

- magnitude of effort required to police, manage, preserve, and protect the Chowan River's shoreline and waters; and,
- degradation of the resource resulting from litter, pollution, and undesirable activities conducted on and off-shore.

Features, facilities, organizations, and programs that may assist the County include:

State and Federal agencies, programs, and regulations are the main assets available to the County to address this issue.

4. Development Design Standards

The issue facing the County is how to develop and utilize development design standards to continue and enhance its desired development character. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of local (County) technical and financial resources; and,
- private initiatives that may be contrary to County goals.

Features, facilities, organizations, and programs that may assist the County include:

Citizens, local elected and appointed leadership, and the development community will work together to address this issue. The County will develop and amend ordinances as necessary and will use its police powers to ensure desirable development in the County.

5. Federal Properties and Programs

The issue facing the County is how to ensure that Federal properties and programs are used in ways that are consistent with the County's established growth patterns and image. This issue is related to the following State management topics: land use compatibility, natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

Potential for Federal decision makers to disregard or act contrary to County goals if/when properties are being considered for land use changes or during program development and implementation.

Features, facilities, organizations, and programs that may assist the County include:

Citizens, local elected and appointed leadership, and State and Federal elected representatives will work together to address this issue.

6. Growth Management

The issue facing the County is how to promote environmentally friendly development that is sustainable, aesthetically pleasing, and consistent with the County's rural image and character. This issue is related to the following State management topics: land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of local (County) technical and financial resources; and,
- private initiatives that may be contrary to County goals.

Features, facilities, organizations, and programs that may the County include:

Citizens, elected and appointed officials, and the development community will work together to address this issue.

7. Infrastructure Carrying Capacity and Provision of Public Facilities and Services

The issue facing the County is how to ensure that public systems and services are sized, located, and managed to protect or restore the quality of areas of environmental concern or other fragile areas while providing adequate levels of service to meet the needs of citizens. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of local (County) technical and financial resources; and,
- balancing the needs of year-round (and seasonal populations) in planning for public facilities.

Features, facilities, organizations, and programs that may assist the County include:

Local elected and appointed leadership, State and Federal elected representatives, and service providers will work to address this issue.

8. Intergovernmental Relations

The issue facing the County goal is how to interact with local governments in the region and State and Federal agencies on a routine basis to promote Gates County's interests and to make others aware of its positions on local, regional, State, and Federal issues. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

State, regional, and/or Federal decision making processes that do not allow input will be the main problem or obstacle that will prevent Gates County from addressing this issue.

Features, facilities, organizations, and programs that may assist the County include:

Local elected and appointed leadership, State and Federal elected representatives and agencies, regional organizations, and membership/lobbying organizations will work together to address this issue.

9. Land Use Compatibility

The issue facing the County is how to ensure that development and use of land resources is consistent with the compatibility of the land to accommodate such development and uses. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of local (County) technical resources; and,
- private initiatives that may be contrary to County goals.

Features, facilities, organizations, and programs that may assist the County include:

Citizens, local elected and appointed leadership, and the development community will work together to address this issue. The County will use its police powers to ensure land use compatibility.

10. Natural Hazard Areas

The issue facing the County is how to conserve protective functions of wetlands, flood plains, and other coastal features. This issue is related to the following State

management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of local (County) technical and financial resources; and,
- private initiatives that may be contrary to County goals.

Features, facilities, organizations, and programs that may assist the County include:

Citizens, local elected and appointed leadership, State agencies such as the North Carolina Department of Environment and Natural Resources, Division of Coastal Management, and Federal agencies such as the U.S. Army Corps of Engineers and Environmental Protection Agency will help the County address this issue.

11. Public Access

The issue facing the County is how to maximize access to public trust waters while respecting private property rights and the character, image, and development patterns of Gates County. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of County-owned land for public access sites; and,
- lack of local (County) financial and technical resources.

Features, facilities, organizations, and programs that may assist the County include:

Citizens, local elected and appointed leadership, and the North Carolina Department of Environment and Natural Resources will work together to address this issue.

12. Public Safety

The issue facing the County is how to ensure safety of residents and visitors--on land and in water and maintain the image of Gates County as a safe, rural community. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of local (County) financial resources; and,
- increases in the seasonal population.

Features, facilities, organizations, and programs that may assist the County include:

Citizens, local elected and appointed leadership, the Gates County Sheriff's Department, and the North Carolina Highway Patrol (State Police) will work together to address this issue.

13. Redevelopment

The issue facing the County is how to monitor and consider redevelopment proposals for consistency with County development goals. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of local (County) technical resources; and,
- private development initiatives that are contrary to County goals.

Features, facilities, organizations, and programs that may be available to assist the County in addressing its goal include:

Citizens, local elected and appointed leadership, the Town of Gatesville, the villages of Corapeake, Gates, and Sunbury, and the development community will work together to address this issue. The County will use its police powers to ensure redevelopment proposals are consistent with the County's land use and development goals and the desires of the villages and town in the County.

14. Residential Development

The issue facing the County is how to ensure future development is in character with existing development, is sustainable, is aesthetically pleasing, and is consistent with the County's rural character. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of local (County) technical resources; and,

- private development initiatives that may be contrary to County goals.

Features, facilities, organizations, and programs that may assist the County include:

Citizens, local elected and appointed leadership, and the development community will work together to address this issue. The County will use its police powers to ensure residential development proposals are consistent with the County's stated land use and development goals.

15. Septic Tank Use

The issue facing the County is how to ensure that the performance of existing septic tank systems is monitored; that existing systems are properly maintained; and, that proposed systems are installed according to approved plans under the supervision of appropriate agencies. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

The County should not encounter problems or obstacles addressing this issue.

Features, facilities, organizations, and programs that may assist the County include:

The County will rely on the Gates County Health Department to assist in addressing this issue.

16. Solid Waste Management

The issue facing the County is how to ensure the efficient, economical collection and disposal of solid waste. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- increased costs; and,
- greater demand on collection and disposal systems due to increased population.

Features, facilities, organizations, and programs that may assist the County include:

The County will continue to provide solid waste collection and disposal services. The County's elected and appointed leadership will monitor the demands placed on the system to determine if and when changes are needed.

17. Storm Water Management

The issue facing the County is how to seek assistance in developing a storm water management plan and implementing (infrastructure) system improvements. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of local (County) financial and technical resources;
- extent and patterns of existing development;
- private initiatives that may be contrary to County goals; and,
- balancing private property rights and the benefits of public storm water management systems.

Features, facilities, organizations, and programs that may assist the County include:

Local elected and appointed leadership, the development community, and the North Carolina Department of Environment and Natural Resources, Division of Coastal Management will work together to address this issue.

18. Transportation

The issue facing the County is how to ensure the provision of a safe, efficient transportation system given State and local finances, topography, geography, and natural systems and surrounding land uses and development. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

The County should not encounter problems or obstacles addressing this issue.

Features, facilities, organizations, and programs that may assist the County include:

Citizens, local elected and appointed leadership, State and Federal representatives, and the North Carolina Department of Transportation will assist the County in addressing this issue.

19. Water Quality

The issue facing the County is how to maintain, protect, and restore the quality of public trust waters. This issue is related to the following State management topics: public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the County from addressing this issue include:

- lack of local (County) financial and technical resources;
- magnitude of effort required to police, manage, preserve, and protect water quality; and,
- degradation of the resource resulting from litter, pollution, and undesirable activities.

Features, facilities, organizations, and programs that may assist the County include:

State and Federal agencies, programs, and regulations are the main assets available to the County to address this issue.

C. County Vision

The vision statement has two main planning purposes. It provides a foundation for setting priorities, defining goals, and developing land use policies to achieve them. It also allows Gates County to build consensus among various stakeholders on a unified approach to its land use and development issues. Through its vision statement, Gates County describes what it wants to be and how it wants to look in the future. The Gates County vision statement: is developed using information about driving forces, priority issues, and citizen values and aspirations concerning what Gates County should look like in the future; is written in positive terms and in the present tense; includes a description of how the County will look in the future; is not be time-bound and extends beyond the horizon of the land use plan; is not lengthy, but provides for goals and policies developed as a part of the land use plan; is tailored to Gates County; and, is endorsed by the Gates County Board of Commissioners.

GATES COUNTY VISION STATEMENT

Gates County desires to remain a slow paced, rural area. The County seeks to maintain its abundant charm and beauty by protecting its forest resources, agricultural lands, and natural environment systems. It will accomplish these objectives by: balancing residential and commercial land uses; protecting and preserving view sheds; protecting and preserving the natural environment and public trust waters; promoting smart growth and prudent land use; and, discouraging over development and strip development along State maintained roads.

1. Desired General Physical Appearance and Form

The continuation of its present physical appearance and form is important-if not critical-to the County if it is to maintain its unique character among jurisdictions in the region--including those in northeastern North Carolina and the Hampton Roads area of Virginia. Development patterns are well established. Most residential development occurs along State maintained roads and most commercial development occurring in villages, the Town of Gatesville, or at crossroads in rural areas.

The proliferation of residential lots along State maintained roads can be problematic in that the construction of multiple driveways along a rural road can negatively impact and permanently transform the rural nature of an area and create traffic congestion and related problems that were not present before development occurred. Many people want to arrest this trend by encouraging or requiring subdivision development wherein properly constructed and dedicated roads are built to serve platted lots and provide access to State roads at limited points. Well engineered and sustainable development is preferred and should be promoted to achieve the County's desired general physical appearance and form. Enhanced subdivision regulations, development design standards, and county-wide zoning are tools that may help the County arrest the proliferation of strip development, improve development generally, and help achieve its desired physical appearance and form. The County must work to educate citizens and the development community with respect to its desired physical appearance and form.

2. General Land Use Plan Objectives

The land use plan should help the County: preserve its rural character; protect and preserve the natural environment; provide adequate public facilities and services; achieve support and consensus for County initiatives; promote unity in its residential and commercial communities; and, make infrastructure improvements that compliment but do not duplicate existing systems.

Chapter III: Population, Housing, and Economy

A. Population

The study of population and growth patterns in Gates County provides an essential foundation for long range planning and for planning of capital improvements. This chapter contains text and exhibits which describe the past and present nature of the Gates County's population and projections of future growth. Information presented here introduces issues which are central to the land use plan update. An understanding of these issues is necessary in order to effectively plan for the future. Land use planning must be sensitive to the changing characteristics of the population of a community. Changes in population create changing demands for housing, commercial services, and public facilities and services.

1. Permanent Population Growth Trends

From 1930 to 1970, Gates County's population declined steadily. However, since 1970, the County's population has steadily increased. The population of Gates County grew by 13 % from 9,305 persons in 1990 to 10,516 persons in 2000. The State estimates the County's population as of July 2003 to be 10,726 persons. Gates County ranks 94th (out of 100 counties) in population size in North Carolina. There are about 31.47 persons per square mile in Gates County.

These numbers are an example of the population shift occurring in some parts of the region as people move from metropolitan areas to rural areas. The Baby Boomer generation will be retiring within the next few years and the national trends are for retirees to reside in locations less urban and more rural. This will continue to make Gates County very appealing. Employment in the Hampton Roads area of Virginia has also been expanding rapidly, offering Gates County residents job opportunities within easy commuting distance.

2. Permanent and Seasonal Population Estimates

The 2003 population estimate for Gates County is 10,726 persons. The County does not experience any appreciable increase in population due to seasonal factors. Census 2000 indicates there are 72 housing units for seasonal, recreational, or occasional use. The average household size in Gates County in 2000 was about 3 persons. This average, applied to 72 seasonal housing units produces an additional 216 persons of a seasonal nature. Thus, the peak population in the County is estimated to be about 11,000 persons. Merchants Millpond State Park and the Great Dismal Swamp attract hundreds of day trip visitors to Gates County annually. While visitors to these resources and users of boat launching ramps in the County provide some economic impact at restaurants and stores, the potential impact is limited in part by the lack of overnight lodging opportunities in the County.

3. Key Population Characteristics

Census 2000 reflects that 59.1% (6,213) of Gates County residents were white and 39.2% (4,120) were black, with the remaining 1.7% (183) representing American Indian, Asian, or other races. In 1990, 54.9% of the residents of the County (5,107) were white and 45.1% (4,195) were black. In 2000, the County's population was 49.0% (5,155) male and 51.0% (5,361) female.

There were a total of 4,847 married persons 15 years or older in Gates County, according to Census 2000. EXHIBIT III-A provides a breakdown of marital status.

EXHIBIT III-A GATES COUNTY, NORTH CAROLINA MARITAL STATUS 2000

	NUMBER	PERCENT
Population 15 years and over	8,182	100.0
Never Married	1,775	21.7
Now Married, Except Separated	4,847	59.2
Separated	208	2.5
Widowed	766	9.4
Divorced	586	7.2

SOURCE: U.S. Census Bureau, Census 2000. Sample data.

There were 3,901 total households in Gates County in 2000. Of the total, 2,933 (75.2%) were family households and 968 (24.8%) were non-family households. Of the non-family households, 846 were situations wherein the householder lived alone. In 2000, the average household size in Gates County was 2.66 persons while the average family size was 3.09 persons.

In Gates County in 2000, 2,709 persons, or 25.8% of the County's total population were enrolled in schools, the majority attending elementary school (grades 1-8). See EXHIBIT III-B.

**EXHIBIT III-B
GATES COUNTY, NORTH CAROLINA
SCHOOL ENROLLMENT
(Population 3 Years and Over Enrolled in School)**

SCHOOL TYPE	NUMBER	PERCENT
Nursery School, Preschool	104	3.8
Kindergarten	152	5.6
Elementary School (Grades 1-8)	1,411	32.1
High School (Grades 9-12)	718	26.5
College or Graduate School	324	12.0
TOTAL	2,709	100%

SOURCE: U.S. Census Bureau, Census 2000. Sample data.

In 2000, over 71.4% of Gates County's population aged 25 years and over (7,095) were high school graduates or higher. Nearly 11% held a bachelor's degree or higher. See EXHIBIT III-C.

**EXHIBIT III-C
GATES COUNTY, NORTH CAROLINA
EDUCATION ATTAINMENT
(Population 25 Years and Over)**

LEVEL	NUMBER	PERCENT
Less Than 9 th Grade	742	10.5
9 th to 12 th Grade, No Diploma	1,288	18.2
High School Graduate (Includes equivalency)	2,506	35.3
Some College, No Degree	1,369	19.3
Associates Degree	447	6.3
Bachelor's Degree	585	8.2
Graduate or Professional Degree	158	2.2
TOTAL	7,095	100%

SOURCE: U.S. Census Bureau, Census 2000. Sample data.

4. Age

EXHIBIT III-D provides a breakdown of Gates County residents by age group. The median age of residents in 2000 was 38.1 years as compared to 34.2 years in 1990. This has been in keeping with both nationwide and statewide trends toward an older population. This increase in the age of the population stems from a decrease in the birth rate. Fewer children are being born; therefore, the general population grows older with each passing year. In addition, the number of older persons coming to the County is increasing.

**EXHIBIT III-D
GATES COUNTY, NORTH CAROLINA
POPULATION BY AGE 1990 AND 2000**

AGE	1990		2000	
	NUMBER	PERCENT	NUMBER	PERCENT
Under 5 years	678	7.3	605	5.8
5-9 years	684	7.4	816	7.8
10-14 years	628	6.8	907	8.6
15-19 years	640	6.9	698	6.6
20-24 years	590	6.4	423	4.0
25-34 years	1,551	16.7	1,235	11.7
35-44 years	1,260	13.5	1,826	17.4
45-54 years	999	10.7	1,388	13.2
55-59 years	367	3.9	594	5.6
60-64 years	547	5.8	510	4.8
65-74 years	862	9.3	821	7.8
75-84 years	461	4.9	519	4.9
85 years and over	38	0.4	174	1.7
TOTAL	9,305	100%	10,516	100%

SOURCE: U.S. Census Bureau, 1990 Census and Census 2000.

5. Income

The North Carolina Department of Commerce, Economic Development Information Services reports that as of the second quarter of 2001, average weekly earnings in Gates County were \$442, ranking the County 71 among 100 counties. Per capita personal income in 2000 was reported to be \$19,260, ranking the County 93 among 100 counties. The median family income (in 2002) was reported to be \$47,600, ranking the County 46 among 100 counties. In fiscal year 2000-2001, gross retail sales in Gates County totaled \$38,387,523.00, ranking the County 97 among 100 counties. Gross retail sales for January 2002 totaled \$2,552,219.00, ranking the County 96 among 100 counties.

6. Population Projections

Gates County should continue to experience moderate population growth over the next three decades. Census 2000 recorded 10,516 persons in Gates County. In 2003, the State estimated the County had grown to 10,726 persons and projects the County will have 10,960 persons by 2005. The North Carolina State Demographics section projects the County's population will grow to 11,534 by 2010, to 11,991 by 2015, to 12,547 by 2020, to 12,951 by 2025, and to 13,411 by 2030.

B. Housing Stock

Standard housing units provide, among other things, shelter, one of man's basic needs. Housing becomes a problem when man is not able to secure that housing which satisfies this need. Many groups and individuals, for a host of reasons, are confronted with a myriad of housing and housing-related problems. The most prevalent and crucial problems, and those on which the most attention is centered, are related to too many substandard dwelling units and an inadequate supply of standard units to meet the demand and needs of the general population at prices affordable by the general population.

A number of reports have indicated a correlation between the occupancy of substandard dwelling units and the occurrence of other problems (immoral and antisocial behavior, physical and mental diseases, poverty, etc). Substandard dwelling units, whether occupied or vacant, are a problem. Entire communities, those within which such units exist and those adjacent thereto, can be negatively impacted by the problems associated with the existence and occupancy of less than standard dwelling units. All levels of government should do all that is possible to insure that decent housing and suitable living environments are made accessible to all citizens.

The information and data in the following sections was taken from Demographic Profiles generated by the U.S. Census Bureau as a part of Census 2000, and from Gates County building permit records.

1. Current Housing Stock

A total number of housing units in Gates County increased from 3,696 in 1990 to 4,389 in 2000. Also, the number of occupied housing units increased from 3,352 in 1990 to 3,901 in 2000. These increases, coupled with improvements to structures with deficiencies noted in 1990 point to a general improvement in the County's housing stock.

Single-family structures continue to be the dominant housing type in North Carolina and in Gates County. Single units (detached) accounted for 63.9% (2,803 units) of the County's 4,389 total units in 2000. While single family structures are found along nearly all State routes and private drives, some traditional subdivisions have been developed.

The number of manufactured (mobile) homes in the County increased from 989 in 1990 to 1,533 in 2000. Manufactured (mobile) homes accounted for 34.9% of the County's total housing units in 2000, up from 26.8% of total housing units in 1990.

EXHIBIT III-E provides an inventory of housing units in the County in 1990 and 2000 by number of units in the structure. EXHIBIT III-F compares total housing units in 1990 and 2000 by the number of rooms.

**EXHIBIT III-E
GATES COUNTY, NORTH CAROLINA
UNITS IN STRUCTURE 1990-2000
TOTAL HOUSING UNITS**

UNITS IN STRUCTURE	1990		2000	
	NUMBER	PERCENT	NUMBER	PERCENT
1 Unit, Detached	2,610	70.6	2,803	63.0
1 Unit, Attached	16	0.4	6	0.1
2 Units	2	--	8	0.2
3 or 4 Units	--	--	13	0.3
5 to 9 Units	12	0.3	12	0.3
10 to 19 Units	--	--	--	--
20 or More Units	--	--	--	--
Manufactured Homes	989	26.8	1,533	34.9
Boat, RV, Van, Etc.	67	1.8	14	0.3
TOTAL	3,696	100%	4,389	100%

-- Represents zero or rounds to zero.

SOURCE: 1990 Census and Census 2000. Census 2000 data based on a sample.

**EXHIBIT III-F
GATES COUNTY, NORTH CAROLINA
ROOMS PER HOUSING UNIT 1990 AND 2000**

ROOMS	1990		2000	
	NUMBER	PERCENT	NUMBER	PERCENT
1	9	0.2	2	--
2	51	1.4	52	1.2
3	123	3.3	145	3.3
4	758	20.5	560	12.8
5	965	26.1	1,213	27.6
6	765	20.7	1,120	25.5
7	550	14.9	616	14.0
8	281	7.6	416	9.5
9 or more	194	5.2	265	6.0
TOTAL	3,696	100.0%	4,389	100.0%

SOURCE: 1990 Census and Census 2000.

There are a number of variables which can indicate that a dwelling unit is substandard. It is common practice to use "lacking complete plumbing facilities" to approximate the number of substandard units. The potential fallacy of this method relates to the fact that a unit may have all plumbing facilities but still be substandard. The problem with this method would appear to be potentially more acute in a rural area such as Gates County, in which such a larger percentage of the houses are not served by public water and sewer facilities.

Many factors enter into one's housing experience or the conditions encountered in the housing unit. Among these are the availability of plumbing, appliances, communications, means of mobility, and spatial comfort and shelter.

Of the County's 3,901 occupied housing units in 2000, 72 (1.8%) lacked complete plumbing facilities while 48 (1.2%) lacked complete kitchen facilities. Two hundred nineteen (219) (5.6%) did not have telephone service in 2000. Only 351 (9.0%) did not have a vehicle available at the unit.

Most occupied housing units in 2000 relied on electricity for heating fuel (climate control) as shown on EXHIBIT III-G.

**EXHIBIT III-G
 GATES COUNTY, NORTH CAROLINA
 HOUSE HEATING FUEL – OCCUPIED
 HOUSING UNITS 2000**

HOUSE HEATING FUEL	NUMBER	PERCENT
Utility gas	57	1.5
Bottled, tank, or LP gas	1,250	32.0
Electricity	1,588	40.7
Fuel oil, kerosene, etc.	728	18.7
Coal or coke	--	--
Wood	255	6.5
Solar energy	--	--
Other fuel	11	0.3
No fuel used	12	0.3
TOTAL	3,901	100%

-- Represents zero or rounds to zero.

SOURCE: Census 2000. Date based on a sample.

In 2000, only 488 units (11.1%) of the County's 4,389 total housing units were classified vacant, while 3,901 (88.9%) were occupied. Seventy-two of the vacant units were for seasonal, recreational, or occasional use.

In 2000, owners occupied 3,202 (82.1%) of Gates County's occupied structures (3,901) while renters occupied 699 (17.9%) of the occupied structures.

In 2000, 3,766 (96.5%) of occupied housing units had one or less occupant per room. Only 14 units had over 1.5 occupants per room.

Over 44% (1,937) of the total housing units (4,389) recorded in Gates County have been built since 1980. EXHIBIT III-H displays the eras housing units were built.

**EXHIBIT III-H
GATES COUNTY, NORTH CAROLINA
AGE OF HOUSING UNITS – YEAR STRUCTURE BUILT**

YEAR STRUCTURE BUILT	NUMBER	PERCENT
1999 to March 2000	139	3.2
1995 to 1998	536	12.2
1990 to 1994	433	9.9
1980 to 1989	829	18.9
1970 to 1979	711	16.2
1960 to 1969	433	9.9
1940 to 1959	749	17.1
1939 or earlier	559	12.7
TOTAL HOUSING UNITS	4,389	100.0%

SOURCE: Census 2000.

2. Building Permits Activity

EXHIBIT III-I provides a breakdown of the types and number of building permits issued by Gates County since 1997 when detailed records started to be kept. These figures show the dominance of permits for manufactured homes occurring in Gates County.

**EXHIBIT III-I
GATES COUNTY, NORTH CAROLINA
BUILDING PERMIT ACTIVITY
1997-2003**

TYPE OF STRUCTURE	YEAR PERMIT ISSUED						
	1997	1998	1999	2000	2001	2002	2003
Site Built Residential	14	22	26	24	18	19	18
Commercial	2	1	0	3	0	0	7
Industrial	0	2	0	0	0	2	1
Institutional	0	0	0	1	0	0	3
Manufactured Homes	152	139	111	111	113	123	115
Modular Homes	4	5	4	5	4	3	9
TOTAL	172	169	141	144	135	147	153

SOURCE: Gates County Building Inspection Department, 2004.

C. Economy

In Gates County, commercial and industrial service type development is clustered in the County's villages and in and around the Town of Gatesville. Also, there are retail establishments, auto service centers (and junk yards), and personal services type establishments located throughout the County, primarily at crossroads areas.

In 2003, the County's annual unemployment rate was 2.9%. In February 2004, the unemployment rate was 3.1%. In February 2004, 40.3% of the County's population was in the workforce, most of which commuted out of the County to work. Data provided by the State in 2004 indicates there were 4,231 Gates County residents employed in the County or elsewhere. This represents 41.1% of the County's 2000 population of 10,516 people. Of the 4,321 people employed, 1,481 people (34.3%) lived and worked in Gates County while 1,591 people (36.8%) lived in Gates County but worked in the cities and counties comprising the Hampton Roads area of Virginia. The availability of employment opportunities in Virginia will likely help continue this trend. Downturns in the Hampton Roads regional economy and or the creation of more commercial and industrial jobs opportunities in Gates County could reverse or slow the trend of out-migrating workers. Of the 1,591 people going to Hampton Roads to work in 2000, over one-third (31.6%) traveled to Suffolk, Virginia to work in service and manufacturing establishments.

EXHIBIT III-J breaks down the County's workforce by industry in mid-2003. A total of 1,559 people were reported as being employed. Government jobs accounted for 40.5 % of the County's employed persons, followed by service jobs (19.1%), manufacturing (11.2%) and retail trade (10.8%). Compared to the 632 people (40.5%) employed by government, 927 people (59.5%) were employed in private industry.

EXHIBIT III-K lists the County's largest private employers, their locations, staff, and year established.

**EXHIBIT III-J
GATES COUNTY, NORTH CAROLINA
WORKFORCE BY TYPE OF INDUSTRY (3rd QUARTER, 2003)**

TYPE OF INDUSTRY	WORKFORCE	
	NUMBER	PERCENT
Agriculture	138	8.9
Construction	5	0.3
Finance/Insurance/Real Estate	36	2.3
Government	632	40.5
Manufacturing	175	11.2
Retail Trade	168	10.8
Wholesale Trade	48	3.1
Service	298	19.1
Transportation/Communication/Public Utilities	59	3.8
*TOTAL WORKFORCE	1,559	100.0%

*Mining is excluded because of its very small share of employment in NC and for confidentiality reasons.

SOURCE: North Carolina Department of Commerce, Economic Development Information System (EDIS).

**EXHIBIT III-K
GATES COUNTY, NORTH CAROLINA
PRIVATE EMPLOYERS**

Lewis, Ashton Lumber Co	Gatesville	80	1968
Hofler, HS & Sons Lumber Co	Sunbury	34	1962
Gates Custom Milling Inc	Gatesville	29	1981
Dalure Fashions	Gatesville	20	1981
Bundy Logging Co Inc	Gatesville	20	1971
Dawson Brothers Inc	Gatesville	14	1970
Lewis Logging Inc	Gatesville	8	1985
Gates County Index	Gatesville	3	n/a
Rainbow Screen Printing	Sunbury	1	1982

SOURCE: North Carolina Department of Commerce, Economic Development Information System (EDIS), 4-7-03.

Chapter IV: Natural Systems

The analysis of natural systems is intended to describe and analyze the natural features and environmental conditions in Gates County and to assess their capabilities and limitations for development. In the context of land use planning, environmental conditions describe the physical state of the County's environment and fitness for development. Three specific dimensions are addressed: water quality, natural hazards, and natural resources. Capabilities and limitations are similar terms that may represent opposite sides of the same coin. Environmental capability is the capacity of land with a particular natural feature to accommodate a specified type or intensity of development. Similarly, an environmental limitation is a natural feature or group of features that places restraints on a specified type or intensity of development.

This chapter contains a three part analysis of the County's natural features in order to assess conditions, capabilities, and limitations. Section A is an assessment of natural features present in Gates County and interpretations of the capabilities or limitations that the features identified have for development. Section B builds from the interpretation of the capabilities and limitations of each natural feature category. Based on interpretation of their relative capabilities and limitations, natural features are combined into three categories (classes) on a single map (EXHIBIT IV-C Composite Environmental Conditions Map). Section C assesses environmental conditions in Gates County relative to water quality, natural hazards, and natural resources.

A. Natural Features

Data files used to generate various natural features maps were provided by the State at the outset of the land use planning process. For Gates County, natural features include: areas of environmental concern and environmentally fragile areas; soil characteristics; flood and natural hazard areas; storm surge areas; and non-coastal wetlands and probable 404 wetlands.

1. Areas of Environmental Concern (AEC) and Environmentally Fragile Areas

One of the basic purposes of North Carolina's Coastal Area Management Act (CAMA) is to establish a State management plan that is capable of rational and coordinated management of coastal resources. The act recognizes that the key to more effective protection and use of the land and water resources of the coast is the development of a coordinated approach to resource management. The Coastal Area Management Act provides two principal mechanisms to accomplish this purpose. First, the formulation of local land use plans and, and second, the designation of Areas of Environmental Concern (AEC) for the protection of areas of statewide concern within the coastal area. AEC are grouped into four broad categories. These are: estuarine and ocean systems, ocean hazard areas, natural and cultural resource areas, and public water supplies.

Included within the estuarine and ocean system are the following AEC categories: estuarine waters, coastal wetlands, public trust areas, and estuarine and public trust shorelines. Each of the AEC is either geographically within the estuary or, because of its location and nature, may significantly affect the estuarine and ocean system. In Gates County estuarine waters and estuarine and public trust shorelines are AEC under State permitting jurisdiction.

Of greatest concern are the Chowan River, its shoreline, and the deep wooded swamps and wetlands that border the river. Except for public trust waters, the Chowan River is the only estuarine body of water located in Gates County and the Chowan River and its attendant wetlands and shores represent all the AEC in the County.

The next broad grouping is composed of those AEC that are considered natural hazard areas along the Atlantic Ocean shoreline where, because of their special vulnerability to erosion or other adverse effects of sand, wind, and water, uncontrolled or incompatible development could unreasonably endanger life or property. Ocean hazard areas include beaches, frontal dunes, inlet lands, and other areas in which geologic, vegetative and soil conditions indicate a substantial possibility of excessive erosion or flood damage. The ocean hazard system of AEC includes the following areas: ocean erodible areas, high hazard flood areas, inlet hazard areas, and unvegetated beach areas. Gates County is not impacted by this AEC.

The third broad grouping of AEC includes valuable small surface water supply watersheds and public water supply well fields. Public water supplies as a broad category include two AEC: small surface water supply watersheds and public water supply well fields. Gates County is not impacted by this AEC.

The fourth and final group of AEC is gathered under the heading of fragile coastal natural and cultural resource areas and is defined as areas containing environmental, natural or cultural resources of more than local significance in which uncontrolled or incompatible development could result in major or irreversible damage to natural systems or cultural resources, scientific, educational, or associative values, or aesthetic qualities. AEC within the fragile coastal natural and cultural resource category include coastal complex natural areas that sustain remnant species, unique coastal geologic formations, significant coastal architectural resources, and significant coastal historic architectural resources. Other fragile areas AEC in Gates County are the Great Dismal Swamp and Merchants Millpond.

2. Soil Characteristics

The soils in Gates County belong to nine general soil map units. These are:

- Bladen-Craven-Lenoir;
- Icaria-Tomahawk-Valhalla;
- Goldsboro-Noboco-Bonneau;

- Rains-Pantego;
- Pungo-Belhaven;
- Alaga-Pactolus-Leon;
- Conetoe-Altavista-State;
- Cape Fear-Roanoke-Tomotley; and
- Dorovan-Nawney-Chowan.

The Bladen-Craven-Lenoir general soil unit contains nearly level to strongly sloping, poorly drained to moderately well drained soils that have a loamy surface layer and a clayey subsoil; on uplands. The major soils in this map unit are on broad flats and in depressions and on smooth to slightly rounded ridges and side slopes along drainage ways. Most areas of this map unit are throughout the County.

This unit makes up 36 percent of the County. It is 61 percent Bladen soils, 22 percent Craven soils, 8 percent Lenoir soils, and 9 percent soils of minor extent. The minor soils include Rains, Exum, Goldsboro, Ballahack, Bonneau, Chowan, Icaria, Nawney, Noboco, Winton, and Lynchburg soils.

The Craven and Lenoir soils are used mainly as cropland. The Bladen soils are used mainly as woodland. Wetness is the main limitation affecting agricultural uses. Erosion is a hazard in some areas of the Craven soils. Wetness is the main limitation affecting woodland management in areas of the Craven and Lenoir soils. Erosion is a hazard in some areas of the Craven soils. Wetness and the seedling mortality rate are management concerns in areas of the Bladen soils. Wetness, low strength, and slow permeability are the main limitations affecting most urban and recreational uses. Erosion is a hazard in some areas of the Craven soils.

The Icaria-Tomahawk-Valhalla general soil unit contains nearly level and gently sloping, well drained to very poorly drained soils that have a loamy or sandy surface layer and a loamy subsoil; on the Suffolk Scarp. The soils in this unit are in depressions and on flats and smooth to slightly rounded ridges along the Suffolk Scarp.

This unit makes up 3 percent of the County. It is 52 percent Icaria soils, 30 percent Tomahawk soils, 16 percent Valhalla soils, and 2 percent soils of minor extent. The minor soils are dominantly Leon soils.

The major soils in this unit are used mainly as cropland and to a lesser extent as pasture or woodland. Droughtiness, soil blowing, and the leaching of plant nutrients are limitations affecting agricultural uses in areas of the Valhalla soils. The main limitation in areas of the Tomahawk and Icaria soils is wetness.

Low available water capacity is the main limitation affecting woodland management in areas of the Valhalla soils. The main limitation in areas of the Tomahawk and Icaria

soils is wetness. The main limitations affecting urban and recreational uses in areas of the Valhalla soils are soil blowing and droughtiness.

The Goldsboro-Noboco-Bonneau general soil unit contains nearly level and gently sloping, well drained and moderately well drained soils that have a loamy or sandy surface layer and a loamy subsoil; on uplands. The major soils in this unit are on broad ridges and side slopes adjacent to terraces and flood plains. The soils are throughout the County.

This unit makes up 15 percent of the County. It is 49 percent Goldsboro soils, 18 percent Noboco soils, 10 percent Bonneau soils, and 23 percent soils of minor extent. The minor soils include Exum, Craven, Ballahack, Bladen, Chowan, Lenoir, Nawney, Pantego, Rains, Winton, and Lynchburg soils.

The major soils in this unit are used mainly as cropland. In a few areas they are used as pasture or woodland. The Noboco soils have few limitations affecting agricultural uses, though erosion is a hazard in some areas. The Goldsboro soils are limited by wetness. The Bonneau soils are limited by droughtiness, soil blowing, and the leaching of plant nutrients.

The Noboco soils have few limitations affecting most urban and recreational uses, though in some areas they are limited by the hazard of erosion. The Goldsboro soils are limited by wetness. The Bonneau soils are limited by the sandy surface layer. The Noboco and Bonneau soils have few limitations affecting woodland management, but some areas of the Noboco soils are limited by the hazard of erosion. The Bonneau soils are limited by the sandy surface layer.

The Rains-Pantego general soil unit contains nearly level, poorly drained and very poorly drained, loamy soils; on broad upland flats. The soils in this unit are on broad upland flats and in depressions.

This unit makes up 9 percent of the County. It is 57 percent Rains soils, 32 percent Pantego soils, and 11 percent soils of minor extent. The minor soils include Lynchburg and Bladen soils.

The Rains soils are used mainly as cropland. The Pantego soils are used mainly as woodland. Wetness is the main limitation affecting agricultural, woodland, and urban and recreational uses.

The Pungo-Belhaven general soil unit contains nearly level, very poorly drained soils that are deep muck or have a muck surface layer and loamy underlying mineral soil; on broad flats. This unit is dominantly on broad flats in the eastern part of the County in the Great Dismal Swamp.

This unit makes up 8 percent of the County. It is 74 percent Pungo soils, 25 percent Belhaven soils, and 1 percent soils of minor extent. The minor soils include Cape Fear soils.

The major soils in this unit are used almost exclusively as woodland and wildlife habitat. Wetness, low strength, and the content of logs, stumps, and roots are the main limitations affecting use and management. The main limitations affecting agricultural use are wetness and the high percentage of logs, stumps, and roots in the organic layers. The main limitations affecting urban and recreational uses are wetness, excess humus, seepage, and low strength.

The Alaga-Pactolus-Leon general soil unit contains nearly level and gently sloping, somewhat excessively drained to poorly drained, sandy soils; on river and stream terraces. The major soils in this unit are terraces along the Chowan River and its tributaries.

This map unit makes up 8 percent of the County. It is 43 percent Alaga soils, 25 percent Pactolus soils, 8 percent Leon soils, and 24 percent soils of minor extent. The minor soils include Altavista, Conetoe, Dorovan, Icaria, Nawney, and Ballahack soils.

The major soils in this unit are used mainly as woodland. In a few areas they are used as cropland or pasture. The main limitations affecting agricultural and woodland uses in areas of the Alaga soils are low available water capacity and soil blowing. The Pactolus and Leon soils are limited by wetness and soil blowing during dry periods. The major limitations affecting urban and recreational uses in areas of the Alaga soils are seepage, soil blowing, and droughtiness. The Pactolus and Leon soils are limited by wetness and seepage.

The Conetoe-Altavista-State general soil unit contains nearly level and gently sloping, well drained and moderately well drained soils that have a sandy or loamy surface layer and a loamy subsoil; on river and stream terraces. The soils in this unit are on ridges and flats along streams that flow into the Chowan River. This unit is mainly in the southwestern part of the County.

This unit makes up 5 percent of the County. It is 47 percent Conetoe soils, 24 percent Altavista soils, 9 percent State soils, and 20 percent soils of minor extent. The minor soils include Alaga, Dorovan, Icaria, Nawney, Pactolus, Roanoke, Tomahawk, and Tomotley soils. The soils in this unit are used mainly as cropland and to a lesser extent as pasture or woodland. The Conetoe soils are limited for agricultural uses by droughtiness, soil blowing, and the leaching of plant nutrients. The Altavista soils are limited by wetness. The State soils have no major limitations, though in some areas they are limited by the hazard of erosion. The main limitation affecting woodland management in areas of the Conetoe soils is the low available water capacity. The Altavista soils are limited by wetness. The State soils have no major limitations affecting woodland management, though in some areas they are limited by the hazard

of erosion. The Conetoe and State soils have no major limitations affecting urban and recreational uses. In some areas, the State soils are limited by the hazard of erosion. The Altavista soils are limited by wetness.

The Cape Fear-Roanoke-Tomotley general soil unit contains nearly level, poorly drained and very poorly drained soils that have a loamy surface layer and a loamy or clayey subsoil; on broad, flat terraces. The soils in this map unit are on broad flats and in depressions on river and stream terraces and at the base of the Suffolk Scarp.

This map unit makes up 3 percent of the County. It is 40 percent Cape Fear soils, 35 percent Roanoke soils, 18 percent Tomotley soils, and 7 percent soils of minor extent. The minor soils include Belhaven soils.

The soils in this unit are used mainly as woodland and to a lesser extent as cropland or pasture. Wetness is the main limitation affecting these uses. The main limitations affecting most urban and recreational uses in areas of the Roanoke and Cape Fear soils are wetness and slow permeability. The main limitation in areas of the Tomotley soils is wetness.

The Dorovan-Nawney-Chowan general soil unit contains nearly level, very poorly drained and poorly drained soils that are mucky or loamy throughout or are loamy in the upper part and underlain by mucky material; on flood plains. The major soils in this unit are on flood plains throughout the County.

This unit makes up 13 percent of the County. It is 61 percent Dorovan soils, 23 percent Nawney soils, 10 percent Chowan soils, and 6 percent soils of minor extent. The minor soils include Ballahack and Pungo soils.

The major soils are used almost exclusively as woodland. The main management concerns affecting agricultural, woodland, and urban and recreational uses are wetness and flooding. EXHIBIT IV-A examines the County's general soil units with respect to their erosion hazard and suitability for septic tank absorption fields.

**EXHIBIT IV-A
GATES COUNTY, NORTH CAROLINA
GENERAL SOIL UNITS~
EROSION HAZARD AND SUITABILITY FOR
SEPTIC TANK ABSORPTION FIELDS**

Well drained to very poorly drained soils on uplands:

	<u>Erosion Hazard</u>	<u>Septic Tank Absorption Fields</u>
1) Bladen-	Slight	Severe (wetness, percs slowly)
Craven-	Slight	Severe (wetness, percs slowly)
Lenoir	Slight	Severe (wetness, percs slowly)
2) Icaria-	Slight	Severe (wetness)
Tomahawk-	Slight	Severe (wetness)
Valhalla	Slight	Severe (poor filter)
3) Goldsboro-	Slight	Severe (wetness)
Noboco-	Slight	Severe (wetness)
Bonneau	Slight	Severe (wetness)
4) Rains-	Slight	Severe (wetness)
Pantego	Slight	Severe (wetness)

Somewhat excessively drained to very poorly drained soils on the Chowan River Terrace and the Pamlico Surface:

	<u>Erosion Hazard</u>	<u>Septic Tank Absorption Fields</u>
5) Pungo-	Slight	Severe (subsides, wetness, percs slowly)
Belhaven-	Slight	Severe (wetness, percs slowly)
6) Alaga	Slight	Severe (poor filter)
Pactolus-	Slight	Severe (wetness, poor filter)
Leon	Slight	Severe (wetness, poor filter)
7) Conetoe-	Slight	Slight
Altavista-	Slight	Severe (wetness)
State	Slight	Moderate (wetness, percs slowly)
8) Cape Fear-	Slight	Severe (wetness, percs slowly)
Roanoke-	Slight	Severe (wetness, percs slowly)
Tomotley	Slight	Severe (wetness percs slowly)

Poorly drained and very poorly drained soils on flood plains:

	<u>Erosion Hazard</u>	<u>Septic Tank Absorption Fields</u>
9) Dorovan-	Slight	Severe (subsides, flooding)
Nawney-	Slight	Severe (flooding, wetness)
Chowan	Slight	Severe (flooding, wetness, percs slowly)

Sound land planning and development, special site planning and current technology, can address some of the concerns associated with soil limitations. The Gates County Health Department determines if soils will permit the use of septic tank systems on a case by case basis.

3. Flood and Other Natural Hazard Areas

Flood hazard areas are found along Gates County's Chowan River shoreline and its tributaries. Development in these areas is subject to flood plain regulations.

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.

4. Storm Surge Areas

Storm surge areas extend along the entire length of Gates County's Chowan River shoreline. In some areas, a fast hurricane storm surge would inundate vast portions of southwestern Gates County, as far north as Gatesville.

5. Non-Coastal Wetlands and Probable 404 Wetlands

There are no coastal wetlands in Gates County. The Chowan River is designated as joint waters from below the Chowan River Bridge, Edenhouse to the North Carolina/Virginia line. All wetlands and swamps in Gates County are inland swamps. Non-coastal wetlands are found in various areas of Gates County, primarily in western Gates County and near Merchants Millpond. NC Coastal Wetland Significance areas are found throughout the County, with vast areas along the Chowan River and the Great Dismal Swamp. The areas along the Chowan River include Bryant's Swamp (State-owned), the State boat landing area along US 13, and Nature Conservancy property.

Swamps and marsh lands comprise approximately 40% of the County's total land acreage. Most notable are (a portion of) the Chowan Swamp State Natural Area and the Chowan Swamp Gameland. 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 NC Division of Water Quality. 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.

B. Natural Systems and Development Compatibility

To analyze development capabilities and limitations, the County profiled the features of its natural systems. The purpose of such a profile is to show the fit between natural features and the land uses and development activities associated with community development. The following questions helped construct the profile:

- Does the natural feature perform a function that is vital for environmental health and the quality of life of Gates County residents?
- Does the feature constitute a consequential threat to people or property if development is located there?
- Does the feature provide a scenic amenity that is valued by the County and that should be considered in the development of land use policies?
- Does the area contain rare outstanding elements of natural diversity of the County or the State that merit special consideration as land use and development decisions are made?
- Do the characteristics of the feature materially limit the type or intensity of development that can take place without unacceptable environmental costs or significant investment in public facilities?

EXHIBIT IV-B lists the natural features and uses numbers to indicate their degree of development compatibility. Development includes all of the land use activities that are generally considered to be urban development: higher density residential, commercial and industrial uses, and availability of basic services.

**EXHIBIT IV-B
GATES COUNTY, NORTH CAROLINA
INTERPRETATION OF NATURAL FEATURES
DEVELOPMENT COMPATABILITY**

NATURAL FEATURES	COMPATIBILITY FOR HIGH INTENSITY (URBAN-TYPE) DEVELOPMENT
AEC: Estuarine waters	(2)
AEC: Estuarine shoreline	(2)
AEC: Public trust areas, protected lands, and managed areas	(3)
AEC: High hazard flood area	(2)
Land within 500 feet of historic site or Archeological area	(2)
SOILS: Slight septic limitations	(1)
SOILS: Moderate to severe septic limitations	(2)
SOILS: Slight erosion hazards	(1)
SOILS: Moderate to severe erosion hazards	(2)
NON-COASTAL WETLANDS (NC-CREWS)	(3)
HAZARDS: Within 100-year flood	(3)
HAZARDS: Within storm surge area	(3)
WATER QUALITY: Watersheds	(2)

(1) Generally
Compatible

(2) Less
Compatible

(3) Least
Compatible

C. Environmental Conditions Composite

Based on the County's interpretation of the capabilities and limitations of identified natural features, land in Gates County has been generally classified into three categories. Class I is land that contains only minimal hazards and limitations that can be addressed by commonly accepted land planning and development practices. With sound land use planning and development practices, Class I land may generally support the more intensive types of land use and development. Class II is land that has hazards and limitations for development that can be addressed by restrictions on land uses, special site planning, or the provision of public services, such as water and sewer. Land in this class will generally support only the less intensive uses, such as low-density residential, without significant investment in services. Class III is land that

has serious hazards and limitations. Land in this class will generally support very low-intensity uses such as conservation and open space.

The features that are included in each class are described in EXHIBIT IV-C Composite Natural Features Analysis. Classifications are not intended to prohibit or regulate land use and development. They serve to present a picture of natural systems' capabilities and constraints with respect to land use and development.

**EXHIBIT IV-C
 GATES COUNTY, NORTH CAROLINA
 COMPOSITE NATURAL FEATURES ANALYSIS**

CLASSIFICATION	MAPPING SYMBOL	NATURAL SYSTEM OPPORTUNITIES AND CONSTRAINTS
Class I – land containing only minimal hazards and having only slight limitations that may be addressed by sound land planning and development practices	I	Soils with slight limitations for septic tanks. Soils with slight erosion hazards. Non-wetland area or wetland rated beneficial and not high potential risk. Land located outside 100-year flood hazard area. Land located outside storm surge area (slow moving storm).
Class II – land containing development hazards and limitations that may be addressed by methods such as restrictions on types of land uses, special site planning, or provision of public services	II	High hazard flood area Soils with moderate to severe limitations for septic tanks. Soils with moderate to severe erosion hazards. Non-coastal wetlands rated as beneficial and high potential risk or substantial significance. Land located within a 100-year flood hazard area. Land located within a storm surge area (slow moving storm), water supply watersheds
Class III – land containing serious hazards for development of lands where the impacts of development would cause serious damage to the values of natural systems	III	Estuarine waters Public trust areas Conservation, managed, and protected areas, State facilities, Federally managed areas, Flood plains Non-coastal wetlands rated as substantial significance with high potential risk or exceptional significance with or without high potential risk.

EXHIBIT IV-D Composite Environmental Conditions Map shows the general locations of land classifications based on the composite natural features analysis. Based on the analysis, no Class I lands have been mapped, primarily due to the soils' limitations for

septic tanks. State guidelines allow flexibility in the land features included in each class. The classifications may be adjusted to designate Class I lands. Class II lands, though possessing limitations for septic tank absorption systems, are located out of storm surge areas and flood hazard areas and do not include any non-wetland or wetland areas rated as beneficial. Although most of the soils in Gates County, as reported in the Gates County Soils Study, are rated moderate or severe for septic tank absorption systems, sound land use planning and development, special site planning and development and current technology can address some of the concerns associated with soils' limitations. Class III lands are generally those found in storm surge areas, flood hazard areas, non-coastal wetlands, public trust areas, protected lands, and managed areas.

D. Environmental Conditions Assessment

As explained earlier, classifications are not intended to prohibit or regulate land use and development. They serve to present a picture of natural systems capabilities and constraints with respect to land use and development. CAMA land use planning guidelines also require an assessment of three categories of environmental conditions or features: water quality, natural hazards, and natural resources. This information will be the basis for developing goals and policies to maintain and restore water quality, reduce vulnerability to natural hazards, and protect valuable natural resources.

1. Water Quality

a. Surface Water Quality

Basinwide water quality planning is a nonregulatory watershed-based approach to restoring and protecting the quality of North Carolina's surface waters. Basinwide water quality plans are prepared by the NC Division of Water Quality (DWQ) for each of the seventeen major river basins in the state. Each basinwide plan is revised at five-year intervals. While these plans are prepared by the DWQ, their implementation and the protection of water quality entails the coordinated efforts of many agencies, local governments, and stakeholders in the State. Gates County lies within portions of two river basins. These are the Pasquotank River basin and the Chowan River basin.

The Basin Wide Water Quality Plan for the Pasquotank River Basin was completed in 1997 and updated in 2002. According to the Division of Water Quality's 2002 Pasquotank River Basinwide Water Quality Plan, the Pasquotank River basin encompasses 3,635 square miles of low-lying lands and vast open waters, including Albemarle Sound, in the state's northeast outer coastal plain. The basin includes all or portions of Camden, Chowan, Currituck, Dare, Gates, Hyde, Pasquotank, Perquimans, Tyrrell and Washington counties. The basin also contains numerous small watersheds that drain into Albemarle, Currituck, Croatan, Roanoke and Pamlico Sounds.

The Pasquotank River basin is part of the Albemarle-Pamlico Estuarine system, the second largest estuarine system in the United States. In 1987, this estuarine system became part of the Environmental Protection Agency Estuary Program and was the subject of a major study known as the Albemarle-Pamlico Estuarine Study.

Parts of Gates County lie within two subbasins of the Pasquotank River. Subbasin 03-01-50 is 454 square miles and contains a population density of 80 persons per square mile. Subbasin 03-01-52 is 541 square miles and contains a population density of 46 persons per square mile.

Subbasin 03-01-50 consists of the Pasquotank River and its tributaries in Camden, Pasquotank and Gates counties. The headwaters of the Pasquotank River include freshwater in the Great Dismal Swamp. Southward, a significant portion of the waters in this subbasin is brackish estuarine, including Albemarle Sound and the Pasquotank River below Elizabeth City. This subbasin includes the Great Dismal Swamp Wildlife Refuge and portions of the Great Marsh. In addition, the subbasin has Significant Natural Heritage Areas near the mouth of the Pasquotank River. In subbasin 03-01-50, there are seven permitted dischargers in the subbasin, none of which are in Gates County. The Elizabeth City WWTP is the only major discharge, which discharges into the Pasquotank River.

Subbasin 03-01-52 consists of the northwestern edge of Albemarle Sound and the rivers that empty into it. The largest of these rivers are the Little River and the Perquimans River. The Perquimans River originates in the Great Dismal Swamp and flows south before emptying into Albemarle Sound. In subbasin 03-01-52, a small portion of the land area near the mouths of the Yeopim, Perquimans and Little River is designated as Significant Natural Heritage Areas. In subbasin 03-01-52, there are five permitted dischargers in the subbasin; none of which are major permit holders and none are in Gates County. Four general permits are currently issued in the basin.

In basinwide plans, surface waters are classified according to their best intended uses. Determining how well a water supports its designated uses (use support status) is an important method of interpreting water quality data and assessing water quality. Waters are rated fully supporting (FS), partially supporting (PS) or not supporting (NS). The terms refer to whether the classified uses of the water (i.e., aquatic life protection, recreation, and water supply) are being met. For example, waters classified for aquatic life protection and secondary recreation (Class C for freshwater and SC for saltwater) are rated FS if data used to determine use support did not exceed specific criteria. However, if these criteria were exceeded, then the waters would be rated as PS or NS, depending on the degree of degradation. Waters rated PS or NS are considered to be impaired. Waters lacking data, or having inconclusive data, are listed as not rated (NR). The use support ratings for subbasin 03-01-50 are shown on EXHIBIT IV-E. The use support ratings for subbasin 03-01-52 are shown on EXHIBIT IV-F

**EXHIBIT IV-E
GATES COUNTY, NORTH CAROLINA
USE SUPPORT RATINGS (2000) FOR MONITORED AND
EVALUATED** STREAMS (MILES) IN PASQUOTANK RIVER
SUBBASIN 03-01-50**

Use Support Category	FS	PS	NS	NR	Total*
Aquatic Life/ Secondary Recreation**	28,665.8 estuarine acres	0	0	132.4 mi. 23,208.9 estuarine acres	132.4 mi.
Primary Recreation	37,851.5 estuarine acres	0	0	93.3 estuarine acres	37,944.8 estuarine acres

* Total stream miles/acres assigned to each use support category in this subbasin. Column is not additive because some stream miles are assigned to more than one category.

** These waters are impaired because of a regional fish consumption advisory.
SOURCE: Pasquotank River Basinwide Water Quality Plan, July 2002.

**EXHIBIT IV-F
GATES COUNTY, NORTH CAROLINA
USE SUPPORT RATINGS (2000) FOR MONITORED AND
EVALUATED** STREAMS (MILES) IN PASQUOTANK RIVER
SUBBASIN 03-01-52**

Use Support Category	FS	PS	NS	NR	Total*
Aquatic Life/ Secondary Recreation**	72,795.5 estuarine acres	0	0	88.6 mi 18,924.6 estuarine acres	88.6 mi 91,720.1 estuarine acres
Primary Recreation	72,795.5 estuarine acres	0	0	9,840.3 estuarine acres	82,635.8 estuarine acres

* Total stream miles/acres assigned to each use support category in this subbasin. Column is not additive because some stream miles are assigned to more than one category.

** These waters are impaired because of a regional fish consumption advisory.
SOURCE: Pasquotank River Basinwide Water Quality Plan, July 2002.

There are several primary nursery areas in the Pasquotank River basin, identified by both NC DMF and the Wildlife Resources Commission (WRC). DMF defines nursery areas for coastal waters and WRC defines them for inland waters. Nursery areas provide the necessary conditions (such as food, cover, bottom type, salinity and temperature) for post-larval development of fish. Coastal primary nursery areas in the Pasquotank include Dough, Scarborough and Broad creeks in the area of Roanoke Sound. The WRC has defined areas of the North River, Alligator River and Currituck Sound as inland primary nursery areas. The Currituck Sound is a valuable nursery ground for spot, croaker, mullet, blue crab and flounder.

Public health hazards have been identified in the Pasquotank River basin. The NC Department of Health and Human Services (NCDHHS) has developed guidelines to advise people to what fish are safe to eat. DWQ considers uses of waters with a consumption advisory for one or more species of fish to be impaired. Elevated methylmercury levels have been found in shark, swordfish, king mackerel, tilefish, largemouth bass, bowfin (or blackfish), and chain pickerel (or jack). As of April 2002, these fish are under an advisory.

According to the 2002 Pasquotank River Basinwide Water Quality Plan, there are 395,371.3 acres of shellfish harvesting waters (Class SA) in the Pasquotank River basin. There are 5,033.3 (1.3%) acres currently rated as impaired in the shellfish harvesting use support category. Many of the impaired waters are in areas that have a high value shellfish resource. The following sections describe programs that monitor shellfish harvesting waters, methods for determining use support in class SA waters, and recommendations for addressing impairment class SA waters.

There are 390,338.0 acres of shellfish harvesting (Class SA) waters that are classified as approved by DEH Shellfish Sanitation in the Pasquotank River basin. These areas are always open to shellfishing harvesting and close only after heavy rainfall events such as hurricanes. As of 2001, there were no Conditionally Approved-Open or Conditionally Approved-Closed shellfish harvesting waters in the Pasquotank River basin.

There are 5,033.3 acres of shellfish harvesting (Class SA) waters that are prohibited or restricted for shellfish harvesting in the Pasquotank River basin. Most of these areas receive runoff that consistently results in fecal coliform bacteria levels above the state standard. As noted above, the sources of fecal coliform bacteria may be many. DEH Shellfish Sanitation shoreline surveys attempt to identify possible sources. In many areas, the contamination may be from several different sources at different times of the year including, but not limited to, adjacent development and marinas.

Dioxin has prompted an advisory since March 2001 in the Albemarle Sound from Bull Bay to Harvey Point, west to the mouth of the Roanoke River and north to the mouth of the Chowan River at the US Highway 17 Bridge. Weyerhaeuser Company, located at the mouth of Welch Creek in the Roanoke River basin, previously discharged directly

to the creek. During the 1980's, officials recognized that dioxin, a carcinogenic by-product of the chlorine bleaching process, was accumulating in fish tissue. In 1988, Weyerhaeuser made improvements and relocated the discharge to the Roanoke River. Weyerhaeuser is required by DWQ to provide extensive monitoring in the Roanoke River from Williamston down the Roanoke and out into the Albemarle Sound as far as Bull Bay. Data recently collected by Weyerhaeuser Company indicate a decline in dioxin concentrations. In October 2001, the advisory was partially lifted for game fish. However, an advisory remains in place for bottom-dwelling fish such as carp and catfish.

The Environmental Sciences Branch of DWQ collects a variety of biological, chemical and physical data to assess water quality. DWQ's 1997 Pasquotank River Basinwide Plan identified no impaired stream segments in subbasin 03-01-50.

According to 2002 Pasquotank River Basin Water Quality Plan, the Pasquotank River is currently no rated. There are indications that urban stormwater runoff may be adversely affecting water quality in the Pasquotank River near Elizabeth City.

The 1997 Pasquotank River Basinwide Plan identified two segments as impaired in subbasin 03-01-52 (Little River and Burnt Mill Creek). According to the 2002 Pasquotank River Basinwide Water Quality Plan, the Little River is currently not rated, but there are indications that agricultural land uses may be contributing to observed algal growths and low dissolved oxygen. DWQ will determine if the low dissolved oxygen in the Little River is due to natural conditions or other inputs. DWQ will continue to develop biocriteria to better assess use support in waters with swamp characteristics. According to the 2002 plan, Burnt Mill Creek is currently not rated and is no longer considered impaired. DWQ collected new biological information suggesting the previous bioclassification was inappropriate. DWQ will continue to develop biocriteria to better assess use support in waters with swamp characteristics.

The Chowan River Basinwide Water Quality Plan was also updated in 2002. The Chowan River basin is located in the northeastern coastal plain of North Carolina and southeastern Virginia. The North Carolina portion includes all or part of Northampton, Hertford, Gates, Bertie and Chowan counties. The Chowan River is formed at the border of Virginia and North Carolina by the confluence of the Nottoway and Blackwater Rivers, and its streams flow southeastward towards the Albemarle Sound.

The majority of the river's watershed (approximately 75 percent) lies within the Virginia borders. This Virginia portion of the basin is managed as the Chowan River and Dismal Swamp basin. This Virginia portion covers 4,061 square miles of the Chowan River and Chowan River basin's headwaters. The Virginia basin is bordered by the James River basin and the small coastal river basins to the east, the Roanoke River basin to the west, and the Virginia/North Carolina state line to the south. The basin is approximately 145 miles in length and varies from 10 to 50 miles in width. The

Chowan River and Dismal Swamp basin is mostly rural with approximately 64 percent of its land covered by forest, 28 percent cropland and pasture, and about 6 percent urban areas.

The Chowan River basin in North Carolina is composed of two major drainages: Chowan River and Meherrin River. There is only meager information available regarding water quality in the basin. However, the data available indicate that water quality is generally good. Many streams have been classified as High Quality Waters, and all of the waters in the basin are designated as Nutrient Sensitive Waters.

The Chowan River basin is part of the Albemarle-Pamlico Estuarine system, the second largest estuarine system in the United States. In 1987, this estuarine system became part of the National Estuary Program and was the subject of a major study known as the Albemarle-Pamlico Estuarine Study (APES).

Parts of Gates County lie within two subbasins of the Chowan River basin. Subbasin 03-01-01 is 579 square miles and has a population density of 44 persons per square mile. Subbasin 03-01-03 is 123 square miles and has a population density of 47 persons per square mile.

Subbasin 03-01-01 is located in the northeastern coastal plain of North Carolina. Portions of Merchants Millpond State Park and Chowan Swamp State Natural Area are also located in this subbasin. The Chowan Swamp State Natural Area, administered by the Department of Parks and Recreation, protects more than 6,000 acres. Merchants Millpond supports a diverse assemblage of aquatic herbs including several rare species.

There are five NPDES permit holders in subbasin 03-01-01. Four of these are in Gates County and all are minor permit holders. The facilities are part of the Gates County School Division including: Gatesville Elementary School, Sunbury Primary School, T.S. Cooper Elementary School, and Bucklnad Elementary School.

Subbasin 03-01-03 contains the middle section of the Chowan River, above Rockyhock Creek and below Bennett Creek, including the Indian Creek and Catherine Creek tributaries. The entire subbasin is designated as Nutrient Sensitive Waters. This subbasin contains the Colerain/Cow Island Swamp and Slopes Natural Heritage Areas. Perhaps the most important wetland community in this Chowan River basin is Tidal Cypress-Gum Swamp, which is found along much of the shoreline of the Chowan River.

There are currently two NPDES permit holders in the basin, one minor and one major. Neither permit holder is in Gates County.

The use support ratings for subbasin 03-01-01 and subbasin 03-01-03 are shown on EXHIBIT IV-G and EXHIBIT IV-H respectively.

**EXHIBIT IV-G
GATES COUNTY, NORTH CAROLINA
USE SUPPORT RATINGS (2000) FOR MONITORED AND
EVALUATED** STREAMS (MILES) IN CHOWAN RIVER
SUBBASIN 03-01-01**

Use Support Category	FS	PS	NS	NR	Total*
Aquatic Life/Secondary Recreation	39.8	22.5	0	347.0	409.3
Fish Consumption**/**	0	39.8	0	0	39.8
Primary Recreation	39.8	0	0	0	39.8

* Total stream miles/acres assigned to each use support category in this subbasin. Column is not additive because some stream miles are assigned to more than one category.

** For the fish consumption use support category, only monitored stream miles are presented.

*** These waters are impaired because of a regional fish consumption advisory.

SOURCE: Chowan River Basinwide Water Quality Plan, July 2002.

**EXHIBIT IV-H
GATES COUNTY, NORTH CAROLINA
USE SUPPORT RATINGS (2000) FOR MONITORED AND
EVALUATED** STREAMS (MILES) IN CHOWAN RIVER
SUBBASIN 03-01-03**

Use Support Category	FS	PS	NS	NR	Total*
Aquatic Life/Secondary Recreation**	14.1 miles	0	0	16.8 miles	30.9 miles
Primary Recreation	14.1 miles	0	0	12.8 miles	26.9 miles

* Total stream miles/acres assigned to each use support category in this subbasin. column is not additive because some stream miles are assigned to more than one category.

** These waters are impaired because of a regional fish consumption advisory.

SOURCE: Chowan River Basinwide Water Quality Plan, July 2002.

The Chowan River is a documented spawning and nursery area for blueback herring, alewife, American shad, hickory shad and striped bass. The Chowan River shoreline in Gates County is utilized by these species for spawning and nursery. Catherine (Warwick), Bennetts, Beef, Sarem, Shingle (Island), Barnes, Spikes, Buckhorn, Mud and Somerton creeks are also documented spawning and nursery areas for blueback herring and alewife. All of these waters are also utilized by white perch, yellow perch, catfishes and other commercially and recreationally important species for spawning and nursery. Commercial and recreational fisheries are important throughout the Chowan system.

At the time of this writing, DWQ has not yet designated any primary nursery areas in the Chowan basin. There are anadromous spawning areas in the basin and DWQ is presently working on mapping spawning areas. Spawning areas are along the entire Chowan River shoreline, wetlands, and creeks, notable Bennett's Creek.

According to the 2002 Chowan River Basinwide Water Quality Plan, the NC Department of Health and Human Services (NCDHHS) has developed guidelines to advise people to what fish are safe to eat. DWQ considers uses of waters with a consumption advisory for one or more species of fish to be impaired. Elevated methylmercury levels have been found in shark, swordfish, king mackerel, tilefish, largemouth bass, bowfin (or blackfish), and chain pickerel (or jack). As of April 2002, these fish are under an advisory.

The Chowan River from the Virginia border to Albemarle Sound was placed under a fish consumption advisory in 1990 for all species except herring and shad due to dioxin contamination from International Paper, formerly known as Union Camp, in Franklin, Virginia. Yearly monitoring by International Paper in North Carolina indicated that dioxin levels gradually decreased in fish from the Chowan River and Meherrin River after new bleaching technologies were instituted in 1990 to improve effluent quality.

In March 1998, the advisory was partially lifted, leaving carp and catfish as the only two species still considered unsafe to eat. The advisory was completely lifted in early 2000 after dioxin levels from all stations and species remained below the recommended level for two consecutive years (1998 and 1999) (Williams, 2000). The sampling of catfish species by International Paper is scheduled to continue through the year 2001 to verify the reduction in dioxin concentrations.

According to the 2002 Chowan River Basinwide Water Quality Plan, benthic macroinvertebrate data indicate water quality in the upper Chowan River is Good to Good-Fair. The recent benthic macroinvertebrate sampling indicate a slight decline in water quality since 1995, although the uppermost site remains Good-Fair. All of the sampling areas receive large amount of agricultural runoff, and water quality problems are likely related to the low dissolved oxygen concentrations that occurred during the summer.

The Chowan River near the Gatesville site was sampled for the first time during the summer of 2000. There were very low dissolved oxygen concentrations in the bottom waters; however, scientists did not attribute this to either natural or anthropogenic conditions.

Three of the six benthic macroinvertebrate stations exhibit swamp-like characteristics, and they were sampled for the first time through the addition of a winter sampling period in 2000. Field assessments at Cole Creek, Stony Creek and Chinkapin Creek did not indicate any serious water quality problems.

The 1997 Chowan River Basinwide Plan identified three impaired stream segments in subbasin 03-01-01. These streams are Ahoskie Creek (27.8 miles from source to Wiccacon River); Wiccacon River (Hoggard Swamp) (22.5 miles from source to Chowan River); and, Merchants Millpond (Bennetts Creek).

With respect to Ahoskie Creek, in 1997, DWQ's recommendation was: Ahoskie Creek, also known as Ahoskie Swamp or Bear Swamp (from source to Wiccacon River), was previously considered impaired. Its impairment was based on benthic macroinvertebrate and fish data. Nonpoint source pollution from agriculture and channelization were considered to be the probable cause of impairment. The 1997 basin plan recommended that the Nonpoint Source Team help clarify and characterize agricultural activities in the area and consider them for targeting of the team's remediation efforts.

The 2002 Plan states: 2000 biological sampling indicates that Ahoskie Creek and its tributaries west of NC 13, as well as other streams have been channelized. At the Ahoskie Creek benthic sampling site, the location had an impacted riparian zone on one side and poor instream habitat. Therefore, Ahoskie Creek remains a concern for the state. DWQ will work with the Division of Soil and Water Conservation to address the likely agricultural impacts to the creek. DWQ will also notify local agencies of water quality concerns regarding these waters and work with them to conduct further monitoring and to locate sources of water quality protection funding.

With respect to Wiccacon River, in 1997, DWQ's recommendation was: Channelization, nonpoint source pollution from agricultural activities, and increasing number of animal operations are suspected to have contributed to impairment in the Wiccacon River. The 1997 basin plan recommended that the Nonpoint Source Team help clarify and characterize agricultural activities in the area and consider them for targeting of the team's remediation efforts.

Currently, the Wiccacon River is partially supporting aquatic life based on a Fair bioclassification at SR1433. The watershed is in agricultural land use and many of the tributary streams to the river are channelized.

The 2002 Plan states: A progressive program to implement nonpoint source pollution controls is recommended to reduce the nutrient and sediment loading. Such a program will need to be developed and implemented at the local level. DWQ will provide technical assistance and funding information to local communities to assist in this effort. In addition, DWQ will notify local agencies of water quality concerns regarding these waters and work with them to conduct further monitoring and to locate sources of water quality protection funding.

With respect to Merchants Millpond, in 1997, due to an over abundance of aquatic weeds, the 1997 basin plan noted threats to Merchant Millpond's designated uses (mostly canoeing and fishing). In an effort to combat the loss of use in the Millpond, it

was recommended that the Nonpoint Source Team consider this area as a target for some of its future efforts in order to prevent any further degradation.

The 2002 Plan states: A progressive program to implement nonpoint source pollution controls is recommended to reduce the nutrient and sediment loading. Such a program will need to be developed and implemented at the local level. DWQ will provide technical assistance and funding information to local communities to assist in this effort. In addition, DWQ will notify local agencies of water quality concerns regarding these waters and work with them to conduct further monitoring and to locate sources of water quality protection funding.

The upper Chowan River was considered support threatened in the 1997 plan due to a stressed aquatic system that experienced threats of algal blooms. Because the upper Chowan bridges both Virginia and North Carolina, the 1997 Plan's recommendation was for North Carolina to improve communication with Virginia to promote actions to reduce nutrient levels entering the state from the headwaters.

The 1997 Chowan River Basinwide Plan identified one segment of the Chowan River as impaired in subbasin 03-01-03. The segment is called Chowan River (5.5 miles from below Holiday Island near Harrellsville to Marker 17 at Colerain).

In the 1997 Chowan River Basin Plan, this portion of the Chowan River was noted to have continued problems with nuisance algal blooms related to excess nutrients and low pH levels. Although the NSW management strategy had been in place since 1982, DWQ recommended the need for continued implementation of the NSW management strategy, specifically focusing on reducing nutrient inputs from nonpoint sources of pollution.

The 1997 basin plan noted that Chowan River from the Virginia border to the Albemarle Sound (at Highway 17 bridge) was under a fish consumption advisory since 1990 for all fish except herring, shellfish and shad (including roe).

The 2002 Plan states: DWQ continues to issue permits for point sources using the NSW management strategy that involves nitrogen and phosphorus limit and land application requirements. DWQ scientists will conduct a 15-year status analysis on nutrient reduction efforts in the Chowan River basin, publishable in 2005. The DWQ Modelers and NPDES Permittees will review the information, reevaluate current permit limitations, and revise as necessary.

b. Shellfish Waters

The North Carolina Department of Health, Shellfish Sanitation Section protects the consuming public from shellfish and crustacean which could cause illness. Rules and regulations following national guidelines have been implemented to ensure the safety

of harvesting waters and the proper sanitation of establishments that process shellfish and crustacean for sale to the general public.

The Pasquotank River basin contains many prohibited shellfish harvesting areas, which are now given a use support rating of not supporting (NS) shellfish harvesting based on the DEH designation. This use support rating differs significantly from the historical use support ratings of partially supporting (PS) for prohibited shellfish harvesting areas. Of the 395,371.3 acres of monitored streams in the entire Pasquotank River basin, 98.7% (390,338.0 acres) are rated as fully supporting while only 1.3% (5,033.3 acres) are rated as impaired.

The 2002 Chowan River Basinwide Water Quality Plan does not address the presence of specific shellfish harvesting in Gates County.

c. Finfish and Finfish Habitat

The North Carolina Marine Fisheries Commission (MFC) has adopted definitions in rule for anadromous spawning and nursery areas. Anadromous fish spawning areas are those areas where evidence of spawning of anadromous fish has been documented by direct observation of spawning, capture of running ripe females, or capture of eggs or early larvae [NCAC 31.0101(20)C)]. Anadromous fish nursery areas are those areas in the riverine and estuarine systems utilized by post-larval and later juvenile anadromous fish [NCAC 31.0101(20)(D)].

Wetlands are of great importance to fisheries production serving as sources of biological productivity, directly and indirectly, nursery areas and reducing sedimentation/turbidity to improve water quality.

The waters of the Pasquotank River basin are an important habitat for several anadromous fish species. In the state, the Albemarle Sound is considered the most important nursery and spawning area for anadromous and freshwater fish (Epperly, 1984). Anadromous species found in the area include blueback herring (*Alosa aestivalis*), alewife (*Alosa pseudoharengus*), hickory shad (*Alosa mediocris*), American shad (*Alosa sapidissima*), Atlantic sturgeon (*Acipenser oxyrinchus*) and striped bass (*Morone saxatilis*). The first two species (blueback herring and alewife) are often generally referred to as "river herring". All of these fish have a very large range extending along the Atlantic from Canada to northern Florida. Blueback herring that were tagged during the summer in Canada have been recaptured in the Roanoke River in North Carolina, and fish tagged in North and South Carolina waters haven been recaptured in Georges Bank, Canada (DMF, 1993). Striped bass are an important recreational and commercial fishery from Maine to North Carolina. In North Carolina, more than 50% of total landings of striped bass have been taken from the Albemarle Sound area (DMF, 1993).

Chowan River is a documented spawning and nursery area for blueback herring, alewife, American shad, hickory shad and striped bass. The shoreline of the river in Gates County is utilized by these species for spawning and nursery. Catherine (Warwick), Bennetts, Beef, Sarem, Shingle (Island), Barnes, Spikes, Buckhorn, Mud and Somerton creeks are also documented spawning and nursery areas for blueback herring and alewife. All of these waters are also utilized by white perch, yellow perch, catfishes and other commercially and recreationally important species for spawning and nursery. Commercial and recreational fisheries are important throughout the Chowan system.

The Chowan River is known for some of the best fishing in the state, with largemouth bass, bluegill, chain pickerel, black crappie, perch and herring being some of the most sought after species. However, the Chowan River is noteworthy for more than good fishing. Approximately one hundred miles of the Chowan River are considered to be a significant aquatic habitat by the North Carolina Natural Heritage Program. The Chowan River has received this designation because of the diversity of its freshwater mussel populations, many of which are rare and vulnerable.

The Chowan River is a vital resource for commercial and recreational fishers. Recreationally important gamefish species that reside in the river include largemouth bass, black crappie and many sunfish species. Commercially important species include several anadromous fish species such as blueback herring, alewife, hickory shad, American shad, Atlantic sturgeon and striped bass. Blueback herring and alewife are commonly referred to as river herring.

d. Chronic Wastewater Treatment System Malfunctions

There is only one central public wastewater treatment plant system in Gates County. The system is operated by the North Carolina Department of Corrections for its facility in Gates County. The facility has not experienced any chronic system malfunctions. 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.

e. Public Health Hazards

The Gates County Health Department has been contacted to identify subdivisions in the County experiencing septic tank problems and to identify areas in the County experiencing chronic septic system problems. The Department estimates that about 80% of the County has areas or sites that have experienced septic tank problems. Areas highlighted include Sunbury, Eason's Crossroads, Eleanor's Crossroad/ Highway 37N including Buckland. The Department works to help develop solutions for problem systems. The department will refer severe problems to the Management Entities Program of the Albemarle Regional Health System for more intensive problem solving with respect to septic system installation or repair.

2. Natural Hazards

a. Storm Hazards and Floods and Wind Damage Estimates

Property damage in Gates County resulting from storms is not isolated to one (or even a few) particular areas and generally occurs as a result of high winds or flooding. The North Carolina Department of Emergency Management is designated as the Flood Insurance Coordinating Office. The County has requested that the State Department of Emergency Services supply repetitive loss data for properties in the County, but no information has been provided as of this writing. The County Planner's Office is not normally advised by property owners when losses occur due to storms. Property losses due to recent hurricanes have been minimal, although downed trees, standing flood waters, and power outages occurred in many areas of the County.

The potential for development in many areas of Gates County, particularly areas in and adjacent to natural hazard areas, is extremely limited due to poor soils, abundant wetlands and protected areas, and large areas of publicly held lands.

b. Shoreline Erosion

At present, no database is available for structures and facilities threatened by shoreline erosion. The Division of Coastal Management provides very general mapping that shows long term shoreline erosion rates for some areas of the State, but not Gates County.

As it developed this land use plan, the County contacted the Soil Conservation Service and determined that no erosion "hot spots" have been identified.

3. Natural Resources

a. Natural Heritage Areas

The North Carolina Natural Heritage Program is a part of the Office of Conservation and Community Affairs within the NC Department of Environment and Natural Resources. The program inventories catalogues, and facilitates protection of the rarest and the most outstanding elements of the natural diversity of the State. These elements of natural diversity include those plants and animals which are so rare or the natural communities which are so significant that they merit special consideration as land decisions are made.

There are a diversity of public lands and significant natural heritage areas in the Chowan River basin. One of the most frequently visited areas includes Merchants Millpond State Park, about 3,300 acres situated east of the Chowan mainstem. Several significant natural heritage areas in the form of game lands are also adjacent

to the Chowan mainstem throughout the basin. A small percentage (1.2 percent) of the Chowan River basin is publicly-owned conservation land. The Chowan Swamp State Natural Area, administered by the Division of Parks and Recreation, protects more than 6,000 acres. Wildlife Resources Commission has two small game lands within the basin, the Chowan Game Lands and the Chowan Swamp Game Lands.

Merchants Millpond was constructed in 1811 as a source of waterpower, but has not been used as such for a long time. Now Merchant's Millpond State Park, the shallow pond supports an excellent Piedmont/Coastal Plain Semipermanent Impoundment community, believed to resemble those in the large, mature beaver ponds that were eliminated from the state when beavers became extinct. The pond has an open canopy of stunted cypress and tupelo trees and supports a diverse assemblage of aquatic herbs including several rare species. Upstream of the pond, in Lassiter Swamp, is an excellent quality blackwater Cypress-Gum Swamp, including an area of virgin water tupelo. The state champion water tupelo can be found in this area. The diversity of habitat supports a tremendous variety of animal life. Over 190 species of birds have been recorded in the park. Diverse populations of reptiles and amphibians and numerous mammals such as beaver, mink and river otter are also found here.

North Carolina is home to approximately 5,700 species of plants, more than 700 species of vertebrates, and more than 10,000 species of invertebrates. The Natural Heritage Program has been able to identify and to develop lists of those plants and animals which are most rare and, thus most in need of protection, by working closely with experts from across the state and in cooperation with the U.S. Fish and Wildlife Service, the Plant Conservation Program of the N.C. Department of Agriculture and Consumer Services and the Nongame and Endangered Wildlife Program of the N.C. Wildlife Resource Commission. Several protected species live in the Pasquotank River basin, including fish, aquatic insects, mollusks, crustaceans and plants. EXHIBIT IV-1 provides information on rare aquatic and wetland-dwelling species in the basin as recorded by the NC Natural Heritage Program, Division of Parks and Recreation.

**EXHIBIT IV-I
GATES COUNTY, NORTH CAROLINA
RARE AND THREATENED AQUATIC SPECIES
IN THE PASQUOTANK RIVER BASIN
(AS OF JUNE 2001)**

Major Taxon	Common Name	Scientific Name	State Status	Federal Status
fish	Shortnose Sturgeon	Acipenser brevirostrum	E	E
reptile	American Alligator	Alligator mississippiensis	T	T(S/A)
reptile	Loggerhead	Caretta caretta	T	T
reptile	Green Turtle	Chelonia mydas	T	T
reptile	Hawksbill	Eretmochelys imbricate	E	E
fish	Lyre Goby	Evorthodus lyricus	SR	
fish	Waccamaw Killfish	Fundulus waccamensis	SC	FSC
reptile	Northern Diamondback Terrapin	Malaclemys terrapin terrapin	SC	FSC
mammal	Manatee	Trichechus manatus	E	E

Rare Species Listing Criteria

- E= Endangered (those species in danger of becoming extinct)
T= Threatened (considered likely to become endangered within the foreseeable future)
T(S/A)= Threatened due to similarity of appearance.
SR= Significantly Rare (those whose numbers are small and whose populations need monitoring)
SC= Species of Special Concern
FSC= Federal Species of Concern

SOURCE: Pasquotank River Basinwide Water Quality Plan, May 2002.

Several protected species live in the Chowan River basin, including fish, aquatic insects, mollusks, crustaceans and plants. EXHIBIT IV-J provides information on rare aquatic and wetland-dwelling species in the basin as recorded by the NC Natural Heritage Program, Division of Parks and Recreation.

**EXHIBIT IV-J
GATES COUNTY, NORTH CAROLINA
RARE AND THREATENED AQUATIC SPECIES
IN THE CHOWAN RIVER BASIN
(AS OF JUNE 2001)**

Major Taxon	Common Name	Scientific Name	State Status	Federal Status
fish	Shortnose Sturgeon	Acipenser brevirostrum	E	E
aquatic insect	a caddisfly	Cercllea tarsipunctata	SR	--
mollusk	Triangle Floater	Alasmidonta undulata	T	--
mollusk	Alewife Floater	Anodonta implicata	SC*	--
mollusk	Eastern Lampmussel	Lampsilis radiate radiate	SC*	--
mollusk	Tidewater Mucket	Leptodea ochracea	SC*	--
mollusk	Eastern Pondmussel	Ligumia nasuta	SC*	--
crustacean	Chowanoke Crayfish	Orconectes virginianus	SR	FSC
plant	Water Purslane	Didiplis diandra	SR	--
plant	Water Violet	Hottonia inflata	C	--
plant	A water-hyssop	Bacopa innominata	C	--
plant	Conferva Pondweed	Potamogeton confervoides	C	FSC
plant	Pale Mannagrass	Torreyochloa pallida	SR	--

*Effective July 1, 2002, these species will be listed as State threatened.

Rare Species Listing Criteria

- E= Endangered (those species in danger of becoming extinct)
- T= Threatened (considered likely to become endangered within the foreseeable future)
- SR= Significantly Rare (those whose numbers are small and whose populations need monitoring)
- SC= Species of Special Concern
- FSC= Federal Species of Concern
- C= Candidate

SOURCE: Chowan River Basinwide Water Quality Plan, May 2002.

The NC Natural Heritage Program tallies the elements of natural diversity (rare plants and animals, rare and exemplary natural communities, and special animal habitats) known to occur in all North Carolina counties and according to USGS 7.5-minute quadrangles. The information on which these lists is based comes from a variety of

sources, including field surveys, museums, herbaria, scientific literature, and personal communications. These lists are dynamic, with new records continually being added and old records being revised as new information is received.

Current lists for the quadrangles that cover Gates County can be accessed at <http://www.ncsparks.net/nhp/search.html>. The quadrangles are: Riverdale, Gates, Whaleyville, Corapeake, Lake Drummond, Winston, Gatesville, Merchants Millpond, Sunbury, Lynchs Corner, Ahoskie, Harrellsville, Mintonville, Hobbsville, and Chapanoke. Lists for each of these quadrangles can be accessed. A variety of birds, reptiles, fish, vascular plants, natural communities and special habitats are listed

The potential for development in many areas of Gates County, particularly areas in and adjacent to natural resource and heritage areas, is extremely limited due wetlands, protected areas, and large areas of publicly held lands.

b. Mineral Resource Areas and Productive Soils

The North Carolina Department of Natural Resources, Division of Land Resources monitors mining activities and serves as the State's issuing agency for mining permits. At the time of this writing, the Division reports that there are no mining operations currently permitted in Gates County. The Division reports that as of April, 2003, no applications have been submitted this year for permit renewals, new mining operations, or changes to existing permitted operations.

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 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.

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 Natural Resources Conservation Service regularly provides educational workshops to keep farmers informed of Best Management Practices needed to control erosion and maintain fertility.

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 at 159,000 acres over the past five years. The commercial forests are well managed, and reforestation is a regular management practice.

Chapter V: Land Use and Development

The analysis of land use and development provides the County with a snap shot of current land use patterns, an assessment of emerging development trends, and a forecast of the location of future development, given current trends. Existing land use is a major part of the foundation upon which land use policies and the future land use map are built. The land use information developed in this part of the plan serves several purposes. Some of these include helping develop policies that address land use conflicts; establishing relationships between land use and development and water quality; identifying areas where land use is in transition; and identifying areas where in-fill development or redevelopment are feasible.

A. Existing Land Use

Gates County remains overwhelmingly rural in nature, possessing vast natural areas, most notably the Great Dismal Swamp and Merchants Millpond. The County contains one town (Gatesville) and several small villages that serve as places of commerce and gathering.

Residential development is found throughout the County, primarily along State roads and/or associated with farms. The proliferation of residential development along State roads--as opposed to traditional subdivision development--has caused the County to reassess its subdivision ordinance and the need for zoning regulations. Spill-over development from the nearby Hampton Roads region of Virginia continues and could intensify. The County's poor soils (with respect to septic tank use suitability) and the lack of a central wastewater disposal system have slowed the trend somewhat but pressure is still evident.

Most commercial activity in the County occurs in Gatesville or the villages but several businesses are found along State roads and at intersection. There are a number of lumber related businesses Gates County and a cotton gin operating in the County but industrial development is not present. A number of confined animal feeding operations are found in the County.

1. Land Use Categories

CAMA guidelines require the collection of data on existing land uses and the provision of a map of the land use categories and activities. EXHIBIT V-A which follows shows the land use categories applicable to Gates County and provides examples of activities normally associated with each.

EXHIBIT V-A GATES COUNTY, NORTH CAROLINA EXISTING LAND USE CATEGORIES

Existing Land Use Category	Examples of Activities Included
Residential Home Sites	Site Built Single-family Structures Duplexes Multi-family Structures Mobile/Manufactured Homes
Commercial	General and specialty retail, convenience stores, personal and professional services, offices, lumber yards, and mixed uses
Institutional, Public, Semi-public, Churches	Public buildings and sites, schools, churches
Undeveloped	Agriculture, forest lands, vacant/idle land

EXHIBIT V-B shows the general and predominant locations of these land uses. Given the lack of property identification maps in a usable, reproduceable format, the locations of land uses and features are approximate. Land uses are shown in a general way, reflective of the predominant land use in an area, along a road, or at an intersection. For example, clusters of residential development are shown but each individual house in the County is not. The County will develop detailed, parcel by parcel mapping based on recent aerial photography but this resource is still 3 - 5 years away. In addition to general land use locations, the locations of public buildings and sites are shown as are the locations of confined animal feeding operations and junk yards.

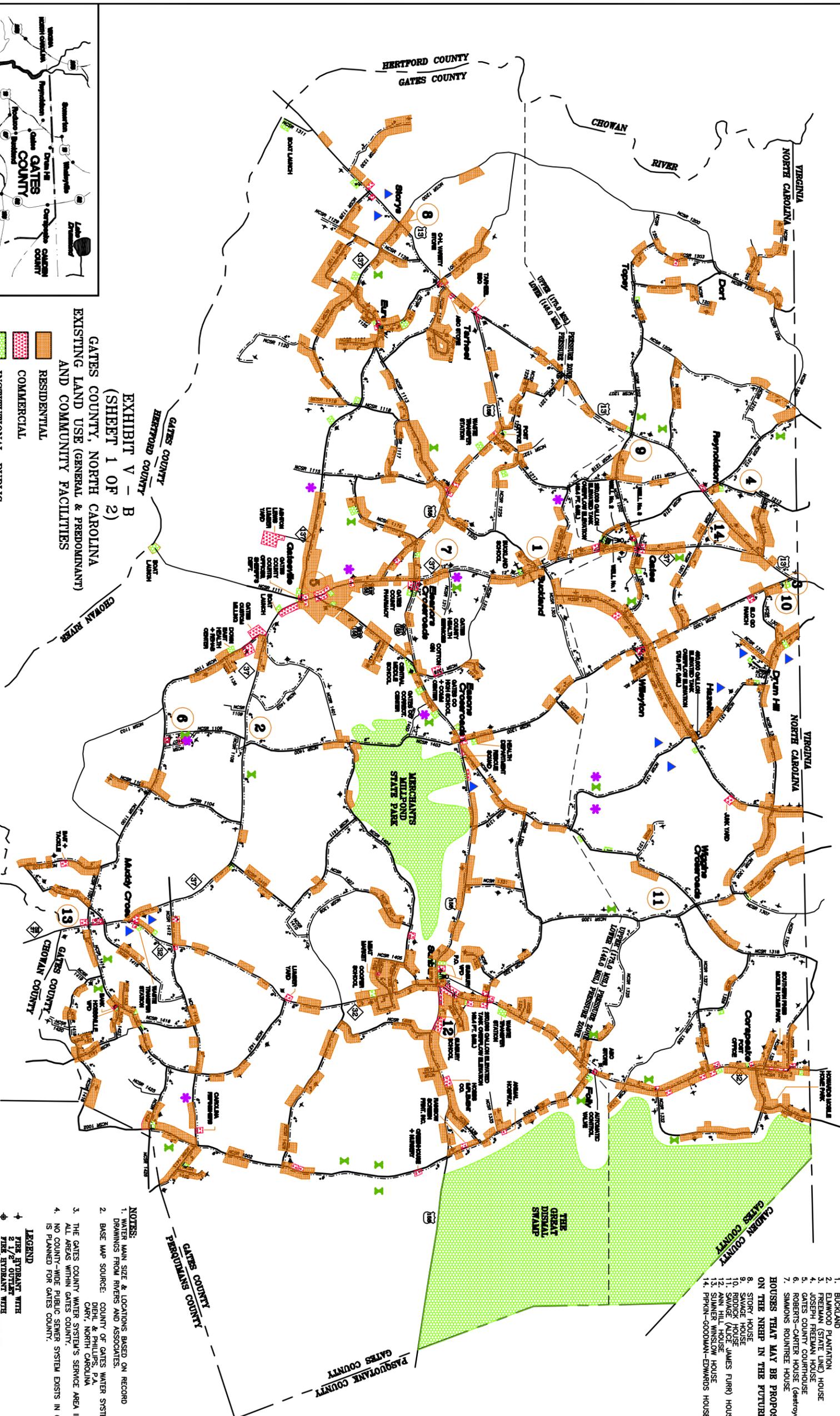
Also shown as a part of EXHIBIT V-B (Sheet 2 of 2) are the existing land use map classifications' estimated development (building) density and intensity. As indicated on EXHIBIT V-B, the predominant land use is "Undeveloped." Undeveloped includes agricultural, wooded, and forest lands where few, if any residential dwelling units or nonresidential units exist. Parcel lines were not used to create the existing land use map; therefore, residential home sites located on large agricultural tracts may be shown as "residential" and the related farm acreage as "Undeveloped." The "Institutional, Public, and Semi-public, Churches" category includes Merchants Millpond, the Great Dismal Swamp, and publicly held lands.

SITES LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES (NRHP):

1. BUCKLAND PLANTATION
2. FREEMAN (STATE LINE) HOUSE
3. JOSEPH FREEMAN HOUSE
4. GATES COUNTY COURTHOUSE
5. ROBERTS-CARTER HOUSE (destroyed) SITE
6. SIMMONS ROUNDRICE HOUSE

HOUSES THAT MAY BE PROPOSED FOR INCLUSION ON THE NRHP IN THE FUTURE:

7. STORE HOUSE
8. RIDGE HOUSE
9. SAVAGE (ALICE) HOUSE
10. ANN HILL HOUSE
11. SUMNER WINSLOW-EDWARDS HOUSE
12. PINKIN-GOODMAN-EDWARDS HOUSE



**EXHIBIT V - B
(SHEET 1 OF 2)
GATES COUNTY, NORTH CAROLINA
EXISTING LAND USE (GENERAL & PREDOMINANT)
AND COMMUNITY FACILITIES**

- RESIDENTIAL
- COMMERCIAL
- INSTITUTIONAL, PUBLIC, SEMI-PUBLIC, CHURCHES
- UNDEVELOPED
- JUNKYARD
- CONFINED ANIMAL FEEDING OPERATION - HOGS
- CONFINED ANIMAL FEEDING OPERATION - POULTRY

COMMUNITY PLANNING COLLABORATIVE, INC.

THE PREPARATION OF THIS MAP EXHIBIT WAS FINANCED IN PART THROUGH A GRANT PROVIDED BY THE NORTH CAROLINA COASTAL ZONE MANAGEMENT PROGRAM, THROUGH FUNDS PROVIDED BY THE NORTH CAROLINA ZONE MANAGEMENT ACT OF 1972, AS AMENDED, WHICH IS ADMINISTERED BY THE OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

- NOTES:**
1. WATER MAIN SIZE & LOCATIONS BASED ON RECORD DRAWINGS FROM RIVERS AND ASSOCIATES.
 2. BASE MAP SOURCE: COUNTY OF GATES WATER SYSTEM MAP DEWITT & PHILIPS, P.A. CARY, NORTH CAROLINA.
 3. THE GATES COUNTY WATER SYSTEM'S SERVICE AREA INCLUDES ALL AREAS WITHIN GATES COUNTY.
 4. NO COUNTY-WIDE PUBLIC SEWER SYSTEM EXISTS IN OR IS PLANNED FOR GATES COUNTY.

- LEGEND**
- FIRE HYDRANT WATER
 - 2 1/2" OUTLET
 - FIRE HYDRANT WATER
 - 2" EXISTING WATERLINE
 - 3" EXISTING WATERLINE
 - 4" EXISTING WATERLINE
 - 6" EXISTING WATERLINE
 - 8" EXISTING WATERLINE
 - 10" EXISTING WATERLINE
 - 12" EXISTING WATERLINE
 - ELEVATED WATER TANK

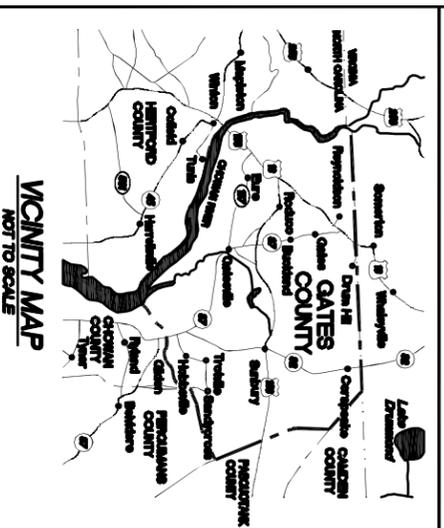
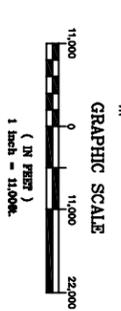


EXHIBIT V-B (continued)
(SHEET 2 of 2)
GATES COUNTY, NORTH CAROLINA
EXISTING LAND USE (GENERAL AND PREDOMINANT) AND COMMUNITY
FACILITIES

**EXISTING LAND USE MAP CLASSIFICATIONS DEVELOPMENT (BUILDING)
DENSITY AND INTENSITY ESTIMATES***

Existing Land Use Category	Existing Development Density & Intensity Estimates (a. = Acres Devoted to Use Estimate) (b. = Estimated Number of Units) (c. = Average Building Height) (d. = Lot Size Range Estimate) (e. = Average Building Size Estimate)
Residential	a. 4,334 acres b. 4,389 units (dwelling units) c. 35 feet d. 1 – 10 acres e. 2,000 square feet
Commercial	a. 350 acres b. 40 units (buildings) c. 35 feet d. 1 – 10 acres e. 4,000 square feet
Institutional, Public, Semi-Public, Churches	a. 26,360 acres** b. 50 units (buildings) c. 35 feet d. 1 – 10 acres e. 6,000 square feet
Undeveloped	a. 185,436 acres b. N/A c. N/A d. N/A e. N/A

NOTE: This exhibit is intended to show the estimated distribution of land uses (residential, commercial, institutional, public, semi-public, churches, and undeveloped) in Gates County in January 2004 according to four general existing land use classifications which were evaluated and mapped. As per the DCM Land Use Plan Technical Manual, several additional and different classifications for Future Land Use were evaluated and mapped. Thus, direct comparison of the two (existing and future land use classifications) is not practicable.

*General estimate; not based on actual parcel lines but intended to reflect observed existing land use. Acreage estimates are for predominant land uses on given parcels and does not reflect the total acreage of the tract upon which the land use is located.

**Includes Federal properties, most notably Great Dismal Swamp (12,306 acres estimated) and State owned properties (13,394 acres estimated).

***"Units" is used as an indicator of residential dwelling units for residential (category) density purposes or for buildings for commercial, institutional, public, semi-public, and church uses.

2. Land Area Allocated to Each Land Use

EXHIBIT V-C tabulates the amount and percentage of the County that is allocated to each of the land use categories and sub-categories of same. This also shows an estimate of the total acres per person in each category, based on the estimate of Gates County's 2002 population (10,720 persons). This estimate of acres per person is useful for making the projections of future land needs.

EXHIBIT V-C GATES COUNTY, NORTH CAROLINA EXISTING LAND USE TABULATIONS (ESTIMATED)

Category	Acres	% of Total	Acres per person
Residential Home Sites	4,334	1.9%	.40
Commercial	350	*	.03
Institutional, Public, Semi-public, Churches:			
Local Government Owned	100	*	.009
State Owned	13,794	6%	1.28
Federally Owned**	12,306	5.4%	1.14
Public Utilities	86	*	.008
Churches	74	*	.007
Undeveloped:			
Woodlands	159,000	69.1%	14.8
Cleared Lands***	39,822	17.3%	3.7
Vacant/Idle Lands/ Open Spaces	114	*	.01
TOTALS	229,980	100%	21.45

*Less than 1%.

**Includes federally managed lands and Nature Conservancy lands.

***Includes cropland, pastures, and hayland.

SOURCE: Gates County Tax Department and Gates County Soil Survey.

3. Land Use Conflicts and Land Use-Water Quality Conflicts

This section describes existing land use conflicts and any existing land uses that have negative impacts on water quality. Gates County used the following list of conflict categories to conduct its analysis.

- Location of intensive livestock and poultry operations in close proximity to existing residential areas
- Encroachment of residential and other urban-level land uses into traditional agricultural and forestry areas
- Location of hazardous operations in close proximity to developed areas
- Residential development in flood hazard areas
- Small lot development of soils with septic tank limitations

- Residential development in and adjacent to land traditionally used for public access
- Auto salvage operations located in flood hazard areas
- Blighted areas

According to DWQ, as of August 19, 2004, there are 38 inactive confined animal feeding operations in Gates County encompassing 3,734.8 acres and 10 active operations encompassing 875.5 acres. Out of 3,400 enforcement cases logged since 1997, only one case concerned an operation in Gates County. The operation has since gone inactive.

B. Development Trends and Projected Development Areas

The following section describes the County's development trends using indicators, such as building permits or subdivision lots, and to identify the location(s) of land expected to experience development during the five years following CRC certification of the land use plan.

Identification of land expected to experience development during the 5-year planning period is based on the best judgment of the County. In addition to the analysis described above, the County considered other factors that generate and shape land development. Examples of these factors include road building and improvements scheduled during the planning period, extension of water, and construction of developments.

Anticipated development areas were compared to the natural systems composite map to examine potential development conflicts with Class II and Class III lands when the future land use map was prepared as a part of the land use plan update process.

Gates County envisions the majority of residential development will continue to be along State maintained roads. The County amended its subdivision ordinance in 2004 to strengthen the instrument while developing strategies to encourage the development of subdivisions that are developed with and served by internal access roads built to State standards, and not merely the continuation of strip development along State roads that has become the norm.

Some of the areas (and the State maintained roads serving same) that are experiencing growth and are expected to continue to experience development during the five years following land use plan certification by the CRC include the: Willeyton area (SR 1304); Drum Hill area (SR 1308); Lees Mill Road area (SR 1213); Hazelton Road area (SR 1311); and, Corapeake area (NC 32). Continued residential development is expected. Most of the areas and State routes identified will continue to see predominantly mobile and manufactured home type development. The Lees Mill Road (SR 1213) is experiencing—and likely will continue to experience—site built and

modular home type development. Much of the building activity in Gates County is can be characterized as replacement home development.

All lands in Gates County have been classified as either Class I or Class II lands, as explained in Chapter VII which follows. Given the amount and type of development anticipated, the County's one acre minimum lot size requirement, and likely difficulties encountered with the installation of septic tank systems due to poor soils, no conflicts with identified Class II or Class III lands should occur or are anticipated. Septic tank system failures have occurred in various areas of the County during the last several years. Some system failures are likely to occur in the years to come.

The Gates County Planner's Offices has not received any reports of existing land use – water quality conflicts. The County Planner and other County officials routinely communicate and interact with agencies such as the Gates County Health Department and the USDA Agriculture Services Center to keep apprised should land use-water quality conflicts be reported. The County relies on the State to monitor and regulate confined animal feeding operations. Development in flood hazard areas is regulated, as are junk yards and auto salvage operations. The County has amended its subdivision ordinance to require a one-acre minimum lot size. The County is developing a zoning ordinance.

While the County's water system is capable and available to serve most all areas of the County, the poorness of soils in Gates County serve to preclude development in many areas given the cost and technical difficulties associated with septic tank drain field use. Without the construction of a central public sewage system, vast areas of the County will not be even considered for development of any nature.

C. Projections of Future Land Needs

The environmental constraints present in Gates County (with respect to development) will govern the allocation of land needed to meet anticipated needs.

Since 1997, the County has issued 897 building permits for residential type development, averaging 148.5 annually over the seven-year period. The State projects that Gates County's population will grow from 10,720 persons in 2002 to 10,960 persons in 2005. The State projects that the County will have 11,534 persons by 2010, and 12,547 persons by 2020. If these projections hold true, the County will grow by just over 1,800 persons in the period 2002 – 2020. If residential construction trends continue (at or near the rate of 148.5 residential structures per year) until 2020, an additional 2,673 units could potentially be built or placed in Gates County. This total—or even half of it—would more than accommodate the population growth projected. However, this level of construction would involve the significant conversions of lands from other uses (most notably cleared agricultural lands and woodlands) and/or the continuation and perhaps acceleration of strip development along State roads. At a rate of one acre per home site, 2,691 acres

could potentially be converted to residential uses. This would more than double the amount of land allocated for residential home site uses (4,334 acres) in 2002. This is viewed as highly unlikely. The County will address some of these issues with ordinance development, amendment, and enforcement. Moreover, environmental constraints will serve to preclude or slow down development in many areas of Gates County.

As of this writing, County records and mapping systems do not allow for an accurate count of platted but un-built lots. Record keeping systems are being improved. The County Planner's Office now maintains files on subdivision development. The County is in the process of creating new, county-wide tax maps. The County was flown and new aerial photographs taken in 2003-2004. The mapping system and revised records will be completed in 2006-2007, in time for the County's next revaluation in 2009. The County has some 7,000 parcels of land in its tax records. With its new mapping system and improved record keeping, the County will be in a position of better analyze and monitor lot creation and building development in subdivision.

Chapter VI: Community Facilities

The analysis of community facilities provides the County with basic information about major types of community facilities including water, roads, and storm water. These facilities have been termed growth shapers for the role that they play in local land development. Infrastructure, whether built by the County or private entities, can have a major influence on local growth and development – location, costs, density, timing, and the amount of new development. In addition, the County's policies for the operation, maintenance, extension, and development of facilities can have a major impact on environmental values.

The Coastal Resources Commission's (CRC) land use management topics recognize the importance of infrastructure in the location and timing of land development. The management goal of the infrastructure carrying capacity management topic is to ensure that public infrastructure systems are appropriately sized, located and managed so that the quality and productivity of areas of environmental concern (AEC) and other fragile areas are restored and protected.

The infrastructure carrying capacity management topic requires the plan to identify or establish service area boundaries for existing and planned infrastructure. This requirement focuses on water, sewer, and roads. In addition, the future land use map categories developed as a part of this land use plan must be correlated with existing and planned infrastructure.

Utilities and services deemed adequate to meet the current normal needs of the citizens of the County exist. Water and wastewater are discussed later in this chapter as are the transportation system and design capacities and utilization of community facilities. Other services include: recreation and beach areas, police protection, emergency medical services, fire fighting, solid waste, schools, libraries, and public health. Community facilities in Gates County (County owned and otherwise) are shown on EXHIBIT V-B in the preceding chapter.

A. Water Supply and Wastewater Treatment Systems

Gates County residents and businesses receive potable water from the Gates County water system. The Gates County water system service area boundaries are all areas within Gates County. Potable water is available to all areas of Gates County. As of April 2003, there were 3,400 metered connections using 652,000 gallons per day in Gates County. The total water used in 2002 was just over 315 million gallons. The Gates County Water System sells 30,000 gallons per day to the Town of Gatesville. The Town of Gatesville owns and maintains its own water distribution system.

The Gates County Water System gets all of its water from three deep wells which can yield 1.430 million gallons per day. The total capacity of the Gates County Water Plant is 1.400 million gallons per day, about half of what is used daily.

The projected demand for water does not indicate that demand will exceed 80% of capacity before the year 2030. The Gates County Water System develops a Local Water Supply Plan (LWSP) each five years. The current LWSP was completed in February 2003 and indicates the system is well maintained and operated.

Quantity issues with respect to the water supply for Gates County are not pressing. The County's water system is debt free. According to the Gates County Local Water Supply Plan (2/26/03), the County does not currently have a well head protection plan.

Homes and businesses in Gates County rely primarily on septic tank and drain field systems to treat and dispose of wastewater. While under good conditions, such systems are perfectly adequate, over 80% of the soils in Gates County's are not well suited for septic tank drain field systems. The County's soils present enough hazards to the proper functioning of septic systems that their use must be carefully monitored. Periodic high water tables in certain areas can block the proper percolation of wastewater throughout the soil and can lead to the contamination of estuarine waters. In addition, placing septic systems too close to wells creates a threat to human health. The Gates County Health Department is responsible for overseeing and permitting the use of septic systems. The Health Department uses standards adopted by the State of North Carolina's Department of Environment and Natural Resources, Division of Environmental Health. These standards cover the design and location of septic tanks and drain fields. The standards are deemed adequate to meet the County's needs and potential concerns should problems arise.

The North Carolina Department of Corrections operates a lagoon-spray field sewage disposal system in the County. The system serves the Gates County Detention Center, Gates County High School, Central Middle School, the Gates County Community Center, and a North Carolina Department of Transportation maintenance facility. The system is functioning adequately at this time. The system is functioning at about 5,000 gallons per day under capacity for peak flows at the present time. No county-wide public sewer system exists in or is planned for Gates County.

B. Transportation Systems

The vast majority of roads and streets in Gates County are State maintained. EXHIBIT VI-A provides a summary of the County's transportation system's mileage. (The County's transportation system is shown on EXHIBIT V-B, Existing Land Use and Community Facilities in the previous chapter.)

**EXHIBIT VI-A
 GATES COUNTY, NORTH CAROLINA
 TRANSPORTATION SYSTEM SUMMARY**

	PAVED MILES	UNPAVED MILES	TOTAL MILES
STATE SECONDARY ROAD SYSTEM	231.12	46.00	277.12
STATE URBAN SYSTEM	3.40	0	3.40
STATE PRIMARY SYSTEM	81.46	0	81.46
TOTAL STATE HIGHWAY SYSTEM	315.98	46.00	361.98

SOURCE: North Carolina Department of Transportation.

In addition to maintenance responsibilities, the North Carolina Department of Transportation (NCDOT) is available to assist the County--as it does throughout the State--to develop long range plans for system improvements or implement more immediate corrective actions as needed. North Carolina Department of Transportation (NCDOT) representatives with the Elizabeth City Residency Office indicated that there have been no determinations of roadway segments that have an unacceptable level of service in Gates County.

The State's current draft 2004-2010 Transportation Improvement Program (TIP) includes several projects in Gates County. EXHIBIT VI-B describes six (6) major projects programmed for Gates County by NCDOT for activity during the next several years and planned operating assistance to meet work first and employment transportation needs, elderly and disabled transportation needs, and several general public needs. Growth levels and development will not increase or decrease during the planning period as a result of the TIP projects in the planning stages for facilities in and around Gates County. However, overall conditions (safety, traffic movement, emergency evacuation, etc.) will improve. Growth patterns are already well established along the County's major transportation routes. The development of vacant properties must comply with County regulations.

**EXHIBIT VI-B
GATES COUNTY, NORTH CAROLINA
TRANSPORTATION SYSTEM IMPROVEMENT PROJECTS**

TIP #	ROUTE/CITY	COUNTY (ies)	DIV	DESCRIPTION
B-3640	SR 1400	Gates	1	Merchants Mill Pond. Replace Bridge No. 16
B-4520	SR 1100	Gates	1	Trotman Creek. Replace Bridge No. 32
B-4521	SR 1320	Gates	1	Duke Swamp. Replace Bridge No. 26
R-2507	US 13	Gates	1	NC 461 South of Winton to the Virginia State line. Widen to multi-lanes.
R-2578	US 158	Gates	1	US 13 at Tarheel to NC 32 in Sunbury. Widen to multi-lanes.
R-2579	US 158	Gates	1	NC 32 in Sunbury to US 17 at Morgan's Corner. Widen to multi-lanes.
TJ-4736	Gates County	Gates	1	Provide operating assistance to counties and community transportation systems to meet work first and employment transportation needs.
TJ-4836	Gates County	Gates	1	Provide operating assistance to counties and community transportation systems to meet work first and employment transportation needs.
TL-4736	Gates County	Gates	1	Provide operating assistance for additional transportation services to the elderly and disabled.
TL-4836	Gates County	Gates	1	Provide operating assistance for additional transportation services to the elderly and disabled.
TR-4736	Gates County	Gates	1	Provide maintenance assistance for community transportation systems to serve the rural general public.
TR-4836	Gates County	Gates	1	Provide maintenance assistance for community transportation systems to serve the rural general public.

Note: For a more detailed summary with project costs, funding, and schedules, access <http://apps.dot.state.nc.us> and look project up under it's specific program (ex. Highway Program).

SOURCE: Draft 2004-2010 Transportation Improvement Program, North Carolina Department of Transportation.

C. Storm Water Systems

The County relies on structures, swales and ditches (associated with the transportation system), ponds, and natural areas to handle storm water run-off. The County could develop a comprehensive storm water management study and plan to alleviate or mitigate its storm water problems. The County should seek assistance to minimize public and private losses due to flood conditions in specific areas. This would be accomplished by provisions designed to:

- restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- minimize the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;
- minimize filling, grading, dredging and other development which may increase erosion of flood damage; and,
- Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

Notable drainage problem areas identified by NCDOT in Gates County include areas in the village of Gates along NC 37 at the intersection with Gates School Road and in Gatesville near Todd's Pharmacy.

Pollutants that enter waters fall into two general categories: point sources and non-point sources. Point sources are typically piped discharges and are controlled through regulatory programs administered by the State. All regulated point source discharges in North Carolina must apply for and obtain a National Pollutant Discharge Elimination System (NPDES) permit from the State. (Non-point sources are from a broad range of land use activities and are typically carried to waters by rainfall, runoff, or snowmelt.)

In the Gates County portions of the Pasquotank and Chowan rivers basins, there are four NPDES permit holders. No issues have been raised or cited by permitting agencies with regard to water quality related to these point source dischargers of waste water.

The Environmental Protection Agency's (EPA) Storm Water Phase II Final Rule covers two classes of storm water dischargers: operators of small municipal separate storm sewer systems (called MS4s) in urbanized areas as defined by the Bureau of the

Census and operators of small construction activities that disturb equal to or greater than one (1) and less than five (5) acres of land. Gates County does not operate a municipal separate storm sewer system, nor does the County conduct construction projects.

D. Other Facilities

The solid waste disposal needs of Gates County will be met for at least the next decade using the current system of collection and disposal. The County's system uses four (4) convenience centers where residents can bring household trash, recyclables, and yard waste. The convenience centers are located at: 289 NC 32 North (1.5 miles north of Sunbury; 1332 US 158 West in Roduco; 1304 NC 32 South (near the junction of NC 37 and NC 32) in Hobbsville; and, 467 Water Plant Road in Gates. Gates County is a part of the Albemarle Regional Solid Waste Management Authority. Waste collected in Gates County is taken to a transfer station on Belvidere in Perquimans County and eventually disposed of in a regional solid waste (landfill) facility in Bertie County.

The primary and secondary educational needs of County residents are being met by Gates County Schools which enjoys a reputation of providing a top notch educational experience. The 2003 enrollment figures for Gates County schools are:

- Buckland Elementary.....310 students
- Gatesville Elementary School.....281 students
- T.S. Cooper Elementary School.....297 students
- Central Middle School.....533 students
- Gates County High School.....622 students
- TOTAL ENROLLMENT.....2,043 students

The School System employs 160 teachers. With the exception of Gatesville Elementary School, all schools in the County utilize temporary classrooms. There are five (5) temporary classrooms in use at Buckland Elementary, five (5) at T.S. Cooper Elementary School, three (3) at Central Middle School, and six (6) at Gates County High School. Currently, the School System plans to construct an additional four (4) classrooms at the Gates County High School.

Library services for Gates County residents are provided by Gate County Library which is located in the Historic Gates County Courthouse in Gatesville.

Basic public health services are available to all County residents at the Gates County Health Department near Gatesville.

Law enforcement, emergency medical transport service, and fire fighting services of the County are deemed adequate to meet current needs.

The Gates County Sheriff's Department provides police protection. Currently, the department is comprised of the Sheriff, ten (10) sworn officers (two of which are school resource officers), an Animal Control Officer, and a secretary. The Department is quartered in the Gates County Courthouse Building in Gatesville. Gates County Inmates are transported to and housed in Edenton which is about 45 minutes from Gatesville. The Department currently occupies two rooms in the Courthouse Building and has limited space for storage and personnel. The Department has a fleet of ten (10) patrol cars.

The Gates County Volunteer Rescue Squad provides emergency medical transport services to Gates County. The Squad is made up of 30 members, ranging in training from medical responder to emergency medical technician. The Squad has three (3) ambulances and also provides technical rescue services at automobile accidents. The Squad utilizes raises the majority of its operating funds through fundraising, donations, and grant assistance. Gates County also provides funding.

Firefighting services are provided to the County by the Gatesville Volunteer Fire Department, the Eure Volunteer Fire Department, the Gates Volunteer Fire Department, the Sunbury Volunteer Fire Department, and the Hobbsville Volunteer Fire Department. The County funds a portion of the departments' operating expenses through the County Fire Use Fee.

The Gatesville Volunteer Fire Department has twenty-seven (27) members. Its apparatus includes two pumpers, two tankers (one of which is also used as a brush truck), and an equipment truck. The Eure Volunteer Fire Department has thirty (30) members. Its apparatus includes two pumpers, one tanker, and a mobile air compressor unit. The Gates Volunteer Fire Department has twenty-five (25) members. Its apparatus includes one pumper, one tanker, and a combination equipment truck/pumper. The Sunbury Volunteer Fire Department has twenty-eight (28) active members. Its apparatus includes one pumper, one pumper/tanker, one tanker, and one brush truck. The Hobbsville Volunteer Fire Department has twenty-five (25) members. Its apparatus includes two pumpers and one tanker. The department also has a cascade system for filling air tanks, ten airpaks, and a computer system.

Gates County, through its 9-1-1 emergency reporting telephone system, dispatches fire, rescue, and law enforcement services. The system, funded by the County, operates from the Sheriff's Department.

The County continues to review its needs with respect to recreation and recreational facilities. In Gates County, the major tourist attractions are the Great Dismal Swamp, Merchants Millpond State Park, and the Chowan River. Typical water related recreational activities occur in and along these resources including boating, fishing, hunting, bird and wildlife watching, hiking, and camping. There are two public access points providing access to the Chowan River.

According to the North Carolina State Historic Preservation Office, Gates County listings in the National Register of Historic Places (NRHP) include Buckland, Elmwood Plantation, Freeman (Stateline) House, Joseph Freeman House, and the gates County Courthouse. Another NRHP property, the Roberts-Carter House was destroyed by a tornado in 1984. The Simmons Rountree House was added to the National Register on August 2, 2000. Other houses that may be proposed for inclusion in the NRHP in the future include: Story House, Savage House, Riddick House, Savage (Alice James Furr) House, Ann Hill House, Sumner Winslow House, and Pipkin-Goodman-Edwards House. The general locations of these are shown on EXHIBIT V-B in the preceding chapter.

Chapter VII: Land Suitability Analysis

In January 2003, the Division of Coastal Management (DCM) provided compact disks containing the land suitability analysis (LSA) model and map for Gates County. In May 2003, the State supplied a revised LSA model disk for use in developing this chapter of the land use plan update. The sections that follow discuss the process of developing a LSA, methods to define characteristics (attributes) of suitable land, and the method used by the State to rate suitability factors. The State supplied GIS-based LSA program is discussed below and the LSA map is included in this chapter.

The land suitability analysis required by State planning guidelines is a process for determining the supply of land in the County that is suitable for development. The overall purpose of this analysis is to provide the County with information on the best areas for development in order to guide the formulation of local policies and the design of the future land use map. To determine development suitability, the guidelines identify categories of suitability factors that must be considered. These categories of factors relate primarily to the County's physical characteristics and include:

- environmental characteristics and analysis of water quality conditions;
- existing development and man-made features;
- proximity to existing development;
- compatibility with existing land uses;
- potential impact of development on historic, culturally significant, or scenic sites;
- availability and capacity of community facilities; and,
- regulatory restrictions on land development – County, State, and Federal.

As an integral part of the suitability analysis, the land suitability map generally shows the degree to which land in the County is suitable for development. The general process for the suitability analysis and the production of the land suitability map includes:

1. Identifying the factors that should be considered.
2. Determining the relative importance of these factors.
3. Determining the suitability rating of each factor (relative development suitability of land with a particular factor).
4. Preparing appropriate maps or overlays of each factor.
5. Combining the overlays to produce a land suitability map.

A. Attributes of Land Suitable for Development

Defining the characteristics that make land suitable for development is the starting point for the land suitability analysis. State guidelines specify the types of suitability

factors that must be considered in the analysis. Specific factors within these categories that will be used to analyze suitability must be identified. To define these characteristics, it is helpful to look at Gates County through the eyes of a land developer. What are the best natural features for development? What natural amenities are desirable? What types of public facilities are needed; how far can facilities be extended to serve development? What types of existing land uses should be avoided; what types of development should be located nearby? EXHIBIT VII-A provides some of the attributes of land that address these questions.

**EXHIBIT VII-A
GATES COUNTY, NORTH CAROLINA
ATTRIBUTES THAT MAKE LAND SUITABLE FOR DEVELOPMENT**

1. Class I natural features
2. Use permitted by County, State, or Federal regulations
3. Quality water nearby
4. Landscape interest (scenic areas)
5. Close proximity to existing developed areas where a range of supporting land uses and services are available
6. Absence of incompatible uses
7. Easy access to major roads
8. Easy access (affordable) to water and sewer
9. Proximity to historic areas

These attributes are related to a single class of development that lumps together all of the land use activities generally considered to be urban development: higher density residential, commercial and industrial uses, and availability of basic services. The County may consider conducting a suitability analysis for more than one development classification. If an analysis is conducted for more than one use or development type, the list of suitability factors will be different in each study.

B. Land Suitability Ratings

Ratings for suitability factors are a way to approximate the development suitability of land that has a particular type of factor or characteristic. Ratings are typically the result of professional judgments and are expressed generally as either a number or a qualitative description – high, medium, or low. Take special flood hazard area for example. For this particular factor, land inside a flood hazard area may be shown as having low suitability; land outside a flood hazard area may be shown as having high suitability. Another example is the availability of public water. Land with public water within 0.25 (1/4) mile may receive a high suitability rating; with public water within 0.25 (1/4) to 0.50 (1/2) mile, a medium suitability; and with public water more than 0.50 (1/2) mile, a low rating. Similar ratings are developed for each of the suitability factors. The classes shown on the composite environmental conditions map (Chapter

IV, EXHIBIT IV-D) prepared in the natural systems analysis readily lend themselves to suitability ratings.

Factor weights, which indicate the relative importance of each factor, are a second dimension of the suitability analysis process. Because of the complexity involved, weighting usually is done only in conjunction with a GIS-based suitability analysis program.

C. Geographic Information System (GIS) Based Land Suitability Analysis Program

The Division of Coastal Management and the N.C. Center for Geographic Information and Analysis (NCCGIA) jointly developed a geographic information system (GIS) based land suitability analysis program (LSA). The program utilizes the Spatial Analyst extension of ArcView GIS. It is designed to address the requirements of the land use planning guidelines for land suitability analysis and to provide a level of flexibility so that the analysis can be tailored to reflect local planning situations. The data used in LSA conforms as closely as possible to the requirements of Section .0702 (c)(5) of the planning guidelines (please see discussion above), subject to availability in digital format from the NCCGIA corporate database.

LSA applies a numerical rating system to indicate the relative suitability of locations with a particular factor type or categories within a factor type. The rating scale is from 0 to 3. A 0 is assigned to a factor or category that is not generally available for development or for which development may be hazardous or prohibitively expensive. A 3 is assigned to factors or categories that have no significant limitations. LSA also incorporates factor weights to reflect the relative importance of each factor in determining suitability. EXHIBIT VII-B provides the initial categories, ratings, and weights assigned by the State program model for each factor.

The output of LSA is a land suitability map that classifies land in one of the following 4 classifications: **least suitable; low suitability; medium suitability; or high suitability**. The Gates County land suitability map generated by the State using the LSA program model appears as EXHIBIT VII-C, providing a general breakdown of Gates County into the four suitability classifications.

The State supplied LSA model and map were not adjusted by the County. The LSA map reflects the findings of the County with respect to existing land use trends and projected future land use patterns. The County used the State-supplied LSA map as a guide, carefully comparing the LSA with the composite environmental conditions map (Exhibit IV-D), existing land use map (Exhibit V-B), and future land use map (IX-B). The development patterns in Gates County are greatly influenced by the poor soils found throughout the County.

Comparing the LSA map with a County soils map, the composite environmental conditions map (Exhibit IV-D), and the existing land use map (Exhibit V-B) was very

useful in pinpointing areas in the County wherein various environmental factors and constraints to development have combined to ensure vast areas remain vacant. Based on the review of the map sources developed as a part of this land use plan update and the LSA, areas exhibiting low suitability for development and lands deemed least suitable for development are generally found within areas controlled by the State or Federal government, or along the Chowan River, its tributaries and floodplain.

**EXHIBIT VII-B
GATES COUNTY, NORTH CAROLINA
DIVISION OF COASTAL MANAGEMENT (DCM) AND NORTH CAROLINA CENTER
FOR GEOGRAPHIC INFORMATION AND ANALYSIS (NCCGIA) LAND SUITABILITY
ANALYSIS FACTOR RATINGS AND WEIGHTS**

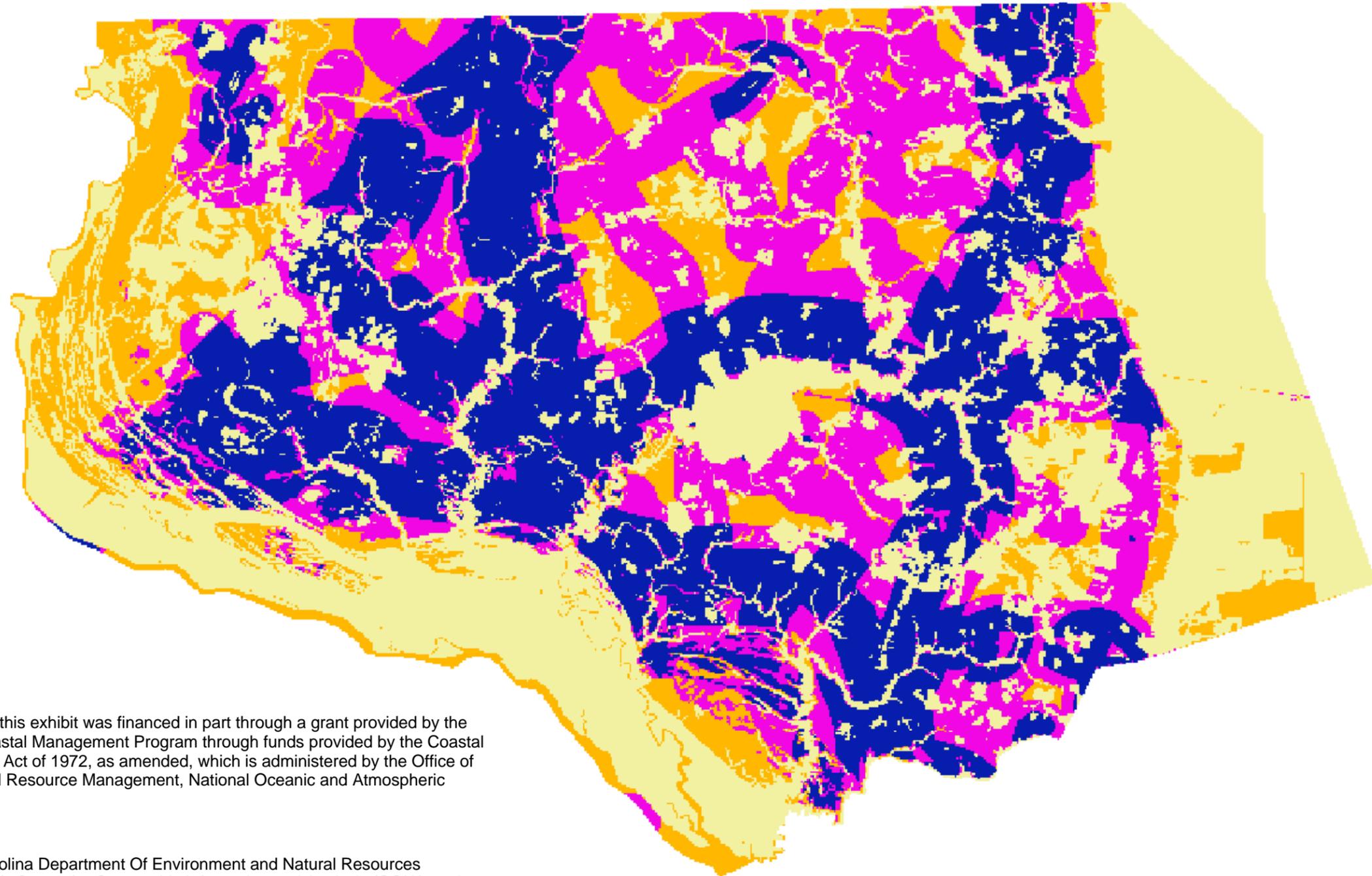
Layer Name	Categories and Ratings				Initial Assigned Weight
	0	1	2	3	
Coastal wetlands	Inside	Outside			3
"404" wetlands	Inside	Outside			3
Estuarine waters	Inside	Outside			3
Protected lands	Inside	Outside			3
Storm surge areas		Inside		Outside	2
Soils (septic limitations)		Severe	Moderate	Slight	2
Flood zones		Inside		Outside	2
HQW/ORW watersheds		Inside		Outside	1
Natural heritage areas		<500 feet		>500 feet	1
Hazardous waste disposal sites		<500 feet		>500 feet	1
NPDES sites		<500 feet		>500 feet	1
Wastewater treatment plants		<500 feet		>500 feet	1
Discharge points		<500 feet		>500 feet	1
Land application sites		<500 feet		>500 feet	1
Airports		<500 feet		>500 feet	1
Developed land		> 1 mi	0.5-1.0 mi	<0.5 mi	1
Major roads		> 1 mi	0.5-1.0 mi	<0.5 mi	2
Water pipes		>0.5 mi	0.25-0.5 mi	<0.25 mi	3
Sewer pipes		>0.5 mi	0.25-0.5 mi	<0.25 mi	3

SOURCE: Technical Manual for Coastal Land Use Planning, Version 2.0, July 2002, Department of Environment and Natural Resources, Division of Coastal Management.

EXHIBIT VII - C

GATES COUNTY, NORTH CAROLINA

LAND SUITABILITY ANALYSIS MAP



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

Source: North Carolina Department Of Environment and Natural Resources (NCDENR), Center for Geographic Information and Analysis (CGIA), and the NC Division of Coastal Management (DCM).

LEGEND

- Least Suitable
- Low Suitability
- Medium Suitability
- High Suitability

Chapter VIII: Review of Current CAMA Land Use Plan

The 1993 Gates County Land Use Plan Update relied heavily on the previous land use planning documents prepared in cooperation with the N.C. Division of Coastal Management. CAMA guidelines require a review and evaluation of the current land use plan to evaluate the County's success in implementing the land use plan and the effectiveness of its policies in achieving the goals of the plan. The County considered three factors in its review. The County considered the consistency of the County's current land use and development ordinances with the policies included in the land use plan. It also considered the adoption of the plan's implementation measures by the Board of Commissioners. Finally, it considered the efficacy of current policies.

The 1993 update contains the following policy issues:

RESOURCE PROTECTION ISSUES:

AEC's

Soil Limitations

Flood Prone Areas

Septic Tank Suitability

Freshwater Swamps and Marshes

Cultural and Historic Resources

Manmade Hazards and Nuisances

Protection of Potable Water Supply & the Use of Package Treatment
Plants

Storm Water Run-off: Residential Uses

Storm Water Run-off: Agricultural Development

Storm Water Run-off: Coastal Wetlands

Floating Home and Marina Development

RESOURCE PRODUCTION AND MANAGEMENT ISSUES

Productive Agricultural Lands

Commercial Forest Land

Existing and Potential Mineral Production

Commercial and Recreational Fishery

Off-Road Vehicles

Residential and Commercial Land Development on Any Resource

Industrial Impact of Any Resource

Peat and Phosphate Mining Impact on any Resource

ECONOMIC AND COMMUNITY DEVELOPMENT ISSUES

Types and Locations of Desired Industries

Local Commitment to Providing Services

Types of Urban Growth Patterns Desired

Redevelopment of Developed Areas

Commitment to State and Federal Programs

Channel Maintenance and Beach Nourishment
Energy Siting and Development
Tourism, Waterfront Access, and Estuarine Access
Types of Densities, Location of Anticipated Residential Development
And Services Necessary to Support such Development

STORM HAZARD MITIGATION

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

Issue: CONSTRAINTS TO DEVELOPMENT: AEC's

1993 Policy:

Gates County totally supports the efforts of the Division of Coastal Management in efforts to prevent the further degradation of the Estuarine Resource of Gates County. Gates County has, during the process of this Land Use Plan Update, 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 committed 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 requirements of this ordinance is that a certificate be placed on the face of the plat acknowledging whether the subdivision is located totally or partially within an AEC and requiring a CAMA permit before any construction of improvements may begin.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited for adoption and none were adopted. The County administered its ordinances.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: CONSTRAINTS TO DEVELOPMENT: SOIL LIMITATIONS

1993 Policy:

It shall be Gates County's policy to minimize development on soils which may create hazards to health and safety; however, it shall also be the policy of the County to pursue solutions to the severe septic tank limitation imposed by the soils in the County and shall encourage the use of alternative and non traditional solutions to the County's sewage disposal problems.

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 development 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.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were adopted. The County continued to administer applicable ordinances and cooperate with and rely on agencies such as the Soil Conservation Service and Gates-Hertford District Health Department.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: CONSTRAINTS TO DEVELOPMENT: FLOOD PRONE AREAS

1993 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 permanent 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 require that a full contour drawing be prepared for all subdivisions containing more than 25 lots.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were adopted. The County continued to administer its ordinances.

Effectiveness of Policy in Creating Desired Land Use Pattern and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: SEPTIC TANK SUITABILITY

1993 Policy:

Gates County will continue to protect the quality of its ground water supplies particularly in areas of primary recharge. The County will also investigate alternative technologies to use for on-site septic treatment systems and will rely on the Division of Environmental Health and the Division of Environmental Management through their permitting and monitoring to safeguard Gates County's ground and surface waters.

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.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were adopted. The County continued to administer its ordinances.

Effectiveness of Policy in Creating Desired Land Use Pattern and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: FRESHWATER, SWAMPS, AND MARSHES

1993 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 blooms and its inherent problems.

Implementation Strategies:

Gates County shall work with the NC 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.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were adopted. The County continued to enforce its ordinances and cooperate with other local governments and the State.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: CULTURAL AND HISTORIC RESOURCES

1993 Policy:

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. A recent inventory of potentially eligible structures in the County has been completed.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: MANMADE HAZARDS AND NUISANCES

1993 Policy:

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.

Implementation Strategies:

The County will investigate the possible use of special setback requirements as a means of protecting residential developments from the dangers associated with hazardous materials storage facilities. Gates County will consult with other counties who are also experiencing the conflict between residential uses and large livestock operations to see if anyone has developed an equitable and acceptable solution to this problem.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were adopted. The County conducted periodic training of County employees concerning hazardous materials.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: PROTECTION OF POTABLE WATER SUPPLY AND THE USE OF PACKAGE TREATMENT PLANTS

1993 Policy:

Gates County will use what legal means necessary to prevent large scale users, public or private, from using an unregulated volume of water from any of the County's aquifers. The County will investigate and pursue regulations so the County may regulate the amount of water removed from its aquifers from locations within the County. The County has no policy regarding package treatment plants, if the discharge system can be properly permitted and maintain compliance with its discharge permit.

Implementation Strategies:

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

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were adopted. The County enforced its ordinances.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: STORM WATER RUNOFF: RESIDENTIAL USES

1993 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.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were adopted. The County enforced its ordinances and relied on State agencies to administer applicable programs and regulations.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: STORM WATER RUNOFF: AGRICULTURAL DEVELOPMENT

1993 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 U.S. Soil Conservation Service.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: STORM WATER RUN-OFF – COASTAL WETLANDS

1993 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 U.S. Soil Conservation Service.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were adopted.

Effectiveness of Policy in Creating Desired land use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: FLOATING HOME AND MARINA DEVELOPMENT

1993 Policy:

The County, however, would be supportive of a marina development on the Chowan River providing its waste disposal system could be permitted.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No implementation strategies were cited for adoption and no action was taken.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The stated policy has not had an impact since no proposals for this type development have been received.

Issue: PRODUCTIVE AGRICULTURAL LAND

1993 Policy:

Gates County does not feel that its productive agricultural lands are threatened by any unreasonable or unmanageable growth, or 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.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were adopted. The County encouraged the preservation of agricultural lands and the use of best management practices.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: COMMERCIAL FOREST LAND

1993 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)

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

No policy was cited.

Adoption of Implementation Strategies by Board of Commissioners:

No implementation strategies were cited for adoption and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

No policy was cited.

Issue: EXISTING AND POTENTIAL MINERAL PRODUCTION

1993 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.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

No policy was cited.

Adoption of Implementation Strategies by Board of Commissioners:

No implementation strategies were cited and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

No policy was cited.

Issue: COMMERCIAL AND RECREATIONAL FISHERY

1993 Policy:

Although no policy statement on this issue is considered necessary, the County passively encourages commercial fishing.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

No policy was cited.

Adoption of Implementation Strategies by Board of Commissioners:

No implementation strategies were cited and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

No policy was cited.

Issue: OFF-ROAD VEHICLES

1993 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.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited for adoption and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: RESIDENTIAL AND COMMERCIAL LAND DEVELOPMENT IMPACT ON ANY RESOURCE

1993 Policy:

Gates County shall investigate the need of a Zoning ordinance to control incompatibility problems among competing land uses.

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.

Consistency of Existing Land Use and Development Ordinances with Policy:

The County continues to discuss the need for zoning.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited for adoption and none have been adopted. The County enforced its ordinances.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The stated policy has not been implemented.

Issue: INDUSTRIAL IMPACT ON ANY RESOURCE

1993 Policy:

None cited.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

No policy was cited.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited and no action was taken.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

No policy was cited.

Issue: PEAT AND PHOSPHATE MINING IMPACT ON ANY RESOURCE

1993 Policy:

None cited.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

No policy was cited.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

No policy was cited.

Issue: TYPES AND LOCATIONS OF DESIRED INDUSTRIES

1993 Policy:

It shall be the policy of Gates County to provide assistance and support to local and regional organizations recruiting and promoting industrial growth in the area.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No implementation strategies were cited and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: LOCAL COMMITMENT TO PROVIDING SERVICES

1993 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. The County is also committed to protecting those natural resources that make the provision of these services possible with every available legal means.

Implementation Strategies:

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

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited for adoption and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: TYPES OF URBAN GROWTH PATTERNS DESIRED

1993 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. 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 referred rural character.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited for adoption. The County enforced its ordinances.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: REDEVELOPMENT OF DEVELOPED AREAS

1993 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.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies have been adopted. The County enforced its ordinances.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: COMMITMENT TO STATE AND FEDERAL PROGRAMS

1993 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 and strongly supports any efforts to construct an interstate link between Norfolk and Raleigh that is easily accessible to County residents. Gates County also strongly supports the following Federal and State programs: Community Development Block Grant, Rural Development Agency, Farmers Home Administration, Soil and Conservation Fund

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited for adoption and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Issue: CHANNEL MAINTENANCE AND BEACH NOURISHMENT

1993 Policy:

None cited.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

No policy was cited.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

No policy was cited.

Issue: ENERGY SITING AND DEVELOPMENT

1993 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.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

No policy was cited.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

No policy was cited.

Issue: TOURISM, WATERFRONT ACCESS, AND ESTUARINE ACCESS

1993 Policy:

Where access is available, it is available to the public. Therefore, Gates County considers it unnecessary to adopt a policy on water access.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

No policy was cited.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

No policy was cited.

Issue: TYPES OF DENSITIES, LOCATION OF ANTICIPATED RESIDENTIAL DEVELOPMENT NECESSARY TO SUPPORT SUCH DEVELOPMENT

1993 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.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited for adoption and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

**Issue: MITIGATION OF STORM DAMAGE FROM HIGH WINDS, FLOODING,
WAVE ACTION AND EROSION**

1993 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:

Gates County developed a Storm Hazard Mitigation, Post Disaster Recovery Plan as a part of the 1993 Land Use Plan Update to implement as circumstances dictate.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing ordinances are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No specific implementation strategies were cited for adoption and none have been adopted.

Effectiveness of Policy in Creating Desired Land Use Patterns and Protecting Natural Systems:

The County's stated policy is deemed effective.

Chapter IX: Plan for the Future

A. Introduction

The “Plan for the Future” sets Gates County’s course of action to achieve its vision. This element has three components: land use and development goals, policies, and a future land use map. As a whole, the plan sets out the strategies, actions, and programs the County will implement to achieve its goals, and it provides a roadmap for future land use and development in the County.

The policies and the future land use map address the Coastal Resources Commission’s (CRC) six management topics. These management topics are intended to ensure that local land use plans support the overall goals of CAMA and provide a “substantive basis” for CRC review and certification of local plans. The plan’s goals, the types of policies and their content, and the spatial policies of the future land use map address the CRC management topics for land use plans.

In addition, this chapter analyzes and evaluates the County’s policies to demonstrate that they support the management topics. The management topics require two levels of policy analysis. At a more general or summary level, this plan demonstrates that its policy framework goals, policies, and future land use map – will “guide land use and development in a manner that is consistent with the ... management topics.” A second, more detailed analysis is intended to determine the impact of the plan’s policies – including the future land use map – on the management topics.

B. Management Topics and Local Areas of Concern

Management topics are categories of local land use and development policies determined by the CRC to be essential for achieving the local land use planning mission. The purpose of the management topics is to support the important tie between the goals of CAMA and local land use plans by clearly describing CRC planning goals and expectations for local land use plans and providing benchmarks for the development of local policies.

EXHIBIT IX-A summarizes the management topic categories. The first five of the topics on the list address planning concerns associated with the goals of CAMA.

**EXHIBIT IX-A
GATES COUNTY, NORTH CAROLINA
SUMMARY OF LAND USE PLAN MANAGEMENT TOPICS**

Public Access (Strategies for maximizing community access to beaches and public trust areas.)

Land Use Compatibility (Management of land use and development in a way that minimizes its primary and secondary impacts on natural and man-made resources.)

Infrastructure Carrying Capacity (Strategies to ensure that infrastructure is available to support anticipated and planned development and that it is managed to protect areas of environmental concern and other fragile areas.)

Natural Hazard Areas (Policies to reduce the community's vulnerability to natural hazards.)

Water Quality (Land use and development policies and strategies to protect quality waters and to restore quality in waters that are non-supporting.)

Local Areas of Concern (Policies and strategies to address local planning and development goals.)

The sixth management topic, Local Areas of Concern, is intended to incorporate specific issues, concerns, and opportunities that are identified by the County. For Gates County, these issues include:

- Commercial and Industrial Development
 - Community Appearance
 - Chowan River Shoreline
- Development Design Standards
- Federal Properties and Programs
 - Growth Management
- Intergovernmental Relations
 - Public Safety
 - Redevelopment
- Residential Development
 - Septic Tank Use
- Solid Waste Management
- Storm Water Management
 - Transportation

For each of the management topics and the issues listed above, goals, objectives, and policies were developed. Policies were developed recognizing management goals, planning objectives, and land use plan requirements. The management goals define the desired outcomes or results that the CRC seeks through its overall management of coastal resources. A second part is a planning objective, which defines the more immediate role that local land use plans play in achieving the management goal. And finally, planning requirements are specific minimum content requirements for policies that are included in land use plans to address the management topics.

C. Goals, Objectives, and Policies

1. Introduction

Goals are the desired ends toward which the policies and programs of the land use plan are directed. Goals are often considered to be the values and general principles that guide the development of a community. They put in words a community's preferred future. Goals also provide a benchmark for developing effective policies and programs to achieve the desired future. The desired ends in the goal statements are fairly general, but they are consistent with the desires expressed in the County's vision. Goals are not time-bound.

There is no mandatory process for setting goals and no required format or content for goal statements. The guidelines require consideration of two initial plan elements in developing goals: the community concerns and aspirations, and the needs and opportunities identified in the analysis of existing and emerging conditions (Chapter II). Gates County opted to list and to include goal statements for a number of local areas of concern to address its specific needs and circumstances. The State designated management topics' goals and planning objectives are listed and included as well. Some of these have been modified to more accurately address local needs and concerns.

Objectives help identify the steps that will be taken to achieve Gates County's goals and strengthen the link between its goals and policies. Objectives also assist in the completion the required analysis of policies to demonstrate that they address the management topics. And finally, objectives make it easier for the County to measure its progress toward attaining its goals and to assess the effectiveness of its plan.

For the purposes of the CAMA land use plan, policies are a consistent set of principles and decision guidelines or courses of action, adopted by an elected board, that are intended to attain the locality's land use and development goals and objectives.

The State requirements allow flexibility in developing policies. However, the planning guidelines have three major requirements that affect policy content. These requirements are:

1. Policies must be consistent with the goals of the Coastal Area Management Act and other applicable State and Federal rules;
2. Policies must effectively guide development and use of land in a manner that is consistent with goals, planning objectives, and land use plan requirements of each management topic; and
3. If a policy has a negative impact on any State management topic, the plan must include additional policies, methods, programs, and/or processes to mitigate the negative impact.

Generally, the guidelines require two types of policies in the land use plan. The first type, basic policies, deals with the central issues of land use planning. The second type, land use and development policies, and the associated future land use map, are closely tied to basic policies, but are more detailed. And they relate primarily to the land classifications or generalized land use designations, the land use principles and guidelines included in the classification or designation, and their spatial distribution on the future land use map.

The policies will guide both day-to-day and long-range decisions and actions of the local government. They may assist as the County considers requests to approve development proposals (or a zoning decision if and when the County adopts a zoning ordinance), or they may guide long-range planning. They may also provide the foundation for the specific actions that the County will take to implement the plan. As a result of the range of purposes that they serve, there may be significant range in the content and specificity of the policies. Policies are treated as regulatory and are used by the Division of Coastal Management in making consistency determinations for issuance of CAMA permits. Local policies are also used in Federal consistency determinations.

2. Issue Areas' Goals, Objectives, and Policies

This section includes the nineteen (19) issue areas identified by Gates County during the land use plan update process. A goal statement, objectives, and a policy statement have also been developed for each issue area. Taken together, these goals, objectives, and policies will help to chart the future of Gates County. They will also serve to assist the County as it considers and decides upon land use and development proposals.

Several action oriented terms are used in this land use plan and as a part of many of the policy statements in this chapter. The terms are defined as follows:

Should – An officially adopted course or method of action intended to be followed to implement goals. Though not as mandatory as “shall”, it is still an obligatory course of action unless clear reasons can be identified that an exception is warranted. Elected, appointed, and administrative officials may be involved at all levels from planning to implementation.

Create – Bring about the desired goal, usually with elected and appointed officials and staff involved and actions, which may involve financial support, as appropriate at all levels from planning to implementation.

Continue – Follow past and present procedures and funding, if appropriate, to maintain desired goal, usually with elected and appointed officials and staff involvement and actions at all levels from planning to implementation.

Encourage – Foster the desired goal through County policies and actions, including financial support, if appropriate.

Enhance – Improve current goal to a desired state through the use of policies and actions at all levels of planning using external resources and County financial support as appropriate.

Identify – Catalog and confirm issues, resource(s), and potential or desired actions.

Implement – Act to accomplish land use plan objectives.

Maintain – Keep in good condition the desired state of affairs through the use of County policies and with elected and appointed officials and staff involvement, funding, and actions as appropriate.

Prevent – Stop described event through the use of appropriate County policies and regulations, as well as coordination with other local, State, and Federal planning and regulatory agencies and programs. Actions may involve County financial support, if appropriate.

Promote – Advance the desired state through the use of County policies and elected and appointed officials and staff involvement, and take action as appropriate.

Protect – Guard against a deterioration of the desired state through the use of County policies, regulations, and funding, as appropriate, in concert with other local, State, and Federal programs and regulations. Enlist the cooperative efforts of elected and appointed officials, staff, and external resources including other local, State and Federal agency personnel.

Provide – Take the lead role in supplying the appropriate support to achieve the desired goal. The County is typically involved in all aspects from planning to

implementation to maintenance. Actions may involve County financial support, if appropriate.

Strengthen – Improve and reinforce the desired goal through the use of County policies and regulations in concert with other local, regional, statewide, or Federal programs and regulations. Elected and appointed officials and staff, as well as external resources may be involved and take action, including financial support, if appropriate.

Support – Adopt and pursue policies and take action to coordinate activities and supply necessary resources, as appropriate, to achieve desired goal.

Sustain – Uphold the desired state through County policies and regulations, appropriate financial assistance, and elected and appointed official and staff involvement and actions to achieve the desired goal.

Work – Cooperate and act through the use of staff, County officials, outside resources and volunteers to create the desired goal.

ISSUE AREA #1: COMMERCIAL AND INDUSTRIAL DEVELOPMENT

GOAL #1: Sustainable commercial and industrial development in areas where such activities already occur or can be reasonably accommodated by public facilities and the County's natural systems and to encourage local support and patronage of County businesses.

POLICY #1a: Gates County supports sustainable commercial and industrial development in areas where such activities already occur or can be reasonably accommodated by public facilities and the County's natural systems; local support and patronage of County businesses; and, planned commercial and industrial developments that are clustered so as to minimize potential impacts on the County's environment and in keeping with the County's rural character.

POLICY #1b: Gates County will adopt and enforce ordinances and procedures to regulate land use, development, redevelopment, and the placement of commercial and industrial developments.

POLICY #1c: Gates County will: encourage local support and patronage for County businesses; promote commercial cluster type development during the development review process; and, encourage efforts and programs of the Northeast North Carolina Economic Development Partnership to attract business and industry to the County and to assist existing businesses and industry.

POLICY #1d: Gates County will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY #1e: Gates County will develop a zoning ordinance to regulate development density and building intensity factors such as building height, lot coverage, and building setbacks for commercial and industrial building development. As it develops county-wide zoning, Gates County will consider and may include specific guidance relative to: net developable area calculations should not include natural hazard areas or areas of environmental concern wherein development should not occur; that a variety of residential zoning districts should be considered with varying density and intensity standards and development requirements; that cluster development should be promoted in various residential zoning districts; that buffering of various land uses such commercial and industrial uses should be buffered when proposed in or near residential areas or adjacent thereto; and, that certain zones will be considered for allowing the use of package sewage treatment plants as a special or conditional use when deemed to be in the best interests of the citizens of Gates County.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #1a: Enforce, and amend as necessary, applicable County ordinances.

OBJECTIVE #1b: Develop commercial and industrial building and development design guidelines and standards.

OBJECTIVE #1c: Promote the development of an environmentally compatible, sustainable industry park.

OBJECTIVE #1d: Seek input from business owners concerning County initiatives.

OBJECTIVE #1e: Develop, adopt, and enforce, and amend as necessary, a County zoning ordinance including designation(s) of permitted and conditional use density and intensity criteria.

ISSUE AREA #2: COMMUNITY APPEARANCE

GOAL #2: Remain aesthetically pleasing while maintaining rural atmosphere, open spaces, and natural areas.

POLICY #2a: Gates County will use its police powers to adopt and enforce ordinances and procedures to regulate land use, development, redevelopment, and community appearance. As it develops county-wide zoning, Gates County will consider and may include specific guidance relative to: net developable area calculations should not include natural hazard areas or areas of environmental concern wherein development should not occur; that a variety of residential zoning districts should be considered with varying density and intensity standards and development requirements; that cluster development should be promoted in various residential zoning districts; that buffering of various land uses such commercial and industrial uses should be buffered when proposed in or near residential areas or adjacent thereto; and, that certain zones will be considered for allowing the use of package sewage treatment plants as a special or conditional use when deemed to be in the best interests of the citizens of Gates County.

POLICY #2b: Gates County will: develop commercial and industrial building and development design guidelines and standards and residential development design guidelines and standards.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #2a: Enforce, and amend as necessary, applicable County ordinances.

OBJECTIVE #2b: Develop a County website and a quarterly newsletter to disseminate information to residents and visitors concerning community appearance (litter, signage, design guidelines, etc.) related issues.

OBJECTIVE #2c: Develop, adopt, and enforce, and amend as necessary, a County zoning ordinance including designation(s) of permitted and conditional use density and intensity criteria.

ISSUE AREA #3: CHOWAN RIVER SHORELINE

GOAL #3: Preserve, protect, and enhance the Chowan River shoreline and attendant wetlands and shores and ensure future generations are able to enjoy its beauty and bounty and can continue to use it for passive and active recreation and leisure activities.

POLICY #3a: Gates County will adopt and enforce ordinances and procedures to regulate land use, development, and redevelopment and support applicable State and Federal laws and regulations regarding building, land uses, and development in areas of environmental concern to help preserve, protect, and enhance the Chowan River. Gates County supports continued management of the Chowan River shoreline and its attendant wetlands and shores to protect and preserve the natural resources of the water and shoreline, relying primarily on the CAMA permit program and the Areas of Environmental Concern (AEC) designated under the CAMA program. Gates County reserves the right to review, comment, advocate, or oppose any regulations or programs that may affect the regulation of Chowan River waters and/or shoreline. As it develops county-wide zoning, Gates County will consider and may include specific guidance relative to: net developable area calculations should not include natural hazard areas or areas of environmental concern wherein development should not occur; that a variety of residential zoning districts should be considered with varying density and intensity standards and development requirements; that cluster development should be promoted in various residential zoning districts; that buffering of various land uses such commercial and industrial uses should be buffered when proposed in or near residential areas or adjacent thereto; and, that certain zones will be considered for allowing the use of package sewage treatment plants as a special or conditional use when deemed to be in the best interests of the citizens of Gates County.

POLICY #3b: Gates County will evaluate (during the development review process) the potential impacts of existing and planned development on existing and planned evacuation infrastructure.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #3a: Adopt and apply development policies that balance protection of natural resources and fragile areas with residential and economic (commercial and industrial) development.

OBJECTIVE #3b: Provide clear direction to assist decision making and consistency findings for divisions of land and public and private projects.

OBJECTIVE #3c: Develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, or flooding.

OBJECTIVE #3d: Develop location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure so that they can better avoid or withstand natural hazards.

OBJECTIVE #3e: Develop a County website and a quarterly newsletter to disseminate information to residents and visitors concerning Chowan River use and related issues.

OBJECTIVE #3f: Develop, adopt, and enforce, and amend as necessary, a County zoning ordinance including designation(s) of permitted and conditional use density and intensity criteria.

ISSUE AREA #4: DEVELOPMENT DESIGN STANDARDS

GOAL #4: Development design standards.

POLICY #4a: Gates County supports the concept of development design standards and will develop guidelines for commercial and industrial development and residential development.

POLICY #4b: Gates County will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan. As it develops county-wide zoning, Gates County will consider and may include specific guidance relative to: net developable area calculations should not include natural hazard areas or areas of environmental concern wherein development should not occur; that a variety of residential zoning districts should be considered with varying density and intensity standards and development requirements; that cluster development should be promoted in various residential zoning districts; that buffering of various land uses such commercial and industrial uses should be buffered when proposed in or near residential areas or adjacent thereto; and, that certain zones will be considered for allowing the use of package sewage treatment plants as a special or conditional use when deemed to be in the best interests of the citizens of Gates County.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #4a: Enforce, and amend as necessary, applicable County ordinances.

OBJECTIVE #4b: Develop, adopt, and enforce, and amend as necessary, a County zoning ordinance including designation(s) of permitted and conditional use density and intensity criteria.

OBJECTIVE #4c: Develop a County website and a quarterly newsletter to disseminate information to residents and visitors concerning commercial building/development design standards and related issues.

ISSUE AREA #5: FEDERAL PROPERTIES AND PROGRAMS

GOAL #5: Use of Federal properties and programs consistent with County growth patterns, character, and image.

POLICY #5a: Gates County supports applicable Federal laws and regulations regarding land uses and development in areas of environmental concern. Additional Federal regulatory programs or expansion of existing programs will be reviewed on a case by case basis. The County reserves the right to support, oppose, review, or comment on additional regulations that may impact Gates County, its image and character, and its economy. Local public hearings by Federal agencies should be extensively advertised and conducted in Gates County, before any new regulations are adopted or existing programs are expanded.

POLICY #5b: Gates County will lobby for the opportunity to purchase all or part of Federal properties within its borders if such properties are proposed for sale and will work to ensure that any changes to land use on Federal properties is consistent with County goals, objectives, and policies.

An objective that will help the County achieve its goal and implement its policies is:

OBJECTIVE #5a: Monitor Federal programs affecting, or potentially affecting, Gates County and the region on an on-going basis.

ISSUE AREA #6: GROWTH MANAGEMENT

GOAL#6: Promote environmentally friendly development that is sustainable, aesthetically pleasing, and consistent with the County's rural image and character.

POLICY #6a: Gates County will adopt and enforce ordinances and procedures to regulate land use, development, and redevelopment and supports applicable State and Federal laws and regulations regarding building, land uses, and development. Detached residential structures are the preferred type of residential land use in Gates County. Gates County will work to ensure the continuance of established residential development patterns and work to ensure future development is in character with

existing development with regard to size, lot coverage, architectural design, and construction materials and methods. As it develops county-wide zoning, Gates County will consider and may include specific guidance relative to: net developable area calculations should not include natural hazard areas or areas of environmental concern wherein development should not occur; that a variety of residential zoning districts should be considered with varying density and intensity standards and development requirements; that cluster development should be promoted in various residential zoning districts; that buffering of various land uses such commercial and industrial uses should be buffered when proposed in or near residential areas or adjacent thereto; and, that certain zones will be considered for allowing the use of package sewage treatment plants as a special or conditional use when deemed to be in the best interests of the citizens of Gates County.

POLICY #6b: Gates County will develop commercial and industrial building and development and residential design guidelines and standards and work to promote commercial cluster type development.

POLICY #6c: Gates County will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY #6d: Gates County will develop a zoning ordinance to regulate development density and building intensity factors such as building height, lot coverage, and building setbacks for residential, commercial, and industrial building development.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #6a: Provide clear direction to assist local decision making and consistency findings for divisions of land and public and private projects.

OBJECTIVE #6b: Enforce, and amend as necessary, applicable County ordinances.

OBJECTIVE #6c: Evaluate development and redevelopment proposals according to County goals, objectives, and policies and the land suitability analysis and future land use map developed as a part of the land use plan update.

OBJECTIVE #6d: Establish mitigation criteria and concepts that may include but are not limited to cluster subdivision design, enacting local buffers, impervious surface limits, and effective innovative storm water management alternatives.

OBJECTIVE #6g: Develop, adopt, and enforce, and amend as necessary, a County zoning ordinance including designation(s) of permitted and conditional use density and intensity criteria.

OBJECTIVE #6h: Promote the development of an environmentally compatible, sustainable industry park.

ISSUE AREA #7: INFRASTRUCTURE CARRYING CAPACITY AND PROVISION OF PUBLIC FACILITIES AND SERVICES

GOAL #7: Ensure that public systems and services are sized, located, and managed to protect or restore the quality of areas of environmental concern or other fragile areas while providing adequate levels of service to meet the needs of citizens.

POLICY #7a: Gates County is committed to the provision of public systems and services at appropriate levels adequate to meet the needs of resident and visitors. Gates County will develop ways to improve interaction and communication between the Gates County Board of Commissioners, Planning Board, and School Board with respect to school facilities' capacities and needs as related to the impacts of development(s).

POLICY #7b: Gates County will evaluate the potential impacts of development proposals according to the future land use map categories of this land use plan update with existing and planned infrastructure capabilities.

POLICY #7c: Gates County will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #7a: Establish level of service standards and criteria for infrastructure systems.

OBJECTIVE #7b: Identify and/or establish service area boundaries for existing and future infrastructure as needed.

OBJECTIVE #7c: Develop a County website and a quarterly newsletter to disseminate information to residents and visitors concerning County services, schedules, and related issues.

OBJECTIVE #7d: Enforce, and amend as necessary, applicable County ordinances.

OBJECTIVE #7e: Develop a capital improvements plan.

OBJECTIVE #7f: Develop a County-wide mapping and geographic information system (GIS).

ISSUE AREA #8: INTERGOVERNMENTAL RELATIONS

GOAL #8: Government cooperation and interaction.

POLICY #8a: Gates County will work to improve intergovernmental relations and promote cooperative, multi-jurisdictional efforts to solve regional and area problems.

Objectives that will help the County achieve its goal and implement its policy include:

OBJECTIVE #8a: Interact with local governments in the region and State and Federal agencies on a routine basis to promote County interests.

OBJECTIVE #8b: Advise other governmental agencies of Gates County's positions on local, regional, State, and Federal issues.

ISSUE AREA #9: LAND USE COMPATIBILITY

GOAL #9: Ensure that development and use of resources or preservation of land minimizes direct and secondary environmental impacts, avoids risks to public health, safety and welfare and is consistent with the capability of the land based on considerations of interactions of natural and manmade features.

POLICY #9a: Gates County will adopt and enforce ordinances and procedures to enhance land use compatibility by regulating land use, development, and redevelopment.

POLICY #9b: Gates County supports applicable State and Federal laws and regulations regarding land uses and development in areas of environmental concern.

POLICY #9c: Gates County will establish mitigation criteria for development impacts and study the implementation of concepts that may include but are not limited to cluster subdivision design, requiring local buffers, impervious surface limits, and effective innovative storm water management alternatives.

POLICY #9d: Gates County will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY #9e: Maintain the pattern of current development specifically low density residential (approximately 1 dwelling unit per acre) and small scale commercial development (1 acre lots or previously approved and recorded lots) with provisions for discretionary review of large scale commercial development (5,000 – 15,000 square foot).

POLICY #9f: Utilize zoning, when adopted, to change or impose additional density and intensity standards for residential, commercial, and industrial development and incorporate design guidelines and components that encourage or require the development of cluster type development. As it develops county-wide zoning, Gates County will consider and may include specific guidance relative to: net developable area calculations should not include natural hazard areas or areas of environmental concern wherein development should not occur; that a variety of residential zoning districts should be considered with varying density and intensity standards and development requirements; that cluster development should be promoted in various residential zoning districts; that buffering of various land uses such commercial and

industrial uses should be buffered when proposed in or near residential areas or adjacent thereto; and, that certain zones will be considered for allowing the use of package sewage treatment plants as a special or conditional use when deemed to be in the best interests of the citizens of Gates County.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #9a: Adopt and apply local development regulations and procedures to ensure protection of natural resources and fragile areas with economic development.

OBJECTIVE #9b: Adopt regulations and procedures that provide clear direction to assist local decision making and consistency findings for divisions of land and public and private projects.

OBJECTIVE #9c: Enforce, and amend as necessary, applicable County ordinances.

OBJECTIVE #9d: Evaluate development and redevelopment proposals according to County goals, objectives, and policies and the land suitability analysis and future land use map developed as a part of this land use plan update.

OBJECTIVE #9f: Develop, adopt, and enforce, and amend as necessary, a County zoning ordinance including designation(s) of permitted and conditional use density and intensity criteria.

ISSUE AREA #10: NATURAL HAZARD AREAS

GOAL #10: Conserve protective functions of wetlands, flood plains, and other shore line features for their natural storm protection functions and their natural resources giving recognition to public health, safety, and welfare issues.

POLICY #10a: Gates County will adopt and enforce ordinances and procedures to regulate land use, development, and redevelopment and supports applicable State and Federal laws and regulations regarding land uses and development in natural hazard areas and areas of environmental concern.

POLICY #10b: Gates County will evaluate (during the development review process) the potential impacts of existing and planned development on existing and planned evacuation infrastructure. The County will support State efforts and initiatives to maintain and increase the current miles and acres of shellfish harvesting waters.

POLICY #10c: Gates County will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY #10d: Encourage the use of pervious materials and new technologies that provide for safe and efficient driveway and parking areas and that appropriately address storm water runoff areas.

POLICY #10e: Support State and Federal policies that regulate the location and intensity of development in State designated areas of environmental concern.

POLICY #10f: Discourage inappropriate development by limiting residential and commercial development density, structure size, and development intensity through the use of zoning. As it develops county-wide zoning, Gates County will consider and may include specific guidance relative to: net developable area calculations should not include natural hazard areas or areas of environmental concern wherein development should not occur; that a variety of residential zoning districts should be considered with varying density and intensity standards and development requirements; that cluster development should be promoted in various residential zoning districts; that buffering of various land uses such commercial and industrial uses should be buffered when proposed in or near residential areas or adjacent thereto; and, that certain zones will be considered for allowing the use of package sewage treatment plants as a special or conditional use when deemed to be in the best interests of the citizens of Gates County.

POLICY #10g: Allow development and redevelopment within special flood hazard areas subject to the provisions and requirements of the National Flood Insurance Program, CAMA regulations, the County's flood plain ordinance.

POLICY #10h: Adopt and periodically update a Hazard Mitigation Plan that addresses the County's natural hazards and meets the requirements of the NC Division of Emergency Management and the Federal Emergency Management Agency. Gates County will: establish appropriate mitigation-oriented policies and participate in local, regional, and statewide planning efforts, as appropriate for Gates County and the Town of Gatesville, that seek to lessen the damaging effects of natural hazards and that protect life and property; implement as needed and as appropriate mitigation-oriented projects and preventive maintenance programs that lessen the damaging effects of natural hazards and that protect life and property; identify and seek funding for infrastructure and emergency management resource improvements; create and maintain effective public education, outreach, and awareness programs aimed at providing key information and timely alerts to the citizens of Gates County and the Town of Gatesville; and, investigate, seek funding for, and implement special projects that are intended to have a positive effect on reducing the damaging impacts of natural hazards on Gates County and the Town of Gatesville. As included in the Gates County Multi-jurisdictional Hazard Mitigation Plan (April 2005), Gates County will work to:

- 1.) Reinforce Millpond Road and Millpond Bridge to mitigate repetitive flooding on Merchants Millpond Creek;
- 2.) Upgrade county communications tower;
- 3.) Open waterways by clearing debris in ditches throughout the county;
- 4.) Multi-laning (road widening) of at least one primary road (Highway 13) for greater evacuation capacity;

- 5.) Increase public awareness of local hazard mitigation plan and emergency response plan;
- 6.) Increase community awareness of wildfire-related issues and wildland fire safety by utilizing the Firewise program and its resources (www.firewise.org);
- 7.) Investigate the types and costs of enhances warning systems and any state and federal funding sources that may be available for the type of system Gates County will ultimately wish to purchase;
- 8.) Provide mitigation related information and literature to schools, churches, and local newspaper;
- 9.) Further educate the public through on-going public meetings;
- 10.) Increase EMS and law enforcement personnel resources;
- 11.) Increase emergency management training opportunities for county personnel;
- 12.) Continue to enforce existing building code and fire code, and investigate appropriate ways to advance these codes for greater future effectiveness with regard to natural hazards;
- 13.) Keep power/utility right-of-way clear by routinely pruning trees and clearing tree limbs; and,
- 14.) Investigate the potential advantages and disadvantages, if any, of joining the NFIP's Community Rating System (CRS).

In addition, as included in the Gates County Multi-jurisdictional Hazard Mitigation Plan (April 2005), Gates County will work with the Town of Gatesville to:

- 1.) Investigate the cause of one repetitive loss property known to exist within the Town of Gatesville; and,
- 2.) Increase emergency management training opportunities for town personnel.

POLICY #10i: Maintain or improve the Community Rating System (CRS) score to make the County safer from flood risks and reduce premiums for Federal Flood Insurance.

POLICY #10j: Take steps locally and in conjunction with NCDOT and adjacent jurisdictions to improve traffic safety and drainage to mitigate the impact of localized flooding and seek alternative methods of hazard avoidance.

POLICY #10k: Consider regulating uses and activities in and on public waters through adoption of zoning overlay districts to address the impacts of development and redevelopment and uses on natural features to avoid introduction of hazards to these sensitive environmental resources.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #10a: Develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, flooding, or sea level rise.

OBJECTIVE #10b: Develop location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure so that they can better avoid or withstand natural hazards.

ISSUE AREA #11: PUBLIC ACCESS

GOAL #11: Provide public access opportunities to public trust waters.

POLICY #11a: The development of additional public access points is not deemed a pressing issue at this time and existing access points (public and private) will be relied upon until a shoreline access study is undertaken and additional needs are identified and potential sites designated. Public accesses should provide for access to all segments of the community, including persons with disabilities.

POLICY #11b: Gates County will develop a shoreline access plan and will consider proposals to provide public access opportunities to public trust waters and supports continued funding and enhancement of State maintained public access facilities along the Chowan River and in Merchants Millpond State Park.

POLICY #11c: Seek opportunities, including memorandums of understanding, easements, and deeded property, for public access(s).

Objectives that will help the County achieve its goal and implement its policy include:

OBJECTIVE #11a: Assess shoreline access needs and opportunities on an on-going basis.

OBJECTIVE 11b: Seek State assistance to develop and implement a shoreline access plan setting forth the frequency and type of access facilities with provision for public access for all segments of the community.

ISSUE AREA #12: PUBLIC SAFETY

GOAL #12: Safety of residents and visitors.

POLICY #12a: Gates County will adopt and enforce ordinances and procedures to regulate land use, development, and redevelopment and supports applicable State and Federal laws and regulations regarding building, land uses, and development in areas of environmental concerns. Gates County supports the enforcement of criminal statutes.

POLICY #12b: Gates County will evaluate (during the development review process) the potential impacts of existing and planned development on existing and planned evacuation infrastructure. In its Hazard Mitigation Plan, Gates County will: establish appropriate mitigation-oriented policies and participate in local, regional, and statewide planning efforts, as appropriate for Gates County and the Town of

Gatesville, that seek to lessen the damaging effects of natural hazards and that protect life and property; implement as needed and as appropriate mitigation-oriented projects and preventive maintenance programs that lessen the damaging effects of natural hazards and that protect life and property; identify and seek funding for infrastructure and emergency management resource improvements; create and maintain effective public education, outreach, and awareness programs aimed at providing key information and timely alerts to the citizens of Gates County and the Town of Gatesville; and, investigate, seek funding for, and implement special projects that are intended to have a positive effect on reducing the damaging impacts of natural hazards on Gates County and the Town of Gatesville. As included in the Gates County Multi-jurisdictional Hazard Mitigation Plan (April 2005), Gates County will work to:

- 1.) Reinforce Millpond Road and Millpond Bridge to mitigate repetitive flooding on Merchants Millpond Creek;
- 2.) Upgrade county communications tower;
- 3.) Open waterways by clearing debris in ditches throughout the county;
- 4.) Multi-laning (road widening) of at least one primary road (Highway 13) for greater evacuation capacity;
- 5.) Increase public awareness of local hazard mitigation plan and emergency response plan;
- 6.) Increase community awareness of wildfire-related issues and wildland fire safety by utilizing the Firewise program and its resources (www.firewise.org);
- 7.) Investigate the types and costs of enhanced warning systems and any state and federal funding sources that may be available for the type of system Gates County will ultimately wish to purchase;
- 8.) Provide mitigation related information and literature to schools, churches, and local newspaper;
- 9.) Further educate the public through on-going public meetings;
- 10.) Increase EMS and law enforcement personnel resources;
- 11.) Increase emergency management training opportunities for county personnel;
- 12.) Continue to enforce existing building code and fire code, and investigate appropriate ways to advance these codes for greater future effectiveness with regard to natural hazards;
- 13.) Keep power/utility right-of-way clear by routinely pruning trees and clearing tree limbs; and,
- 14.) Investigate the potential advantages and disadvantages, if any, of joining the NFIP's Community Rating System (CRS).

In addition, as included in the Gates County Multi-jurisdictional Hazard Mitigation Plan (April 2005), Gates County will work with the Town of Gatesville to:

- 1.) Investigate the cause of one repetitive loss property known to exist within the Town of Gatesville; and,
- 2.) Increase emergency management training opportunities for town personnel.

POLICY #12c: Gates County will continue to support the efforts and programs of the County's volunteer fire and rescue organizations and the North Carolina Highway Patrol (State Police), and the Gates County Sheriff's Department.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #12a: Enforce, and amend as necessary, applicable County ordinances.

OBJECTIVE #12b: Maintain/provide police protection utilizing the Gates County Sheriff's Department.

OBJECTIVE #12c: Develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, or flooding.

OBJECTIVE #12d: Develop location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure so that they can better avoid or withstand natural hazards.

OBJECTIVE #12g: Develop a County website and a quarterly newsletter to disseminate information to residents and visitors concerning emergency services, contact information, and related issues.

ISSUE AREA #13: REDEVELOPMENT

GOAL #13: Redevelopment consistent with County land use and development goals.

POLICY #13a: Gates County will adopt and enforce ordinances and procedures to regulate land use, development, and redevelopment and supports applicable State and Federal laws and regulations regarding building, land uses, and development.

POLICY #13b: Gates County will evaluate redevelopment proposals for consistency with its land use and development goals.

POLICY #13c: Gates County will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY #13d: Gates County will develop a zoning ordinance to regulate development density and building intensity factors such as building height, lot coverage, and building setbacks for residential, commercial, and industrial building development. As it develops county-wide zoning, Gates County will consider and may include specific guidance relative to: net developable area calculations should not include natural hazard areas or areas of environmental concern wherein development should not occur; that a variety of residential zoning districts should be considered with varying density and intensity standards and development requirements; that cluster development should be promoted in various residential zoning districts; that buffering of various land uses such commercial and industrial uses should be buffered when proposed in or near residential areas or adjacent thereto; and, that certain

zones will be considered for allowing the use of package sewage treatment plants as a special or conditional use when deemed to be in the best interests of the citizens of Gates County.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #13a: Adopt regulations and procedures that provide clear direction to assist local decision making and consistency findings for divisions of land and public and private projects.

OBJECTIVE #13b: Enforce, and amend as necessary, applicable County ordinances.

OBJECTIVE #13c: Evaluate development and redevelopment proposals according to County goals, objectives, and policies and the land suitability analysis and future land use map developed as a part of this land use plan update.

OBJECTIVE #13d: Develop local mitigation criteria and concepts that may include but are not limited to cluster subdivision design, enacting local buffers, impervious surface limits, and effective innovative storm water management alternatives.

OBJECTIVE #13e: Develop, adopt, and enforce, and amend as necessary, a County zoning ordinance including designation(s) of permitted and conditional use density and intensity criteria.

ISSUE AREA #14: RESIDENTIAL DEVELOPMENT

GOAL #14: Ensure future development is in character with existing development, is sustainable, is aesthetically pleasing, and is consistent with the County's rural character.

POLICY #14a: Gates County will adopt and enforce ordinances and procedures to regulate land use, development, and redevelopment and supports applicable State and Federal laws and regulations regarding building, land uses, and development. Detached residential structures are the preferred type of residential land use in Gates County.

POLICY #14b: Gates County will work to: promote the development of traditional, platted subdivisions served by interior roads and adequate infrastructure (as opposed to State road frontage lot development); and, ensure future development is in character with existing development with regard to size, lot coverage, architectural design, and construction materials and methods.

POLICY #14c: Gates County will review and evaluate development and redevelopment proposals according to County goals, objectives, and policies and the land suitability analysis and future land use map developed as a part of the land use plan update.

POLICY #14d: Gates County will develop a zoning ordinance to regulate development density and building intensity factors such as building height, lot coverage, and building setbacks for residential building development.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #14a: Adopt regulations and procedures that provide clear direction to assist local decision making and consistency findings for divisions of land and public and private projects.

OBJECTIVE #14b: Enforce, and amend as necessary, applicable County ordinances..

OBJECTIVE #14c: Develop mitigation criteria and concepts that may include but are not limited to cluster subdivision design, enacting local buffers, impervious surface limits, and effective innovative storm water management alternatives.

OBJECTIVE #14d: Develop, adopt, and enforce, and amend as necessary, a County zoning ordinance including designation(s) of permitted and conditional use density and intensity criteria.

ISSUE AREA #15: SEPTIC TANK USE

GOAL #15: Performance of septic tank systems is monitored; that existing systems are properly maintained; and, that proposed systems are installed according to approved plans under supervision of appropriate agencies.

POLICY #15a: Gates County supports the use of individual, on-site sewage disposal systems as the primary method of wastewater treatment in Gates County. Non-traditional methods of wastewater treatment should be used only when natural soil conditions dictate their use and not solely to accommodate larger structures or a greater dwelling density. Package treatment plants should be considered only when natural conditions prohibit the use of septic systems, as remedial efforts to correct existing failing septic improvements, or if required by ordinance and should be constructed to serve a specific development without excess capacity for off-site wastewater treatment connections. Maintenance of privately owned package treatment plants should be supervised by the NC Utilities Commission or other public agencies.

Objectives that will help the County achieve its goal and implement its policy include:

OBJECTIVE #15a: Rely on the Gates County Health Department to ensure that the performance of existing septic tank systems is monitored; that existing systems are properly maintained; and, that proposed systems are installed according to approved plans under the supervision.

OBJECTIVE #15b: Consider proposals for central public wastewater treatment systems.

OBJECTIVE #15c: Rely on the Albemarle Regional Health Services Management Entity Program for design, review, and monitoring of specialized waste water systems serving development areas with very poor soils that will not accommodate a traditional septic tank system.

ISSUE AREA #16: SOLID WASTE MANAGEMENT

GOAL #16: Efficient, economical collection and disposal of solid waste.

POLICY #16a: Gates County will work to ensure the efficient and cost effective collection and disposal of solid waste, continued participation in a regional solid waste authority, and continued operation of voluntary recycling efforts. The County will coordinate additional programs for hazardous materials disposal and large item pick-ups.

POLICY #16b: Gates County will continually monitor the demands placed on the solid waste management system to determine if and when changes are needed.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #16a: Continue the existing system for solid waste collection and disposal services.

OBJECTIVE #16b: Develop a County website and a quarterly newsletter to disseminate information to residents and visitors concerning solid waste management system related issues.

ISSUE AREA #17: STORM WATER MANAGEMENT

GOAL #17: Comprehensive storm water management.

POLICY #17a: Gates County supports efforts and programs to minimize and mitigate the effects of storm water drainage and a comprehensive approach to storm water management.

POLICY #17b: Gates County will develop: location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure so that they can better avoid or withstand natural hazards; and, regulations that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, and flooding.

Objectives that will help the County achieve its goal and implement its policies include:

OBJECTIVE #17a: Seek assistance in developing a storm water management plan and implementing (infrastructure) system improvements.

OBJECTIVE #17b: Seek technical assistance from North Carolina Department of Transportation concerning storm water drainage problem areas.

ISSUE AREA #18: TRANSPORTATION

GOAL #18: Safe, efficient transportation system given State and local finances, topography, geography, and natural systems and surrounding land uses and development.

POLICY #18a: Gates County supports efforts and programs to provide a safe, efficient, and well planned transportation system in the County and in the region.

POLICY #18b: Gates County encourages intergovernmental cooperation with other jurisdictions to study of the transportation needs of the region and supports the provision of a safe, efficient transportation system given State and local finances, topography, geography, and natural systems and surrounding land uses and development.

POLICY #18c: Gates County will work to require new subdivisions to be served by roads constructed to State standards.

An objective that will help the County achieve its goal and implement its policies is:

OBJECTIVE #18a: Seek technical assistance from the North Carolina Department of Transportation concerning storm water drainage problem areas.

ISSUE AREA #19: WATER QUALITY

GOAL #19: Maintain, protect, and where possible enhance water quality of public trust waters.

POLICY #19a: Gates County will adopt and enforce ordinances and procedures to regulate land use, development, and redevelopment and supports applicable State and Federal laws and regulations regarding building, land uses, and development in natural hazard areas and areas of environmental concern.

POLICY #19b: Gates County will assist the State as appropriate to develop programs and regulations: for public trust waters to help ensure that water quality is maintained if not impaired and improved if impaired; that help prevent or control non-point source discharges (sewage and storm water) such as, but not limited to impervious surface limits, vegetated riparian buffers, natural areas, natural area buffers, and wetland protection; and, to protect open shell fishing waters and restore closed or conditionally closed shell fishing waters.

POLICY #19c: Consider creating landscaping provisions, requiring vegetated riparian buffers, providing for cluster subdivision design, setting impervious surface limits, and requiring storm water management in the zoning ordinance (when developed) to assist in improvements of water quality.

POLICY #19d: Consider adoption of local erosion and sedimentation control, filling, and grading regulations to address and control adverse effects on water quality.

POLICY #19e: Undertake a comprehensive storm water management program that controls the amount and quality of storm water runoff that is consistent with maintaining and enhancing water quality in the Chowan River.

POLICY #19f: Ensure that land use and development regulations are consistent with the proper management of water resources and applicable State and Federal development regulations.

POLICY #19g: Consider regulating uses and activities in and on public waters through adoption of zoning overlay districts to address the impacts of development and redevelopment and uses on natural features to avoid introduction of hazards to these sensitive environmental resources.

An objective that will help the County achieve its goal and implement its policy is:

OBJECTIVE #19a: Develop a County website and a quarterly newsletter to disseminate information to residents and visitors concerning water quality and related issues.

D. Future Land Use

1. Land Classification Scheme

The land classification scheme utilized by the County was chosen based on its appropriateness for the goals, objectives, and policies listed above, the County's vision, the purposes for which the land use plan update is used, and the County's capacity to implement the plan.

A land classification approach was chosen by Gates County for its land classification scheme. The land classification approach includes the designation of typical functional land use areas which include: 1) developed and in-fill development areas, 2) growth and town-like transition areas, 3) limited growth and transition areas, 4) community areas, 5) rural areas, and 6) conservation, open space, and public recreation areas.

Developed and in-fill development areas contain or are likely to experience high to medium density development. These areas are town-like or more urban with a mixture of residential, commercial, and public services type land uses. Basic public services are available throughout these areas. These areas are expected to experience in-fill development, concentrated efforts to preserve properties or buildings, and/or redevelopment.

Growth and town-like transition areas are generally near or adjacent to developed and in-fill development areas wherein medium density development is occurring or is likely to occur. A mixture of land uses is anticipated in these areas with commercial and service delivery type land uses and development predominant. Basic public services are available or are nearby these areas.

Limited growth and transition areas are generally on the fringes of growth and town-like transition areas but may also be found on the fringes of developed and in-fill development areas and community areas wherein low density residential and/or commercial development is likely to occur. Basic public services are available or are nearby these areas. Community areas are essentially crossroads communities. These areas generally have low density development and normally feature a commercial, public, or semi-public land use or building as a focal point. Basic public services are available or nearby these areas. Low density residential and commercial development is likely to occur in these areas on a limited or sporadic basis.

Rural areas are areas wherein lands used for agriculture pursuits, pasture land, and woodlands under private ownership are predominant. Very low density development, primarily residential or of an agricultural support nature, exists and is likely to occur in these areas. Generally, with the exception of public water along State roads, basic public services may not be nearby or may not be readily available to these areas. Infrastructure improvements are not planned.

Conservation, open space, and recreation areas are areas wherein lands have significant environmental constraints and/or are set aside or targeted for conservation, open space maintenance, and public recreation are predominant. Very limited or no development is anticipated in these areas which generally fall under the ownership or regulatory/statutory control of public agencies or local, State, or Federal governments. Generally, with the exception of public water along State roads, basic public services may not be nearby or may not be readily available to these areas. Infrastructure improvements are not planned.

At the present time, Gates County does not have county-wide zoning, and it does not have provisions for required floor area ratios, lot coverage limits, buffering, building sizes, etc. The future land use map has been developed as a tool to help implement the policies included in this land use plan and to guide the development of county-wide zoning. It is anticipated that zoning will establish, among other things, districts specifying type, density, and intensity of development as well as lot coverage and building size requirements, and have provisions for buffering, landscaping, signage, building orientation, etc.

Consistent with the future land use map, the County prefers single family detached site built residential structures, 1 dwelling unit per acre or larger. Low density development is generally considered as one structure per acre although larger lots are encouraged

by the County and are generally the rule, resulting from the need for adequate land to accommodate septic tank and drain field systems and the poor soils found in the County. Medium density is considered as one structure per less than one acre although this density is generally only found in Gatesville (which has its own zoning ordinance), in some of the County's village areas, along some State maintained roads, and at a few crossroads communities, where lots were created before the County had subdivision regulations and/or had increased minimum lot size requirements. Low intensity commercial development is preferred; generally one unit per acre or more for new subdivided lots (or on smaller lots if approved and recorded).

Based on the future land use map, it is anticipated that more intensive uses, cluster-type development, some mixed uses, and commercial and industrial development will be encouraged, through zoning, in developed and in-fill development areas, growth and town-like transition areas, and limited growth and transitions areas. Such development is preferred in developed and in-fill development areas and growth and town-like transition areas, although some of these type developments will likely occur in limited growth and transition areas as well, and/or in commercial/business parks or industrial parks, if and when developed. Maximum floor areas ratios will be developed for these more intensive land uses and lot sizes of one acre or more are envisioned with provisions for extra/adequate land area to be included given the poor soils found in Gates County, the lack of a central public sewer system, and the difficulties normally encountered in developing on-site sewage disposal systems.

Gates County's population is expected to grow by about 1,000 persons between 2000 and 2010. In 2000, there were 3,901 occupied housing units in Gates County, housing a population of 10,501 people, or an average of 2.69 people per occupied housing units. At this average, an additional 371 housing units would be needed between 2000 and 2010 to accommodate the projected population increase, or an average of about 37 housing units per year. It is likely that some housing units that were reported (in CENSUS 2000) as being unoccupied will become occupied during the decade and that the lots already (as of 2005) created (approved and recorded) for residential development purposes will satisfy but not exceed the amount of land area allocated to various uses will not exceed projected needs.

2. Future Land Use Map

In addition to showing the boundaries of the land classifications, EXHIBIT IX-B Future Land Use Map shows the 14 digit hydrological units encompassing Gates County and the existing road network, the County's water system lines and fire hydrants, and other community facilities. There is no central wastewater collection and treatment system and no storm sewer system in Gates County. At present, no major community facilities' extensions or development is planned and therefore no cost estimates have been developed.

The composite environmental conditions map (Chapter IV, EXHIBIT IV-C, page IV-13) and the land suitability analysis map (Chapter VII, EXHIBIT VII-C, page VII-5) were used to help to develop the future land use map. During the land use planning process, the County visually compared its future land use map (EXHIBIT IX-B), the composite environmental conditions map (EXHIBIT IV-D), and the State -supplied land suitability analysis map (EXHIBIT VIII-C) by overlaying color versions of each map with vellums (black and white, see through) of other maps. From this process, a high level of consistency was apparent and noted between the maps. The future land use map includes the amount of land allocated to the various land use classifications.

EXHIBIT IX-C breaks down Gates County’s projected future land use classifications by estimated areas (acres and square miles) and percent of County total. Estimated area totals indicate sufficient land(s) is available to meet (and exceed) projected future land needs.

**EXHIBIT IX-C
GATES COUNTY, NORTH CAROLINA
PROJECTED FUTURE LAND USE TOTALS**

FUTURE LAND USE CLASSIFICATION	AREA IN ACRES*	AREA IN SQUARE MILES*	PERCENT OF COUNTY TOTAL
Developed and in-fill development areas	3,286	5.1	1.5%
Growth and town-like transition areas	2,159	3.3	1.0%
Limited growth and transition areas	9,728	15.2	4.5%
Community areas	1,224	1.9	0.6%
Rural areas	124,276	194.1	57.4%
Conservation, open space, and recreational areas	75,807	118.4	35.0%
COUNTY TOTALS	216,480	338	100%

*Estimated.

EXHIBIT IX-D shows the County’s existing land use (map) classifications development (building) density and intensity estimates. As indicated on EXHIBIT IX-D, the predominant land use is “Undeveloped.” Undeveloped includes agricultural, wooded, and forest lands where few, if any residential dwelling units or nonresidential units exist. Parcel line maps (which are being prepared, but were not available for use in preparing this land use plan update) were not used to create the existing land use map; therefore, residential home sites located on large agricultural tracts may be shown as “residential” and the related farm acreage as “Undeveloped.” The “Institutional, Public, and Semi-public, Churches” category includes Merchants Millpond, the Great Dismal Swamp, and publicly held lands.

EXHIBIT IX-D shows the estimated distribution of land uses (residential, commercial, institutional, public, semi-public, churches, and undeveloped) in Gates County in January 2004 according to four general existing land use classifications which were evaluated and mapped. As per the DCM Land Use Plan Technical Manual, several additional and different classifications for Future Land Use were evaluated and mapped. Thus, direct comparison of the two (existing and future land use classifications) is not practicable.

**EXHIBIT IX-D
GATES COUNTY, NORTH CAROLINA
EXISTING LAND USE MAP CLASSIFICATIONS DEVELOPMENT (BUILDING) DENSITY AND
INTENSITY ESTIMATES***

Existing Land Use Category	Existing Development Density & Intensity Estimates (a. = Acres Devoted to Use Estimate) (b. = Estimated Number of Units***) (c. = Average Building Height) (d. = Lot Size Range Estimate) (e. = Average Building Size Estimate)
Residential	a. 4,334 acres b. 4,389 units (dwelling units) c. 35 feet d. 1 – 10 acres e. 2,000 square feet
Commercial	a. 350 acres b. 40 units (buildings) c. 35 feet d. 1 – 10 acres e. 4,000 square feet
Institutional, Public, Semi-Public, Churches	a. 26,360 acres** b. 50 units (buildings) c. 35 feet d. 1 – 10 acres e. 6,000 square feet
Undeveloped	a. 185,436 acres b. N/A c. N/A d. N/A e. N/A

NOTE:

*General estimate; not based on actual parcel lines but intended to reflect observed existing land use. Acreage estimates are for predominant land uses on given parcels and does not reflect the total acreage of the tract upon which the land use is located.

**Includes Federal properties, most notably Great Dismal Swamp (12,306 acres estimated) and State owned properties (13,394 acres estimated).

***"Units" is used as an indicator of residential dwelling units for residential (category) density purposes or for buildings for commercial, institutional, public, semi-public, and church uses.

Several exhibits follow which should be considered as a part of the future land use map, serving to supplement and clarify future projections and the relationship between the future land use map and County policy statements.

EXHIBIT IX-E shows the estimated distribution of residential housing units (average building heights, population, lot coverage percentages, and estimated total acreage) for existing development and future development density and intensity according to future land use categories. Parcel line maps (which are being developed in 2005-2006, but were not available for use in preparing this land use plan update) were not used to develop the existing land use map or future land use map. In December 2005, utilizing new aerial photography (made available in 2005) and field reviews, existing development density and intensity estimates were revisited and distributed according to future land use categories developed in Phase 2 of the land use plan update process (as opposed to the general categories developed in Phase 1 and shown on EXHIBIT IX-D).

EXHIBIT IX-E reflects the County's desire to guide future residential and non-residential development to areas of the County that are similarly developed and have facilities and services to serve such development and away from rural areas or conservation, open space, and recreation areas during the next twenty years. Residential development is projected for, and should be guided through zoning and County interaction with the development community to developed and in-fill development areas, growth and town-like transition areas, and limited growth and transition areas. While some growth will inevitably occur in community areas and rural areas, it should be limited primarily to low density/large tract (10-20 acres) residential associated with agricultural pursuits. As the County develops a zoning ordinance, it is considering buffers, large lot zoning, sliding scale zoning, etc. and is projecting commercial and institutional zones in areas developed and in-fill development areas, growth and town-like transition areas, and limited growth and transition areas.

EXHIBIT IX-E shows a current population of 10,860 people living in 4,389 residential units served by 90 commercial or institutional buildings. The twenty year projections shown on EXHIBIT IX-E assume the County does not develop a central public sewer system or develop a collection system for transporting sewage to another jurisdiction for treatment. The soils in Gates County are so poor that lot size determination must factor in the areas for septic systems or hybrid systems and reserve/repair areas. Thus most "lots" created in Gates County are essentially acreage tracts. EXHIBIT IX-E projects a 2020 population of 15,254, living in 5,917 residential units served by 90 commercial or institutional buildings.

The County instituted a subdivision moratorium on major subdivisions in 2003-2004. Another moratorium was instituted in May 2005 with the goal of having a zoning ordinance in place prior to its expiration. As the County works on zoning, the moratorium has been extended into 2006. The County is also considering an adequate public facilities ordinance to help ensure public facilities (schools and water) and development keep pace. As a part of its annual land use plan review and the CAMA required status of implementation review that must be done two years in to the planning period, the County will analyze development patterns. If development occurs at a pace likely to go beyond projections, the County may amend the land use plan.

**EXHIBIT IX-E
GATES COUNTY, NORTH CAROLINA
FUTURE LAND USE MAP CLASSIFICATIONS EXISTING & FUTURE DEVELOPMENT
(BUILDING) DENSITY AND INTENSITY ESTIMATES**

Future Land Use Category	Existing Development Density & Intensity Estimates* (a. = Estimated Residential Units) (b.= Est. Nonresidential Buildings) (c. = Average Building Height) (d. = Population***) (e. = Lot Coverage Percentage) (f. = Estimated Total Acreage) (g.=Est. Residential Acres) (h.=Est. Commercial Acres) (i.=Est. Institutional Acres) (j.=Est. Undeveloped Acres)	Future Development Density & Intensity (Estimate)** (a. = Estimated Residential Units)*** (b.=Est. Nonresidential Buildings) (c. = Average Building Height) (d. = Population***) (e. = Lot Coverage Percentage) (f. = Estimated Total Acreage) (g.=Est. Residential Acres) (h.=Est. Commercial Acres) (i.=Est. Institutional Acres) (j.=Est. Undeveloped Acres)
Developed and In-Fill Development Areas	a. 1,242 units b. 35 buildings c. 35 feet d. 3,120 people e. 4.6% f. 3,286 acres g. 1,550 acres h. 175 acres i. 175 acres j. 1,386 acres	a. 1,853 units b. 35 buildings c. 35 feet d. 4,818 people e. 4.6% f. 3,286 acres g. 2,462 acres h. 298 acres i. 263 acres j. 263 acres
Growth and Town-Like Transition Areas	a. 660 units b. 25 buildings c. 35 feet d. 1,604 people e. 4.6% f. 2,159 acres g. 850 acres h. 125 acres i. 125 acres j. 1,059 acres	a. 877 units b. 25 buildings c. 35 feet d. 2,280 people e. 4.6% f. 2,159 acres g. 1,619 acres h. 194 acres i. 173 acres j. 173 acres
Limited Growth and Transitions Areas	a. 842 units b. 15 buildings c. 35 feet d. 2,080 people e. 4.6% f. 9,728 acres g. 1,514 acres h. 75 acres i. 75 acres j. 8,064 acres	a. 1,157 units b. 15 buildings c. 35 feet d. 3,008 people e. 4.6% f. 9,728 acres g. 2,500 acres h. 100 acres i. 100 acres j. 7,028 acres
Community Areas	a. 303 units b. 10 buildings c. 35 feet d. 676 people e. 4.6% f. 1,224 acres g. 520 acres h. 50 acres i. 50 acres j. 604 acres	a. 350 units b. 10 buildings c. 35 feet d. 780 people e. 4.6% f. 1,224 acres g. 600 acres h. 98 acres i. 110 acres j. 416 acres
Rural Areas	a. 1,342 units b. 5 buildings c. 35 feet d. 3,380 people e. 4.6% f. 124,276 acres g. 2,800 acres h. 25 acres i. 25 acres j. 121,426 acres	a. 1,680 units b. 5 buildings c. 35 feet d. 4,368 people e. 4.6% f. 124,276 acres g. 3,360 acres h. 25 acres i. 25 acres j. 120,866 acres

Conservation, Open Space, and Recreation Areas	a. N/A b. N/A c. N/A d. N/A e. N/A f. 75,807 acres g. 0 acres h. 0 acres i. 0 acres j. 75,807 acres	a. N/A b. N/A c. N/A d. N/A e. N/A f. 75,807 acres g. 0 acres h. 0 acres i. 0 acres j. 75,807 acres
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NOTES:

*Estimate of existing development types occurring within the general boundaries of future land use classifications areas designated on the Future Land Use Map.

**Year 2020 projection.

***Estimated total population within each future land use category.

EXHIBIT IX –F shows estimates of current water usage (2005) and future water usage (2020) for residential land uses. The Gates County water system service area boundaries are all areas within Gates County and potable water is available to all areas of the County. The County sells 30,000 gallons per day to Gatesville. There were 3,400 metered customers in 2003 and just over 315 million gallons of water was used in 2002. Current systems estimates place the water usage at about 850,000 gallons per day. The County system gets its water from wells which can yield 1.430 million gallons per day. The total capacity of the Gates County Water Plant is 1.4 million gallons per day and the plant is permitted for 2.3 million gallons per day. If the projected 2020 water usage of 1.398 million gallons per day comes to fruition, and expansion of the plant or purchase of treated water may be required. The County Water System, through preparation and submission of State required Local Water Supply Plan (LWSP), must keep abreast of existing and projected water usage and continue to work in concert with other County agencies to advise decision makers with respect to water resources and development proposals.

As a part of its work plan to implement this land use plan update, the County will develop capital improvements plan (CIP) which should include projects associated with the water systems and school system. Typically, such plans forecast needs for a five year hence time frame and are updated annually. As it develops the CIP and as it entertains development proposals, the County must remain cognizant of the capabilities and capacities of utility systems (particularly the water system) and public facilities and services providers (particularly the school system).

Currently, the County requests technical review of development proposals from utility and service providers and is considering developing an adequate public facilities ordinance. A development moratorium is in effect through the end of 2006 as the County develops zoning; completes property line based mapping and geographic information systems; amends the subdivision ordinance; and, develops an adequate public facilities ordinance. As the County develops its geographic information system (GIS), a more substantive count and analysis of building development in each category will be achievable and may be developed.

The 2020 estimate is based on 6,007 potential total water customers (1,888 customers in developed and in-fill development areas combined; 702 customers in growth and town-like transition areas combined; 1,172 customers in limited growth and transition areas combined; 360 customers in community areas combined; and 1,685 customers in rural areas combined) using an average of 212 gallons of water per day each. Commercial or industrial development may occur in each of the future land use classifications. Such uses may require more water than a residence, depending on the size and type of the commercial or industrial uses.

**EXHIBIT IX-F
GATES COUNTY, NORTH CAROLINA
FUTURE LAND USE MAP CLASSIFICATIONS EXISTING & PROJECTED (ESTIMATED)
FUTURE WATER USAGE**

Future Land Use Category	Current Water Usage (Estimate)*	Projected Water Usage (Estimate)*/**
Developed and In-Fill Development Areas 3,286 total acres	270,724 gallons per day; 1,550 total estimated acres for residential uses 1,736 total estimated acres for non-residential uses	400,256 gallons per day; 2,462 total estimated acres for residential uses 824 total estimated acres for non-residential uses
Growth and Town-Like Transition Areas 2,159 total acres	145,220 gallons per day; 850 total estimated acres for residential uses 1,309 total estimated acres for non-residential uses	191,224 gallons per day; 1,619 total estimated acres for residential uses 540 total estimated acres for non-residential uses
Limited Growth and Transitions Areas 9,728 total acres	177,868 gallons per day; 1,514 total estimated acres for residential uses 8,214 total estimated acres for non-residential uses	248,464 gallons per day; 2,500 total estimated acres for residential uses 7,228 total estimated acres for non-residential uses
Community Areas 1,224 total acres	66,356 gallons per day; 520 total estimated acres for residential uses 704 total estimated acres for non-residential uses	76,320 gallons per day; 600 total estimated acres for residential uses 624 total estimated acres for non-residential uses
Rural Areas 124,276 total acres	285,564 gallons per day; 2,800 total estimated acres for residential uses 121,476 total estimated acres for non-residential uses	357,220 gallons per day; 3,360 total estimated acres for residential uses 120,916 total estimated acres for non-residential uses
Conservation, Open Space, and Recreation Areas 75,807 total acres	N/A 75,807 total estimated acres for non-residential uses	N/A 75,807 total estimated acres for non-residential uses

NOTES: *Includes Gates County Water System customers and units/buildings still using private wells.
Current (2005) total water system usage: 850,000 gpd and projected (2020) water system usage=1,398,000 gpd.
**Year 2020 projection.

EXHIBIT IX-G shows that an estimated 3,793 acres are deemed likely for development by 2020. To determine the area likely for development, the current developed area estimates for residential, commercial, and institutional uses from EXHIBIT IX-E (items g., h., and i.) were subtracted from the future developed area estimates, with the net result representing the area in acres deemed likely for development by 2020. It must be acknowledged that not all of the total acreages included in areas deemed likely for development in the future land use categories may yield development, given soils and environmental constraints and land use regulations the County may institute in the future through zoning and subdivision regulations.

It is anticipated the majority of development in the next 15 to 20 years will be targeted to developed and in-fill development areas, growth and town-like transition areas and limited growth and transition areas which account for 1.5%, 1.0%, and 4.5% respectively of the County's future land use area totals.

By 2020, a projected 1,123 additional acres is deemed likely for development in the developed and in-fill development areas, combined with an estimated 1,900 acres currently developed for a total of 3,023 acres, leaving a projected 263 acres undeveloped. By 2020, a projected 886 additional acres is deemed likely for development in the growth and town-like transition areas, combined with an estimated 1,100 acres currently developed for a total of 1,986 acres, leaving 173 acres undeveloped. Development in limited growth and transition areas are expected to generally require more acreage to ensure adequate building placement and buffering areas and promote land conserving development practices. By 2020, a projected 1,036 additional acres is deemed likely for development in limited growth and transition areas, combined with an estimated 1,664 acres currently developed for a total of 2,700 acres, leaving 7,028 acres undeveloped. Growth in community areas, which account for 0.6% of the County total projected future land use area should be minimal by 2020. An additional 188 acres is likely for development, combined with the current estimate of 620 acres for a total of 808 acres, leaving 416 acres undeveloped. Rural areas, which account for 57.4% of the projected future land use area should also see relatively limited development during the period with the current 2,850 developed acres increased by 560 acres, leaving 120,866 acres undeveloped. The 75,807 acres comprising the conservation, open space and recreation areas is projected to remain undeveloped.

Gates County, as it develops zoning, is using the future land use category areas shown on the future land use map and tabulated on EXHIBIT IX-G as planning tools. The future land use map and EXHIBIT IX-G are being examined, in concert with aerial photographs (received in 2005) and windshield surveys as the County develops zoning. As a guide, the future land use map provides the County with the general parameters of areas where development is likely, may be desired, or should not occur.

The County will use the information contained in EXHIBIT IX-G, along with the future land use map and applicant and review agency input as guidance tools as it reviews

and evaluates development proposals in an effort to manage growth and steer development to areas where such development exists, can be served by public facilities and services, and is compatible with the County’s land use planning policies. Similarly, this exhibit and the future land use map are serving the County as it develops a zoning ordinance and re-evaluates its subdivision ordinance. This exhibit and future land use map provide the basis for determining zoning classifications and permitted and conditional uses therein. They serve to help ensure zoning targets growth so that development is compatible with County policies and administrative capabilities, thus preserving the County’s rural areas and protecting its natural, environmentally sensitive systems.

**EXHIBIT IX-G
GATES COUNTY, NORTH CAROLINA
PROJECTED FUTURE LAND USE TOTALS/FUTURE LAND USE MAP HOLDING CAPACITY**

FUTURE LAND USE CLASSIFICATION	AREA IN ACRES	CURRENT UNDEVELOPED ACRES	CURRENT DEVELOPED ACRES	ADDITIONAL ACRES DEEMED LIKELY FOR DEVELOPMENT*	PROJECTED UNDEVELOPED ACRES*
Developed and in-fill development areas	3,286	1,386	1,900	1,123	263
Growth and town-like Transition areas	2,159	1,059	1,100	886	173
Limited growth and Transition areas	9,728	8,064	1,664	1,036	7,028
Community areas	1,224	604	620	188	416
Rural areas	124,276	121,426	2,850	560	120,866
Conservation, open space, and recreational areas	75,807	75,807	0	0	75,807
TOTALS	216,480	208,346	8,134	3,793	204,553

NOTE: *Year 2020 projection.

Future development proposals within the projected future land use areas will be evaluated on a variety of factors, including their consistency with the land use plan update and future land use map and potential impact on utility systems (water), public facilities (transportation and storm water); and, public services (schools and public health). In addition, as a part of an annual review of the land use plan update, and the CAMA required status of implementation review that must be done two years in to the planning period, the County will analyze development patterns. If, though deemed highly unlikely, developments occurs at a pace that appears likely to go beyond projections, the County may amend the land use plan and/or take additional steps to restrict development.

Gates County will develop a zoning ordinance to regulate development density and building intensity factors such as building height, lot coverage, and building setbacks for residential, commercial, and industrial building development. As it develops county-wide zoning, Gates County will consider and may include specific guidance relative to: net developable area calculations should not include natural hazard areas or areas of environmental concern wherein development should not occur; that a variety of residential zoning districts should be considered with varying density and intensity standards and development requirements; that cluster development should be promoted in various residential zoning districts; that buffering of various land uses such commercial and industrial uses should be buffered when proposed in or near residential areas or adjacent thereto; and, that certain zones will be considered for allowing the use of package sewage treatment plants as a special or conditional use when deemed to be in the best interests of the citizens of Gates County.

EXHIBIT IX-H provides a summary of the distribution of acreages for existing land uses as shown previously on EXHIBIT V-B and for future land uses according to the future land use map (EXHIBIT IX-B) classifications.

**EXHIBIT IX-H
GATES COUNTY, NORTH CAROLINA
DISTRIBUTION OF ACREAGE FOR EXISTING AND FUTURE LAND USE
MAP CLASSIFICATIONS**

EXISTING LAND USE CLASSIFICATIONS*:

Residential	4,334 acres
Commercial	350 acres
Institutional	26,360 acres**
<u>Undeveloped</u>	<u>185,936 acres</u>

TOTAL ACREAGE 216,480 acres

FUTURE LAND USE CLASSIFICATIONS*:**

Developed and in-fill –

- Residential 2,462 acres
- Commercial 298 acres
- Institutional 263 acres
- Undeveloped 263 acres
- TOTAL 3,286 acres

Growth and town-like –

- Residential 1,619 acres
- Commercial 194 acres
- Institutional 173 acres
- Undeveloped 173 acres
- TOTAL 2,159 acres

E. Policy Analysis

1. Consistency With Management Topics

State CAMA planning guidelines require an analysis to “demonstrate how the land use and development goals, policies and future land use map...will guide development in a manner that is consistent with the specific management goal(s), planning objectives(s), and land use plan requirements of each Management Topic” [.0702 (d)(2)(A)].

The sections and exhibits which follow demonstrate that the County plan’s goals, policies, and future land use map will guide development in a manner that is consistent with each component of the Management Topics. The Management Topics are summarized in EXHIBIT IX-A on page IX-2 of this chapter.

a. Consistency of County Goals With Management Topics

EXHIBIT IX-I describes the consistency between the County’s goals as contained in this land use plan update with the Management Topics.

EXHIBIT IX-I GATES COUNTY, NORTH CAROLINA CONSISTENCY REVIEW-GATES COUNTY GOALS AND MANAGEMENT TOPICS

<u>ISSUE AREA</u>	<u>GOAL STATEMENT</u>	<u>CONSISTENCY WITH MANAGEMENT TOPICS</u>
1. Commercial and Industrial Development	Goal #1	The County’s goal is consistent with the land use compatibility management topic as it seeks to manage commercial and Industrial development that “can be reasonably accommodated by...the County’s natural systems.”
2. Community Appearance	Goal #2	The County’s goal is consistent with the land use compatibility management topic as if seeks to maintain rural atmosphere, open space, and natural systems.
3. Chowan River Shoreline	Goal #3	The County’s goal is consistent with the land use compatibility, natural hazard areas, public access, and water quality management topics as it seeks to preserve, protect, and enhance the shoreline and to ensure its use for passive and active recreation and leisure activities.
4. Development Design Standards	Goal #4	The County’s goal is consistent with the land use compatibility management topic as it seeks to manage land use and development to minimize primary and secondary impacts on resources through standards for development.

EXHIBIT IX-I (continued)
GATES COUNTY, NORTH CAROLINA
CONSISTENCY REVIEW-GATES COUNTY GOALS
AND MANAGEMENT TOPICS

5. Federal Properties and Programs	Goal #5	The County's goal is consistent with the land use compatibility, natural hazard areas, and water quality management topics as it seeks to ensure Federal properties and programs are used in a manner consistent with the County's growth patterns, character, and image.
6. Growth Management	Goal #6	The County's goal is consistent with the land use compatibility, natural hazards, infrastructure carrying capacity, and water quality management topics as it seeks environmentally friendly and sustainable development consistent with its rural image and character.
7. Infrastructure Carrying Capacity and Provision of Public Facilities and Services	Goal #7	The County's goal is essentially a restatement of the infrastructure carrying capacity management topic.
8. Intergovernmental Relations	Goal #8	The County's goal is consistent with the infrastructure carrying capacity and land use compatibility management topics as it seeks cooperation and interaction between government agencies which will help to facilitate the provision of adequate and planned infrastructure and managed land use and development.
9. Land Use Compatibility	Goal #9	The County's goal is essentially a restatement of the land use compatibility management topic.
10. Natural Hazard Areas	Goal #10	The County's goal is consistent with the land use compatibility, natural hazard areas, and water quality management topics as it seeks to conserve protective functions of wetlands, flood plains, and other shoreline features.
11. Public Access	Goal #11	The County's goal is consistent with the public access management topic as it seeks to provide public access opportunities.
12. Public Safety	Goal #12	The County's goal is consistent with the infrastructure carrying capacity management topic as it seeks to provide infrastructure to existing and anticipated development.
13. Redevelopment	Goal #13	The County's goal is consistent with the land use compatibility, natural hazards, infrastructure carrying capacity, and water quality management topics as it seeks environmentally friendly and sustainable development consistent with its rural image and character.

EXHIBIT IX-I (continued)
GATES COUNTY, NORTH CAROLINA
CONSISTENCY REVIEW-GATES COUNTY GOALS
AND MANAGEMENT TOPICS

14. Residential Development	Goal #14	The County's goal is consistent with the land use compatibility, natural hazards, infrastructure carrying capacity, and water quality management topics as it seeks environmentally friendly and sustainable development consistent with its rural image and character.
15. Septic Tank Use	Goal #15	The County's goal is consistent with the infrastructure carrying capacity, water quality, and land use compatibility management topics as it seeks cooperation and interaction between government agencies which will help to facilitate the provision of adequate and planned infrastructure, properly installed septic systems, and managed land use and development.
16. Solid Waste Management	Goal #16	The County's goal is consistent with the infrastructure carrying capacity management topic as it seeks to provide infrastructure to existing and anticipated development.
17. Storm Water Management	Goal #17	The County's goal is consistent with the infrastructure carrying capacity management topic as it seeks to provide infrastructure to existing and anticipated development and the land use compatibility, natural hazard area, and water quality management topics as it seeks to conserve protective functions of wetlands, flood plains, and other shoreline features.
18. Transportation	Goal #18	The County's goal is consistent with the infrastructure carrying capacity management topic as it seeks to provide infrastructure to existing and anticipated development.
19. Water Quality	Goal #19	The County's goal is essentially a restatement of the water quality management topic.

b. General Direction of Policies

EXHIBIT IX-J summarizes the general direction of Gates County’s policies.

**EXHIBIT IX-J
GATES COUNTY, NORTH CAROLINA
GENERAL DIRECTION OF COUNTY POLICIES**

<u>ISSUE AREA</u>	<u>POLICY</u>	<u>GENERAL POLICY DIRECTION</u>
1. Commercial and Industrial Development	Policy #1	The County supports: sustainable commercial and industrial development in areas where it can be accommodated by public facilities and the natural systems; patronage of local businesses; planned/clustered commercial and industrial developments; and, use of police powers to regulate land use, redevelopment, and placement of commercial and industrial developments.
2. Community Appearance	Policy #2	The County will use its police powers to regulate land use, development, redevelopment, and community appearance.
3. Chowan River Shoreline	Policy #3	The County will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development in areas of environmental concern. Gates County supports management of the Chowan River shoreline and the CAMA permit program.
4. Development Design Standards	Policy #4	The County supports the concept of development design standards.
5. Federal Properties and Programs	Policy #5	The County supports applicable Federal laws and regulations regarding land uses and development in areas of environmental concern.
6. Growth Management	Policy #6	The County will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development. Detached residential structures are the preferred type of residential land use in Gates County.
7. Infrastructure Carrying Capacity and Provision of Public Facilities and Services	Policy #7	The County supports adequate public systems and services.
8. Intergovernmental Relations	Policy #8	The County supports intergovernmental relations and multi-jurisdictional efforts to solve problems.
9. Land Use Compatibility	Policy #9	The County will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development in areas of environmental concern.

EXHIBIT IX-J (continued)
GATES COUNTY, NORTH CAROLINA
GENERAL DIRECTION OF COUNTY POLICIES

10. Natural Hazard Areas	Policy #10	The County will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development in areas of environmental concern.
11. Public Access	Policy #11	The County will consider proposals to provide additional accesses and supports State funded and maintained public access facilities.
12. Public Safety	Policy #12	The County supports adequate public systems and services.
13. Redevelopment	Policy #13	The County will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development in areas of environmental concern.
14. Residential Development	Policy #14	The County will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development. Detached residential structures are the preferred type of residential land use in Gates County.
15. Septic Tank Use	Policy #15	The County supports the use of individual, on-site sewage disposal systems. Package treatment plants should only be used when natural conditions prohibit the use of septic systems.
16. Solid Waste Management	Policy #16	The County supports continued participation in a regional solid waste authority and voluntary recycling.
17. Storm Water Management	Policy #17	The County supports comprehensive approaches to storm water management.
18. Transportation	Policy #18	The County supports adequate public systems and services.
19. Water Quality	Policy #19	The County will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development in areas of environmental concern.

c. Consistency of Future Land Use Map and Land Use Plan Requirements

The future land use map (EXHIBIT IX-B) includes six land classifications. Currently, Gates County does not have a county-wide zoning ordinance. However, the minimum lot size for new divisions of land is one acre. The residential density and development intensity encouraged by the land classifications shown on the future land use map are as follows:

- Developed and in-fill development areas contain or are likely to experience high to medium residential density development.
- Growth and town-like transition areas are wherein medium density residential development is occurring or is likely to occur.
- Limited growth and transition areas are areas wherein low density residential development is likely to occur.
- Community areas are areas wherein low density residential development is likely to occur on a limited or sporadic basis.
- Rural areas are areas wherein very low density development, primarily residential or of an agricultural support nature, exists and is likely to occur.
- Conservation, open space, and recreation areas are areas wherein very limited or no development is anticipated.

The future land use map was developed using the composite environmental conditions map (EXHIBIT IV-D, page IV-11) and the land suitability analysis map (EXHIBIT VII-C, page VII-5) as the primary guiding tools.

Developed and in-fill development areas, growth and town-like transition areas, limited growth and transition areas, and community areas are projected to occur or continue in areas wherein any development constraints (hazards and limitations) present may be addressed by methods such as restrictions on types of land uses, special site planning, or the provision of public services, as shown on the composite environmental conditions map. Generally, these areas are also found in areas of the County shown as having medium to high suitability for development according to the land suitability analysis.

Rural areas and conservation, open space, and recreation areas shown on the future land use map essentially mirror the areas shown on the composite environmental conditions map as having development constraints (hazards and limitations) present that may be addressed by methods such as restrictions on types of land uses, special site planning, or the provision of public services or contain serious hazards for development or lands where the impacts of development would cause serious damage to the values of natural systems. Generally, these areas are found in areas of the County shown as having low suitability or being least suitable for development according to the land suitability analysis.

No material differences appear between the development patterns shown on the future land use map and the development constraints shown on the natural systems composite map and the land suitability patterns shown on the land suitability map.

There are no material differences between the spatial patterns of land classifications that depend on public water and sewer and the planned development or extension of water and sewer. Public water is available to areas developed or likely to develop. No public sewer is planned for or by Gates County. The sewage system owned by the

State (Department of Corrections), if expanded could serve some very limited development in an area of Gates County (US 158) which is projected to likely experience limited growth and transition.

Very limited or no development is planned for any of the County's natural hazard areas.

Projected land use patterns, density, and intensity will not negatively impact the County's evacuation infrastructure which is comprised of: US 158, US 13, NCSR 32, and NCSR 37.

The land classifications and spatial patterns shown on the future land use map reflect the significant amount of conservation, open space, and recreation areas in Gates County, none of which will readily accommodate development. These natural areas will remain in a natural state. There are no open shell fish waters in Gates County.

2. Impact of County Policies on Management Topics

CAMA guidelines require that the land use plan contain "a description of the type and extent of analysis completed to determine the impact of CAMA Land Use Plan policies on the Management Topics. Both positive and negative impacts of...policies on the Management Topics must be described. Policies that have any negative impacts on Management Topics must include a description of the policies, methods, programs and processes (either currently in place or included in the plan) to mitigate any negative impacts..."[.0702(d)(2)(B)].

EXHIBIT IX-K is a matrix describing the analysis of the impacts of County policies on Management Topics. The goals, planning objectives, and land use plan requirements for each Management Topic have been summarized into benchmarks. References to County policies are listed in the left column and each County policy is compared to the Management Topic benchmarks and whether it is beneficial, neutral, or detrimental to attainment of the policy benchmark labeled. For policies that are judged to be either beneficial or detrimental to a Management Topic, a brief summary of the analysis that led to that conclusion is noted.

**EXHIBIT IX-K
GATES COUNTY, NORTH CAROLINA
POLICY ANALYSIS MATRIX ~
COUNTY POLICIES AS BENEFICIAL, NEUTRAL, OR DETRIMENTAL TO
STATE MANAGEMENT TOPIC BENCHMARKS**

State Management Topics	Public Access	Land Use Compatibility	Infrastructure	Natural Hazards	Water Quality
Benchmarks	More planned access locations Upgrades to existing access locations	Reduction in habitat loss and fragmentation related to impacts of land use and development Reduction of water resource and water quality degradation	Water, sewer, and other key community facilities and services being available in required locations at adequate capacities to support planned community growth and development patterns	Land uses and development patterns that reduce vulnerability to natural hazards Land uses and development patterns that take into account the existing and planned capacity of evacuation infrastructure	Land use and development criteria and measures that abate impacts that degrade water quality
County Land Use and Development Policies					
1. Commercial and Industrial Development, POLICY #1	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL	NEUTRAL
2. Community Appearance, POLICY #2	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL
3. Chowan River Shoreline, POLICY #3	BENEFICIAL	BENEFICIAL	NEUTRAL	BENEFICIAL	BENEFICIAL
4. Development Design Standards, POLICY #4	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL	NEUTRAL

EXHIBIT IX-K (continued)
GATES COUNTY, NORTH CAROLINA
POLICY ANALYSIS MATRIX~
COUNTY POLICIES AS BENEFICIAL, NEUTRAL, OR DETRIMENTAL TO
STATE MANAGEMENT TOPIC BENCHMARKS

State Management Topics	Public Access	Land Use Compatibility	Infrastructure	Natural Hazards	Water Quality
Benchmarks	More planned access locations Upgrades to existing access locations	Reduction in habitat loss and fragmentation related to impacts of land use and development Reduction of water resource and water quality degradation	Water, sewer, and other key community facilities and services being available in required locations at adequate capacities to support planned community growth and development patterns	Land uses and development patterns that reduce vulnerability to natural hazards Land uses and development patterns that take into account the existing and planned capacity of evacuation infrastructure	Land use and development criteria and measures that abate impacts that degrade water quality
County Land Use and Development Policies					
5. Federal Properties and Programs, POLICY #5	NEUTRAL	BENEFICIAL	NEUTRAL	BENEFICIAL	BENEFICIAL
6. Growth Management, POLICY #6	NEUTRAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL
7. Infrastructure, POLICY #7	NEUTRAL	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL
8. Intergovernmental Relations, POLICY #8	NEUTRAL	BENEFICIAL	BENEFICIAL	NEUTRAL	NEUTRAL
9. Land Use Compatibility, POLICY #9	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL	NEUTRAL

EXHIBIT IX-K (continued)
GATES COUNTY, NORTH CAROLINA
POLICY ANALYSIS MATRIX~
COUNTY POLICIES AS BENEFICIAL, NEUTRAL, OR DETRIMENTAL TO
STATE MANAGEMENT TOPIC BENCHMARKS

State Management Topics	Public Access	Land Use Compatibility	Infrastructure	Natural Hazards	Water Quality
Benchmarks	More planned access locations Upgrades to existing access locations	Reduction in habitat loss and fragmentation related to impacts of land use and development Reduction of water resource and water quality degradation	Water, sewer, and other key community facilities and services being available in required locations at adequate capacities to support planned community growth and development patterns	Land uses and development patterns that reduce vulnerability to natural hazards Land uses and development patterns that take into account the existing and planned capacity of evacuation infrastructure	Land use and development criteria and measures that abate impacts that degrade water quality
County Land Use and Development Policies					
10. Natural Hazard Areas, POLICY #10	NEUTRAL	BENEFICIAL	NEUTRAL	BENEFICIAL	BENEFICIAL
11. Public Access, POLICY #11	BENEFICIAL	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL
12. Public Safety, POLICY #12	NEUTRAL	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL
13. Redevelopment, POLICY #13	NEUTRAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	NEUTRAL
14. Residential Development, POLICY #14	NEUTRAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL

Chapter X: Tools for Managing Development

Taken together, this chapter and the preceding one (Chapter IX Plan for the Future) are arguably the most important parts of the land use plan because they state the County's goals, objectives, and policies and its strategy and action plan for implementing policies. In this chapter, State guidelines require identification and description of the tools and the actions that the County has selected to implement its land use plan. This chapter has four parts:

- Guide for land use decision-making. (Description of the role of the plan and the status of its policies in Gates County's land use and development decisions.)
- Existing development management program. (Description of Gates County's existing policies, ordinances, codes, and regulations and how they will be coordinated and employed to implement the land use and development policies.)
- Additional tools. (Additional tools, such as new or amended ordinances, capital improvements, purchase of property, or other specific projects, selected by Gates County to implement the plan.)
- Action plan and schedule. (Description of the priority actions that Gates County will take to implement the plan and a general schedule for accomplishing these actions.)

A. Guide for Land Use Decision-Making

The Gates County Land Use Plan should be used by the County's elected and appointed officials and the community as a guide in making decisions about (or that affect) land use and development. It is generally accepted that the policies and the future land use map are decision-making guides and that they do not have the force of law. However, in considering the roles and status of the plan, the County must remain aware that the policies and the map are frequently used in a "regulatory" manner in the issuance of State and Federal permits. For example, consistency with the local land use plan is a major consideration in the issuance of major and minor CAMA development permits.

The plan and its policies serve short-term purposes. The plan is used by various sectors. Developers and/or others seeking County review or intervention may consult the policies to formulate a request that is consistent with the policies, thereby increasing the chances of approval. The County staff will review requests in light of policies, pointing out those policies: (1) that support the request; (2) that are in conflict; and (3) that carry the most weight, thereby shaping the overall staff response.

Planning Board members can make individual determinations as to the consistency of the request with the policies. They may consider staff recommendation, but may choose to give different weights to the policies. The general public can reference the policies when speaking in favor of or against a petition. The Board of Commissioners can take into account and weigh the policy interpretations by the petitioner, the staff, the Planning Board, and residents, as well as its own interpretations and priorities in making its decision.

The plan also serves important long-term functions. It gives guidance to new development management tools and to major adjustments of existing tools. The plan may be used in the development of plans for major capital facilities. And finally, it may guide the development of plans for projects that support implementation of the plan.

The land use plan's function with respect to zoning is of prime importance to Gates County since one of the main action items the County will undertake is the development of a zoning ordinance. Once developed and adopted, proper administration of the County's zoning ordinance should require any review of a proposed text or map amendment – whether by the staff, the Planning Board, or the Board of Commissioners – to be based on consideration of whether the proposed amendment is consistent with the Gates County Land Use Plan and otherwise advances the public health, safety, and general welfare.

Because the land use plan's standards are wide ranging but explicit, it should be the principal guide to the Planning Board's discussions and actions concerning land use management and development, particularly zoning ordinance amendments -- if and when a zoning ordinance is implemented. The Board, however, should also look beyond the plan and consider whether proposed developments or requests for amendments to zoning or other ordinances, even if consistent with the plan, advance the best interests of public health, safety, and general welfare. This very general criterion calls for consideration of a wide range of issues, including, but not limited to the potential impact of a development or a proposed ordinance amendment on:

- the natural environment – i.e., how a proposed development or development allowed by an amendment might affect air quality, water quality, flooding, erosion, important natural areas, etc.;
- important natural resources – i.e., how a proposed development or the development allowed by an amendment might threaten or enhance the continued availability and efficient use of finite natural resources for agriculture or forestry.
- the transportation system – i.e., whether any additional traffic generated by a proposed development or a development allowed by an amendment can be safely and efficiently accommodated by the County's transportation facilities;

- the provision of utilities and services – i.e., whether any additional demands for water supply, electricity, refuse collection, fire and police protection, education, health care, recreation, etc. generated by a proposed development or development allowed by an amendment can be safely and efficiently accommodated by public, community, or private utility and service systems;
- the County economy – i.e., how a proposed development or development allowed by an amendment might affect employment opportunities and the general health of the Gates County economy;
- important historical, architectural, archeological, and cultural resources – i.e., how a proposed development or development allowed by an amendment might threaten or enhance the continued existence and integrity of resources of architectural, archeological, or cultural significance;
- neighboring development – i.e., how a proposed development or development allowed by an amendment might affect living or working conditions in neighboring areas (including whether development might deter or enhance the appropriate development or conservation of neighboring property);
- community function, character, and attractiveness – i.e., how a proposed development or development allowed by an amendment might enhance the attractiveness and functional mix of land uses needed to meet the needs of future populations and avoid adverse impacts; and,
- provision of affordable and convenient housing – i.e., how a proposed development or development allowed by an amendment might affect people’s ability to find affordable housing reasonably accessible to their place of employment.

B. Existing Development Management Program

State land use planning guidelines require that the plan include the following information related to development management: (1) a description of the County’s existing development management program; (2) a description of the role that this program will play in implementing the plan; and, (3) a description of the steps that the County will take to coordinate the ordinances and codes to implement the plan. The County’s existing development management program includes all of the ordinances, regulations, codes, policies, and directives that affect land use and development in the County.

The following paragraphs list the land use related ordinances, codes, and policies that have been adopted or implemented by Gates County and which department(s) is responsible for managing the program. A brief statement of how each will be used to implement the plan is also included. The State management topics that are affected are noted. In some cases, major adjustments or amendments that are needed to

make the existing development program components more effective tools for implementing the plan are discussed.

Flood plain ordinance – adopted April 27, 1987, amended December 1, 2003

Managing department/agency: Gates County Planning and Inspections.

Use in plan implementation: This instrument is used to ensure building and development activities are conducted outside of flood prone areas and/or are elevated above flood levels, thereby contributing to the health, safety, and general welfare of residents, protection of buildings and properties, and the minimization of adverse or negative impacts of development on environmentally fragile areas.

State management topic(s) affected: Public Access, Land Use Compatibility, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: No adjustments or amendments are envisioned during the planning period.

Development Ordinance – Amended December 18, 1986 to require 125' frontage, one residential building per lot, and 20' setbacks on all sides

Managing department/agency: Gates County Planning and Inspections.

Use in plan implementation: This instrument is used to promote and ensure managed development and to avoid overcrowding of structures, thereby contributing to the health, safety, and general welfare of residents, protection of buildings and properties, and the minimization of adverse or negative impacts of development on environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility.

Needed adjustments or amendments: No adjustments or amendments are envisioned during the planning period.

Subdivision regulations – amended December 1, 1985, November 1, 1999, and Spring/Summer, 2004

Managing department/agency: Gates County Planning and Inspections.

Use in plan implementation: This instrument is used to promote and ensure managed development and to avoid overcrowding of structures, thereby contributing to the health, safety, and general welfare of residents, protection of buildings and properties, and the minimization of adverse or negative impacts of development on environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility.

Needed adjustments or amendments: At the time of this writing, substantial amendments to the subdivision ordinance are being considered by the Board of Commissioners. Action on the amendments is expected in Spring/Summer 2004.

Storm-water management regulations (some regulations included in subdivision regulations)

Managing department/agency: Gates County Planning and Inspections.

Use in plan implementation: This instrument is used to promote and ensure managed development and to avoid overcrowding of structures, thereby contributing to the health, safety, and general welfare of residents, protection of buildings and properties, and the minimization of adverse or negative impacts of development on environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility.

Needed adjustments or amendments: At the time of this writing, substantial amendments to the subdivision ordinance are being considered by the Board of Commissioners. Action on the amendments is expected in Spring/Summer 2004.

Open space preservation regulations (some regulations included in subdivision regulations)

Managing department/agency: Gates County Planning and Inspections.

Use in plan implementation: This instrument is used to promote and ensure managed development and to avoid overcrowding of structures, thereby contributing to the health, safety, and general welfare of residents, protection of buildings and properties, and the minimization of adverse or negative impacts of development on environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility.

Needed adjustments or amendments: At the time of this writing, substantial amendments to the subdivision ordinance are being considered by the Board of Commissioners. Action on the amendments is expected in Spring/Summer 2004.

Farmland preservation (some regulations included in subdivision regulations)

Managing department/agency: Gates County Planning and Inspections.

Use in plan implementation: This instrument is used to promote and ensure managed development and to preserve farmland, thereby contributing to the health, safety, and general welfare of residents, the promotion of agriculture, and the minimization of adverse or negative impacts of development on environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility.

Needed adjustments or amendments: At the time of this writing, substantial amendments to the subdivision ordinance are being considered by the Board of Commissioners. Action on the amendments is expected in Spring/Summer 2004.

Building inspection

Managing department/agency: Gates County Planning and Inspections.

Use in plan implementation: This function is used to ensure proper building methods and materials are utilized, thereby contributing to the health, safety, and general welfare of residents, protection of buildings and properties, and the minimization of adverse or negative impacts of development on environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility.

Needed adjustments or amendments: No adjustments are envisioned during the planning period.

CAMA local permits (must have CAMA representative sign off on certain plats)

Managing department/agency: Gates County Planning and Inspections and the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Coastal Management (DCM).

Use in plan implementation: This program is used to ensure improvements to buildings, structures, and properties are regulated and properly permitted, thereby contributing to the health, safety, and general welfare of residents, protection of buildings and properties, and the minimization of adverse or negative impacts of development on environmentally fragile areas.

State management topic(s) affected: Public Access, Land Use Compatibility, Natural Hazard Areas and Water Quality.

Needed adjustments or amendments: No adjustments are envisioned during the planning period.

On-site wastewater treatment policy (through Gates County Health Department)

Managing department/agency: Hertford-Gates Health Agency and Management Entities Program through the Albemarle Regional Health System.

Use in plan implementation: This program is used to ensure on-site wastewater treatment systems are regulated and properly permitted and installed, thereby contributing to the health, safety, and general welfare of residents and the minimization of adverse or negative impacts of development on environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: No adjustments are envisioned during the planning period.

Mobile Home Park Ordinance – November 5, 1973

Managing department/agency: Gates County Planning and Inspections.

Use in plan implementation: This instrument is used to promote and ensure managed development and to avoid overcrowding of structures, thereby contributing to the health, safety, and general welfare of residents, protection of buildings and properties, and the minimization of adverse or negative impacts of development on environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility.

Needed adjustments or amendments: No adjustments or amendments are envisioned during the planning period.

Manufactured Home and Manufactured Home Park Ordinance – November 1, 1999

Managing department/agency: Gates County Planning and Inspections.

Use in plan implementation: This instrument is used to promote and ensure managed development and to avoid overcrowding of structures, thereby contributing to the health, safety, and general welfare of residents, protection of buildings and properties, and the minimization of adverse or negative impacts of development on environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility.

Needed adjustments or amendments: No adjustments or amendments are envisioned during the planning period.

Rules and regulations of the Gates County Water System

Managing department/agency: Gates County Water (System) Department.

Use in plan implementation: This instrument is used to properly manage the supply, treatment, and distribution of potable water to residents, thereby contributing to the health, safety, and general welfare of residents and the minimization of adverse impacts of development on environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility, Infrastructure Carrying Capacity, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: No adjustments are envisioned during the planning period.

Coordination of the various components of the development management program can be an important part of effective implementation of the plan. Generally, unless otherwise noted, management of the development program in the County is coordinated through the Gates County Planning and Inspections Office.

C. Additional Tools

Tools, in addition to those already included in the existing development management program that will be used to implement the plan are grouped into four categories which are: ordinances, capital improvement program, acquisition program, and specific projects. The following sections describe their use by Gates County.

1. Ordinances

Gates County is in the process of amending its subdivision ordinance. The County, as stated in this land use plan update, intends to develop a county-wide zoning ordinance. The Gates County Board of Commissioners has budgeted funds for this purpose. At the time of this writing, the County is negotiating for contracted professional planning services to assist in the development of a zoning ordinance (text and maps). The ordinance development process should be completed in late 2004, with a draft ordinance presented to the Board of Commissioners for its consideration and action in early 2005.

2. Capital Improvements Program

Gates County, as stated in this land use plan update, intends to develop a capital improvements plan during the planning period. This work element will be instrumental in implementing the County's stated goal with respect to infrastructure carrying capacity and provision of public facilities and services (GOAL #7) and its stated policy (POLICY #7).

3. Acquisition Program

At the present time, Gates County does not plan or foresee any land acquisitions.

4. Specific Projects

As previously discussed, Gates County is in the process of amending its subdivision ordinance, has started the process of developing a county-wide zoning ordinance, and intends to develop a capital improvements plan. In addition to these projects, and the continuation of its normal local government management, regulation, and administrative functions, programs, and services, the County has included several specific projects and activities that will be used to implement the land use plan update. These are included as objectives (for achieving the goals and implementing the policies) cited for the nineteen issue areas discussed in Chapter IX, Plan for the Future.

Specific projects geared toward The County intends to: consider developing residential development design guidelines and standards; consider developing commercial and industrial building and development design guidelines and standards; develop a County web site; monitor Federal and State programs; promote the development of an environmentally compatible, sustainable industry park; develop a county-wide mapping and geographic information system; interact with Federal and State agencies and local governments in the region; seek assistance in developing a storm water management plan and implementing (infrastructure) system improvements; require new developments to be served by roads constructed to State standards; and, assist the State to adopt policies for public trust waters to help ensure that water quality is maintained if not impaired and improved if impaired. These projects and the subdivision ordinance amendments, zoning ordinance development, and capital improvements plan development discussed earlier are listed in the next section as action items in the County's Action Plan/Schedule.

D. Action Plan/Schedule

State guidelines require that the plan include a separate action plan and schedule. The action plan includes the priority actions that Gates County will undertake to implement the plan. The accompanying schedule includes the fiscal year in which the actions are initiated and the year that they are complete. The schedule covers a 5-year period. The action plan and schedule will be used to prepare the implementation status report, which is required by CAMA land use planning grant rules, found in 15A NCAC 7L .0511. These rules require submission of an Implementation Status Report every two years for as long as the plan remains in effect. State guidelines also require the action plan to include a description of the specific steps that will be taken to involve citizens in the implementation of the plan. EXHIBIT X-A outlines the County's Action Plan and Schedule.

**EXHIBIT X-A
GATES COUNTY, NORTH CAROLINA
ACTION PLAN AND SCHEDULE**

POLICY REFERENCES	IMPLEMENTATION ACTION	BEGIN	END
POLICY(S)#2,#3,#4,#6.#7 #9, #10,#13,#14, #15	Amend subdivision ordinance	2003	2004
POLICY(S)#1,#2,#3,#4, #6,#9,#13,#14	Develop zoning ordinance	2004	2005
POLICY(S)#7	Develop capital improvements plan	2005	2006
POLICY(S)#2,#4,#6	Consider developing residential development design guidelines and standards	2006	2007
POLICY(S)#1,#2,#4	Consider developing commercial and industrial building and development design guidelines and standards	2006	2007
POLICY(S)#2,#3,#4,#7,#12 #16,#19	Develop a County web site	2005	2005
POLICY(S)#1,#6	Promote development of an environmentally compatible, sustainable industry park	2006	2007
POLICY(S)#7	Develop a county-wide mapping and geographic information system	2003	2007
POLICY(S)#10,#17,#18,#19	Seek assistance in developing a storm water management plan	2005	2006
POLICY(S)#4,#6,#7,#14,#18	Require new developments to be served by roads constructed to State standards	2004	2005
POLICY(S)32,#3,#4,#7,#12 #16,#19	Continue public participation program	2004	Ongoing
POLICY #11	Seek assistance to develop a shoreline access plan	2005	2006

WORKSHOPS AND MEETINGS

February 25, 2003	Planning Board meeting (Phase I orientation)
March 25, 2003	Public input session
April 22, 2003	Planning Board meeting (review chapters I, II, III, and VIII)
May 21, 2003	Planning Board meeting (review chapters IV, V, VI, and VII)
June 24, 2003	Planning Board meeting (continue chapter review)
July 22, 2003	Planning Board meeting (continue chapter review)
August 26, 2003	Planning Board meeting (Phase II orientation)
October through November 25, 2003	Planning Board meeting (review chapter IX)
December 2003 through January 2004	Continue review of draft chapters
February 24, 2004	Planning Board meeting (review chapter X)
March 23, 2004	Planning Board meeting (review preliminary draft land use plan update)
May 3, 2004	Discuss preliminary draft land use plan update at Board of Commissioners meeting
August 17, 2004	Discuss preliminary draft land use plan at Gates County Rotary Club meeting
January –February, 2005	Staff work sessions to respond to DCM comments
March 22, 2005	Planning Board recommends draft land use plan to Board of Commissioners
July 1, 2005	Staff/DCM meeting to discuss final clarifications to draft land use plan
July 11, 2005	Board of Commissioners adopts land use plan

Gates County developed and adopted a Citizen Participation Plan (CPP) at the beginning of the CAMA CORE Land Use Plan Update development process. The CPP was amended at the start of Phase II. The CPP is on file in the Gates County Planner's Office. In addition to the numerous workshops and meetings held during the planning process, information about the land use plan process and copies of draft chapters and exhibits was distributed as requested. Information was also distributed, and input was solicited at civic group meetings held during the planning process.

SOURCES CONSULTED

Chowan River Basinwide Water Quality Plan, May 2002 (Division of Water Quality)
Diehl & Phillips, Inc. (base mapping)
Gates County Board of Commissioners
Gates County CAMA Land Use Plan Update, 1993
Gates County Health Department
Gates County Inspections Office
Gates County Local Water Supply Plan (Gates County Water Department)
Gates County Manager's Office
Gates County Ordinances
Gates County Planning Board
Gates County Planning Office
Gates County Public Schools
Gates County Sheriff's Department
Gates County Tax Department
Gates County Water Department
North Carolina Administrative Code
NC Department of Agriculture and Consumer Services
NC Department of Environment and Natural Resources
NC Department of Health and Human Services
NC Department of Transportation
NC Division of Coastal Management
NC Division of Marine Fisheries
NC Division of Soil and Water Conservation
NC Division of Water Quality
NC Division of Waste Management
NC Forest Service
NC Marine Fisheries Commission
NC Natural Heritage Program
NC Public Water Supply Section
NC State Demographer's Office
NC Wildlife Resources Commission
Pasquotank River Basinwide Water Quality Plan, July 2002 (Division of Water Quality)
Soil Survey of Gates County North Carolina (US Department of Agriculture)
US Army Corps of Engineers
US Census Bureau
US Department of Agriculture
US Environmental Protection Agency
US Fish and Wildlife Service
US Geological Survey

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NOTE: This section is provided to assist the user/reader in locating information pertaining to a variety of items (terms, issue areas, concepts, facilities, programs, agencies, etc.) discussed or referenced in the Gates County 2003-2004 CAMA Core Land Use Plan Update. Some of the items are specific to Gates County, while most are generally associated with North Carolina CAMA land use planning. The items listed, and the page numbers provided for each, may not be totally inclusive, and thus serve to help guide the user/reader to items of interest.

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No items cited.

Y

No items cited.

Z

Zoning: II-3, multiple references in Chapter IX and Chapter X