

PERQUIMANS COUNTY, NORTH CAROLINA



CAMA CORE LAND USE PLAN UPDATE 2005-2006

Adopted by the Perquimans
County Board of Commissioners:
November 16, 2015
Amended March 6, 2017

Adopted by the Town of Hertford
Board of Commissioners:
November 9, 2015

Adopted by the Town of Winfall
Town Council: November 9, 2015

Certified by the Coastal
Resources Commission:
February 10, 2016

Recertified by CRC: April 26, 2017

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

PERQUIMANS COUNTY, NORTH CAROLINA CAMA CORE LAND USE PLAN UPDATE 2005-2006

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EXECUTIVE SUMMARY

This section will be completed upon adoption of the Perquimans County CAMA Core Land Use Plan Update 2005-2006 by the Perquimans County Board of Commissioners.

- The Perquimans County CAMA Core Land Use Plan Update 2005-2006 (Update) seeks to help position Perquimans County, as well as Hertford and Winfall, to continue a proactive stance toward land use planning. This Update builds from the County's current land use plan and considered concepts from a similar plan developed by Hertford.
- The Update was organized according to the outline in the Coastal Area Management Act (CAMA) Technical Manual for land use planning and 2002 State LUP guidelines.
- A series of public input meetings was held throughout the county during the development of the first draft Update. This Update was submitted for review by the State Division of Coastal Management (DCM) staff for consistency with State rules in mid-2006, and subsequent Updates followed in November 2007, and November 2010. The County, to the best of its ability, addressed State review comments when received. The Update was finally accomplished after additional coordination with DCM staff in 2013, and submittal of the final draft Update in August 2015. The State concluded its review in September, 2015. Public hearings were held and, following adoption of the Update by the County, Hertford, and Winfall, the Update was submitted to the State again, this time seeking certification from the North Carolina Coastal Resources Commission (CRC). Certification of the Plan by the CRC was achieved on February 10, 2016, with the understanding that DCM and local government staff will work together to adequately address and, if necessary, to make any amendments to the Plan for consistency with new State laws pertaining to riparian buffers.
- 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. Perquimans County's land use plan update, when reviewed and certified by the 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.

- Perquimans 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 choose to favor its lifestyle. With over 13,000 permanent residents, the County's peak population during the summer does not grow markedly, although day-tripper visits to the County's attractions bring people into the County.
- The Update is one of the major tools Perquimans County and its towns 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, such as public water, to meet the needs of its permanent and visiting population. Moreover, the Update will help Perquimans County protect the essential historic, cultural natural resources that help define the community's lifestyle.
- The Update will provide a solid foundation for day-to-day and long range functions. Day-to-day functions relate to the administration of 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 Boards, Town of Hertford Board of Commissioners, Town of Winfall Town Council, and County Board of Commissioners, the Update will be a policy and decision guide on matters concerning land use and development in the County and the towns. The policies and future land use map included in the Update will help guide decisions about ordinances such as zoning and development design guidelines. The Update will also be used by the respective localities as they make decisions on 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, goals and policies, and the future land use maps. Public input sessions were held in various parts of the County including Hertford and Winfall. The planning process benefited greatly from the efforts of the Perquimans County Planning Board and representatives from Hertford and Winfall, who were available for meetings on an as-needed (generally monthly) basis for nearly two years beginning in early 2005. 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 (in addition to the aforementioned public input sessions); Board of Commissioners and Planning Board meetings; and, presentations at neighborhood and civic association meetings. The County has made review copies available to the public, and distributed copies to neighboring localities and the Albemarle Commission. Throughout the update process, as subsequent drafts were submitted to the Division of Coastal Management, they were also made available to the public in the County Planning and Zoning Office, the County Manager's Office, the Town Offices and Library, and posted on the County's website.

- 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 Perquimans County, Hertford, and Winfall 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 Perquimans 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 and policies. The County's land use and development goals and policies and projected future land use maps are found in **Chapter IX, Plan for the Future**. Goals and policies 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 commercial and industrial development; community appearance and downtown revitalization; Perquimans River, Little River, Yeopim River, and Albemarle Sound and Connecting Creek and Tributary Shorelines; 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; and transportation. 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. An analysis of the impact of the policies on the state management topics was performed and is summarized in the Policy Analysis Matrix in APPENDIX 6, with policies being categorized as either neutral or beneficial. Also, identification of projected future land use needs was developed and presented on individual future land use maps (Exhibit IX-B, Perquimans County; Exhibit IX-C, Hertford; and Exhibit IX-D, Winfall) and corresponding tables (Exhibit IX-H, Perquimans County; Exhibit IX-I, Hertford; and Exhibit IX-J, Winfall).

2. Tools for managing development. This **Phase II (Chapter X, Tools for Managing Development)** component identifies tools for managing development. It outlines strategies and action plans 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. Action Plans and Schedules are provided individually for Perquimans County (Exhibit X-A), Hertford (Exhibit X-B), and Winfall (Exhibit X-C). Additionally, the amendment process is outlined should there be the necessity for any changes to the Plan Update.

Copies of the Update are available for public review at the Perquimans County Planning and Zoning Office (104 Dobbs Street, Hertford, NC); at the Hertford Town Hall (114 West Grubb Street, Hertford, NC); at the Winfall Town Hall (100 Parkview Lane, Winfall, NC); Perquimans County Library (110 West Academy Street, Hertford, NC); and on the County's Website at www.perquimanscountync.gov.

Chapter I: Introduction

A. This is Perquimans County, North Carolina

Perquimans County, located in northeastern North Carolina, is bounded to the north by Gates County, to the east by Pasquotank County, to the south by the Albemarle Sound, and to the west by Chowan County. Hertford is Perquimans County's largest town and is the County seat. Winfall is the County's other incorporated town. (See EXHIBIT I-A on page I-5.)

Perquimans County has a land area of 247 square miles. 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 Perquimans County is about 20 feet above sea level.

Perquimans County boasts a diverse and impressive natural environment. On the east side of Perquimans County is the Little River, while the Perquimans River flows through the center of the County and the Yeopim River and Albemarle Sound make up the southern most boundaries of the County. Early Native American inhabitants of the area included Algonquin speaking tribes, and tribes related to the Powhatan Confederation in Virginia and the tribes encountered by the Roanoke Island colonists. Today, along the County's swamps, pocosins, and creeks, the rich farm land is capable of producing a variety of crops.

Hertford, a North Carolina Main Street and Heritage Tourism Community, was chartered in 1758. The Town, on the Perquimans River, can be approached by traveling over the only "S" shaped swing bridge in the nation. Hertford features thriving downtown, tree-lined streets, waterfront parks, and well preserved late 18th to early 20th century Queen Anne and Colonial homes. The historic 1825 Federal-style Perquimans County Courthouse is located in Hertford.

Hertford, with a population of 2,070 people in 2000, and 2,142 people in 2010, is located in central Perquimans County. There was a 7% increase in population from 1980 (1,942 people) to the 2000 Census, and an increase of just over 10% from 1980 to 2010. The 1990 population was 2,105. Hertford is located about 16 miles southwest of Elizabeth City and 16 miles northeast of Edenton. Hertford encompasses about 2.80 square miles of land area, or approximately 1,818 acres, with an extraterritorial jurisdiction of about 4.8 square miles, or about 3,052 acres. US Highway 17 and NC 37 provide access to the Town. Hertford is bordered on the east of its corporate limits by the Perquimans River. Hertford and surrounding terrain are mostly flat land with most variations in elevation occurring adjacent to streams, creeks, and the Perquimans River.

Winfall was incorporated in 1887. Winfall has fine, picturesque collections of late Victorian residences. Winfall's modern Town Hall and adjacent recreation park are also sources of pride, providing public meeting and gathering space at one location.

Winfall is also located in central Perquimans County. The 1990 Census reported that Winfall lost population from 1980 (633 people) and 1990 (507 people). The 2000 Census showed that the Town's population had increased to 554 people, and then to 594 people in the 2010 Census. The State Data Center estimated the Town's population in 2004 was 567 people. Winfall is located 36 miles east of Windsor and 59 miles south of Chesapeake, Virginia. Winfall encompasses 2.22 square miles of land or about 1,452 acres. US Highway 17 and New Hope Road provide access to the Town heading east towards Durant's Neck. NC 37 provides access northward to Belvidere. The Town's western border is the Perquimans River. Winfall and surrounding terrain are mostly flat land surfaces with most variations in elevation occurring adjacent to stream, creeks, and the Perquimans River. Topographic elevations range from mean sea level to about 17 feet above sea level.

The County's population grew by 8.8% from 10,447 people in 1990 to 11,368 people in 2000, and then another 18.3% from 2000 to 2010, with a county of 13,453 people. The State estimated the County's 2005 population to be 11,890 people. Hertford's population declined by 7.8% from 2,105 people in 1990 to 2,070 people in 2000. However, the NC State Demographer's Office estimated that Hertford's 2003 population was 2,080 people, an increase of 0.5% from the population reported in Census 2000, and an increase of roughly 10% was recorded in 2010 (2,142 people). Winfall's population grew by 10.6% from 501 people in 1990 to 554 people in 2000. The State Demographer estimated Winfall's 2003 population was 567 people, an increase of 2.3% from the population reported in Census 2000.

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.

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 Perquimans County Planning Board, with representation from the Towns of Hertford and Winfall (Land Use Plan Committee) serves as the body responsible for guiding the CAMA core land use plan update effort. The Land Use Plan Committee received assistance from the Perquimans County planning staff and the planning consulting firm Community Planning Collaborative, Inc.

The Land Use Plan Committee met on a monthly basis as needed throughout the project period on the second Tuesday of each month. Meetings are held at the Perquimans County Courthouse Building in Hertford at 7:30 p.m. unless otherwise advertised. Meetings are open to the public and meeting times advertised in the local news media. In addition to the Land Use Plan Committee's orientation meeting and the initial public information meeting, subsequent meetings focused on review and discussion of information gathered and analyses made. The Land Use Plan Committee reviewed draft materials prepared by the planning consultant, assisted in defining land use and development issues and concerns, and provided general input. The Perquimans County Planning staff serves as the local coordinators of the CAMA land use plan update project.

Discussion/narrative in this land use plan update generally refers to the total Perquimans County, unless a specific area or jurisdiction of Hertford or Winfall is cited or the unincorporated areas of Perquimans County are cited. Where applicable and when appropriate, the distinct character and unique issues of Hertford and Winfall, and the unincorporated areas of Perquimans County are reflected.

Except for building permits and building inspection, land use ordinances are administered in Hertford and Winfall by the respective towns within their corporate limits. Hertford has a one mile extraterritorial jurisdiction (ETJ). Winfall has not adopted an ETJ.

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 had 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 Land Use Plan Committee. The citizen participation plan is available to the public throughout the planning process. It is the intent of Perquimans 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.

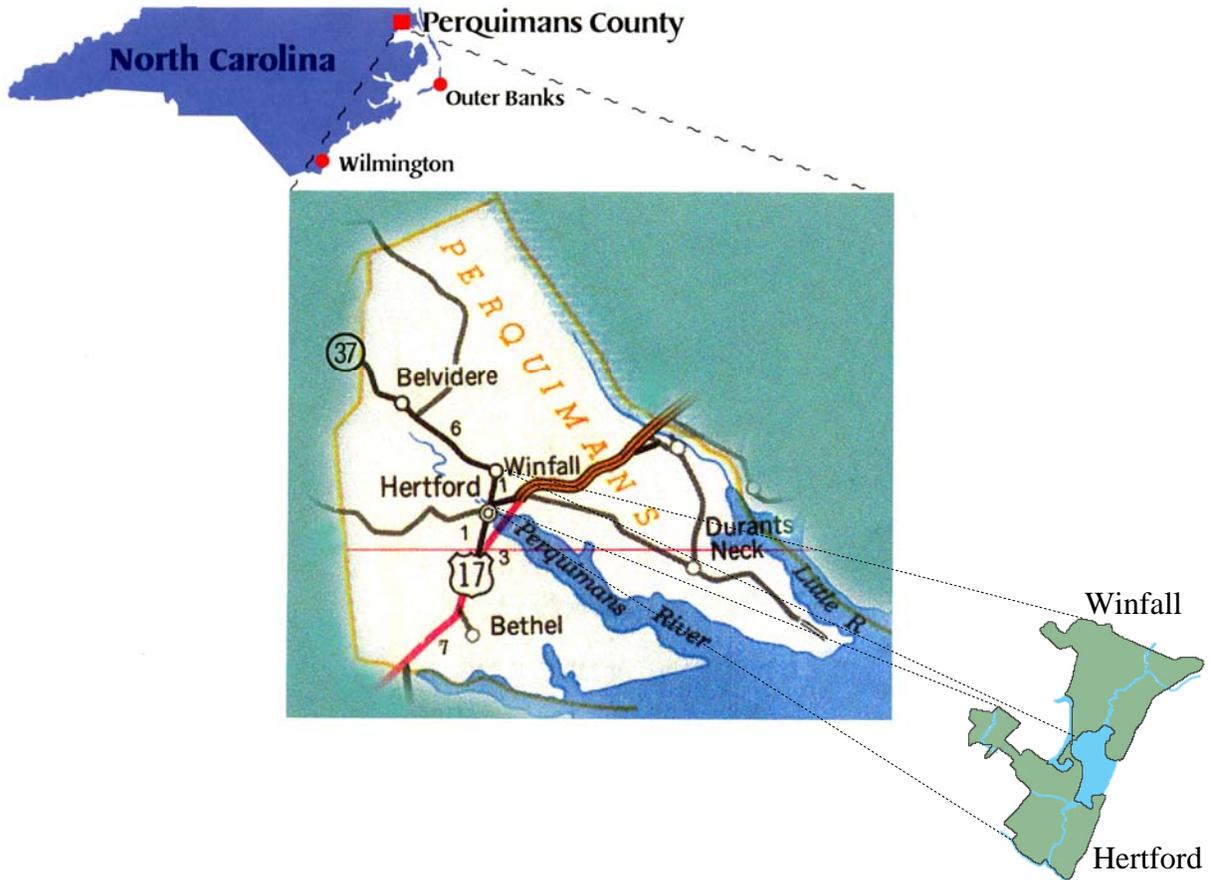
Perquimans County recognizes the importance of providing citizens with opportunities to participate in the planning process. The County also recognizes that citizen participation and citizen education must be made available on a continuing basis. During and after the CAMA core land use plan update project, 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 Gates, Pasquotank, and Chowan. Written comments were requested within a specified 45-day review period. No comments from adjacent jurisdictions were received.

Throughout the update process, as subsequent drafts were submitted to the Division of Coastal Management, they were also made available to the public in the County Planning and Zoning Office, the County Manager's Office, the Town Offices and Library, and posted on the County's website.

EXHIBIT I-A Perquimans County, North Carolina Regional Setting

(EXHIBIT SOURCE: "Discover Perquimans County North Carolina" brochure by Perquimans County Chamber of Commerce)



Chapter II: Concerns and Aspirations

This chapter provides general guidance and direction for the development of the Perquimans County CAMA Core 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 Perquimans 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 Perquimans 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 Perquimans 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 1998 Land Use 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, Hertford, and Winfall operate water systems and rely on the State help to monitor the protection of water supply aquifers. The County has adopted a zoning ordinance and has amended its subdivision ordinance to deal with, among other issues, development patterns along State maintained roads. Hertford developed a land use plan in 1991. A review of the implementation of the plan is included in Chapter VIII of this plan update. Winfall was included in the Perquimans County 1998 land use plan update.

Today, as in 1998, 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: provision of adequate water and sewer facilities; economic development, preservation of cultural and historic resources, pressure for residential development; and, preservation of prime agricultural and forested lands.

Hertford and Winfall are the County's only incorporated towns. Some residential and commercial growth is occurring adjacent to and within the towns. The County's zoning ordinance is proving effective in targeting residential subdivision development into areas zoned for such uses. A vast majority of the County is zoned rural agricultural. This helps to limit the conversion of lands from agricultural uses to more intensive uses such as residential subdivisions. Perquimans 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 8.8% from 10,447 people in 1990 to 11,368 people in 2000. The State projects the County 2005 population to be 11,890 people. Perquimans County is seeing an increase in people relocating from other areas such as Virginia's Hampton Roads region. The Hampton Roads region of Virginia is growing in population and there is spill over growth in localities like Perquimans 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 Perquimans County and the region. A vast majority of Perquimans County remains undeveloped. Subdivision development continues to occur at a controlled pace (which means approving developments in phases, enforcing subdivision and zoning ordinances, requiring/suggesting buffers, and analyzing proposed developments' impact on utilities (water and sewer), facilities (schools), and services (law enforcement, fire protection, and emergency medical services). Several other developments have been proposed and are in the review process. Single family detached homes still represent the vast majority of housing found in Perquimans County and the region.

3. Land Development

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

Some rezoning applications were received through the 2010 timeframe to rezone some agricultural lands/parcels to residential classifications. The County had imposed a subdivision moratorium and when it ended, several applications for rezoning were brought forward. The County's existing 1998 land use plan is used as a general guide when reviewing such applications. While none of the proposals brought forward were in areas designated in the current land use plan as being in prime agricultural areas,

concerns with the lack of potable water and perceived incompatibility with surrounding land uses prompted some to be withdrawn. Rezoning requests that were approved were generally adjacent to developed areas such as in Woodville and Albemarle Plantation.

The County's commercial areas are also established, primarily in the Towns of Hertford and Winfall, and along U.S. 17. Limited commercial development is found at crossroads communities.

4. Water Quality

In Perquimans 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. There is growing consensus that storm water management is a pressing issue, and that the County, Hertford, and Winfall should study and plan for storm water systems improvements.

5. Economic Conditions and Business Activities

Generally, Perquimans County economic base consists primarily of service type businesses geared to the needs of the County's permanent population. Most business activity is found in Hertford, Winfall, and along U.S. 17. Businesses in the area appear to be diverse, successful, and generally well maintained. The development of the Commerce Center (in Hertford) is seen as a positive and proactive step toward improving the area's general economic condition by attracting desirable business activities in a campus setting. Traditional tourism activities (associated with visitation at the numerous cultural and historic sites in the area) and eco-tourism offers the potential for realizing economic benefits. The economic benefits realized will, in turn, help efforts to ensure preservation and enhancement activities are started or continued to protect and preserve resources. An initiative to develop a blue ways/greenways system in and through the County and its towns is underway, spearheaded by a group of volunteers called Trailblazers. Perquimans County may be listed on the Federal list as a route for East Coast Greenways.

6. Agriculture, Forestry, and Natural Resource Related Industries

Perquimans County's natural resources feature three rivers (Perquimans River, Little River, and Yeopim River) and vast areas devoted to agriculture and forestry. Given the relatively unspoiled nature of the 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. However, a group of interested parties are developing a blue ways/greenways plan which may lead to industries related to natural resources.

7. Transportation

The County has a good system of through highways including U.S. 17 and NC 37. Some deterioration caused by heavy traffic, storm damage, and heavy equipment has been noted along some of the County's secondary roads. The County should consider developing a Thoroughfare Plan to study various roadways that may warrant additional land use and development regulations.

8. Potable Water and Wastewater Treatment

Potable water is supplied by the Perquimans County and Hertford systems and is--or can be made--available to all parts of the County. The County operates the water system for all Winfall residents. The County and the Town of Hertford have in the recent past evaluated water and sewer capabilities and needs, engaging a professional engineer to study and make recommendations for the future status of water and sewer systems which may include consolidation of individual County and town systems into a regional entity. Wastewater is also removed through septic tank systems in parts of the County that do not have access to public wastewater treatment. The limited availability of wastewater capacity and related issues in Winfall and Hertford is an existing and emerging condition that affects development within both towns.

9. Public Policies

Perquimans County continues to review its subdivision ordinance and 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 amendments, 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 and Homeland Security

Public safety issues in Perquimans County primarily revolve around the transportation system. Perquimans County, Hertford, and Winfall benefit from the efforts of the Perquimans County Sheriff's Department, police departments of Hertford and Winfall, Perquimans County Emergency Services, and a system of volunteer fire and rescue departments.

Since the September 11, 2001 terrorist attacks in New York and Washington, homeland security and domestic terrorism are issues dominating the news and potentially affecting everyone in the United States. Unfortunately, these issues will no doubt preoccupy the nation, states, and local governments from now on. While Perquimans County may never be the direct target of a terrorist attack, its proximity to facilities and areas that may be targets, its system of highways that may be used during an event as evacuation routes,

and its location that might cause areas in the County to be used as a response and recovery staging area, make these issues very important to the County.

Henceforth, homeland security and the threat of domestic terrorism will influence how localities staff for emergency services, train and equip emergency services, and interact and communicate among themselves and with other localities and State and Federal agencies, and must be considered and planned for.

The Harvey Point Defense Testing Facility is a Federal facility about nine miles from Hertford at the end of Harvey Point Road along the Albemarle Sound. Entrance to the facility is restricted. The facility reportedly has a 4,000 foot airstrip, a lodge, a gym, and conference center.

In August 2005, the County and its towns adopted a multi-jurisdictional hazard mitigation plan. The plan, on file in the Perquimans County Manager's office, demonstrates the local commitment to hazard mitigation planning principles and was developed to: reduce natural hazard vulnerability by reducing the potential for future damages and economic losses; speed recovery and redevelopment following future natural hazard events; comply with State and Federal legislative requirement; and, qualify for grant funding in both pre-disaster and post-disaster situations.

11. Preservation of Historic Resources

Perquimans County and its towns have numerous historic and cultural resources. There are four National Register historic districts (Winfall, Hertford, Old Neck, and Belvidere) to help preserve resources within these areas. Local historic district designations also apply. Development proposals within these areas are, and should be, carefully scrutinized to ensure negative impacts on resources does not occur.

12. Tourism

Perquimans County's historic and cultural resources, and natural environment and associated outdoor recreation activities contribute to its desire as a tourist destination. Similarly, the area's natural environment lends itself to opportunities for eco-tourism opportunities. Traditional tourism activities (associated with visitation at the numerous cultural and historic sites in the area) and eco-tourism offers the potential for realizing economic benefits. The economic benefits realized will, in turn, help efforts to ensure preservation and enhancement activities are started or continued to protect and preserve resources. An initiative to develop a blue ways/greenways system in and through the County and its towns is underway, spearheaded by a group of volunteers called Trailblazers. Perquimans County may be listed on the Federal list as a route for East Coast Greenways.

13. Preservation of Open Space

A vast majority of unincorporated Perquimans County remain rural and agricultural in nature and character. Large areas of vacant, undeveloped areas remain in Hertford and Winfall. Preservation of open spaces and the provision of open space set asides in proposed developments would ensure the continuation of the established character of the area while providing buffers between open spaces and the built environment.

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 Perquimans County include:

Commercial and Industrial Development
Community Appearance and Downtown Revitalization
Perquimans, Little, and Yeopim River Shorelines
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 Perquimans 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, encourage local support and patronage of County businesses, and promote eco-tourism

for the economic benefits such activities can bring to the area. 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, Perquimans County Chamber of Commerce, North Carolina's Northeast Partnerships, groups such as Trailblazers, and the business community will work together to address this issue.

2. Community Appearance and Downtown Revitalization

The issue facing the County and its towns is how to remain aesthetically pleasing while maintaining its rural atmosphere, open spaces, and natural areas and ensuring the viability of Hertford and Winfall. 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, Perquimans County Chamber of Commerce, North Carolina's Northeast Partnership, 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. Perquimans, Little, and Yeopim River Shorelines

The issue facing the County is how to preserve and protect these resources and ensure future generations are able to enjoy their beauty and can continue to use them 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 Perquimans, Little, and Yeopim River shorelines 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. A Wild and Scenic River Act environmental study for the Perquimans River and its tributaries, done by the U.S. Department of Interior, has been submitted as a bill for approval, and may help protect and promote the river and its shorelines

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 Perquimans 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 the 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, Division of Water Quality, and Federal agencies such as the U.S. Army Corps of Engineers, Environmental Protection Agency (EPA), Federal Emergency Management Agency (FEMA), and U.S. Natural Resources Conservation Service, and local groups such as Trailblazers 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 Perquimans 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 and with groups such as Trailblazers 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 Perquimans 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 Perquimans County Sheriff's Department, Hertford Police department, Winfall Police 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, Hertford, Winfall, 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 towns.

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 Perquimans County Health Department and the Albemarle Regional Health Services Management Entity Program 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 and Division of Water Quality 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 Perquimans County to build consensus among various stakeholders on a unified approach to its land use and development issues. Through its vision statement, Perquimans County describes what it wants to be and how it wants to look in the future. The Perquimans County vision statement: is developed using information about driving forces, priority issues, and citizen values and aspirations concerning what the 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 Perquimans County; and, is endorsed by the Perquimans County Board of Commissioners.

PERQUIMANS COUNTY VISION STATEMENT

Perquimans County is an agricultural, historic community and it is the vision of County residents to guide the future development of the County according to the following values:

- **ensure the sustained, planned growth of the County;**
- **promote open space to improve the quality of life,, and,**
- **encourage economic development through planned growth.**

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 (intense/dense) subdivided residential development occurs in platted subdivisions while rural agricultural related residential development occurs along State maintained roads, generally as a part of agricultural pursuits. Most commercial development occurring in Hertford, Winfall, and along U.S. 17, with some limited commercial development 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 continuing to require 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 continued utilization (and improvement) the zoning ordinance 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.

A vast majority of unincorporated Perquimans County remain rural and agricultural in nature and character. Large areas of vacant, undeveloped areas remain in Hertford and Winfall. Preservation of open spaces and the provision of open space set asides in proposed developments would ensure the continuation of the established character of the area while providing buffers between open spaces and the built environment.

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), housing, and economy in Perquimans County provides an essential foundation for land use planning and for planning of capital improvements. This chapter contains text and exhibits which describe the past and present nature of the Perquimans County's population, housing, and economy and projections of future growth and trends. 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

The total population of Perquimans County grew by 8.8% from 10,447 people in 1990 to 11,368 people in 2000. The County's total population grew by 18.3% from 11,368 people in 2000 to 13,453 people in 2010. Perquimans County ranks 90th (out of 100 counties) in population size in North Carolina. There are about 54.46 people per square mile in Perquimans 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 the County very appealing to those people able to afford housing. In spite of the relative lack of available overnight lodging in the County, visitors to the County on given days (presumably weekends) could result in a seasonal population increase of about 1,000 people. Employment in the Hampton Roads area of Virginia has also been expanding rapidly, offering Perquimans County residents job opportunities within easy commuting distance.

2. Permanent and Seasonal Population Estimates

Census 2010 reported the population of Perquimans County to be 13,453 people. Census 2010 estimated there were 564 housing units for seasonal, recreational, or occasional use. The average household size for the County as a whole was placed at 2.39 people per household. If each of the housing units used for seasonal, recreational, or occasional use were occupied at the same time with 2.39 people each, the resulting seasonal population increase of 1,348 people would net a peak population (permanent plus seasonal) estimate of 14,801 people. The county's historic assets attract a number of day trip visitors to Perquimans 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 2010 reported 9,694 people (72.1%) of Perquimans County residents were White and 3,347 people (24.9%) were Black, with the remaining 3.0% representing American Indian, Asian, or other races. In 2000, 70.8% of the residents of the County (8,051 people) were White and 28.0% (3,182) people) were Black. In 2010, the County’s population was 47.9% (6,446 people) male and 52.1% (7,007 people) female.

There were a total of 6,725 married people 15 years or older in Perquimans County (excluding those separated) according to Census estimates. EXHIBIT III-A provides a breakdown of marital status.

**EXHIBIT III-A
 PERQUIMANS COUNTY, NORTH CAROLINA
 MARITAL STATUS 2010
 (Population 15 Years and Over)**

MARITAL STATUS	NUMBER	PERCENT
Never Married	2,355	21.5
Now Married, Except Separated	6,725	61.5
Separated	304	2.8
Widowed	622	5.7
Divorced	924	8.5
TOTAL	10,930	100%

SOURCE: U.S. Census Bureau estimate.

There were 5,598 total households in Perquimans County in 2010. Of the total, 3,949 (70.5%) were family households and 1,649 (29.5%) were non-family households. Of the non-family households, 1,421 were situations wherein the householder lived alone. In 2010, the average household size in Perquimans County was 2.39 people per household, while the average family size was 2.83 people.

In Perquimans County in 2010, 3,067 people over 3 years old were enrolled in schools, the majority attending elementary school (grades 1-8). EXHIBIT III-B breaks down school enrollment for the County’s population of people 3 years old and over enrolled in school.

**EXHIBIT III-B
 PERQUIMANS COUNTY, NORTH CAROLINA
 SCHOOL ENROLLMENT 2010
 (Population 3 Years and Over Enrolled in School)**

SCHOOL TYPE	NUMBER	PERCENT
Nursery School, Preschool	111	3.6
Kindergarten	125	4.0
Elementary School (Grades 1-8)	1,239	40.4
High School (Grades 9-12)	735	24.0
College or Graduate School	857	28.0
TOTAL	3,067	100%

SOURCE: U.S. Census Bureau estimate.

In 2010, 8,011 people (85.3%) of Perquimans County’s population aged 25 years and over were high school graduates. Over 18% held a bachelor’s degree or higher. EXHIBIT III-C breaks down educational attainment levels in Perquimans County in 2010.

**EXHIBIT III-C
 PERQUIMANS COUNTY, NORTH CAROLINA
 EDUCATIONAL ATTAINMENT 2010
 (Population 25 Years and Over)**

ATTAINMENT LEVEL	NUMBER	PERCENT
Less Than 9 th Grade	409	4.4
9 th to 12 th Grade, No Diploma	972	10.3
High School Graduate (Includes equivalency)	3,667	39.0
Some College, No Degree	2,054	21.9
Associate’s Degree	593	6.3
Bachelor’s Degree	1,144	12.2
Graduate or Professional Degree	553	5.9
TOTAL	9,392	100%

SOURCE: U.S. Census Bureau estimate.

4. Age

EXHIBIT III-D provides a breakdown of Perquimans County residents by age group. The median age of residents in 2010 was 46.4 years as compared to 42.2 years in 2000. 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
 PERQUIMANS COUNTY, NORTH CAROLINA
 POPULATION BY AGE, 2000 AND 2010**

AGE	2000		2010	
	NUMBER	PERCENT	NUMBER	PERCENT
Under 5 years	587	5.2	745	5.5
5-9 years	675	5.9	727	5.4
10-14 years	841	7.4	785	5.8
15-19 years	760	6.3	788	5.8
20-24 years	516	4.5	659	4.9
25-34 years	1,154	10.2	1,336	9.9
35-44 years	1,618	14.2	1,434	10.7
45-54 years	1,549	13.6	1,982	14.8
55-59 years	780	6.9	1,027	7.6
60-64 years	696	6.1	1,083	8.1
65-74 years	1,205	10.6	1,763	13.1
75-84 years	751	6.6	815	6.1
85 years and over	236	2.1	309	2.3
TOTAL	11,368	100%	13,453	100%

SOURCE: U.S. Census Bureau, 2000 and 2010 estimates.

5. Income

The North Carolina Department of Commerce, Economic Development Information Services reported the 2011 average weekly wage in Perquimans County to be about \$575.00, while estimated annual median worker earnings totaled \$21,383.00.

Census 2010 estimated the County's per capita income to be \$22,085.00. The 2010 Census estimated the median family income to be \$48,870.00 while the mean family income was estimated to be \$61,674.00. The median household income in 2010 was estimated to be \$43,041.00. The mean household income was estimated to be \$54,099.00.

The estimate population with income below the poverty level was reported to be 2,348 people in 2011.

B. Housing

Standard housing units provide, among other things, shelter, one of mankind's basic needs. Housing becomes a problem when an individual 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.

Much of the information and data in the following sections was taken from Demographic Profiles which are generated by the U.S. Census Bureau. Recent building permit activity figures were provided by Perquimans County.

1. Current Housing Stock

A total number of housing units in Perquimans County increased from 6,043 in 2000 to an estimated 6,887 in 2010. The number of occupied housing units also increased from 4,645 in 2000 to 5,353 in 2010. These increases, coupled with improvements to structures with deficiencies noted in the previous censuses point to a general improvements in the County's housing stock. Single-family structures continue to be the dominant housing type in North Carolina and in Perquimans County. Single units (detached) accounted for 61.2% (3,700 units) of the County's 6,043 total units in 2000 and totaled an estimated 4,683 units (68.0%) by 2010. While single-family structures are found along nearly all State routes and private drives, many traditional subdivisions have been developed.

The number of manufactured (mobile) homes in the County increased from 1,741 units in 2000 to an estimated 1,949 units by 2010. However, the number of single-family detached dwellings increased at a more rapid pace from 2000 to 2010, so manufactured homes as a percentage of the County's total housing stock declined from 28.8% in 2000 to 28.2% in 2010. EXHIBIT III-E on the following page provides an inventory of housing units in the County in 2000 and 2010 by number of units in the structure. EXHIBIT III-F, also on the following page, compares total housing units in 2000 and 2010 by the number of rooms.

**EXHIBIT III-E
 PERQUIMANS COUNTY, NORTH CAROLINA
 UNITS IN STRUCTURE, 2000 AND 2010
 TOTAL HOUSING UNITS**

UNITS IN STRUCTURE	2000		2010	
	NUMBER	PERCENT	NUMBER	PERCENT
1 Unit, Detached	3,700	61.2	4,683	68.0
1 Unit, Attached	84	1.4	0	0
2 to 4 Units	142	2.4	172	2.5
5 to 9 Units	35	0.6	0	0
10 or More Units	52	0.9	83	1.2
Manufactured Homes	1,741	28.5	1,949	28.3
Boat, RV, Van, Etc.	289	4.8	0	0
TOTAL	6,043	100%	6,887	100%

SOURCE: U.S. Census Bureau. Census 2000 reported 289 housing units in the category boat, RV, van, etc., while none were reported in the 2010 Census. This is attributed to changes to and/or more definition of housing unit types recorded in the Census 2010 process or not estimated during the census process. Some of this type housing unit may comprise part of the housing units reported for seasonal, recreational, or occasional use (614 housing units in 2000 and 564 units in 2010).

**EXHIBIT III-F
 PERQUIMANS COUNTY, NORTH CAROLINA
 ROOMS PER HOUSING UNIT, 2000 AND 2010**

ROOMS	2000		2010	
	NUMBER	PERCENT	NUMBER	PERCENT
1	78	1.3	26	0.4
2	231	3.8	80	1.2
3	344	5.7	236	3.4
4	1,010	16.7	945	13.7
5	1,570	26.0	1,739	25.3
6	1,243	20.6	1,511	21.9
7	933	15.4	1,145	16.6
8	326	5.8	701	10.2
9 or more	308	5.1	504	7.3
TOTAL	6,043	100%	6,887	100%

SOURCE: U.S. Census Bureau.

Many variables may indicate that a dwelling unit is substandard. While it is common practice to use “lacking complete plumbing facilities” to approximate the number of substandard units, some units may have all plumbing facilities but still be substandard in other ways. 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.

In 2000, only 51 (1.1%) of the reported occupied housing units lacked complete plumbing facilities while only 14 (0.3%) lacked complete kitchen facilities. By 2010, no units were reported as lacking complete plumbing facilities while an estimated 23 units (0.4%) lacked complete kitchen facilities. One hundred two (102) occupied housing units or 2.2% did not have telephone service in 2000 while 215 units (4.0%) did not use the service in 2010. Only 433 (9.3%) did not have a vehicle available at the unit in 2000 while no vehicle was available at 392 (7.3%) of units in 2010.

Most occupied housing units in 2010 relied on electricity for heating fuel (climate control) as shown on EXHIBIT III-G.

**EXHIBIT III-G
 PERQUIMANS COUNTY, NORTH CAROLINA
 HOUSE HEATING FUEL –
 OCCUPIED HOUSING UNITS 2010**

HOUSE HEATING FUEL	NUMBER	PERCENT
Utility gas	195	3.7
Bottled, tank, or LP gas	1,659	31.0
Electricity	2,894	54.1
Fuel oil, kerosene, etc.	462	8.6
Coal or coke	0	0
Wood	129	2.4
Solar energy	0	0
Other fuel	0	0
No fuel used	13	0.2
TOTAL	5,353	100%

SOURCE: U.S. Census Bureau.

In 2010, an estimated 1,534 units (22.3%) of the County’s 6,887 total housing units were classified vacant, while 5,353 (77.7%) were occupied. Five hundred sixty-four (564) of the vacant units were for seasonal, recreational, or occasional use out of an estimated 1,388 vacant units. Census 2010 reports there were twenty-three (23) housing units in Hertford used for seasonal, recreational, or occasional use out of a reported 187 vacant housing units and two (2) such units in Winfall out of a reported 56 vacant units.

In 2010, owners occupied 4,134 (77.2%) of Perquimans County’s occupied structures (5,353), while renters occupied 1,219 (22.8%) of the occupied structures. In 2010, 5,304 (99.1%) of occupied housing units had one or fewer occupant per room. Only seven (7) units had over 1.51 occupants per room.

Over 66% (4,567 units) of the County’s total estimated housing units (6,887 units) in 2010 have been built since 1970. EXHIBIT III-H displays the numbers of housing units by year structure built.

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

YEAR STRUCTURE BUILT	NUMBER	PERCENT
2005 to 2010	305	4.4
2000 to 2004	362	5.3
1990 to 1999	1,426	20.7
1980 to 1989	1,058	15.4
1970 to 1979	1,416	20.6
1960 to 1969	788	11.4
1940 to 1959	772	11.2
1939 or earlier	760	11.0
TOTAL	6,887	100%

SOURCE: U.S. Census Bureau.

2. Building Permit Activity

EXHIBIT III-I provides a breakdown of the types and number of building permits issued by Perquimans County from 2000 through 2011 and shows the consistent level of building activity, particularly with respect to residential units, occurring in the County.

**EXHIBIT III-I
 PERQUIMANS COUNTY, NORTH CAROLINA
 BUILDING PERMIT ACTIVITY
 2000-2011**

TYPE OF STRUCTURE	YEAR PERMIT ISSUED												TOTAL
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
Site-Built Residential	64	81	66	60	91	137	170	108	43	47	40	33	940
Commercial	3	3	5	2	9	11	14	17	8	6	4	3	85
Manufacturing	0	0	0	0	0	0	0	0	0	0	0	0	0
Institutional	0	0	0	0	0	0	0	0	0	0	0	0	0
Manuf. Homes	96	79	84	76	107	77	68	52	41	32	33	37	782
Modular Homes	1	4	4	8	21	40	31	24	22	9	13	5	182
TOTAL	64	167	159	146	228	265	283	201	114	94	90	78	1,989

SOURCE: Perquimans County Building Inspections Department, 2012.

C. Economy

In Perquimans County, commercial and industrial service type development is clustered in and around the towns. Also, there are retail establishments, auto service centers, and personal services type establishments located throughout the County, primarily at crossroads areas.

According to the U.S. Census Bureau, there were an estimated 5,738 people in the Perquimans County labor force (population 16 years old and over) in 2010. Of this total, 5,695 were in the civilian labor force and 43 were in the armed forces. Of the civilian labor force, 5,198 people were employed and 497 were unemployed. The County's unemployment rate was 8.7%.

In 2010, 5,077 people (16 years old and over) commuted into Perquimans County to work on a daily basis and 74 worked at home. About 3,470 people left Perquimans County daily to work. Most of the people commuting out of the County to work went to Pasquotank County or Chowan County. The same two counties (Chowan and Pasquotank) were the main providers of workers coming into Perquimans County. Also, people left Perquimans County daily to work in the Hampton Roads area of Virginia.

Most workers in Perquimans County drove alone to work in 2010. EXHIBIT III-J, on the following page, shows how Perquimans County workers got to work in 2010.

On average, for the 5,077 civilian workers (16 years old and over) not working at home in Perquimans County in 2010, it took 29 minutes to get to work. EXHIBIT III-K, also on the following page, shows percent of workers by travel time in 2010.

In 2010, 1,136 people, or 21.9% of the Perquimans County workforce, worked in the educational services and health care and social services industry, followed by retail trade (820 people or 15.8%). EXHIBIT III-L, on page III-11, breaks down the County's 2010 estimated employment by industry.

In Perquimans County in 2010, 1,446 people (27.8%) held management, business, science, and arts type occupations while 1,371 people (26.4%) held sales and office type occupations. EXHIBIT III-M, on page III-11, breaks down the County's workforce by occupation in 2010 based on U.S. Census Bureau estimates.

**EXHIBIT III-J
 PERQUIMANS COUNTY, NORTH CAROLINA
 WORKERS' MEANS OF COMMUTING TO WORK IN
 PERQUIMANS COUNTY IN 2010
 (Population: commuting workers 16 years old and over)**

MEANS OF COMMUTING	NUMBER OF WORKERS	PERCENT
Car, truck, van drove alone	4,195	81.4
Car, truck, van carpooled	501	9.7
Public transportation	42	0.8
Walked	158	3.1
Other Means	181	3.5
TOTAL	5,077	100%

SOURCE: U.S. Census Bureau.

**EXHIBIT III-K
 PERQUIMANS COUNTY, NORTH CAROLINA
 COMMUTING WORKERS, PERCENT OF WORKERS BY TRAVEL TIME,
 2010**

TRAVEL TIME	PERCENT
Less than 10 minutes	15.7
10 – 14 minutes	9.5
15 – 19 minutes	14.3
20 – 24 minutes	11.5
25 – 29 minutes	11.1
30 – 34 minutes	14.8
35 – 44 minutes	4.8
45 – 59 minutes	3.9
60+ minutes	14.4
TOTAL	100%

SOURCE: U.S. Census Bureau

**EXHIBIT III-L
 PERQUIMANS COUNTY, NORTH CAROLINA
 ESTIMATED WORKFORCE BY TYPE OF INDUSTRY, 2010
 (Population: 16 years old and over)**

TYPE OF INDUSTRY	NUMBER	PERCENT
Agriculture, Forestry, Fishing and Hunting, Mining	246	4.7
Construction	307	5.9
Manufacturing	418	8.0
Wholesale Trade	200	3.8
Retail Trade	820	15.8
Transportation and Warehousing and Utilities	301	5.9
Information	21	0.4
Finance and Insurance, Real Estate and Rental and Leasing	227	4.4
Professional, Scientific and Management and Administrative and Waste Management Services	438	8.4
Educational Services and Health Care and Social Services	1,136	21.9
Arts, Entertainment and Recreation and Accommodation and Food Services	360	6.9
Other Services Except Public Administration	275	5.3
Public Administration	449	8.6
TOTAL	5,198	100%

SOURCE: U.S. Census Bureau.

**EXHIBIT III-M
 PERQUIMANS COUNTY, NORTH CAROLINA
 ESTIMATED WORKFORCE BY TYPE OF OCCUPATION, 2010
 (Population: 16 years old and over)**

OCCUPATION	NUMBER	PERCENT
Management, business, science, and arts occupations	1,446	27.8
Service occupations	854	16.4
Sales and office occupations	1,371	26.4
Natural resources, construction, and maintenance occupations	692	13.3
Production, transportation, and material moving Occupations	835	16.1
TOTAL	5,198	100%

SOURCE: U.S. Census Bureau.

EXHIBIT III-N lists the County's top twenty-five (25) largest employers by their rank, their respective type of industry, and provides their respective number range of employees for the third quarter of 2011.

**EXHIBIT III-N
 PERQUIMANS COUNTY, NORTH CAROLINA
 TOP TWENTY-FIVE EMPLOYERS 2011, 3rd QUARTER**

RANK	COMPANY	INDUSTRY	RANGE
1	Perquimans County Schools	Education & Health Sciences	250-499
2	Perquimans County	Public Administration	100-249
3	Albemarle Plantation	Leisure & Hospitality	50-99
4	SSC Hertford Operating Co., LLC	Education & Health Services	50-99
5	Food Lion, LLC	Trade, Transportation & Utilities	50-99
6	NC Department of Transportation	Public Administration	50-99
7	Captain Bob's	Leisure & Hospitality	Below 50
8	Tandem Inc., dba McDonalds	Leisure & Hospitality	Below 50
9	Hardee's-Non EDI	Leisure & Hospitality	Below 50
10	Albemarle Elec. Membership Co-op	Trade, Transportation & Utilities	Below 50
11	Albemarle Commission	Public Administration	Below 50
12	Healthcare Services Group	Professional & Business Services	Below 50
13	RPS, Inc.	Trade, Transportation & Utilities	Below 50
14	Town of Hertford	Public Administration	Below 50
15	NC Dept. of Juvenile Justice	Public Administration	Below 50
16	US Postal Service	Trade, Transportation & Utilities	Below 50
17	Parkway Ag. Supply, LLC	Trade, Transportation & Utilities	Below 50
18	Tommy's Pizza	Leisure & Hospitality	Below 50
19	Reed Oil Company	Trade, Transportation & Utilities	Below 50
20	Coastal Carolina Family Practices, PA	Education & Health Services	Below 50
21	Southern Manor, Inc.	Education & Health Services	Below 50
22	Nicholson House, Inc.	Leisure & Hospitality	Below 50
23	Woodards Pharmacy	Trade, Transportation & Utilities	Below 50
24	Alexander Electrical Contractor, Inc.	Construction	Below 50
25	James or Janice Rhodes	Natural Resources & Mining	Below 50

SOURCE: North Carolina Department of Commerce, Division of Employment Security

D. Hertford Population, Housing, and Economy

EXHIBIT III-O provides a profile of demographic information for the incorporated area of Hertford from the 2010 Census.

**EXHIBIT III-O
 TOWN OF HERTFORD
 COMMUNITY DEMOGRAPHIC PROFILE**

Total Population: 2,142
 Median Household Income: \$25,250.00
 Average Household Size: 2.38
 Percent of Individuals Below Poverty Level: 34.2%

CIVILIAN OCCUPATIONS	EMPLOYED PEOPLE (16 years and over)	PERCENT
Management, professional	193	28.0
Service related	151	21.9
Sales and office	186	27.0
Natural resources, construction, and maintenance	41	5.9
Production, transportation, and material moving	119	17.2
TOTAL	690	100%
CIVILIAN EMPLOYMENT	PEOPLE (16 years and over)	PERCENT
Employed	690	51.0
Unemployed	33	2.4
Not in labor force	635	46.6
TOTAL	1,358	100%
EDUCATIONAL ATTAINMENT	PEOPLE (25 years and over)	PERCENT
Less than 9 th grade	90	7.2
9 th -12 th (no diploma)	82	6.5
High school diploma, GED	472	37.6
Some college (no degree)	251	20.0
Associate's degree	54	4.3
Bachelor's degree	247	19.6
Graduate or prof. degree	60	4.8
TOTAL	1,256	100%

SOURCE: U.S. Census Bureau, 2010.

The 2010 Census reported that 1,084 people (85.6%) of Hertford’s population aged 25 years and over (1,256 people) had a high school education or higher, with over 24.4% (307 people) having a bachelor’s degree or higher. The 2010 Census reported the median age of Hertford residents as 38.6 years, with 472 people (22%) of the population over the age of 62 years.

The U.S. Census estimates Hertford had 1,104 total housing units in 2010; 105 units of which (9.5%), were mobile/manufactured homes. See EXHIBIT III-P which follows. Over 47% of all homes in Hertford were constructed before 1960. See EXHIBIT III-Q. In 2010 in Hertford, no housing units lacked complete plumbing facilities and none lacked complete kitchen facilities. Fifty-six (56) housing units did not take telephone service.

**EXHIBIT III-P
 TOWN OF HERTFORD
 HOUSING UNITS BY TYPE**

UNIT TYPE	NUMBER OF UNITS	PERCENT
Single-family	744	67.4
Multi-family	255	23.1
Mobile homes	105	9.5
TOTAL	1,104	100%

SOURCE: U.S. Census Bureau.

**EXHIBIT III-Q
 TOWN OF HERTFORD
 HOUSING UNITS BY YEAR BUILT**

YEAR BUILT	NUMBER OF UNITS	PERCENT
1959 or earlier	527	47.7
1960-19979	490	44.4
2000-2004	41	3.7
2005 or later	46	4.2
TOTAL	1,104	100%

SOURCE: U.S. Census Bureau.

The economy of Hertford depends largely on the educational services, and health care and social assistance industry for employment opportunity. This industry classification accounted for 25% of the employment for employed civilians 16 years old and over. Other notable industries include the arts, entertainment, and recreation, and accommodation and food services; retail trade; and public administration which, combined, accounted for 34% of the workforce in 2010. In 2010, the mean travel time to work for people in Hertford was 20.6 minutes.

E. Winfall Population, Housing, and Economy

EXHIBIT III-R provides a profile of demographic information for the incorporated area of Winfall from the 2010 Census.

**EXHIBIT III-R
 TOWN OF WINFALL
 COMMUNITY DEMOGRAPHIC PROFILE**

Total Population: 594
 Median Household Income: \$45,125.00
 Average Household Size: 2.37
 Percent of Individuals Below Poverty Level: 15.6%

CIVILIAN OCCUPATIONS	EMPLOYED PEOPLE (16 years and over)	PERCENT
Management, professional	68	26.0
Service related	38	14.5
Sales and office	72	27.5
Natural resources, construction, and maintenance	28	10.7
Production, transportation, and material moving	56	21.4
TOTAL	262	100%
CIVILIAN EMPLOYMENT	PEOPLE (16 years and over)	PERCENT
Employed	262	46.5
Unemployed	34	6.0
Not in labor force	268	47.5
TOTAL	564	100%
EDUCATIONAL ATTAINMENT	PEOPLE (25 years and over)	PERCENT
Less than 9 th grade	6	1.2
9 th -12 th (no diploma)	51	10.8
High school diploma, GED	208	40.6
Some college (no degree)	138	27.0
Associate's degree	26	5.1
Bachelor's degree	64	12.5
Graduate or prof. degree	19	3.7
TOTAL	512	100%

SOURCE: U.S. Census Bureau.

According to U.S. Census Bureau estimates, 455 people, or about 89%, of Winfall’s population in 2010 aged 25 years old and over had a high school education or higher, with more than 15% having a bachelor’s degree or higher. The 2010 Census reported the median age of residents in Winfall was 44 years of age, with 25.9% of the Town’s population above the age of 62.

The U.S. Census Bureau estimates Winfall had 373 total housing units in 2010; 68 units of which (18.2%) were mobile/manufactured homes. See EXHIBIT III-S. About 29% of all homes in Winfall were constructed before 1959. See EXHIBIT III-T. In 2010 in Winfall, no housing units lacked completed plumbing facilities and nine (9) lacked complete kitchen facilities. Five (5) housing units did not take telephone service.

**EXHIBIT III-S
 TOWN OF WINFALL
 HOUSING UNITS BY TYPE**

UNIT TYPE	NUMBER OF UNITS	PERCENT
Single-family	305	81.8
Multi-family	0	0.00
Mobile homes	68	18.2
TOTAL	373	100%

SOURCE: U.S. Census Bureau.

**EXHIBIT III-T
 TOWN OF WINFALL
 HOUSING UNITS BY YEAR BUILT**

YEAR BUILT	NUMBER OF UNITS	PERCENT
1959 or earlier	107	28.7
1960-1999	235	63.0
2000-2004	15	4.0
2005 or later	16	4.3
TOTAL	373	100%

SOURCE: U.S. Census Bureau.

As with its neighbor Hertford, the economy of Winfall depends largely on the educational services, and health care and social assistance industry for employment opportunity. This industry classification accounted for 34.7% of the total workforce. Other notable industry classifications are retail trade and professional, scientific, and management services which together accounted for nearly 23% of the workforce in Winfall in 2010. In 2010, the estimated mean travel time to work for people in Winfall was 22.1 minutes.

F. General Population, Housing, and Economic Trends Relative to Land Use and Development

Population trends indicate that more of the people who may choose to relocate to Perquimans County and its towns will be of middle or retirement age. Such populations normally require and expect services such as enhanced emergency medical services, police protection, and access to service establishments and social, cultural amenities.

Sufficient developable land in the unincorporated portions of the Perquimans County and Hertford and Winfall is available and has been zoned to meet projected needs. Both towns have undeveloped land, as well as the opportunity for some existing housing stock to be refurbished and used.

The county and its towns continue efforts to attract businesses, both in the towns themselves and in the Commerce Park. Hertford may expand its Main Street Program which, in part, seeks to attract business to the central business district. US 17 is also cited as a prime location for business development.

G. Population Projections and Estimates

1. Permanent Population Projections

Projections of the permanent population for Perquimans County, Hertford, and Winfall are shown on EXHIBIT III-U. Also included are projections of the permanent population for the unincorporated area of the County (i.e., County total less Town projections).

**EXHIBIT III-U
 PERQUIMANS COUNTY, NORTH CAROLINA
 PERMANENT POPULATION PROJECTIONS**

LOCALITY	2010 CENSUS	2015 PROJECTION	2020 PROJECTION	2025 PROJECTION	2030 PROJECTION
Perquimans County Total	13,453	13,725	13,962	14,198	14,439
Hertford Corporate Area	2,143	2,186	2,223	2,261	2,299
Winfall Corporate Area	594	606	616	626	637
Unincorporated Area of Perquimans County	10,716	10,933	11,123	11,311	11,503

SOURCE: U.S. Census Bureau, North Carolina Office of State Management and Budget, and County projections.

2. 2010 Seasonal and Peak Population Estimates

The County’s estimates of the 2010 seasonal and peak population for Perquimans County, Hertford, and Winfall are shown on EXHIBIT III-V including estimates for the unincorporated area of the County (i.e., County total less Town estimates).

**EXHIBIT III-V
 PERQUIMANS COUNTY, NORTH CAROLINA
 SEASONAL AND PEAK POPULATION ESTIMATES, 2010**

PERQUIMANS COUNTY	TOTAL	PERSONS PER HOUSEHOLD	POPULATION
Housing Units for Seasonal or Occasional Use (2010 Census)	564	2.39	1,348
2010 Seasonal Population Estimate			1,348
Permanent Population (2010 Census)	13,453		13,453
2010 Peak Population Estimate			14,801
Peak to Permanent Ratio			110%
HERTFORD CORPORATE AREA	TOTAL	PERSONS PER HOUSEHOLD	POPULATION
Housing Units for Seasonal or Occasional Use (2010 Census)	28	2.38	55
2010 Seasonal Population Estimate			55
Permanent Population (2010 Census)	2,143		2,143
2010 Peak Population Estimate			2,198
Peak to Permanent Ratio			102.5%
WINFALL CORPORATE AREA	TOTAL	PERSONS PER HOUSEHOLD	POPULATION
Housing Units for Seasonal or Occasional Use (2010 Census)	2	2.37	5
2010 Seasonal Population Estimate			5
Permanent Population (2010 Census)	594		594
2010 Peak Population Estimate			599
Peak to Permanent Ratio			100.8%
UNINCORPORATED AREA OF PERQUIMANS COUNTY	TOTAL	PERSONS PER HOUSEHOLD	POPULATION
Housing Units for Seasonal or Occasional Use (2010 Census)	539	2.42	1,304
2010 Seasonal Population Estimate			1,304
Permanent Population (2010 Census)	10,716		10,716
2010 Peak Population Estimate			12,020
Peak to Permanent Ratio			112%

SOURCE: U.S. Census Bureau, Perquimans County and Community Planning Collaborative, 2012.

3. Seasonal and Peak Population Projections

Based upon the estimated 2010 seasonal and peak population estimates above, and applying an average (6%) factor for potential future increases, EXHIBIT III-W shows a projection for the potential seasonal and peak populations for Perquimans County as a whole, its towns, and for the unincorporated area of the County in five-year “snapshots” for 2015, 2020, 2025, and 2030.

**EXHIBIT III-W
 PERQUIMANS COUNTY, NORTH CAROLINA
 SEASONAL AND PEAK POPULATION PROJECTIONS
 2015, 2020, 2025, and 2030**

PERQUIMANS COUNTY TOTAL

YEAR	2015	2020	2025	2030
Permanent Population Projection	13,725	13,962	14,198	14,439
Seasonal Population Projection	823	838	852	866
Peak Population Projection	14,548	14,800	15,050	15,305

HERTFORD CORPORATE AREA

YEAR	2015	2020	2025	2030
Permanent Population Projection	2,186	2,223	2,261	2,299
Seasonal Population Projection	131	133	136	138
Peak Population Projection	2,317	2,356	2,397	2,437

WINFALL CORPORATE AREA

YEAR	2015	2020	2025	2030
Permanent Population Projection	606	616	626	637
Seasonal Population Projection	36	37	38	38
Peak Population Projection	642	653	664	675

UNINCORPORATED AREA OF PERQUIMANS COUNTY

YEAR	2015	2020	2025	2030
Permanent Population Projection	10,933	11,123	11,311	11,503
Seasonal Population Projection	656	668	678	690
Peak Population Projection	11,589	11,791	11,989	12,193

SOURCE: Perquimans County and Community Planning Collaborative, 2012.

Chapter IV: Natural Systems

The analysis of natural systems is intended to describe and analyze the natural features and environmental conditions in Perquimans County and its towns 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 an analysis of the County's natural features in order to assess conditions, capabilities, and limitations. Section A is an assessment of natural systems present in Perquimans County and its towns and interpretations of the capabilities or limitations that the features identified have for development. Sections B and C build 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 shown in three categories (classes) on a series of maps in Section D.

A. Natural Systems

Data files used to generate various natural features maps were provided by the State at the outset of the land use planning process. The 14-digit hydrological units delineated by the Natural Resources Conservation Service were used as the basic unit of analysis. For Perquimans County and its towns, 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 Perquimans County, estuarine waters and estuarine and public trust shorelines are AEC under State permitting jurisdiction by the Division of Coastal Management.

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. Perquimans 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. Perquimans 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.

Fragile coastal natural resource areas are generally recognized to be of educational, scientific, or cultural value because of the natural features of the particular site. These features in the coastal area serve to distinguish the area designated from the vast majority of coastal landscape and therein establish its value. Such areas may be key components of systems unique to the coast which act to maintain the integrity of that system.

Areas that contain outstanding examples of coastal processes or habitat areas of significance to the scientific or educational communities are a second type of fragile coastal natural resource area. These areas are essentially self-contained units or “closed systems” minimally dependent upon adjoining areas.

Finally, fragile areas may be particularly important to a locale either in an aesthetic or cultural sense. Fragile coastal cultural resource areas are generally recognized to be of educational, associative, scientific, aesthetic or cultural value because of their special importance to our understanding of past human settlement, such as the Newbold-White

House, and of their interaction with the coastal zone. Their importance serves to distinguish the designated areas as significant among the historic architectural or archaeological remains in the coastal zone, and therein established their value.

a. Coastal Wetlands

Coastal wetlands require salt water and can be found in Perquimans County along the Albemarle Sound. Coastal wetlands data were developed by the Division of Coastal Management (DCM) to assist planners in guiding growth away from environmentally sensitive areas. The data are derived from remotely sensed data and should not be used for jurisdictional wetland determinations or a substitute for specific site delineations. While every effort was made to provide accurate information, errors are inevitable. The data are a planning tool, and as such, should not be used at inappropriate scales. Of the 12 wetland classifications defined by DCM, Perquimans County contains the following based on a wetlands map produced by DCM (dated September 29, 1997, the most recent wetlands map from DCM in the County's possession): head water swamps; bottom land hardwood or swamp forests; hardwood flats; and, pine flats.

b. Estuarine Waters and Estuarine Shorelines

Estuarine waters are defined in G.S. 113A-113(b)(2). The boundaries between inland and coastal fishing waters are set forth in an agreement adopted by the Wildlife Resources Commission and the Department of Environment and Natural Resources and in the most current revision of the North Carolina Marine Fisheries Regulations for Coastal Waters codified at 15A NCAC 3Q.0200. Estuarine waters are the dominant component and bonding element of the entire estuarine system, integrating aquatic influences from both the land and the sea. Estuaries are among the most productive natural environments of North Carolina. They support the valuable commercial and sports fisheries of the coastal area which are comprised of estuarine dependent species such as menhaden, flounder, shrimp, crabs and oysters. These species must spend all of some part of their life cycle within the estuarine waters to mature and reproduce. Of the ten leading species in the commercial catch, all but one is dependent on the estuary.

Estuarine shorelines are located landward of Normal Water Level (NWL) and may be upland or wetland and are considered a component of the estuarine system because of the close association with the adjacent estuarine waters. Estuarine shorelines are those non-ocean shorelines which are especially vulnerable to erosion, flooding, or other adverse effects of wind and water and are intimately connected to the estuary. This area extends from the mean high water level or normal water level along the estuaries, sounds, bays, and brackish waters as set forth in an agreement adopted by the Wildlife Resources Commission and the Department of Environment and Natural Resources for a distance of 75 feet landward.

Development within estuarine shorelines influences the quality of estuarine life and is subject to the damaging processes of shore front erosion and flooding. The management

objective of the estuarine shoreline is to ensure shoreline development is compatible with both the dynamic nature of estuarine shorelines and the values of the estuarine system. Estuarine waters and estuarine shorelines exist along the Albemarle Sound, the Little River, Perquimans River up to the U.S. 17 Bypass Bridge, and the Yeopim River and its tributaries.

c. Public Trust Waters

Public trust areas are all natural bodies of water subject to measurable lunar tides and lands there under to the mean high water mark; all navigable natural bodies of water and lands there under to the mean high water level or mean water level as the case may be, except privately-owned lakes to which the public has no right of access; all water in artificially created bodies of water containing significant public fishing resources or other public resources which are accessible to the public by navigation from bodies of water in which the public has rights of navigation; and all waters in artificially created bodies of water in which the public has acquired rights by prescription, custom, usage, dedication, or any other means. Public trust areas for Perquimans County include the Little River and navigable tributaries, Perquimans River and navigable tributaries and creeks, Yeopim River and navigable tributaries and creeks and the Albemarle Sound.

d. Complex Natural Areas

Coastal complex natural areas are defined as lands that support native plant and animal communities and provide habitat qualities which have remained essentially unchanged by human activity. Such areas may be either significant components of coastal systems or especially notable habitat areas of scientific, educational, or aesthetic value. They may be surrounded by landscape that has been modified but does not drastically alter conditions within the natural area. Such areas may have been altered by human activity and/or subject to limited future modification, e.g. the placement of dredge spoil, if the CRC determines that the modifications benefit the plant or animal habitat or enhance the biological, scientific or educational values which will be protected by designation as an AEC. There are no known complex natural areas in Perquimans County.

e. Areas That Sustain Remnant Species

Coastal areas that sustain remnant species are those areas that support native plants and animals which are threatened to be rare or endangered. There are no known areas in Perquimans County that sustain remnant species.

f. Areas Containing Unique Geologic Formations

Unique coastal geologic formations are defined as sites that contain geologic formations that are unique or otherwise significant components of coastal systems or that are especially notable examples of geologic formations or processes in the coastal area. There are no known unique coastal geologic formations in Perquimans County.

g. Scenic and Prominent High Points

There are numerous scenic point throughout the County, but no known designated prominent high points or scenic points.

h. Submerged Aquatic Vegetation

The network of leaves, stem and roots in a bed of submerged aquatic vegetation (SAV) oxygenates the water, filters and traps sediments, and utilizes excess nutrients such as nitrogen and phosphorus in the water. These processes increase clarity in the water and improve the conditions for more SAV growth. SAV provided an abundance of food and shelter and attracts a wide variety of fish and wildlife. For example, largemouth bass utilize the grass beds of Albemarle Sound, while in saltier Core Sound, bay scallops attach to the leaves and stems of SAV. Osprey, egrets, herons and gulls are often seen fishing in these grass beds, while many ducks, swans, and geese consume SAV as a major portion of their diet. Based on the Sensitive Habitat Map prepared by DCM and cited in the 1998 Perquimans County Land Use Plan, SAV are located at the eastern tip of Perquimans County between the Little River and Perquimans River. They are also found along much of the northern and southern edge of the Perquimans River. SAVs could be found in the shallow waters of the Albemarle Sound from the Little River to Yeopim River/Creek. SAVs are transient and may be found in different areas at various densities and within an expanded range over time.

2. Soil Characteristics

Eight general soil map units (comprised of 20 soil types) are identified in Perquimans County by the United States Department of Agriculture, Soil Conservation Service in the Soil Survey of Chowan and Perquimans Counties, North Carolina. These are: 1. Roanoke-Tomotley-Perquimans; 2. Conetoe-Wando-Seabrook; 3. Tomahawk-Echaw-Valhalia; 4. Dogue-Augustal-State; 5. Portsmouth-Arapahoe-Cape Fear; 6. Chapanoke-Yeopim; 7. Chowan-Dorovan; and, 8. Scuppernong.

The Roanoke-Tomotley-Perquimans soil unit features nearly level, poorly drained soils that have a loamy surface layer and a loamy or clayey subsoil. The soils in this map unit are on broad flats and in depressions. This map unit makes up 37 percent of the survey area. It is 61 percent Roanoke soils, 21 percent Tomotley soils, 11 percent Perquimans soils, and 7 percent soils of minor extent. The soils in the map unit are used mainly as cropland and, to a lesser extent, as woodland or pasture. The soils in the map unit are well suited to use as cropland. They are poorly suited to most urban and recreational uses. Wetness is the main limitation.

The Conetoe-Wando-Seabrook soil unit features nearly level and gently sloping, well drained, excessively drained, and moderately well drained soils that have a sandy surface layer and a loamy or sandy subsoil. The soils in this map unit are on ridges and flats along small streams that flow into the Albemarle Sound and Chowan River. This map unit makes up 7 percent of the survey area. It is 30 percent Conetoe soils, 29 percent

Wando soils, 20 percent Seabrook soils, and 21 percent soils of minor extent. The soils in this map unit are used mainly as cropland and, to a lesser extent, as pasture or woodland. The soils in the map unit are suited or well suited to use for crops and as woodland. They range from well suited to poorly suited to most urban uses. Wetness and droughtiness are the main limitations.

The Tomahawk-Echaw-Valhalla soil unit features nearly level and gently sloping, moderately well drained, somewhat poorly drained, and well drained soils that have a sandy surface layer and a loamy or sandy subsoil. The soils in this unit are smooth to slightly rounded ridges along the Suffolk Scarp. This map unit makes up 6 percent of the survey area. It is 33 percent Tomahawk soils, 25 percent Echaw soils, 18 percent Valhalla soils, and 24 percent soils of minor extent. The soils in this map unit are used mainly as cropland and, to a lesser extent, as pasture or woodland. The soils are well suited or suited to use for crops and to use as woodland. Valhalla soils are suited to most urban uses and Tomahawk and Echaw soils range from suited to poorly suited. Wetness, leaching of plant nutrients, the hazard of soil blowing, and droughtiness are the main limitations.

The Dogue Augusta-State soil unit features nearly level and gently sloping, moderately well drained, somewhat poorly drained, and well drained soils that have a sandy or loamy surface layer and loamy or clayey subsoil. The soils in this map unit are on smooth ridges along small streams that flow into the Albemarle Sound, Chowan River, and Perquimans River and are in shallow depressions. This map unit makes up 11 percent of the survey area. It is 38 percent Dogue soils, 23 percent Augusta soils, 22 percent State soils, and 17 percent soils of minor extent. The soils in this map unit are used mainly as cropland and, to a lesser extent, as pasture or woodland. The soils are well suited to use for crops and as woodland. They range from well suited to poorly suited for most urban uses. Wetness is the main limitation.

The Portsmouth-Arapahoe-Cape Fear soil unit features nearly level, very poorly drained soils that have a loamy surface layer and a loamy or clayey subsoil. The soils in this map unit are on broad flats and in depressions. This map unit makes up 23 percent of the survey area. It is 41 percent Portsmouth soils, 23 percent Arapahoe soils, 11 percent Cape Fear soils, and 25 percent soils of minor extent. The soils in this map unit are used mainly as cropland or woodland. The soils in this map unit, if drained, are well suited to cropland. They are poorly suited to most urban and recreational uses. Wetness is the main limitation.

The Chapanoke-Yeopim soil unit features nearly level and gently sloping, somewhat poorly drained and moderately well drained soils that have a loamy surface layer and a loamy subsoil. The soils in this map unit are on smooth ridges and flats along small streams that flow into the Albemarle Sound and Perquimans River. This map unit makes up 4 percent of the survey area. It is 41 percent Chapanoke soils, 36 Yeopim soils, and 23 percent soils of minor extent. The soils in this map unit are used mainly as cropland and, to a lesser extent, as pasture or woodland. The soils are well suited to use for crops

and as woodland. They are suited or poorly suited to most urban uses. Wetness is the main limitation.

The Chowan-Dorovan soil unit features nearly level, very poorly drained soils that are loamy and are underlain by muck and soils that are muck throughout. The soils in this map unit are on the flood plains of the Albemarle Sound, Chowan River, Perquimans River, and of the small streams that flow into them. This map unit makes up 9 percent of the survey area. It is about 51 percent Chowan soils and about 49 percent Dorovan soils. The soils in this map unit are used almost exclusively as woodland. The soils are poorly suited to use for crops, as woodland, and for most urban uses. Wetness, flooding, and low strength are the main limitations.

The Scuppernong soil unit features nearly level, very poorly drained soils that have a surface layer of muck and mucky and loamy underlying material. The soils in this map unit are in oval-shaped depressions and in the northern part of Perquimans County in the Dismal Swamp. This map unit makes up 3 percent of the County. It is 89 percent Scuppernong soils and 11 percent soils of minor extent. The soils of minor extent in the map unit are Portsmouth, Arapahoe, and Cape Fear soils. The soils in this map unit are rapidly being cleared and used for cropland. To a lesser extent, they are used as woodland and wildlife habitat. The soils, if drained, are suited or well suited to use for crops and as woodland. They are poorly suited to most urban uses. Wetness and low strength are the main limitations.

Of the twenty (20) soil types found in Perquimans County, only one (Conetoe) has slight limitations for septic tanks, while only one (State, a soil unit found in the general soil map unit Dogue-Augusta-State) has moderate limitations. The remaining eighteen (18) soil types have severe limitations. Sound land planning and development, special site planning and current technology, can address some of the concerns associated with soil limitations. The Perquimans County Health Department determines if soils will permit the use of septic tank systems on a case by case basis.

The general soil map from the Soil Study of Chowan and Perquimans Counties, North Carolina is included as APPENDIX 1. The soil study and map can also be viewed at the Perquimans County Planning Department. The exhibit shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, a map unit consists of one or more major soils and some minor soils. It is named for the major soils. The soils making up one unit can occur in other units but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified. Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or a building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

3. Flood and Other Natural Hazard Areas

Flood hazard areas are found along Perquimans County's rivers shorelines and their tributaries. Development in these areas is subject to flood plain regulations and flooding can be a severe problem in much of the County. The affected areas exist primarily in the flood plains of the Perquimans River, Little River, and Yeopim River and along the major drainage ways feeding into the rivers. Depression-like areas, while not as large or continuous as the flood plains, intermittently exist in the upland plain area of the County.

The FEMA Flood Hazard Areas as identified on the FEMA Flood Hazard Maps and the steep river bluffs along the western shore of the Perquimans River are natural flood hazard areas in the County. Flood Insurance Rate (FIRM) maps are available for inspection in the Perquimans County Building Inspections Office. APPENDIX 2 shows the general location of flood hazard areas.

Localized flooding can occur many times in Perquimans County in a given year. Given its location, Perquimans County can experience more widespread flooding associated with hurricanes and tropical storms. Localized flooding can be characterized as highly likely and area wide flooding can be characterized as likely. Thus land use decisions and building development must remain cognizant of the threat posed by flooding in many parts of Perquimans County because of these limitations relative to natural hazards such as flood prone areas. Perquimans County, and its towns, currently enforces zoning ordinances and the County enforces the subdivision ordinance throughout its planning jurisdiction. The County has in place a flood damage prevention ordinance that established development standards for FEMA identified flood hazard areas.

4. Water Supply Areas

a. Public Water Supply Watershed

The drinking water supply map provided by DEM (dated September 29, 1997 and cited in the 1998 Perquimans County Land Use Plan) indicates there are no water supply watersheds in protected or critical areas.

b. Public and Community Supply Well Fields

In 2005, Perquimans County had four existing wells and one proposed well clustered in or near Bethel. These are: Well #1; Well #2; Well #3; Long Well; and Chappel Well (future). The County water plant is located east of Winfall on SR 1220. There are five wells located in or near Winfall. These are: Cotton Gin Well; Winslow Well; Plant Well; Lake Road Well; Miller Well; Hurdle Well; and, Field Well. Hertford had two wells, and Winfall had two wells and one emergency well.

5. Slopes Exceeding Twelve (12) Percent

River bluff areas along the western shore of the Perquimans River are the only areas with slopes near or exceeding 12%

6. Shoreline Areas with High Erosion Potential

The Lands End section of the County along the Albemarle Sound has historically experienced high erosion rates due to wind tides and now has riprap and bulkhead shoreline protection. High erosion areas also exist along unincorporated shorelines of the Albemarle Sound and lower portions of the Little, Perquimans, and Yeopim Rivers and lower Yeopim Creek.

7. Watersheds Which Drain into Nutrient Sensitive Waters, Outstanding Resource Waters, Primary Nursery Areas, High Quality Waters, or Submerged Aquatic Vegetation Waters

There are no High Quality Waters, Outstanding Resource Waters, Nutrient Sensitive Waters, or Primary Nursery Areas located adjacent to Perquimans County. The lower portion of Deep Creek/Little River watershed at Lands End drains into waters containing submerged aquatic vegetation. The upper area drains into anadromous fish spawning areas (AFSA). The Perquimans River watershed and Muddy Creek/Perquimans River watershed drain into the Perquimans River, which contains areas with submerged aquatic vegetation and AFSA areas at the upper end of the Perquimans River near Hertford and along Sutton Creek on the north side of the Perquimans River. Submerged aquatic vegetation has been observed along various locations up as far as the Yeopim River and Yeopim Creek, the western shores of the Little River, the Perquimans River, and southern portions of all river bodies.

8. Storm Surge Areas

Storm surge areas extend along the entire length of Perquimans County's rivers shorelines. In some areas, a fast hurricane storm surge would inundate vast portions of southwestern Perquimans County. APPENDIX 3 shows areas of Perquimans County that may be subject to fast and slow inundation.

9. Non-Coastal Wetlands and Probable 404 Wetlands

Nearly all wetlands and swamps in Perquimans County are inland swamps. Non-coastal wetlands are found in various areas of Perquimans County. These areas 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.

B. Environmental Conditions Assessment

As discussed 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. Perquimans County lies within the Pasquotank 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.

Perquimans County lies within the Subbasin 03-01-52 of the Pasquotank River. Subbasin 03-01-52 is 541 square miles and contains a population density of 46 persons per square mile. 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. Four general permits are currently issued in the basin.

In basin wide plans, surface waters are classified according to their best intended uses. Determining how well 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 03-01-52 are shown on EXHIBIT IV-A.

**EXHIBIT IV-A
 PERQUIMANS 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 regional fish consumption advisory.

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

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 methyl mercury 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 1997 Pasquotank River Basin wide Plan identified two segments as impaired in subbasin 03-01-52 (Little River and Burnt Mill Creek). According to the 2002

Pasquotank River Basin wide 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 1997 Pasquotank River Basinwide Plan identified two segments as impaired in subbasin 03-01-52 (Little River and Burnt Mill Creek). The Pasquotank River 2002 Basinwide Water Quality Plan (2002 Plan) reviews use support and recommendations detailed in the 1997 basinwide plan, reports status of progress, gives recommendations for the next five year cycle, and outlines current projects aimed at improving water quality for these stream segments. See EXHIBIT IV-B. Also, the 2002 Plan provides similar information for Mill Creek, Bethel Creek, and Perquimans River. See EXHIBIT IV-C.

The County and its towns must remain cognizant of the limitations and opportunities for development relative to water quality, especially along waterfront areas, natural hazard areas, and natural resource areas. The County and its towns should use local zoning, subdivision, and flood plain regulations to manage development in these areas and follow the recommendations for local governments contained in the Pasquotank River 2002 Basinwide Water Quality Plan which recommends:

Local governments should consider water quality impacts on all aspects of government operations. Land use planning should discourage development in wetlands and areas draining to sensitive coastal areas. Land use plans should incorporate preservation and limited development of land adjacent to approved shellfish harvesting areas. Best management practices should be implemented during all land-disturbing activities to reduce runoff and delivery of bacterial contaminants to shellfish harvesting waters. Local governments with jurisdictions around the large areas of conditionally approved open waters should work together and with the NCDENR agencies to develop strategies for reducing sources and delivery of bacterial contaminants to these waters in an effort to reduce the extent and duration of temporary closures. A long-term strategy should be put in place to eventually restore shellfish harvesting to prohibited areas where human activities have caused these closures.

Hertford may have to consider redevelopment proposals along the Perquimans River near Missing Mill Park and is overseeing the continuing development of the Commerce Center which also has water frontage.

EXHIBIT IV-B
PERQUIMANS COUNTY, NORTH CAROLINA
STATUS AND RECOMMENDATIONS FOR PREVIOUSLY IMPAIRED
WATERS- LITTLE RIVER AND BURNT MILL CREEK

Little River (11.8 miles from source to mouth of Halls Creek)

1997 Recommendations

This segment of the Little River was partially supporting because of low dissolved oxygen (DO) levels. Potential sources included land development, non-irrigated crop production, off-farm animal holding/management area and on-site wastewater systems (septic systems). Swamp conditions combined with agricultural runoff were thought to be contributing to the low dissolved oxygen.

Status of Progress

The Nonpoint Source Team chose against focusing on Little River and instead focused on broader issues that could impact the entire basin.

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.

2002 Recommendations

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. Land adjacent to Little River is expected to undergo development in the near future. Special attention should be placed on development impacts to local primary nursery areas. Growth management within the next five years will be imperative in order to maintain good water quality in this subbasin. Refer to Section 4.11 for more information about minimizing impacts to water quality from development. The updated (March 2007) basin plan notes that 7.9 miles of the Little River from SR 1225 to Halls Creek will be considered impaired for chlorophyll a exceedances of the standard.

Burnt Mill Creek (3.5 miles from source to Yeopim River)

1997 Recommendations

Burnt Mill Creek was not supporting from its source to Yeopim River. DWQ recommended monitoring the waterbody.

Status of Progress

The creek is currently not rated and is no longer considered impaired. DWQ collected new biological information suggesting the previous bioclassification was inappropriate.

2002 Recommendations

DWQ will continue to develop biocriteria to better assess use support in waters with swamp characteristics. The updated (March 2007) basin plan indicates Burnt Mill Creek will be considered Supporting based on current biocriteria.

SOURCE: Pasquotank River 2002 Basinwide Water Quality Plan, page 96.

EXHIBIT IV-C
PERQUIMANS COUNTY, NORTH CAROLINA
ISSUES AND RECOMMENDATIONS RELATIVE TO MILL CREEK, BETHEL
CREEK, AND PERQUIMANS RIVER

Mill Creek

Current Status

Mill Creek is currently not rated. The Perquimans County Water Treatment Plant #2 discharges effluent into an unnamed tributary to Mill Creek that leads to the Pasquotank River. The facility exceeded its permit limits by greater than 40 percent for total suspended solids over the course of two or more months during quarterly review periods in 1999 and 2000.

2002 Recommendations

The Perquimans County Water Treatment Plant #2 has been under a Special Order of Consent and has constructed a treatment facility to treat the total suspended solids problem. DWQ will continue to monitor the treatment facility.

Current Status

The Town of Winfall's Water Treatment Plant discharges to Mill Creek. The facility exceeded its permit limits by greater than 40 percent for total suspended solids over the course of two or more months during quarter review periods in 1998 and 1999.

2002 Recommendations

The Town of Winfall is under a Special Order of Consent (SOC) which requires them to meet the required permit limits by November 2003. DWQ will continue to work with Winfall to make the requirements of the SOC.

According to the (September) 2007 update of the Pasquotank River Basinwide Water Quality Plan, Mill Creek, from the Perquimans County SR 1214 near Winfall to the Perquimans River (14.7 saltwater acres), is Not Rated on an evaluated basis in the aquatic life category due to significant noncompliance issues with permit limits at the Town of Winfall Water Treatment Plant (WTP) (Permit NC0081850). By permit, the Winfall WTP is required to monitor whole effluent toxicity (WET) and is failing to meet its 90 percent acute toxicity target for effluent concentration. The facility discharges filter backwash or reverse osmosis (RO) reject water into Mill Creek. During the last two years of the assessment period, the facility also experienced significant noncompliance issues with total suspended solids (TSS) and settleable solids.

The Town of Winfall's WTP recently was expanded and upgraded, and TSS are likely to meet compliance, but toxicity violations may remain an issue.

EXHIBIT IV-C (continued)
PERQUIMANS COUNTY, NORTH CAROLINA
ISSUES AND RECOMMENDATIONS RELATIVE TO MILL CREEK, BETHEL
CREEK, AND PERQUIMANS RIVER

Bethel Creek

Current Status

Bethel Creek is currently not rated. Perquimans County exceeded its permit limits at its Water Treatment Plant (#1/Bethel) that discharges to Bethel Creek. The facility exceeded its permit limits by greater than 40 percent for total suspended solids over the course of two or more months during quarterly review periods in 1999.

2002 Recommendations

The Perquimans County Water Treatment Plant #1 has been under a Special Order of Consent and has constructed a treatment facility to treat the total suspended solids problem. DWQ will continue to monitor the treatment facility. According to the (September) 2007 update of the Pasquotank River Basinwide Water Quality Plan, Bethel Creek, from source to the Yeopim River (8.0 miles), is Not Rated on an evaluated basis in the aquatic life category due to significant noncompliance issues with permit limits at the Bethel Water Treatment Plant (WTP) (Permit NC0068861). By permit, the Bethel WTP is required to monitor whole effluent toxicity (WET) and is failing to meet its 90 percent acute toxicity target for effluent concentration. The facility discharges filter backwash or reverse osmosis (RO) reject water into Bethel Creek. The Bethel WTP is expanding, with the discharge being relocated to Albemarle Sound. The Town has been advised to seek state funds to assist with renovation of the WTP.

Perquimans River

Current Status

Perquimans River is currently not rated. The Town of Hertford has been experiencing some problems with their wastewater treatment plant. DWQ's Washington Regional Office has met with Hertford to discuss the current situation and to identify some solutions.

2002 Recommendations

DWQ will continue to provide technical assistance to the facilities to ensure that the facilities do not exceed their effluent permit limits. Because of the multiple number of facility violations in the subbasin, DWQ's Environmental Sciences Branch will determine whether or not a biological survey is appropriate. The updated (March 2007) basin plan indicates that the upper 24.2 miles of the Perquimans River will be considered Supporting, but 692.6 acres will be impaired due to low dissolved oxygen and low pH; there were exceedances of the chlorophyll a standard in 8.7% of the samples. A benthic macroinvertebrate sample was collected in the Perquimans River that resulted in a Not Rated bioclassification because the criteria are not yet finalized; however, the draft criteria indicate the benthic sample could be given a Fair bioclassification. A fair bioclassification would result in an impaired status for the benthic community.

SOURCE: Pasquotank River 2002 Basinwide Water Quality Plan, pages 97-98.

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.

According to the 2002 Pasquotank River Basin wide 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 shell fishing harvesting and close only after heavy rainfall events such as hurricanes. As of 2001, there was 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 coli form bacteria levels above the state standard. As noted above, the sources of fecal coli form 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.

Areas prohibited for shell fishing in and near Perquimans County are:

Little River and Flatty Creek: All those water upstream of a line drawn beginning at a point 36 degrees 06.3897' N -76 degrees 11.6187' W on the west shore of Little River near Stevenson Point; running northeasterly across the river to a point 36 degrees 08.3390' N -76 degrees 05.3432' W on the east shore of Flatty Creek;

Albemarle Sound: All those waters upstream of a straight line across the sound beginning at a point 36 degrees 01.3650' N -76 degrees 27.8747' W on the north shore; running southeasterly to a point 35 degrees 58.6609' N -76 degrees 25.4358' W on the

south shore; Perquimans River: All those waters in Perquimans River upstream of a line drawn beginning at a point 36 degrees 05.9659' N -76 degrees 18.1759' W on the west shore near Harvey Point; running easterly across the river to the south shore of Muddy Creek at a point 36 degrees 06.4077' N -76 degrees 15.7330' W on the east shore; and, Yeopim River: All those waters upstream of a straight line beginning at a point 36 degrees 04.0760' N -76 degrees 24.5263' W on the west shore; running northeasterly across the river to a point 36 degrees 05.1346' N -76 degrees 22.2794' W on the east shore.

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 have been recaptured in Georges Bank, Canada (DMF, 1993). Striped bass are important both recreationally and commercially, in the Albemarle Sound area and throughout the species range. The population of striped bass in the Albemarle Sound area, once very low levels, have been declared recovered since 1997. Approximately 75% of the total recreational and commercial landings from the internal waters of NC occur in the Albemarle area.

The Sensitive Habitats Map for Perquimans County produced by the DCM (dated September 19, 1997 and cited in the 1998 Perquimans County Land Use Plan), reflects several areas of the County with anadromous fish spawning areas. These areas are identified as important fisheries habitats (spawning and nursery areas), and are especially sensitive to activities within them and changes in surrounding water quality. Anadromous fish are saltwater fish that spawn in fresh waters. It is important to note that

not only the spawning areas are important, but the areas and river stretches between open water and these spawning areas are also important to these species, since they must pass through them to get to their spawning grounds.

The spawning areas are located along both sides of the Little River northwest of the Southern Shores development. They are also found along both sides of the Perquimans River from west of the Perquimans Commerce Center site to the upper reaches of the Perquimans River and along both sides of the Yeopim River and the large tributary north of Snug Harbor. A small area is also located along Sutton Creek on the north side of the Perquimans River.

d. Chronic Wastewater Treatment System Malfunctions

Albemarle Regional Health Services was 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 identified Holiday Island, Snug Harbor, Bethel Fishing Center, and other, smaller developments southeast of US 17 and along Albemarle Sounds and rivers in the County as areas experiencing septic system problems. Given the soils in the County (predominantly marine sediment clay), conventional septic systems can, and often are problematic. Sand liner trench systems are normally used. Drip irrigation systems have been tried on some system repair jobs.

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 Services for more intensive problem solving with respect to septic system installation or repair.

The updated (March 2007) basin plan indicates that the Bethel WTP had three whole effluent toxicity (WET) failures during the data assessment window and two exceedances of the Settable Solids permit limits; resulting in Bethel Creek receiving a Not rated status rather than a Supporting status.

Also, the Winfall WTP had three whole effluent toxicity (WET) failures during the data assessment window and two exceedances of the Settable Solids permit limits; resulting in Mill Creek receiving a Not rated status rather than a Supporting status.

e. Public Health Hazards

There are no public airports or tank farms located in Perquimans County. There is one private, grass landing strip in the belvedere area, an airstrip on the Harvey Point Defense facility, and two emergency medical helicopter landing pads in the Durant's Neck/New Hope area.

EPA regulations require facilities with chemicals on the EPA's list of Extremely Hazardous Substances present in a quantity equal to or in excess of their established Threshold Planning Quantity or a 500 pound threshold (whichever number is less), as

well as any hazardous chemical present on site in a quantity equal to or greater than 10,000 pounds to be included on an annual Tier II. This report must be submitted by March 1, of each year to the North Carolina Emergency Response Commission, the Local Emergency Planning Committee, and the local fire department with jurisdiction over the reporting facility. Facilities in Perquimans County completing Tier II reports in 2005 include: Crossroads Fuel Service (Hertford); Harvey Point Defense Testing (southeast Perquimans County); Southern States (Hertford); Trade Mart #34 (Hertford); Reed Oil (Hertford); Sprint (Hertford); Western gas (Hertford); and, Amerigas (Hertford)..

2. Natural Hazards

a. Storm Hazards and Floods and Wind Damage Estimates

Property damage in Perquimans 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.

Since 1966, fourteen flood events have been reported in Perquimans County. The National Climatic Data Center also reported two other heavy rain events in Hertford in January and February, 1998, although no flooding was reported with these events. Tropical Storm/Hurricane Dennis I and II and Hurricane Floyd caused flooding resulting in property damage and loss in eastern North Carolina and in Perquimans County.

From 1996 to 2004, nine hurricanes or tropical storms impacted Perquimans County. The amount of damages associated with some of the hurricanes and tropical storms that affected Perquimans County emphasizes the economic and life style impacts of hurricanes and coastal storms.

In 1985, Hurricane Gloria caused \$10,000 in mobile home damages. In 1996, Hurricane Bertha caused shingle and roof damage totaling \$200,000 in structural damage and \$1,000,000 in crop damages. Hurricane Fran in 1996 resulted in \$1,000,000 in property damages. A tropical storm in October 1996 caused \$100,000 in damages. Hurricane Bonnie in 1998 caused \$13,400,000 in damages and resulted in one fatality. Hurricane Dennis in 1999 caused \$35,000 in crop damages and Hurricane Floyd (two weeks after Hurricane Dennis) caused property damage estimated at \$1,000,000 as well as \$3,400,000 in crop damage. The most substantial damages occurred in 2003 when Hurricane Isabel caused \$10,000,000 in property damage, \$38,000,000 in timber damage, and \$12,000,000 in crop damage. In 2004, Hurricane Bonnie and Hurricane Charley caused estimated crop damage of well over \$1,100,000.

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 Perquimans County.

As it developed this land use plan, the County contacted the Natural Resources 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 NCDENR. The program inventories, catalogues, and facilitates protection of the rarest and most outstanding elements of natural diversity of the State. Elements of natural diversity include plants and animals which are so rare that they merit special consideration in local land use decisions.

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 list 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 NC Department of Agriculture and Consumer Services and the Nongame and Endangered Wildlife Program of the NC Wildlife Resources Commission.

Several protected species live in the Pasquotank River Basin, including fish, aquatic insects, mollusks, crustaceans, and plants. EXHIBIT IV-D on the following page 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-D
 PERQUIMANS 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.

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.

Natural Heritage Priority Areas with State significance are located adjacent to the Perquimans River in the Muddy Creek, Perquimans River watershed and northwest of the Wildlife Boat Access site. The largest site of State significance is located along a tributary leading into the Albemarle Sound and east of Holiday Island in the Bethel Creek, Yeopim Creek watershed. A site with regional significance is located north of Snug Harbor and west of Frank Creek in the Bethel Creek, Yeopim Creek watershed.

Current lists for the quadrangles that cover Perquimans County can be accessed at <http://www.ncsparks.net/nhp/search.html>. The quadrangles are: Hobbsville; Chaponoke; Center Hill; Hertford; Nixonton; Weeksville; Edenton; Yeopim River; Harvey Neck; and, Stevenson Point.

Lists for each of these quadrangles can be accessed. A variety of birds, reptiles, fish, vascular plants, natural communities and special habitats are listed. As of June, 2005, the list for Perquimans County includes: two (2) mammals; one (1) reptile; six (6) vascular plants; four (4) natural community elements; and one (1) special habitat. The potential for development in many areas of Perquimans County, particularly areas in and adjacent to natural resource and heritage areas, is extremely limited due wetlands and protected areas.

b. Mineral Resource Areas and Productive Soils

Based on the Prime Farmland Map prepared by the Division of Coastal Management dated September 29, 1997, Perquimans County has prime farmland throughout the County, with concentrations in the northern portion of the Perquimans River and Muddy Creek, Perquimans River watersheds. Goodwin Mill Creek watershed on the western edge of the County also contains substantial areas of prime farmland. The southern portion of Burnt Mill Creek watershed and areas adjacent to Frank Creek in the Bethel Creek, Yeopim Creek watershed contain smaller areas of prime farmland.

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

There are no known publicly owned forest areas in Perquimans County and there are no State park sites in Perquimans County. There are two CAMA access areas located on the Perquimans River in Hertford and one in Winfall.

Perquimans County does not contain any game lands. There is one Wildlife Commission Boating Access Area 1.2 miles off of SR 1319 (Boat Ramp Road) and the County has offered an access site to the Wildlife Commission in the Commerce Park..

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 five (5) permitted mining operations in Perquimans County. The Division reports that as of June, 2005, there are no pending new permits, but one permit modification is pending.

C. 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 Perquimans 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?

The potential for development in many areas of Perquimans County, particularly areas in and adjacent to natural resource area and natural hazard areas (areas of poor soils, wetlands and protected areas, and publicly held lands) should be carefully examined during the development review process, limited, if necessary, and predicated on appropriate mitigation measures as applicable and appropriate. The County should include environmental conditions as they proactively plan for inevitable development, rather than relying on these environmental constraints to slow down development.

EXHIBIT IV-E 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-E
 PERQUIMANS COUNTY, NORTH CAROLINA
 INTERPRETATION OF NATURAL FEATURES
 DEVELOPMENT COMPATIBILITY**

NATURAL FEATURES	COMPATIBILITY FOR 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)	(2)
COASTAL WETLANDS	(2)
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

D. Environmental Conditions Composite

Based on the County’s interpretation of the capabilities and limitations of identified natural features, land in Perquimans 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-F 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-F
 PERQUIMANS 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.

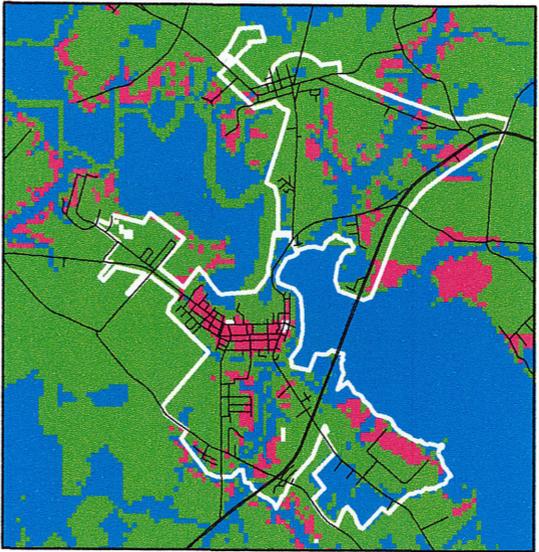
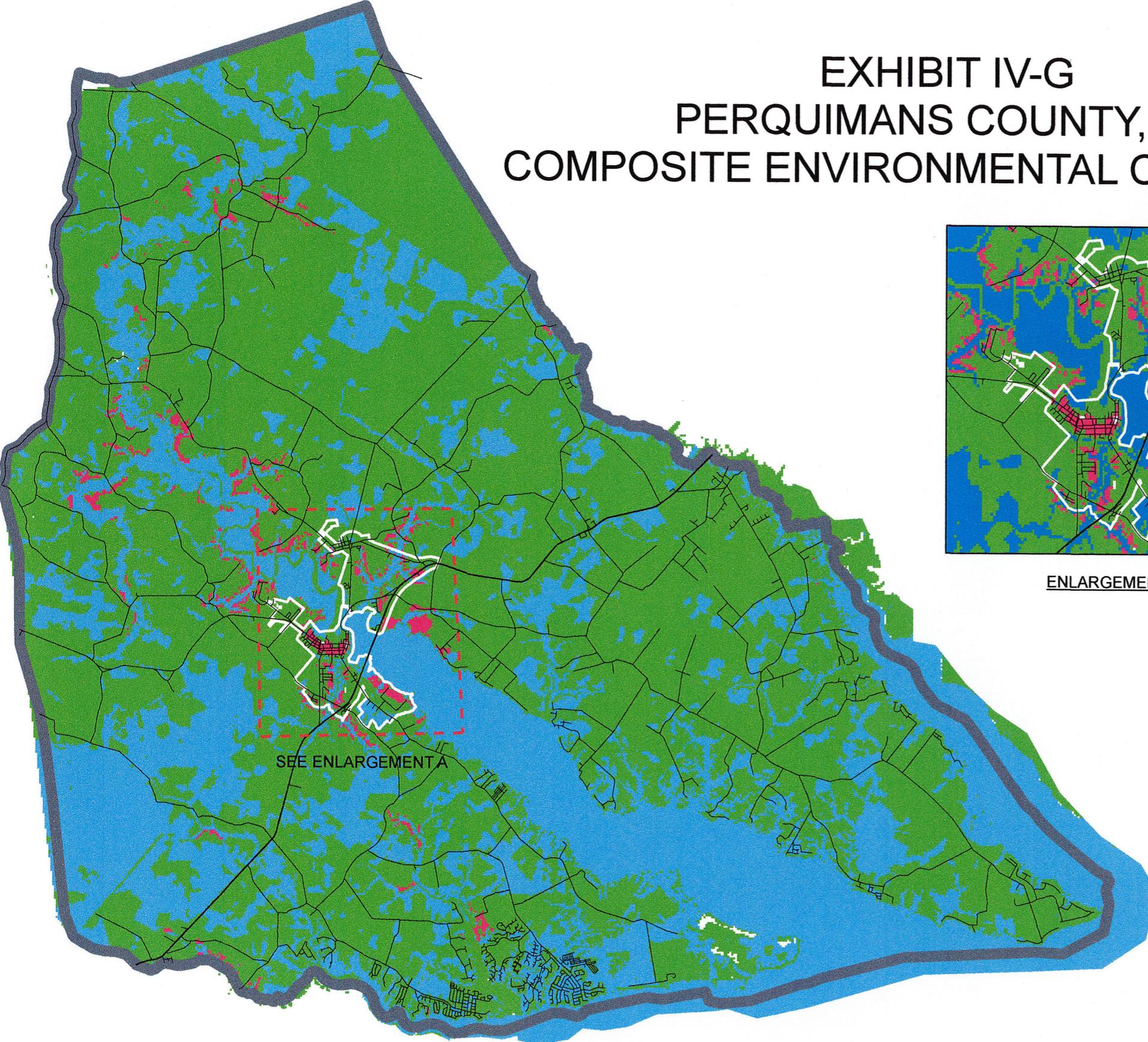
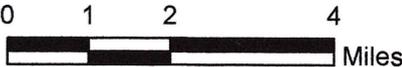
EXHIBIT IV-G on the following page is a composite map showing Class I, Class II, and Class III lands based on the composite natural features analysis. The map was produced from electronic files supplied by the North Carolina Division of Coastal Management in 2010.

Based on the analysis, a limited amount of 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 more 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 Perquimans County, as reported in the Soil Study of Chowan and Perquimans Counties, North Carolina, are rated 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.

EXHIBIT IV-G PERQUIMANS COUNTY, NC COMPOSITE ENVIRONMENTAL CONDITIONS



ENLARGEMENT A

Legend

- Roads
- County Outline

Environment Composite

- Class I
- Class II
- Class III

SOURCE: North Carolina Division of Coastal Management 2012

The preparation of this map 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 Resources Management, National Oceanic and Atmospheric Administration.

Chapter V: Land Use and Development

The analysis of land use and development provides the County with a snapshot 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

Perquimans County remains rural in nature, possessing vast natural areas, wetlands, and flood plains. The towns of Hertford and Winfall are commerce centers, while there are less developed, village center or crossroads communities such as Belvidere, Bethel, and Durants Neck in the County that serve as places of limited 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 and zoning ordinances. Residential subdivision development 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 Hertford and Winfall and along U.S. 17, but several businesses are found along outlying State roads and at intersections. The developing Commerce Center will be a focal point for commercial and service type development. Generally speaking, industrial development in the County is associated with agricultural pursuits. A number of confined animal feeding operations are found in the County. There are no water dependent industrial land uses within Hertford, Winfall, or the unincorporated parts of Perquimans County. In 2006, the County amended its subdivision ordinance to limit the number of road frontage lots allowed to be subdivided from a given parcel.

Residential development within Hertford consists of single-family homes located along existing roadways and in areas of neighborhood type development. Concentrations of commercial development are located in the downtown area and along US 17 Bypass, Church Street and Harvey Point Road (SR 1336). Perquimans County owns approximately 400 acres within the Town on Harvey Point Road which is being developed as a commercial park. Notable areas with concentrations of mobile/manufactured homes are on Don Juan Road (SR 1109) and Wynne Fork Road (SR 1338). Hertford provides water, wastewater, and electric services for the Town.

The majority of development within Winfall consists of single-family residential dwellings along existing roadways and waterfront property. This includes two small subdivisions, less than 20 lots each, referred to as Rivercroft Subdivision (Croft Street and River Drive) and Windemere Shores Subdivision (Windemere Drive). Two mobile/manufactured home parks exist within the Town and are concentrated on Howell Street and at Hollowell Drive and Hollowell Lane.

Commercial/industrial development exists along Main Street (U.S. Post Office and Perquimans County Middle School); River Street; Winfall Boulevard (NC-37) (Oil Company, small retail mall, Perquimans County Central School, a gas station/grocery store and the Town's water plant wells (7) and water tower); Creek Drive (NC Business 17) (Albemarle Electric Membership Corporation, vehicle repair facility, marina, and restaurant/gas station); Jessup Street (State Youth Detention Center); (Wiggins Road, N-37) Cotton Gin Road (Cotton Gin); Ocean Highway (US 17) oil company and used car sales; and Wiggins Road (NC 37) (Fire Department and Perquimans County Recreational Area).

The Town Municipal Building and Town Park are located on Parkview Lane. Most commercial development is mixed with residential development. One major subdivision, approximately 90 homes, is presently in the development process. The subdivision, located off Major Street and adjacent to the Town Municipal Building and Town Park, will have both single-family dwellings and townhomes. A smaller subdivision of townhomes could be approved and would be accessed off Winfall Boulevard.

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 as applicable to Perquimans County, Hertford, and Winfall, and provides examples of activities normally associated with each.

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

Existing Land Use Category	Examples of Activities Included
Residential	Site-built single-family structures, duplexes, and single-owner mobile/manufactured homes in platted subdivisions or established neighborhoods
Multi-family residential*	Apartment buildings
Residential agricultural	Undeveloped parcels, tracts, or lots in primarily agricultural areas, lands devoted to agriculture, forests, vacant/idle land, and site-built single-family structures and mobile/manufactured homes on individual parcels, tracts, or lots within, adjacent to, or surrounded by agricultural or forested areas
Mobile/manufactured home parks	Mobile/manufactured homes in parks designed for such housing units
Manufacturing**	Manufacturing plants, manufacturing support/processing
Commercial	General and specialty retail, convenience stores, personal and professional services, offices, lumber yards, and mixed uses
Public/semi-public/religious/office & institutional	Public buildings and sites (including State- and Federal-owned), schools, churches
Conservation easement***	Tracts held as legally designated conservation easements
Rights of way and easements	Transportation and utility systems' rights of way and easements

*This category applies to Hertford and Winfall.

**This category does not apply to Winfall.

***This category applies to the unincorporated portions of Perquimans County and the Hertford planning jurisdiction, and includes dedicated open space.

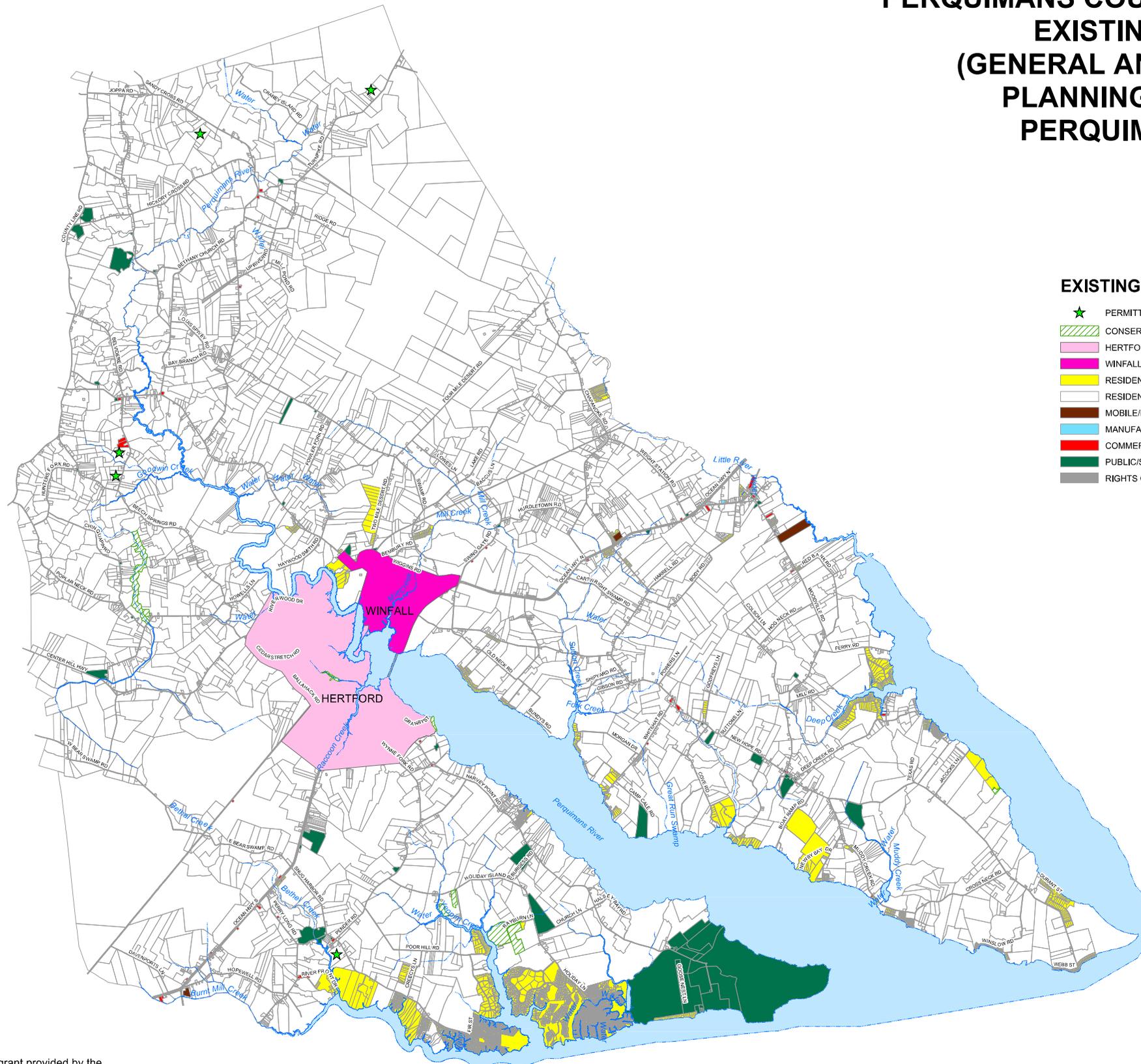
EXHIBIT V-B on page V-4 shows the general and predominant locations of applicable land uses in the Perquimans County planning jurisdiction. Rights of way and easements are shown, as are the locations of confined animal feeding operations which are denoted by a star symbol. The incorporated areas of Hertford (including the Hertford ETJ and Winfall) are highlighted. While there may be areas or parcels within some residential developments that have not been built upon and left for common use as open or community space, only a few parcels have been legally set aside as conservation easements in Perquimans County and in the Hertford planning jurisdiction. These areas are denoted on the respective jurisdictions' existing and projected future land use maps.

EXHIBIT V-C on page V-5 and EXHIBIT V-D on page V-6 show the applicable land uses in the Hertford planning jurisdiction and Winfall respectively, as well as the locations of rights of way and easements.



6,000 3,000 0 6,000 12,000 18,000
 Feet

EXHIBIT V-B PERQUIMANS COUNTY, NORTH CAROLINA EXISTING LAND USE (GENERAL AND PREDOMINANT) PLANNING JURISDICTION PERQUIMANS COUNTY

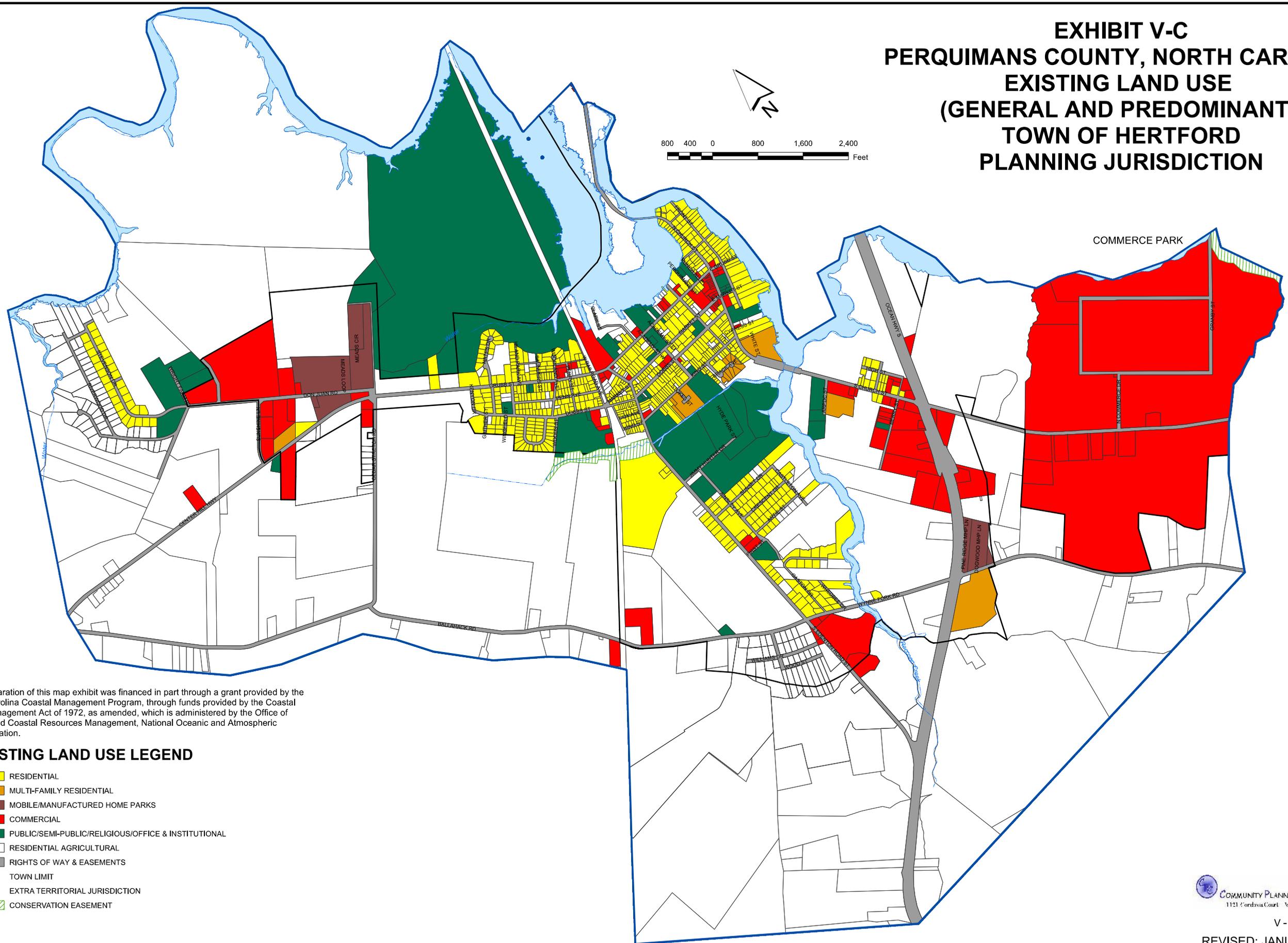


EXISTING LAND USE LEGEND

- PERMITTED (ACTIVE) ANIMAL FEED LOTS
- CONSERVATION EASEMENT
- HERTFORD ETJ
- WINFALL
- RESIDENTIAL
- RESIDENTIAL AGRICULTURAL
- MOBILE/MANUFACTURED HOME PARKS
- MANUFACTURING
- COMMERCIAL
- PUBLIC/SEMI-PUBLIC/RELIGIOUS/OFFICE & INSTITUTIONAL
- RIGHTS OF WAY & EASEMENTS

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EXHIBIT V-C PERQUIMANS COUNTY, NORTH CAROLINA EXISTING LAND USE (GENERAL AND PREDOMINANT) TOWN OF HERTFORD PLANNING JURISDICTION



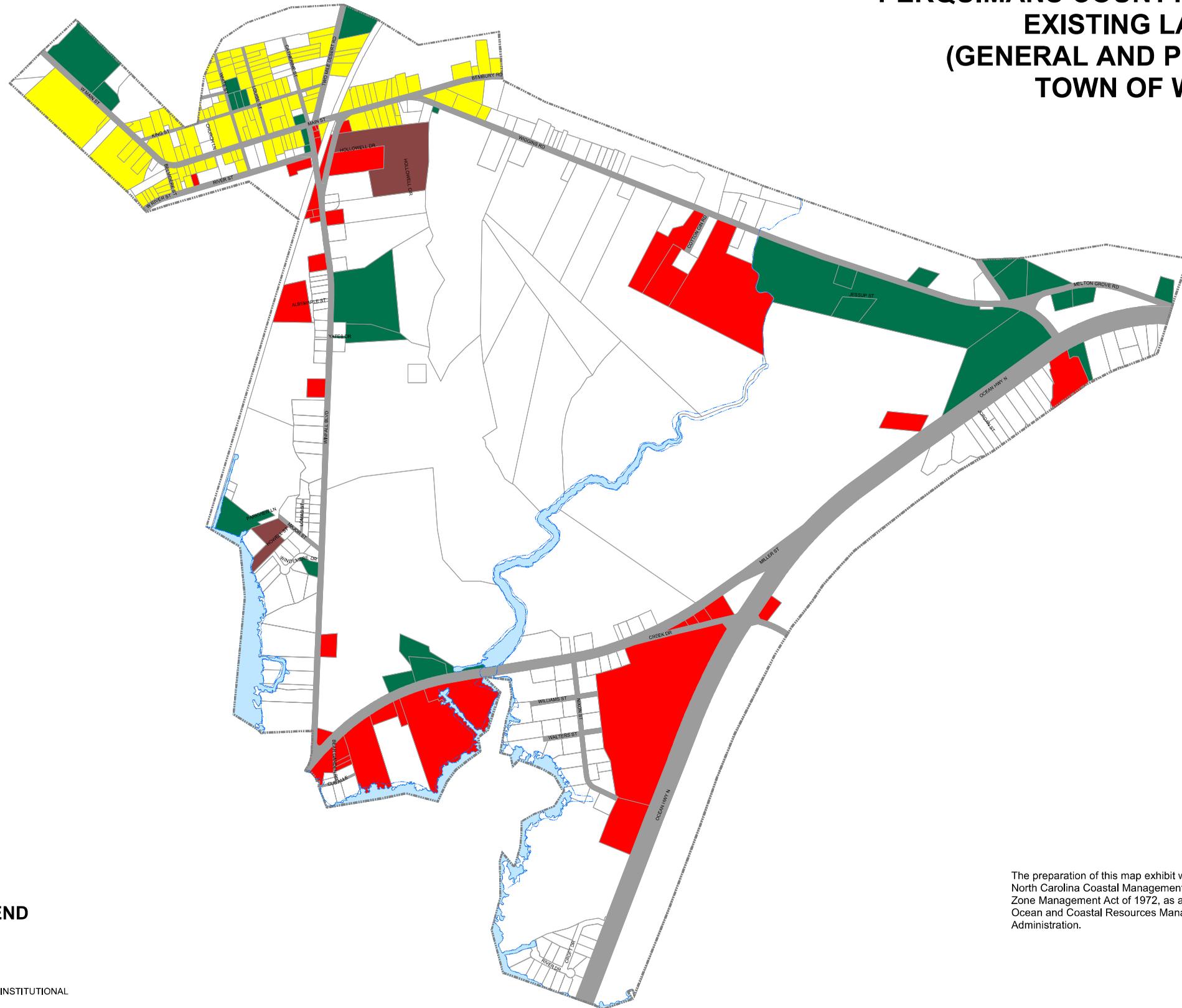
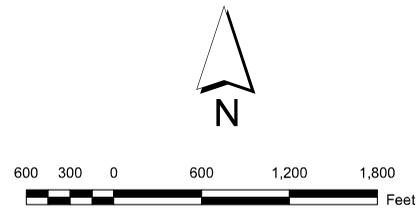
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EXISTING LAND USE LEGEND

- RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- MOBILE/MANUFACTURED HOME PARKS
- COMMERCIAL
- PUBLIC/SEMI-PUBLIC/RELIGIOUS/OFFICE & INSTITUTIONAL
- RESIDENTIAL AGRICULTURAL
- RIGHTS OF WAY & EASEMENTS
- TOWN LIMIT
- EXTRA TERRITORIAL JURISDICTION
- CONSERVATION EASEMENT

Printing Date: June 1, 2013
 File: \\server\lmp\Projects\2016 PROJECTS\06-006-01 Perquimans County Future Zoning Maps\GIS\reviewed_may-1-2013_COMP-PLAN\ELLU-HERTFORD.mxd

EXHIBIT V-D PERQUIMANS COUNTY, NORTH CAROLINA EXISTING LAND USE (GENERAL AND PREDOMINANT) TOWN OF WINFALL



EXISTING LAND USE LEGEND

- RESIDENTIAL
- MOBILE/MANUFACTURED HOME PARKS
- COMMERCIAL
- PUBLIC/SEMI-PUBLIC/RELIGIOUS/OFFICE & INSTITUTIONAL
- RESIDENTIAL AGRICULTURAL
- RIGHTS OF WAY & EASEMENTS

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2. Land Area Allocated to Each Land Use

EXHIBIT V-E tabulates the amount (acres) and percentage of land in the Perquimans County planning jurisdiction that is allocated to each land use category.

**EXHIBIT V-E
 PERQUIMANS COUNTY, NORTH CAROLINA
 EXISTING LAND USE TABULATIONS (ESTIMATED)
 PERQUIMANS COUNTY PLANNING JURISDICTION**

Land Use Category	Total Area in Category (Acres)	% of County Total
Residential	5,847	3.94%
Residential agricultural	135,422	91.18%
Mobile/manufactured home parks	89	0.06%
Manufacturing	3	*
Commercial	93	0.06%
Public/semi-public/religious/office & institutional	3,917	2.64%
Conservation easement(s)	365	0.25%
Rights of way and easements	2,789	1.88%
TOTAL	148,525	100%**

*Less than 0.01%.

**Rounded.

EXHIBIT V-F shows the amount and percentage of land in the Hertford planning jurisdiction (incorporated area and ETJ) allocated to each applicable land use category.

**EXHIBIT V-F
 PERQUIMANS COUNTY, NORTH CAROLINA
 EXISTING LAND USE TABULATIONS (ESTIMATED)
 TOWN OF HERTFORD PLANNING JURISDICTION**

Land Use Category	Total Area in Category (Acres)	% of Town Total
Residential	238	5.19%
Residential agricultural	3,097	67.56%
Multi-family residential	33	0.72%
Mobile/manufactured home parks	41	0.89%
Manufacturing	0	0
Commercial	542	11.82%
Public/semi-public/religious/office & institutional	400	8.73%
Conservation easement(s)	10	0.22%
Rights of way and easements	223	4.86%
TOTAL	4,584	100%*

*Rounded.

EXHIBIT V-G shows the amount and percentage of land in Winfall allocated to each applicable land use category.

**EXHIBIT V-G
 PERQUIMANS COUNTY, NORTH CAROLINA
 EXISTING LAND USE TABULATIONS (ESTIMATED)
 TOWN OF WINFALL**

Land Use Category	Total Area in Category (Acres)	% of Town Total
Residential	49	3.47%
Residential agricultural	1,025	72.59%
Mobile/manufactured home parks	14	0.99%
Commercial	115	8.14%
Public/semi-public/religious/office & institutional	99	7.01%
Rights of way and easements	110	7.79%
TOTAL	1,412	100%*

*Rounded.

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. Issues and recommendations relative to land use and water quality conflicts are also discussed in Chapter IV, B. Environmental Conditions Assessment, 1. Water Quality. Perquimans 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

As of October, 2007, there are five (5) active animal feed operations. Active animal feed operations in Perquimans County are shown on EXHIBIT V-B. According to NCDWQ, (as of July, 2005), there are eleven (11) inactive confined animal feeding operations in Perquimans County. At the time of this writing, the State database has not had acreage totals entered. Similarly, enforcement actions (if any) have not been entered into the database either. Animal feeding operations are closely monitored by the State and generally buffered from surrounding land uses.

The County carefully scrutinizes proposed developments in or near agricultural areas and enforces its floodplain ordinance with respect to development in flood hazard areas. The County relies on Albemarle Regional Health Services to site and review septic tank and drain field system installation. Soil conditions in many parts of Perquimans County preclude development on small lots, although there are some small lots on record which were platted before the County adopted a subdivision ordinance. No conflicts have been reported with respect to residential development in and adjacent to land traditionally used for public access and there are no auto salvage operations known to be located in flood hazard areas. There are no areas identified as blighted in the County or its towns.

The County has not received any complaints concerning the Harvey Point Defense Facility. The Harvey Point Defense Facility has purchased additional land, essentially increasing its buffer from surrounding land uses.

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 environmental conditions composite map discussed in Chapter IV to examine potential development conflicts with Class II and Class III lands as the future land use map was prepared for this land use plan update. There are no significant conflicts with the environmental conditions composite map. Perquimans County envisions the majority of residential development will continue to be in residential subdivisions, within Hertford and Winfall, and to a limited degree along State maintained roads. The County amended its subdivision ordinance in 2005 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.

The Perquimans County Planner's Office 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 Perquimans County Health Department and the USDA Agriculture Services Center and Natural Resources Conservation Service to keep apprised should land use-water quality conflicts be reported. Perquimans 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.

Prior to the County's Zoning Ordinance, the County's subdivision regulations established a minimum lot size of 43,000 square feet (if public water and/or sewer were not available) with driveway limitations along State maintained roads. The County's zoning ordinance, adopted in 2002, carried forward the 43,000 square foot minimum lot size, but allowed for a limited time a 25,000 square foot lot size in some cases. The platting and recording of parcels greater than ten (10) acres can be done pursuant to State law without regard to the County's subdivision regulations.

While the County's water system is capable and available to serve most all areas of the County, the poorness of soils in Perquimans County serves 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 which is not anticipated during the planning period, there may be areas of the County with soils that will not support septic tank and drain field systems may not be considered for development.

The County adopted a county-wide zoning ordinance for the unincorporated parts of Perquimans County in 2002 and amended its subdivision ordinance to set a minimum lot size of 43,000 square feet for lots without public sewer and a minimum lot size of 25,000 square feet for lots that had public sewer. Hertford allows a minimum lot size of 10,000 square feet for lots with sewer service in certain zones. Winfall allows a minimum of 12,000 square feet for lots with sewer service in certain zones.

During development of this land use plan update, the Perquimans County Economic Development Commission (EDC) met to discuss the amount of land currently devoted to commercial and business uses in the County and its towns, and the potential need for additional land devoted to such uses. The EDC discussed commercial and business land needs envisioned for the planning period (2005-2010) and beyond to 2030. The EDC agreed that there is adequate land available for commercial land uses when considering the land available in the Commerce Park, on the commercially zoned U.S. 17, and the commercially zoned property in Hertford and Winfall. Similarly, the Executive Director of the Chamber of Commerce was consulted and agreed with the Economic Development Commission's assessment.

C. Projections of Future Land Needs Based on Population Projections

Perquimans County should continue to experience population growth over the next three decades. Census 2010 recorded 13,453 people in the County. The County's permanent population is projected to grow to 13,725 people by 2015; to 13,962 by 2020, to 14,198 by 2025; and, to 14,439 by 2030. Thus, by 2030, the County's permanent population is projected to grow by about 1,000 people. The projected seasonal population in 2030 for the County could be as many as 866 additional people.

Hertford should also continue to experience population growth. Census 2010 recorded 2,143 people in Hertford. For Hertford, the projected 2015 permanent population is 2,186; for 2020, the projected population is 2,223; for 2025, the projected population is 2,261; and, for 2030, the projected population is 2,299. Thus, by 2030, Hertford's permanent population is projected to grow by about 156 people. The projected seasonal population in 2030 for Hertford could be about 138 people.

Winfall should also grow in population. Census 2010 recorded 594 people in Winfall. For Winfall, the projected 2015 permanent population is 606; for 2020, the projected population is 616; for 2025, the projected population is 626; and for 2030, the projected population is 637. Thus, by 2030, Winfall's permanent population is projected to grow by about 43 people. The projected seasonal population in 2030 for Winfall could be as many as 38 people.

With respect to the unincorporated area of Perquimans County, 2010 population data would indicate that there were 10,716 people in this area. The population in the unincorporated area of Perquimans County is projected to grow to 10,933 people by 2015; to 11,123 people by 2020; to 11,311 by 2025; and to 11,503 by 2030. Thus, by 2030, the permanent population in the unincorporated area of the County is projected to grow by almost 800 people. The project seasonal population in 2030 for the unincorporated area of Perquimans County could be nearly 690 people.

From 2010 through 2011, the County issued 73 building permits for site-built residential structures for an average of about 36 permits per year. Another 70 permits were issued for the same time period for manufactured homes for an average of about 35 permits per year. In addition, the County issued permits for 18 modular homes from 2010 through 2011, for an average of 9 per year. Taken together, the County has issued, on average, 80 permits per year for residential type development (site-built residential, manufactured homes, and/or modular homes). If residential construction trends continue at such an average until 2030, about 1,500 additional residential units could potentially be built or placed in Perquimans County and its towns.

As of this writing, the County's records and mapping systems indicate there are about 1,000 lots in subdivisions approved in the last 25 years that have not yet been built on. Lots in Albemarle Plantation represent most of these. The County maintains a layer in its geographic information system which includes information on subdivisions in the County.

The exhibits which follow provide short- and long-term projection scenarios of residential and other land use totals needed to accommodate projected future population totals. These totals were based on Census data, and State population projections and estimates of projected population for the unincorporated portions of Perquimans County (which includes the area encompassed by Hertford's ETJ since population figures are not specified for such locally designated planning areas by the U.S. Census Bureau), Hertford, and Winfall.

Given locally observed growth and development patterns and trends, and recorded (permitted) building activity occurring in the County, there is concern that utilizing long-term population projections prepared by the State, or trended from previous Census data and used, as in the following exhibits, to calculate projected land need for the County or its towns, may not accurately reflect the current and future growth and development in the County and perhaps its towns. Nor does it reflect the actions the localities have taken to position themselves to attract desired growth. Based upon building permit activity alone, the area has been experiencing growth since 2000.

The County and its towns have already zoned more area for residential and commercial uses than a population projection based methodology would call for. “Unzoning” properties, or not showing them on a projected future land use map as they are zoned to meet the not-to-exceed 50% above need threshold would not be practicable. Further, given that land use plans must be considered by law when development proposals are contemplated, areas wherein approved and/or by-right development may occur should be shown on instruments (i.e., future land use maps) used by governing bodies and the public as the review and approval (or denial) process progresses.

**EXHIBIT V-H
 PERQUIMANS COUNTY, NORTH CAROLINA
 PROJECTED RESIDENTIAL LAND NEEDS
 BASED ON POPULATION PROJECTIONS
 FOR THE UNINCORPORATED PORTIONS OF PERQUIMANS COUNTY**

Unincorporated Portions of Perquimans County	2010	2015	2020	2025	2030	2010- 2030
Projected Permanent Population	10,716	10,933	11,123	11,311	11,503	
Permanent Population Increase		217	190	188	192	787
Estimated Seasonal Population*	1,304	1,365	1,425	1,486	1,546	
Estimated Seasonal Population Change		61	60	61	60	242
Total Permanent and Seasonal Population Increase		278	250	249	252	1,029
Permanent Dwelling Unit Increase^		90	78	78	79	325
Seasonal Dwelling Unit Increase*		25	25	25	25	100
Total Dwelling Unit Increase^		115	103	103	104	425
Gross Residential Acres Per Person		1.0	1.0	1.0	1.0	
Additional Residential Acres Needed		278	250	249	252	1,029

^Based on 2.42 people per household.

*The 2010 Census reported 564 seasonal, recreational, or occasional use structures in Perquimans County. Subtracting those in Hertford and Winfall, leaves a total of 539 seasonal units in the unincorporated portions of Perquimans County. Based on 2.42 people per household, these units could accommodate about 1,300 people. The number of seasonal, recreational, or occasional use structures increased by about 100 units from 1990 to 2010. If an additional 100 units are added from 2010 to 2030, the estimated total number of seasonal, recreational, or occasional use structures (by 2030) could total 639 and accommodate a seasonal population of 1,546 people.

**EXHIBIT V-I
 PERQUIMANS COUNTY, NORTH CAROLINA
 PROJECTED RESIDENTIAL LAND NEEDS
 BASED ON POPULATION PROJECTIONS FOR THE
 TOWN OF HERTFORD**

Town of Hertford	2010	2015	2020	2025	2030	2000-2030
Projected Permanent Population	2,143	2,186	2,223	2,261	2,299	
Permanent Population Increase		43	37	38	38	156
Estimated Seasonal Population*	55	71	86	101	117	
Estimated Seasonal Population Change		16	15	15	16	62
Total Permanent and Seasonal Population Increase		59	52	53	54	218
Permanent Dwelling Unit Increase^		18	16	16	16	66
Seasonal Dwelling Unit Increase*		12	12	12	13	49
Total Dwelling Unit Increase^		30	28	28	29	115
Gross Residential Acres Per Person		0.5	0.5	0.5	0.5	
Additional Residential Acres Needed		30	26	26	27	109

^Based on 2.38 people per household.

*The 2010 Census reported 23 seasonal, recreational, or occasional use structures in Hertford. Based on 2.38 people per household, these units could accommodate 55 people. The number of seasonal, recreational, or occasional use structures increased by 13 units from 2000 to 2010. If 13 units are added each decade from 2010 until 2030 for a total of 26, the estimated total number of seasonal, recreational, or occasional use structures (by 2030) could total 49 units and accommodate a seasonal population of 117 people.

**EXHIBIT V-J
 PERQUIMANS COUNTY, NORTH CAROLINA
 PROJECTED RESIDENTIAL LAND NEEDS
 BASED ON POPULATION PROJECTIONS FOR THE
 TOWN OF WINFALL**

Town of Winfall	2010	2015	2020	2025	2030	2000-2030
Projected Permanent Population	594	606	616	626	637	
Permanent Population Increase		12	10	10	11	43
Estimated Seasonal Population*	2	7	14	21	28	
Estimated Seasonal Population Change		5	7	7	7	26
Total Permanent and Seasonal Population Increase		17	17	17	18	69
Permanent Dwelling Unit Increase^		5	4	4	5	18
Seasonal Dwelling Unit Increase*		2	2	2	2	8
Total Dwelling Unit Increase^		7	6	6	7	26
Gross Residential Acres Per Person		0.5	0.5	0.5	0.5	
Additional Residential Acres Needed		9	9	9	9	36

^Based on 2.37 people per household.

*The 2010 Census reported 2 seasonal, recreational, or occasional use structures in Winfall. Based on 2.37 people per household, these units could accommodate 5 people. Assuming five (5) units are added each decade from 2010 until 2030 for a total of 10, the estimated total number of seasonal, recreational, or occasional use structures (by 2030) would total 12 units and accommodate a seasonal population of 28 people.

**EXHIBIT V-K
 PERQUIMANS COUNTY, NORTH CAROLINA
 PROJECTED NON-RESIDENTIAL LAND NEEDS
 BASED ON POPULATION PROJECTIONS FOR THE
 UNINCORPORATED PORTIONS OF PERQUIMANS COUNTY**

Unincorporated Portions of Perquimans County	2010	2015	2020	2025	2030	Projected additional acreage needed from 2010 to 2030
Population Projections	10,716	10,933	11,123	11,311	11,503	
Commercial Acres per Person (multiplier)	0.0489	0.0489	0.0489	0.0489	0.0489	
Projected Commercial Acres Needed	524	535	544	553	563	39
Industrial Acres per Person (multiplier)	0.0662	0.0662	0.0662	0.0662	0.0662	
Projected Industrial Acres Needed	709	724	736	749	768	59
Public/Semi-public/Religious/Office & Institutional Acres per Person (multiplier)	0.04	0.04	0.04	0.04	0.04	
Projected Public/Semi-public/Religious/Office & Institutional Acres Needed	428	437	445	452	460	32

NOTE: Projections of non-residential land use needs were based upon the proportional relationship of current land use acreage per capita (projected) population. This methodology and the multipliers used were patterned after methodology/multipliers used by Chowan County and the Town of Edenton in their CRC certified (July 23, 2008) CAMA Core Land Use Plan developed with assistance from The Wooten Company.

**EXHIBIT V-L
 PERQUIMANS COUNTY, NORTH CAROLINA
 PROJECTED NON-RESIDENTIAL LAND NEEDS
 BASED ON POPULATION PROJECTIONS FOR THE
 TOWN OF HERTFORD**

Town of Hertford	2010	2015	2020	2025	2030	Projected additional acreae needed from 2010 to 2030
Population Projections	2,143	2,186	2,223	2,261	2,299	
Commercial Acres per Person (multiplier)	0.0580	0.0580	0.0580	0.0580	0.0580	9
Projected Commercial Acres Needed	124	127	129	131	133	
Industrial Acres per Person (multiplier)	0.0345	0.0345	0.0345	0.0345	0.0345	6
Projected Industrial Acres Needed	73	75	77	78	79	
Public/Semi-public/Religious/ Office & Institutional Acres per Person (multiplier)	0.0191	0.0191	0.0191	0.0191	0.0191	3
Projected Public/Semi-public/ Religious/Office & Institutional Acres Needed	41	42	42	43	44	

NOTE: Projections of non-residential land use needs were based upon the proportional relationship of current land use acreage per capita (projected) population. This methodology and the multipliers used were patterned after methodology/multipliers used by Chowan County and the Town of Edenton in their CRC certified (July 23, 2008) CAMA Core Land Use Plan developed with assistance from The Wooten Company.

**EXHIBIT V-M
 PERQUIMANS COUNTY, NORTH CAROLINA
 PROJECTED NON-RESIDENTIAL LAND NEEDS
 BASED ON POPULATION PROJECTIONS FOR THE
 TOWN OF WINFALL**

Town of Winfall	2010	2015	2020	2025	2030	Projected additional acreaage needed from 2010 to 2030
Population Projections	594	606	616	626	637	
Commercial Acres per Person (multiplier)	0.0580	0.0580	0.0580	0.0580	0.0580	
Projected Commercial Acres Needed	34	35	36	36	37	3
Industrial Acres per Person (multiplier)	0.0345	0.0345	0.0345	0.0345	0.0345	
Projected Industrial Acres Needed	20	21	21	22	22	2
Public/Semi-public/Religious/ Office & Institutional Acres per Person (multiplier)	0.0191	0.0191	0.0191	0.0191	0.0191	
Projected Public/Semi-public/ Religious/Office & Institutional Acres Needed	11	12	12	12	12	1

NOTE: Projections of non-residential land use needs were based upon the proportional relationship of current land use acreage per capita (projected) population. This methodology and the multipliers used were patterned after methodology/multipliers used by Chowan County and the Town of Edenton in their CRC certified (July 23, 2008) CAMA Core Land Use Plan developed with assistance from The Wooten Company.

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.

Generally, services are deemed adequate to meet current normal needs and plans are in motion to address projected utilities’ needs with respect to water and wastewater. 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, law enforcement, emergency medical services, fire fighting services, solid waste, school system, library services, health services, senior services, business services, and county and town management. General locations of selected community facilities and the County’s transportation system are shown on EXHIBIT VI-J, EXHIBIT VI-K, and EXHIBIT VI-L at the end of this chapter.

A. Water Supply and Wastewater Treatment Systems

Local governments and other community water systems are required to prepare local water supply plan (LWSP) updates according to NC General Statutes 143-355(l). Draft plans were due in July 2003 and January 2004, based on water data from the year 2002. Plans are submitted to the NC Division of Water Resources (NCDWR) for review. NCDWR estimates that submitted plans will be complete by July 2005. Perquimans County, Hertford, and Winfall have all submitted plans which are under review at the time of this writing. Following NCDWR review, the plans will be available for review at <http://www.newater.org> and at the offices of the County and the towns.

Previously, the last LWSP submitted by Perquimans County and reviewed by NCDWR is dated April 3, 2003. LWSP for Hertford and Winfall for 1997 are available at the NCDWR website. These will be replaced on the web site with the 2004 LWSP when NCDWR review is complete.

Nearly all the unincorporated area of Perquimans County is served by the County water system. The Local Water Supply Plan (2002) for Perquimans County showed the County had eight wells, and served 3,906 residential customers and 94 commercial customers. The average daily use in 2002 was 0.726 million gallons per day. Water is processed at two County-owned plants (Bethel Plant and Winfall Plant) and served through an estimated 300 miles of distribution system lines. Peak demands are not expected to exceed demand and water treatment capacity. All wells draw water from the Yorktown aquifer.

Since 1998, the County has constructed a 300,000 gallon elevated water tank located near Albemarle Plantation. Water lines serving Albemarle Plantation are owned by the County. At the time of this writing (2005), the County was in the process of constructing a 300,000-gallon elevated water storage tank in the New Hope area. A water main was extended from Bethel water plant to the new elevated tank. The existing Bethel plant, which had a capacity of 200 gallons per minute (gpm), was replaced gpm plant. Two new 400 gpm wells were added to the Bethel plant. According to the updated (March 2007) draft Pasquotank River Basin-wide Water Quality Plan, the draft use support indicates that the Bethel WTP had three whole effluent toxicity (WET) failures during the data assessment window and two exceedances of the Settable Solids permit limits; resulting in Bethel Creek receiving a Not Rated status rather than a Supporting status. The Winfall plant, which is a newer plant, has a capacity of 500 gpm. Three new wells have been added to this plant. According to the updated (March 2007) draft Pasquotank River Basin-wide Water Quality Plan, the Winfall WTP has three whole effluent toxicity (WET) failures during the data assessment window and two exceedances of the Settable Solids permit limits; resulting in Mill Creek receiving a Not rated status rather than a Supporting status.

According to the 2002 Local Water Supply Plan for Perquimans County, the County's total water system capacity was 1.584 million gallons per day. The 2010 combine capacity of the Bethel and Winfall plants is now 1,590,000 gallons per day. EXHIBIT VI-A on page VI-5 is the Perquimans County water index map. EXHIBIT VI-B on page VI-6 is the County's sewer index map. APPENDIX 8 contains maps of the Albemarle Plantation wastewater system.

In 2012, Perquimans County negotiated an agreement to purchase as much as 150,000 gallons of water per day from Pasquotank County, which will supplement and enhance Perquimans County's water supply and help to alleviate water quality issues.

According to its most recent Local Water Supply Plan, Hertford's water system served more than 800 residential customers and about 150 commercial customers. The system uses water from two wells. Hertford has an approved well Head Protection Plan (PWSID#472010) on file with the Division of Environmental Health, Public Water Supply Section.

Water is processed at the Hertford Water Treatment Plant and served through 30 miles of distribution system lines throughout the Town. To meet and exceed anticipated demand, the system has been upgraded (Spring, 2010). Hertford's total water system capacity is 0.400 million gallons per day according to the 2002 Local Water Supply Plan for Hertford. EXHIBIT VI-C on page VI-7 shows the Hertford water system and sewer system.

Winfall's water system, serving 300 connections, has been taken over by the County at the time of this writing. The system uses water from two wells which is processed at the Winfall Water Treatment Plant and served through 11 miles of distribution system lines throughout the Town. To meet and exceed anticipated demand, the system can bring an emergency well on-line. EXHIBIT VI-D on page VI-8 shows the Winfall water system and sewer system.

The North Carolina Division of Environmental Health, Public Water Supply (PWS) Section is responsible for implementing the Source Water Assessment Program (SWAP) and completing assessments for all public drinking water supplies in the state. The 1996 amendments to the Safe Drinking Water Act provided federal support and required states to conduct assessments of all public water systems. A source water assessment is a qualitative evaluation of the potential of a drinking water source to become contaminated by the identified potential contaminant sources (PCS) within the delineated area.

In North Carolina, there are approximately 10,000 public water supply sources that were assessed by the state. The PWS Section has gathered information for each water supply and developed a process for completing the assessments. SWAPs have been prepared for Perquimans County, Hertford, and Winfall, as well as Holiday Island and the Harvey Point Defense Activity Facility site. These reports may be viewed on the Public Water Supply Section website at <http://204.211.89.20/Swap/pages/swap.htm>. Excerpts from the above referenced plan are on file in the Perquimans County Manager's Office.

Wastewater in nearly all unincorporated portions of Perquimans County is handled primarily by individual septic tanks. Albemarle Plantation has its own waste water system, relying on spray (irrigation) system. As discussed in earlier sections of the Plan, much of the County's soil is unsuitable for septic tank use without modifications to the soil. Based on comments made during the public participation process, citizens of the County are concerned about protecting water quality and the estuarine waters of the County. County ordinances allow for the use of package treatment plans.

Hertford owns and operates a 0.400 million gallon per day municipal wastewater system which has been improved and upgraded. EXHIBIT VI-C shows the existing Hertford sewer system and infrastructure improvements. The system serves the corporate limits of Hertford.

Since 1998, Winfall completed construction of a new wastewater facility. Waste water is collected in the Town's system and pumped to Hertford for treatment. Winfall had previously relied on septic tanks. All existing structures have been connected to the system and the existing tanks pumped, crushed, and filled with sand. All new construction must connect to the system.

The County relies on Diehl & Phillips, P.A., as its consulting engineer and employs a utilities staff. Hertford contracts with Green Engineering P.L.L.C., as its consulting engineer and employs a public works director. Winfall uses Wooten, Inc., as its consulting engineer and employs a public works director.

At the time of this writing, Perquimans County, Hertford, and Winfall continue to investigate regional solutions to water and wastewater issues. A regionalization study, funded through the NC Rural Center, was completed in 2007 by Wooten, Inc. APPENDIX 7 is an excerpt from the Wooten study which describes the systems operated by the County and its towns and provides demand projections. Many of the Wooten study recommended improvements to water and (towns') sewer systems have been completed or are being planned at the time of this writing. EXHIBIT IX-N and EXHIBIT IX-O (pages IX-71 and IX-72 in Chapter IX, Plan for the Future) shows the progress that has been made.

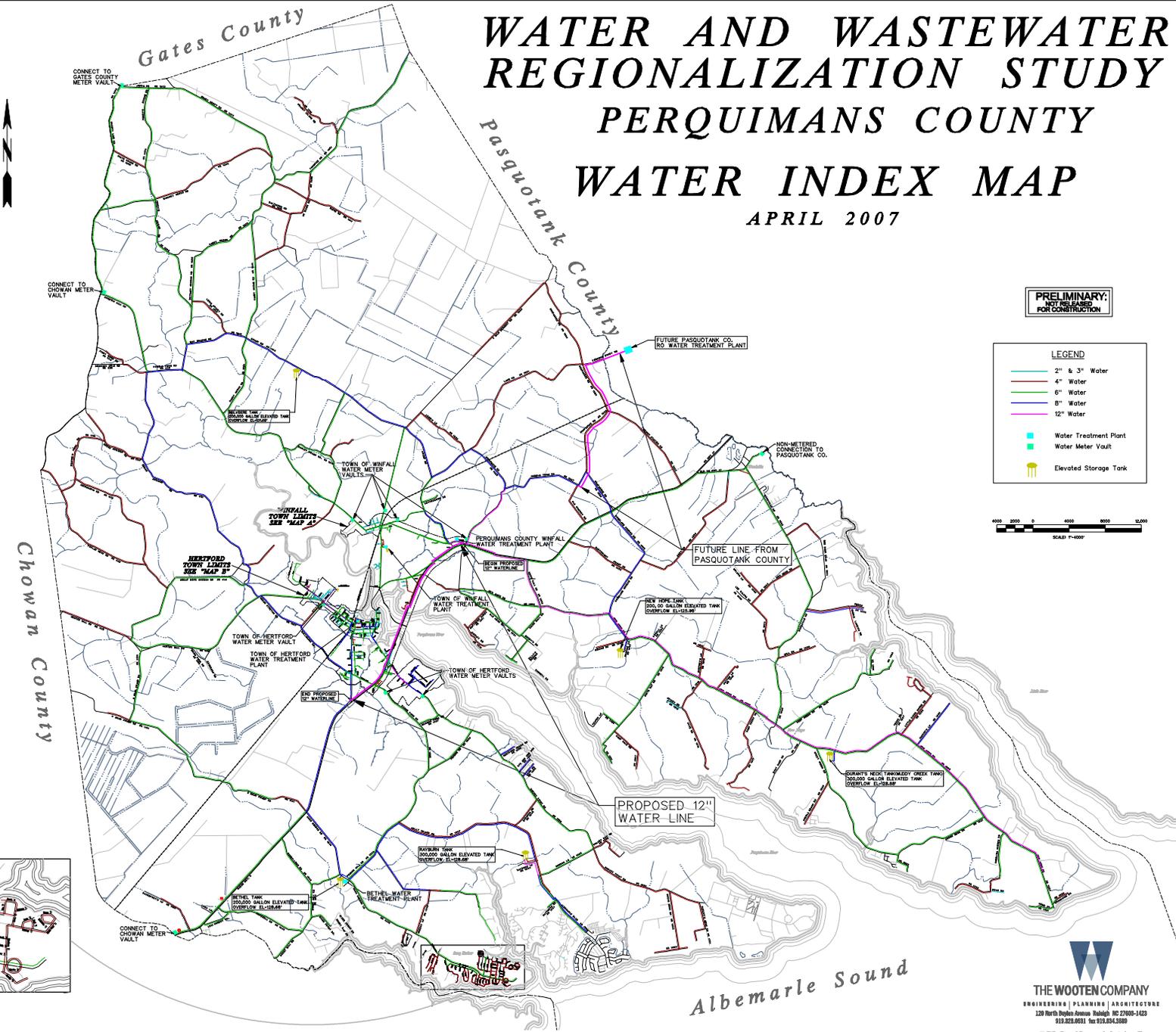
Currently, public water is, or could be made available to all parts of the County. The County does not have a sewer system. Sewer service is available in both Hertford and Winfall.

As previously stated, Perquimans and Pasquotank counties have entered into an agreement for Pasquotank County to provide bulk potable water to Perquimans County when the proposed Pasquotank County reverse osmosis plant comes on line. Pasquotank County has received a NPDES (discharge permit) for the facility. The facility became operational in 2012.

In addition, issues and recommendations relative to land use and water quality conflicts, as identified in the Pasquotank River 2002 Basinwide Water Quality Plan, are discussed in Chapter IV, B. Environmental Conditions Assessment. 1. Water Quality of this land use plan update.

WATER AND WASTEWATER REGIONALIZATION STUDY PERQUIMANS COUNTY WATER INDEX MAP

APRIL 2007



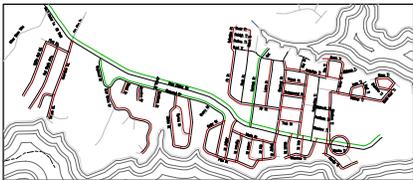
**PRELIMINARY;
NOT TO BE USED
FOR CONSTRUCTION**

LEGEND

- 2" & 3" Water
- 4" Water
- 6" Water
- 8" Water
- 12" Water
- Water Treatment Plant
- Water Meter Vault
- Elevated Storage Tank



Smug Harbor
SCALE 1"=400'



Albemarle Sound

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TWC No. 2952-B

WATER AND WASTEWATER REGIONALIZATION STUDY PERQUIMANS COUNTY SEWER INDEX MAP

APRIL 2007

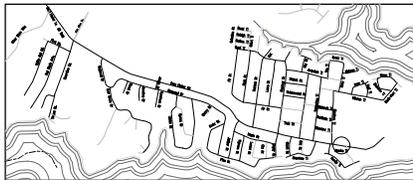


Gates County

Pasquotank County

Chowan County

Snug Harbor



PRELIMINARY:
NOT TO BE USED
FOR CONSTRUCTION

LEGEND

- 3" Force Main
- 4" Force Main
- 6" Force Main
- 10" Force Main
- 12" Force Main
- 6" Sanitary Sewer
- 8" Sanitary Sewer
- 10" Sanitary Sewer
- 12" Sanitary Sewer
- Exist. Pump Station
- Exist. Manhole



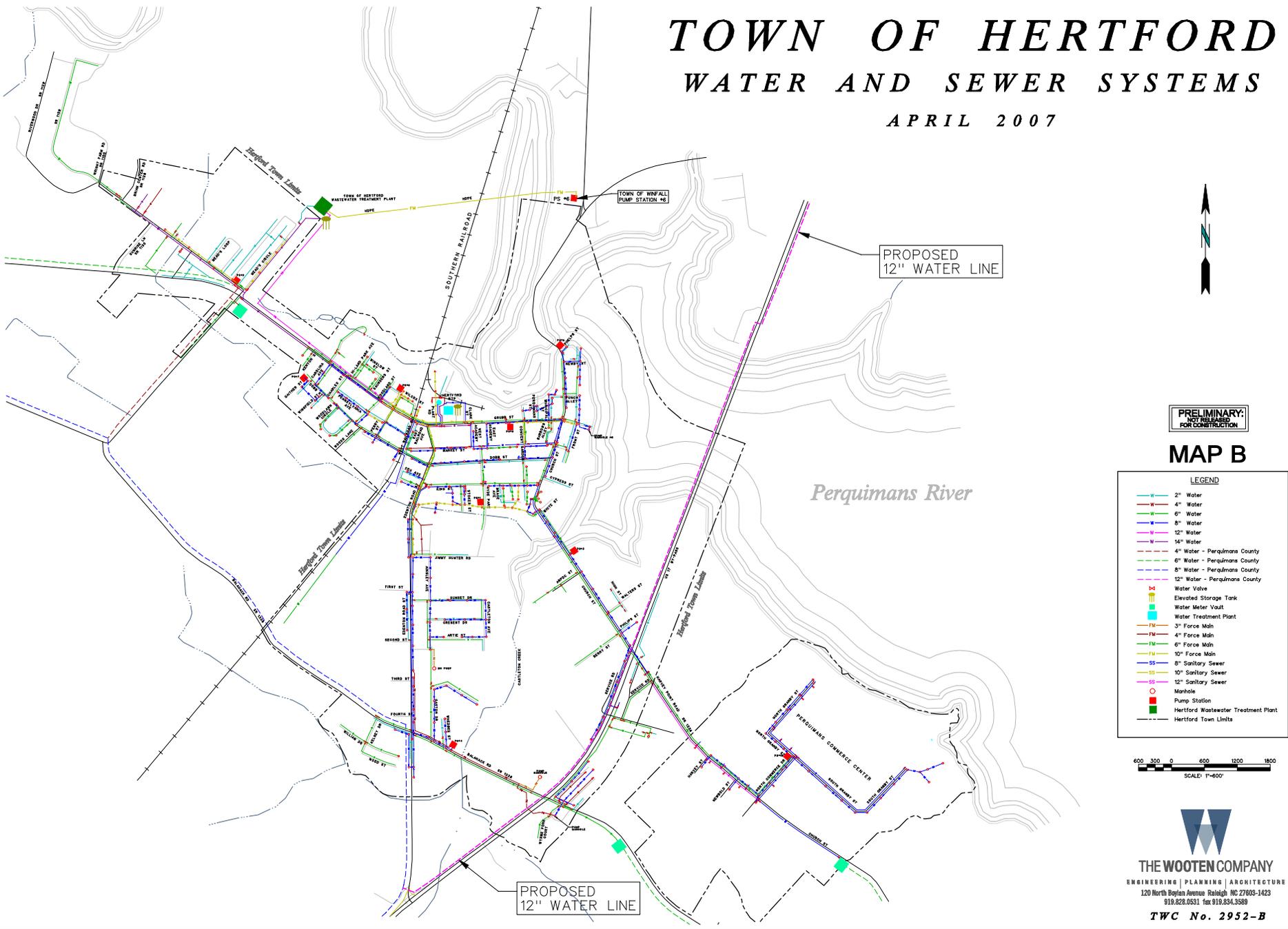
Albemarle Sound



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TWC No. 2952-B

TOWN OF HERTFORD WATER AND SEWER SYSTEMS

APRIL 2007



PRELIMINARY:
NOT BE USED
FOR CONSTRUCTION

MAP B

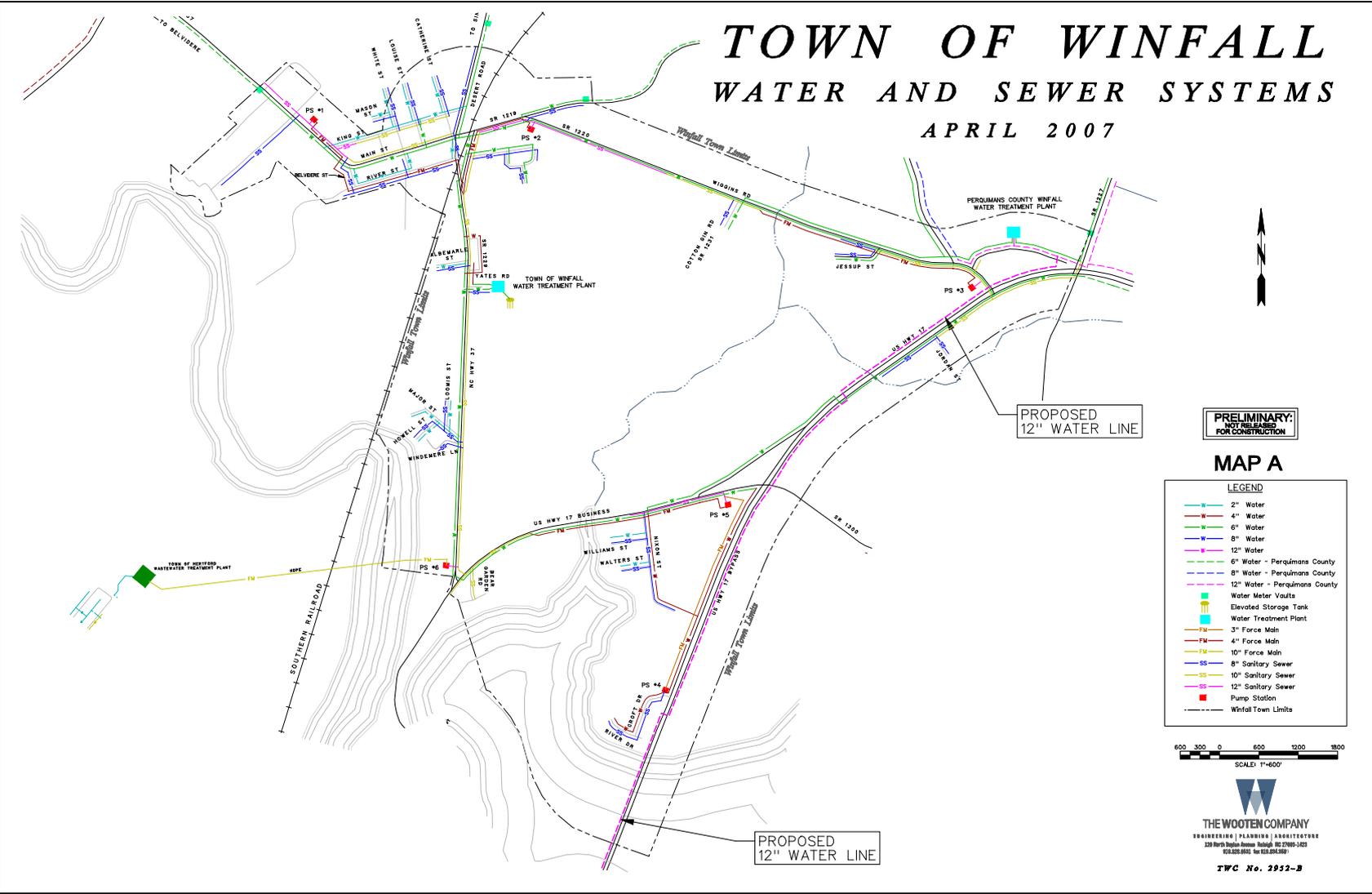
LEGEND

- 2" Water
- 4" Water
- 6" Water
- 8" Water
- 12" Water
- 14" Water
- 4" Water - Perquimans County
- 6" Water - Perquimans County
- 8" Water - Perquimans County
- 12" Water - Perquimans County
- Water Valve
- Elevated Storage Tank
- Water Meter Vault
- Water Treatment Plant
- 3" Force Main
- 4" Force Main
- 6" Force Main
- 10" Force Main
- 8" Sanitary Sewer
- 10" Sanitary Sewer
- 12" Sanitary Sewer
- Manhole
- Pump Station
- Hertford Wastewater Treatment Plant
- Hertford Town Limits



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TWC No. 2952-B

TOWN OF WINFALL WATER AND SEWER SYSTEMS APRIL 2007

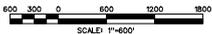


PRELIMINARY:
NOT MEANT
FOR CONSTRUCTION

MAP A

LEGEND

- 2" Water
- 4" Water
- 6" Water
- 8" Water
- 12" Water
- 6" Water - Perquimans County
- 8" Water - Perquimans County
- 12" Water - Perquimans County
- Water Meter Vaults
- Elevated Storage Tank
- Water Treatment Plant
- FM 3" Force Main
- FM 4" Force Main
- FM 10" Force Main
- SS 8" Sanitary Sewer
- SS 10" Sanitary Sewer
- SS 12" Sanitary Sewer
- Pump Station
- Winfall Town Limits



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TWC No. 2952-B

PROPOSED
12" WATER LINE

PROPOSED
12" WATER LINE

As the County (and towns) examine ways of dealing with wastewater issues, it will use its zoning ordinance and subdivision moratoriums to help direct and manage growth. Of particular concern are the large subdivisions located along the Albemarle Sound, Holiday Island and Snug Harbor. Both subdivisions currently use septic tanks.

Holiday Island subdivision, developed in 1969, contains 1300 single family lots and 669 Camping lots, each single-family lot being approximately 70' X 140' or 7,800 square feet and the camping approximately 40' X 70' or 2,800 square feet. Since its development, only 371 single family homes have been built and all use on site disposal systems (septic tanks). The campground has 189 developed lots and is served by a non-discharging system comprised of 4,000 gallons per day extended aeration package treatment plant and three wet land cells. Six comfort stations and 84 full time residents living on these small lots are served by the package treatment plant.

Holiday Island has a history of repeated septic tank failures on the single family lots. Only two septic tank permits have been issued in the past ten years and more than 60 have been turned down because of unsuitable soils and limited lot sizes. At least 5 repair permits are requested each year to correct septic system failures, but these often fail because of the small lots and the heavy mucky soils. Perquimans County and the residents of Holiday Island have explored different approaches to correcting the severe environmental problems plaguing this development, but the cost has always been prohibitive.

According to Albemarle Regional Health Services, since September 30, 2003, there has been 27 percolation tests (for septic tank and drain field system soils suitability) applied for by owners or prospective owners of lots in Snug Harbor. Twenty-six (26) have passed. Fourteen (14) of these actually received a permit since date of application. The other lots that passed but never were issued a permit were likely cases wherein the lot was being sold and a prospective owner applied for the test as a part of the transaction, or the cost of installing the system that would have been required was prohibitive so the permit to install was never sought.

B. Transportation System

The vast majority of roads and streets in Perquimans County are State maintained. EXHIBIT VI-E provides a summary of the County's transportation system's mileage. (The County's transportation system and the location of selected community facilities are shown on EXHIBIT VI-J, EXHIBIT VI-K, and EXHIBIT VI-L at the end of this chapter.)

U.S. 17 Bypass is four lanes which links Perquimans County to Williamston to the west and the Virginia line to the east and north. Many of the secondary roads in the County have been upgraded from dirt to paved roads in recent years, giving the County a road system that can meet its needs during the planning period. Perquimans Crossing is part of the North Carolina Scenic Byway system and runs along U. S. 17 Business through

Hertford. There is an effort underway in Perquimans County to develop a green ways/ blue ways (trail) system in and through the County and its towns.

The Causeway and S-bridge into Hertford is of tremendous historical value and serves as a major thoroughfare. The S-bridge spanning the Perquimans River is sound, but the roadway on/across the causeway is on pilings, some of which are failing. NCDOT patches the roadway regularly. Hertford, Winfall, and Perquimans County, in conjunction NCDOT have adopted a proposal to improve the causeway.

**EXHIBIT VI-E
 PERQUIMANS COUNTY, NORTH CAROLINA
 TRANSPORTATION SYSTEM SUMMARY**

SYSTEM TYPE	PAVED MILES	UNPAVED MILES	TOTAL MILES
STATE RURAL SECONDARY ROAD SYSTEM	256.65	17.92	274,57
STATE URBAN SYSTEM	24.62	-	24.62
STATE RURAL PRIMARY SYSTEM	16.52	-	16.52
TOTAL STATE HIGHWAY SYSTEM	297.79	17.92	315.71

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 Perquimans County.

The State's 2004-2010 Transportation Improvement Program (TIP) includes several projects in Perquimans County. EXHIBIT VI-F describes eleven (11) major projects programmed for Perquimans County by NCDOT for activity during the next several years (and planned operating assistance) to: meet work force 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) the 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.

Improvements to U.S. 17, particularly the U.S. 17 Bypass around Elizabeth City may serve increase awareness of opportunities in Perquimans County, making the County and its towns more appealing as a place to live for commuters who work in Elizabeth City or in Hampton Roads. Generally, more growth in the counties along U. S. 17 is considered likely. In Perquimans County, there were two rezoning applications approved in 2005 for residential uses in the Woodville area near U.S. 17. However, both rezoning applications were subsequently amended to significantly decrease the number of lots. No requests for rezoning lands for commercial uses have been made yet.

During summer 2005, the County was advised by NCDOT that the three proposed interchanges along U.S. 17 (with New Hope Road, Harvey Point Road, and Wynne Fork Road) will be dropped from the TIP.

**EXHIBIT VI-F
 PERQUIMANS COUNTY, NORTH CAROLINA
 TRANSPORTATION SYSTEM IMPROVEMENT PROJECTS (2005)**

TIP#	ROUTE #/ LOCATION	PROJECT DESCRIPTION
B-4225	SR 1220	Mill Creek. Replace bridge number 67.
B-4226	SR 1110	Bear Swamp Canal. Replace bridge number 62.
B-4227	SR 1222	Swamp. Replace bridge number 69.
B-4228	SR 1304	Sutton Creek. Replace bridge number 59.
B-4901	Various	Environmental mitigation for projects in NCDOT division 1 .
B-4923	U.S. 17 Business	Perquimans River. Replace bridge number 8.
E-4501	Hertford	Final phase: Streetscape on North Church Street, historic S bridge to Grubb Street.
E-4732	Hertford	Construct an 18 th Century periauger boat used to transport cargo on local rivers and streams in the 18 th century.
R-4458*	U.S. 17	Convert at-grade intersections at SR 1300 to an interchange.
R-4459*	U.S. 17	Convert at-grade intersections at SR 1336 and SR 1338 to interchanges.
R-4467	U.S. 17 Business	Hertford, Perquimans River Bridge to NC 37. Construct a new roadway on pilings or convert roadway to a bridge.

*To be dropped from the TIP as per NCDOT, summer 2005.

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

SOURCE: Draft 2004-2010 Transportation Improvement Program, NCDOT.

Highway related needs concerning Hertford include the intersections of U.S. 17 and Wynnfork Road and U.S. 17 and Church Street where a flyover or other not at grade improvements are desired. The primary transportation related need is the need to rebuild the U.S. 17 Business causeway at the S-bridge.

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 Perquimans County include areas long the Albemarle Sound, rivers and their tributaries. A multi-jurisdictional approach to storm water management is needed and storm water management issues should be studied and addressed jointly by NCDOT, Perquimans County, Hertford, and Winfall.

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 Perquimans County portions of the Pasquotank River basin, there are four (4) NPDES permit holders (all associated with County or towns' water treatment plants). 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. Perquimans County does not operate a municipal separate storm sewer system, nor does the County conduct construction projects. Significant coastal historic architectural resources are defined as districts, structures, buildings, sites or objects that have more than local significance to history or architecture. Such areas will be evaluated by the North Carolina Historical Commission in consultation with the Coastal Resources Commission (CRC).

Neither the unincorporated County nor the Towns of Winfall or Hertford have storm water systems, other than those provided with the transportation system.

D. Archaeological and Historic Areas and Sites

Significant coastal historic architectural resources are defined as districts, structures, buildings, sites or objects that have more than local significance to history or architecture. Such areas will be evaluated by the North Carolina Historical Commission in consultation with the Coastal Resources Commission (CRC).

Perquimans County has numerous historic structures, including the Newbold-White House, the oldest structure in North Carolina. Detailed information concerning structures on the National Register of Historic Places (NRHP)(or on the study list for such designation) can be obtained through the NC State Historic Preservation Office at <http://www.hpo.dcr.state.nc.us>. The County's website has a link to the NRHP as well. Sites and structures in Perquimans County on the National List (along with their respective general locations and date listed) include:

- Belvidere (Belvidere) 8/2/1977
- Belvidere Historic District (Belvidere) 6/4/1999
- Church of the Holy Trinity (Hertford) 6/11/1998
- Cove Grove (Parkville Township) 8/7/1974
- Fletcher-Skinner-Nixon House and Outbuildings (Hertford vicinity) 1/21/1994
- Hertford Historic District (Hertford) 10/22/1998
- General Jonathon Hill Jacocks House (New Hope vicinity) 4/1/1998
- Land's End (Leigh House) (New Hope)9/20/1973
- Mitchell-Ward House (Belvidere vicinity) 6/25/1999
- Myers-White House (Bethel Township) 1/20/1972
- Newbold-White House (Bethel Township) 6/24/1971
- Samuel Nixon House (Parkville Township) 10/15/1973
- Old Neck Historic District (Hertford vicinity) 9/6/1996
- Perquimans County Courthouse (Hertford) 5/10/1979
- Stockton (New Hope) 6/7/1974

- Sutton-Newby House (New Hope) 9/10/1974
- Isaac White House (Bethel vicinity) 3/23/1979
- Winfall Historic District (Winfall) 1/15/2003

While many sites are included on the National Register of Historic Places, many more are locally designated. EXHIBIT VI-G includes some of the locally designated or recognized sites in Perquimans County, Hertford, and Winfall.

EXHIBIT VI-G
PERQUIMANS COUNTY, NORTH CAROLINA
HISTORIC SITES

Perquimans County

- A. Mitchell-Ward House
- B. Piney Woods Friends Meeting House c. 1724
- C. Belvidere c. 1785 (Robert W. “Wolfman Jack” Smith’s grave site)
- D. Belvidere National Register Historic District
- E. Francis H. Nicholson House c. 1892
- F. Josiah Nicholson Jr. Store c. 1868 (Layden’s Store)
- G. Samuel Nixon House c. 1790
- H. Francis Nixon House c. 1815
- I. Old Neck National Register Historic District
- J. Riverside, William Jones House c. 1815
- K. Swamp Side, Fletcher-Skinner-Nixon House c. 1815
- L. Cove Grove, Benjamin S. Skinner House c. 1830
- M. Gabriel White House c. 1811
- N. Elizabeth Pointer Clayton House c. 1804
- O. New Hope United Methodist Church c. 1810
- P. Gen. Jonathan Hill Jacocks House c.1815
- Q. Layden-Reed House c. 1810
- R. Land’s End, Col. James Leigh House c. 1835
- S. Stockton, Josiah T. Granbery House c. 1840
(Boyhood home of Robert Welch, founder of the John Birch Society)
- T. John L. Blanchard House c. 1855
- U. Elmwood, Thomas Nixon House c. 1848
- V. Bethel Baptist Church c. 1837, Rev. Martin Ross Monument
- W. Richard Pratt House c. 1785, Beechtree Inn/Perquimans Village (Collection of 17 pre-Civil War cottages and out buildings)
- X. Isaac White House c. 1775
- Y. Edmund Blount Skinner House c. 1845
- Z. Newbold-White House c. 1730

Hertford

- A. Holy Trinity Episcopal Church and Cemetery c. 1849
- B. Hertford’s National Register Historic District

EXHIBIT VI-G (continued)
PERQUIMANS COUNTY, NORTH CAROLINA
HISTORIC SITES

- C. Perquimans County Courthouse c. 1925 and Square Monuments (Civil War c.1912; John Harris MD, DDS, Father of Dental Education” c. 1944, and Jim “Catfish” Hunter, Hall of Fame Baseball player c. 1987)
- D. Edmundson-Fox Monument c. 1929 (First religious service in State, 1672)
- E. Creecy-Wedbee House c. 1775
- F. “S”-shaped Bridge c. 1928 (Causeway that inspired Benny Davis to write the song “Carolina Moon”)
- G. Municipal Park
- H. Monument to Colored Union Soldiers (One of 5 in U.S.)
- I. Cedarwood Cemetery (Old) c. 1840
- J. Cedarwood Cemetery (New) c. 1944 (Jim “Catfish” Hunter grave site)
- K. Perquimans County Veteran’s Memorial Field c. 1946
- L. Roadside Cemetery c. 1890

Winfall

- A. Perquimans County Veteran’s Memorial Marker
- B. Winfall National Register Historic District
- C. Cedar Grove Methodist Church c. 1818 (Site of Civil War “Peace Conference” December 24, 1863.)
- D. Thomas Wilson House c. 1841

SOURCE: Exhibit compiled from information obtained from a number of public information sources as well as published sources such as The Historic Architecture of Perquimans County, North Carolina by Dru Gatewood Haley and Raymond A. Winslow, Jr.

E. Other Facilities

The following facilities/services detail the conditions as existed in the 2005-2006 timeframe.

1. School System

The primary and secondary educational needs of County residents are being met by Perquimans County Schools which enjoys a reputation of providing a top notch educational experience. The Perquimans County school system consists of four schools.

The school system employs: 154 certified teachers and principals; 8 central office (administrative) staff; 3 maintenance (administrative) staff; and, 16 non-certified personnel. At the time of this writing, the school system is breaking ground on a new gym and classrooms at the high school. The existing gym will be used as a media center

and additional classrooms, and a general maintenance facility. There are currently no plans to build any new facilities. The school system continues to review space needs and projected enrollment figures.

The 2005 enrollment figures for Perquimans County schools are shown below in EXHIBIT VI-H. The exhibit includes notes concerning desirable design capacities and class size requirements based on current requirements for North Carolina schools as per General Statutes (GS) 115C-301. The design capacities in the exhibit were those prior to the current update of GS 115C-301. The North Carolina Department of Public Instruction and its Facilities Design Department have formulas for use when constructing new schools. These formulas take into consideration the current class size requirements as stated in GS 115C-301, but may not be relevant for older facilities such as those found in Perquimans County. The notes associated with the exhibit attempt to clarify the adequacy of space in the schools in relation to the class size requirements and the enrollment for the 2005-2006 schools year.

2. Library Services

Library services for Perquimans County residents are provided by the Perquimans County Library in Hertford, a member of the Pedigrew Regional Library.

3. Health Services

Basic public health services are available to all County residents at the Perquimans County Office of Albemarle Regional Health Services.

4. Law Enforcement

The citizens of Perquimans County are served by the County Sheriff's Department which has one sheriff, 10 sworn officers, one animal control officer, and one administrative employee. The department has 11 patrol vehicles. Deputies work 12-hour shifts. The Sheriff's Department is quartered in the Perquimans County Courthouse Annex Building in Hertford. Perquimans County Inmates are transported to and housed in the Albemarle District Jail in Elizabeth City. Hertford employs a police force consisting of one chief, six sworn officers, and one administrative person. Winfall employs a police chief.

**EXHIBIT VI-H
 PERQUIMANS COUNTY, NORTH CAROLINA
 PERQUIMANS COUNTY SCHOOL SYSTEM**

NAME	GRADES	DESIGN CAPACITY	2005 ENROLLMENT
Perquimans County Central	Pre-K – 2	550*	459 including 42 pre-K students
Hertford Grammar	3 – 5	550**	358
Perquimans County Middle	6 – 8	740***	430
Perquimans County High	9 – 12	680****	579
TOTAL	-	2,520*****	1,826 students enrolled as of 09/30/05

*Perquimans Central’s student population is increasing. A mobile classroom will be installed during the month of October 2005 to alleviate overcrowding. Using the Grade Span Average as found on the Class Size Information form the following would be the desirable Design Capacity: 24 classrooms x 21 (Grade Span Average) = 504. The classroom numbers do not include office space, media center, multipurpose room, cafeteria, etc.

**Hertford Grammar School is not feeling the effects of overcrowding now; however, as students from Perquimans Central move into the school, classroom space will become an issue. Using the Grade Span Average as found on the Class Size Information form, the following would be the desirable Design Capacity: 21 classrooms x 24.3 (Grade Span Average between grades 3 (21) and grades 4 and 5 (26) = 510. The classroom numbers do not include computer labs, teacher lounges, a science lab, media center, multipurpose room, cafeteria, offices, etc.

***Perquimans County Middle School is not experiencing the effects of overcrowding now; however, as students at the elementary levels move up, this could become an issue. Using the Grade Span Average as found on the Class Size Information form, the following would be the desirable Design Capacity: 24 classrooms x 26 (Grade Span Average) = 624. The classroom numbers do not include computer labs, teacher lounges, media center, office space, cafeteria, gymnasium, etc.

****Perquimans County High School will be adding new classrooms with the current facilities project which is soon to begin. Therefore the Design Capacity will experience a significant change.

*****Perquimans County Schools has 28 more students enrolled than recorded on the fax of October 6, 2005.

Source: Perquimans County School Administration

5. Emergency Medical Services

The Perquimans County Rescue Squad provides emergency medical transport services. The Squad is made up of paid personnel and volunteers. Six paid personnel work from 6:00 am until 6:00 pm. The Squad's volunteers cover the nighttime hours and provide back-up during the day. The Squad's personnel range in training from medical responder to emergency medical technician. The Squad has four (4) 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. Perquimans County also provides funding.

6. Fire Fighting Services

Perquimans County is served by six all-volunteer fire departments with quarters throughout the County. EXHIBIT VI-I provides information on each department, which each have a rural department insurance rating by the North Carolina Department of Insurance of 9-S. APPENDIX 4 shows boundaries of the County's fire districts.

Although the County is currently being served well by the six fire departments, as the County grows, additional fire departments may be needed to serve areas like the Albemarle Plantation, Snug Harbor, and Holiday Island area. Whenever the volunteers providing service feel that response time to a particular location is likely to become a problem, the volunteers petition the County Board of Commissioners to establish a new volunteer district. The County Board then recognizes the need and formally establishes the new fire district. Funding the new district then becomes a fund raising exercise among the volunteers with County and State financial assistance.

Perquimans County, through its 9-1-1 emergency reporting telephone system, dispatches fire, rescue, and law enforcement services for Hertford and Winfall too. The system is partially funded by the towns based on population served. The system operates from the Sheriff's Department.

7. Senior Services

The Perquimans Senior Center, located on Grubb Street in Hertford offers a variety of activities to County residents, aged 55 years and older.

8. Business Services

The Perquimans Chamber of Commerce promotes the County and its towns, offering a variety of services to attract visitors and new businesses, as well as service to the existing business community.

**EXHIBIT VI-I
 PERQUIMANS COUNTY, NORTH CAROLINA
 FIRE DEPARTMENT EQUIPMENT**

DEPARTMENT	EQUIPMENT
Belvidere Chappell Hill 30 members	-1971 (350 gpm) pumper -1975 (750 gpm) pumper -1984 (500 gpm) tanker -1984 brush truck -1986 equipment van -1980 (1,000 gpm/1,000 gallon) pumper
Bethel 26 members	-1998 (1,250 gallon) tanker/pumper -1978 (1,000 gpm/1,500 gallon) pumper -1974 (350 gpm/1,000 gallon) tanker -1985 brush truck -2005 equipment trailer (with portable cascade system)
Durant's Neck 30 members	-2003 (1,500 gpm) engine -1984 (450 gpm) tanker -1980 equipment van -1985 (1,000 gpm) engine
Hertford 30 members	-1994 (1,500 gpm) engine -2002 (1,250 gpm) tanker/pumper -1994 air support truck -1992 rescue/equipment truck -1986 tanker -air compressor
Inter-County 31 members	-1995 (1,000 gallon/1,250 gpm) engine -2005 (1,500 gallon) tanker -2002 extrication equipment truck -2004 air trailer (cascade system)
Winfall 27 members	-1973 (750 gpm) pumper -1998 (1,500 gpm) tanker -1998 (1,250 gpm/1,500 gallon) pumper/tanker -1990 equipment truck

SOURCE: Perquimans County Office of Emergency Management, July, 2005.

9. Recreation

Existing recreation facilities in Perquimans County include the Perquimans County Veteran's Memorial Field, Perquimans Recreation Complex and Missing Mill Park, Henry Stokes Park, all in Hertford. The Perquimans County Recreation and Community Center, also in Hertford, offers recreational opportunities to area residents and visitors. Winfall has Winfall Landing Park adjacent to its Town Hall/Municipal Building. The Perquimans County Recreation Department is located in the Perquimans Commerce Center. Perquimans County, the home to former Major League baseball star and Hall of Fame member Jim "Catfish" Hunter (deceased), boasts over forty (40) historic sites.

Perquimans County also offers residents and visitors pristine natural settings, dramatic, un-spoiled water views, vast tracts of forested and cultivated and uncultivated lands; and numerous opportunities to observe, experience and interact with nature. A wide variety of typical water related recreational activities occur in and along these resources including boating, fishing, hunting, bird and wildlife watching, hiking, and camping. There are a number of public and private access points providing access to the waters of the County, most notably the Perquimans River. The County continues to review its needs with respect to recreation and recreational facilities, particularly passive outdoor opportunities. APPENDIX 5 shows the County's developing blueways system, access points, and some of the system's adjoining facilities, attractions, and services.

10. Solid Waste

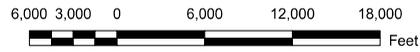
The Perquimans County Landfill site has been closed and capped. The site is now being used as a transfer point by the Perquimans, Chowan, Gates Landfill Commission for temporary deposit of solid waste by roll-off or front-end dumpsters. Perquimans County has a 20-year contract to dispose of solid waste in Bertie County through contracted services with the Landfill Commission. Waste is carried from the transfer site to Bertie County Landfill by 18-wheel trucks. The County is approximately twelve years into its 20-year contract.

11. County and Town Management

Perquimans County has a County Manager, Board of Commissioners form of government. The County has a full-time County Planner. Administrative facilities are located primarily in the County Courthouse in Hertford. Hertford has a manager-Council form of government. Winfall has a Mayor-Council form of government. Except for building permits and building inspections, land use ordinances are administered in Hertford and Winfall by the respective towns within their corporate limits. Hertford has a one-mile extraterritorial jurisdiction (ETJ). Winfall has not adopted an ETJ.

EXHIBIT VI-J shows the general location of selected community facilities and the transportation system serving Perquimans County; EXHIBIT VI-K shows such features in Hertford; and EXHIBIT VI-L shows such features in Winfall.

EXHIBIT VI-J PERQUIMANS COUNTY, NORTH CAROLINA SELECTED COMMUNITY FACILITIES AND TRANSPORTATION SYSTEM

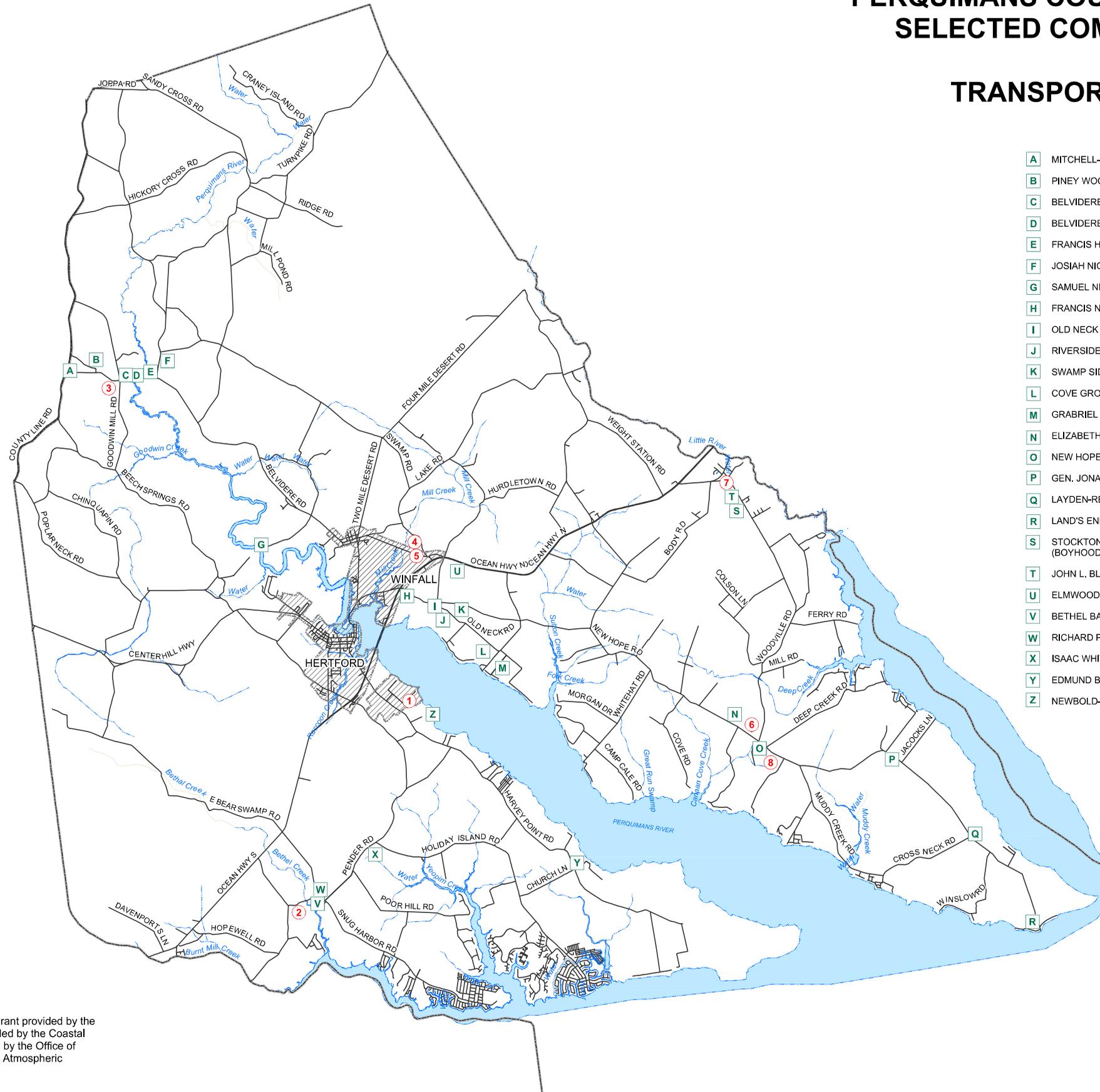


COMMUNITY FACILITIES

- ① PERQUIMANS COUNTY RECREATION COMPLEX
- ② DURANTS NECK POST OFFICE
- ③ DURANTS NECK FIRE DEPARTMENT
- ④ WINFALL FIRE DEPARTMENT
- ⑤ PERQUIMANS COUNTY RECREATION DEPARTMENT ATHLETIC FIELDS
- ⑥ INTER-COUNTY FIRE DEPARTMENT
- ⑦ BETHEL FIRE DEPARTMENT
- ⑧ BELVIDERE/CHAPPELL HILL FIRE DEPTMENT

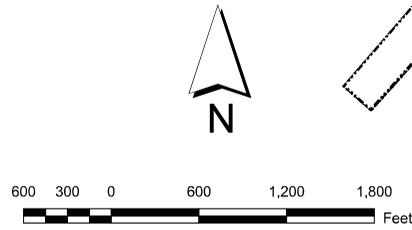
HISTORIC SITES

- A MITCHELL-WARD HOUSE
- B PINEY WOODS FRIENDS MEETING HOUSE
- C BELVIDERE (ROBERT W. "WOLFMAN JACK" SMITH'S GRAVE SITE)
- D BELVIDERE NATIONAL REGISTER HISTORIC DISTRICT SIGN
- E FRANCIS H. NICHOLSON HOUSE
- F JOSIAH NICHOLSON JR. STORE (LAYDEN'S STORE)
- G SAMUEL NIXON HOUSE
- H FRANCIS NIXON HOUSE
- I OLD NECK NATIONAL REGISTER HISTORIC SIGN
- J RIVERSIDE, WILLIAM JONES HOUSE
- K SWAMP SIDE, FLETCHER-SKINNER-NIXON HOUSE
- L COVE GROVE, BENJAMIN S. SKINNER HOUSE
- M GRABRIEL WHITE HOUSE
- N ELIZABETH POINTER CLAYTON HOUSE
- O NEW HOPE UNITED METHODIST CHURCH
- P GEN. JONATHAN HILL JACOBS HOUSE
- Q LAYDEN-REED HOUSE
- R LAND'S END, COL. JAMES LEIGH HOME
- S STOCKTON, JOSIAH T. GRANBERY HOUSE (BOYHOOD HOME OF ROBERT WELCH, FOUNDER OF THE JOHN BIRCH SOCIETY)
- T JOHN L. BLANCHARD HOUSE
- U ELMWOOD, THOMAS NIXON HOUSE
- V BETHEL BAPTIST CHURCH, REV. MARTIN ROSS MONUMENT
- W RICHARD PRATT HOUSE, BEECHTREE INN/PERQUIMANS VILLAGE
- X ISAAC WHITE HOUSE
- Y EDMUND BLOUNT SKINNER HOUSE
- Z NEWBOLD-WHITE HOUSE



The preparation of this map 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 Resources Management, National Oceanic and Atmospheric Administration.

EXHIBIT VI-K PERQUIMANS COUNTY, NORTH CAROLINA SELECTED COMMUNITY FACILITIES AND TRANSPORTATION SYSTEM TOWN OF HERTFORD



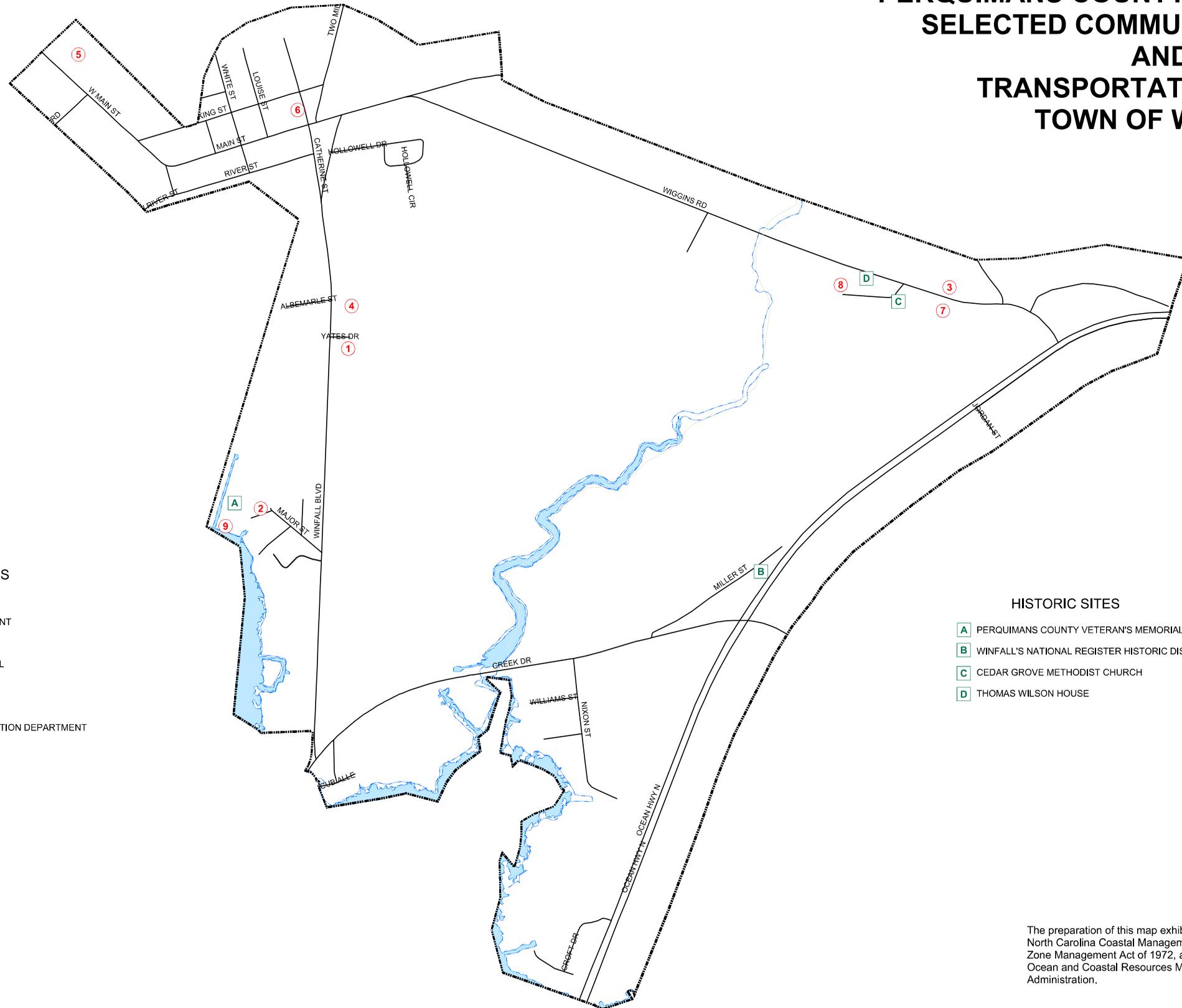
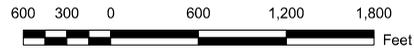
- COMMUNITY FACILITIES**
- ① VISTOR CENTER/PERQUIMANS CHAMBER OF COMMERCE HERTFORD MAIN ST.
 - ② PERQUIMANS COUNTY COURTHOUSE
 - ③ PERQUIMANS COUNTY COURTHOUSE ANNEX
 - ④ TOWN OF HERTFORD MUNICIPAL BUILDING
 - ⑤ TOWN OF HERTFORD POLICE DEPARTMENT
 - ⑥ PERQUIMANS COUNTY RECREATION DEPT./ SENIOR CITIZENS BUILDING
 - ⑦ PERQUIMANS COUNTY LIBRARY
 - ⑧ MISSING HILL PARK
 - ⑨ HERTFORD FIRE DEPARTMENT
 - ⑩ HERTFORD GRAMMER SCHOOL
 - ⑪ PERQUIMANS HIGH SCHOOL
 - ⑫ PERQUIMANS COUNTY RESCUE SQUAD
 - ⑬ POST OFFICE
 - ⑭ PERQUIMANS COUNTY MENTAL HEALTH
 - ⑮ PERQUIMANS COUNTY HEALTH DEPARTMENT
 - ⑯ MUNICIPAL PARK (BOAT RAMPS)
 - ⑰ MUNICIPAL COUNTY SOCIAL SERVICE
 - ⑱ PERQUIMANS COUNTY SCHOOLS CENTRAL OFFICE
 - ⑲ PERQUIMANS COUNTY COOPERATIVE EXTENSIVE CENTER
 - ⑳ PERQUIMANS COUNTY RECREATION COMPLEX

HISTORIC SITES

- A HOLY TRINITY EPISCOPAL CHURCH AND CEMETERY
- B HERTFORD'S NATIONAL REGISTER HISTORIC DISTRICT SIGN
- C PERQUIMANS COUNTY COURTHOUSE AND SQUARE MONUMENTS
- D EDMUNDSON-FOX MONUMENT
- E CREECY-WHEDBEE HOUSE
- F "S"-SHAPED BRIDGE
- G MUNICIPAL PARK
- H MONUMENT TO COLORED UNION SOLDIERS
- I CEDARWOOD CEMETERY (OLD)
- J CEDARWOOD CEMETARY (NEW)
- K PERQUIMANS COUNTY VETERAN'S MEMORIAL FIELD
- L ROADSIDE CEMETERY

The preparation of this map 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 Resources Management, National Oceanic and Atmospheric Administration.

EXHIBIT VI-L PERQUIMANS COUNTY, NORTH CAROLINA SELECTED COMMUNITY FACILITIES AND TRANSPORTATION SYSTEM TOWN OF WINFALL



COMMUNITY FACILITIES

- ① WINFALL PUBLIC WORKS
- ② TOWN HALL/POLICE DEPARTMENT
- ③ FIRE DEPARTMENT
- ④ PERQUIMANS CENTRAL SCHOOL
- ⑤ PERQUIMANS MIDDLE SCHOOL
- ⑥ U.S. POST OFFICE
- ⑦ PERQUIMANS COUNTY RECREATION DEPARTMENT
- ⑧ DETENTION CENTER
- ⑨ WINFALL LANDING

HISTORIC SITES

- A PERQUIMANS COUNTY VETERAN'S MEMORIAL MARKER
- B WINFALL'S NATIONAL REGISTER HISTORIC DISTRICT SIGN
- C CEDAR GROVE METHODIST CHURCH
- D THOMAS WILSON HOUSE

The preparation of this map 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 Resources Management, National Oceanic and Atmospheric Administration.

Chapter VII: Land Suitability Analysis

At the outset of this update project (in 2005), the Division of Coastal Management (DCM) provided compact disks containing the land suitability analysis (LSA) model and map for Perquimans County 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. Subsequently, in 2010, DCM supplied updated electronic files from which the LSA map included in this chapter as EXHIBIT VII-C was produced.

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 Perquimans 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
PERQUIMANS 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 combines 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-G) 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 classifications: **least suitable; low suitability; moderate suitability; high suitability; or highest suitability**. The Perquimans County land suitability map generated by the State in 2010 using the LSA program model appears as EXHIBIT VII-C and provides general breakdown of Perquimans County into the suitability classifications.

The State supplied LSA model and map supplied in 2010 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 and planning tool, carefully comparing the LSA with the composite environmental conditions map (EXHIBIT IV-G), existing land use map (EXHIBIT V-B), and future land use map (EXHIBIT IX-B). The development patterns in Perquimans County are greatly influenced by the poor soils found throughout the County.

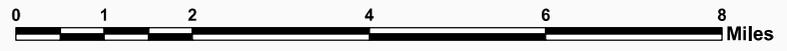
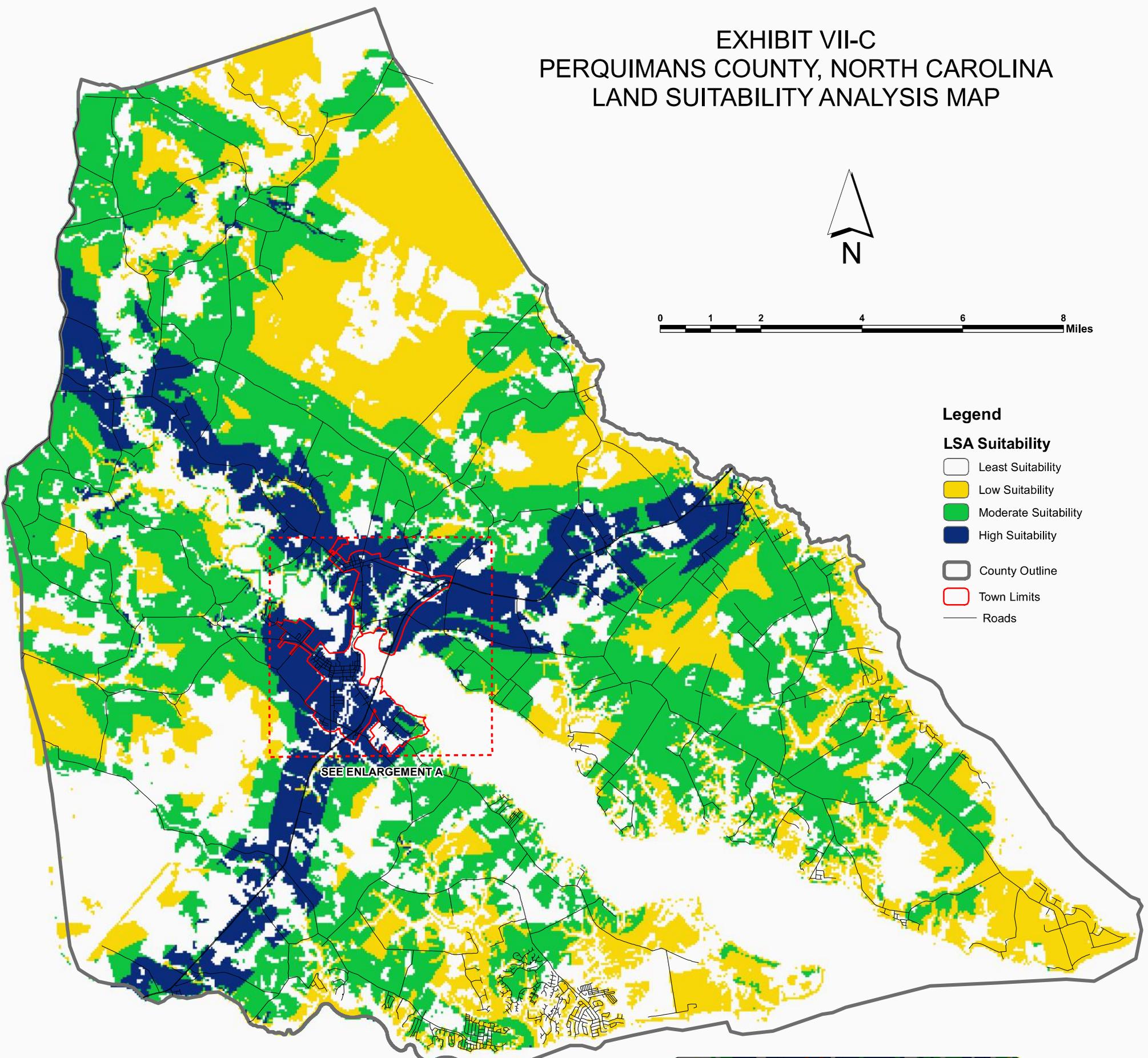
Comparing the LSA map with a County soils map, the composite environmental conditions map, and the existing land use map was very useful in pinpointing areas in the County wherein various environmental factors and constraints to development have combined to ensure vast areas remain vacant. Based on the 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 and adjacent to water courses and floodplains.

**EXHIBIT VII-B
 PERQUIMANS 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 PERQUIMANS COUNTY, NORTH CAROLINA LAND SUITABILITY ANALYSIS MAP



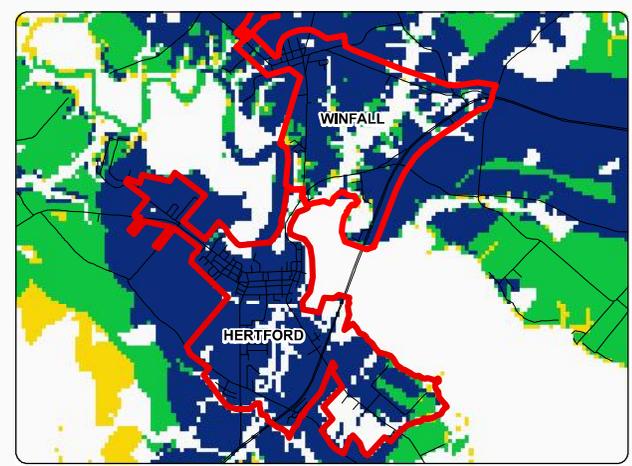
Legend

- LSA Suitability**
- Least Suitability
 - Low Suitability
 - Moderate Suitability
 - High Suitability
- County Outline
- Town Limits
- Roads

SEE ENLARGEMENT A

SOURCE: North Carolina Division of Coastal Management, January 2010

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ENLARGEMENT A

D. Land Area Encompassed by Land Suitability Ratings

The land suitability analysis map (EXHIBIT VII-C) produced through the State’s modeling process classifies land as High Suitability, Moderate Suitability, Low Suitability, and Least Suitable. In general, the areas with the highest suitability for development are within the Hertford and Winfall urban areas, along U.S. 17 and NC 37, and in areas where public water and Town sewer service are available. Lower suitability ratings are found in areas subject to flooding, wetlands areas, and areas with little or no public utilities. EXHIBIT VII-D shows the estimated land area encompassed by the land suitability ratings shown on the State supplied land suitability analysis.

**EXHIBIT VII-D
 PERQUIMANS COUNTY, NORTH CAROLINA
 ESTIMATED ACREAGE ENCOMPASSED BY LAND SUITABILITY RATINGS
 (UNINCORPORATED PORTION OF) PERQUIMANS COUNTY, HERTFORD,
 AND WINFALL**

Perquimans County

Suitability Rating	Total Acres	Percent
High	14,152	9.3%
Moderate	53,604	35.3%
Low	31,283	20.6%
Least	52,967	34.8%
Totals	151,996	100%

Hertford

Suitability Rating	Total Acres	Percent
High	3,903	80.1%
Moderate	141	2.9%
Low	50	1.0%
Least	776	16.0%
Totals	4,870	100%

Winfall

Suitability Rating	Total Acres	Percent
High	852	59.8%
Moderate	79	5.5%
Low	18	1.3%
Least	475	33.4%
Totals	1,424	100%

Note: Acreages exclude water features.

A comparison of the existing land use maps for the unincorporated portions of Perquimans County, Hertford, and Winfall, (EXHIBIT V-B, EXHIBIT V-C, and EXHIBIT V-D, respectively) with the land suitability analysis map (EXHIBIT VII-C) reveals that a considerable number of undeveloped tracts are located within the areas with high and moderate suitability ratings, while large amounts of acreage in the residential agricultural areas have a moderate suitability rating.

Perquimans County, Hertford, and Winfall can use the land suitability analysis map (LSA map) as a planning tool to help ensure that development and the 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. The LSA map will help the localities balance growth and development and the conservation/preservation of natural resources. Its use will help promote land use and public infrastructure development that is compatible with land suitability and the functional purposes of Areas of Environmental Concern.

Perquimans County and its towns, as part of a subdivision request, should review the land suitability analysis map included in this plan as a source of information for determining the general suitability of land for the proposed development. However, because the LSA map is a static illustration of suitability based upon numerous factors (including proximity to developed land and the presence of infrastructure), consideration must be given to conditions which have changed since the time of map preparation that may alter the suitability rating delineated on the map.

Land which the County and its towns have determined, either through their own investigations or the investigations of other public agencies, to be unsuitable for development because of flooding, poor drainage, steep slopes, poor soil conditions and other such physical features which may endanger health, life, or property or necessitate the excessive expenditure of public funds for the provision and/or maintenance of public services should not be approved for subdivision unless methods are formulated by the developer for mitigating the problems created by the subdivision of such land.

Chapter VIII: Review of Current CAMA Land Use Plan

A. 1998 Perquimans County CAMA Land Use Plan

The County's current land use plan (1998 Perquimans County Land Use Plan Update), relied heavily on the previous land use plan developed in 1993. Both documents were prepared in cooperation with the Division of Coastal Management.

The 1998 Perquimans County CAMA Land Use Plan Update included Winfall. Hertford developed its own land use plan in 1991.

The 1998 update contains narrative about the County's findings, policy statements, and narrative concerning policy implementation for a variety of issues under five general topic (or issue) areas: resources protection; resource production and management, economic and community development; continuing public participation, and, storm hazard mitigation.

RESOURCE PROTECTION:

- Areas of Environmental Concern (AEC) and Appropriate Land Use in AECs
- Constraints to Development Including Soil Limitations, Flood Prone Areas, Hazardous and Fragile Land Areas
- Freshwater Swamps and Marshes
- Cultural and Historical Resources
- Use of Package Treatment Plants
- Protection of Potable Water Supply
- Storm Water Run-off Residential Development
- Marina, Floating Home Development, and Dry Stack Storage
- Industrial Impact on Fragile Areas

RESOURCE PRODUCTION AND MANAGEMENT:

- Productive Agricultural Lands
- Commercial Forest Land
- Commercial and Recreational Fishing
- Off-Road Recreational Vehicles
- Residential and Commercial Land Development on Resources

ECONOMIC AND COMMUNITY DEVELOPMENT:

- Types and Location of Industry Desired
- Local Commitment to Provide Services to Development
- Types of Urban Growth Patterns Desired
- Redevelopment of Developed Areas

- Commitment to State and Federal Programs in the Area
- Assistance to Channel Maintenance and Beach Nourishment Projects
- Tourism, Waterfront Access and Estuarine Access
- Types, Density, Location, Units per Acre of Anticipated Residential and Industrial Development and Industrial Development and Services Necessary to Support Such Development

STORM HAZARD MITIGATION, POST-DISASTER RECOVERY AND EVACUATION PLANS:

- Storm Hazard Mitigation
- Post Disaster and Recovery Plan

CONTINUING PUBLIC PARTICIPATION:

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. In its review of the current land use plan, the County considered three factors. The County considered the consistency of 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 in creating the desired land use patterns and protecting natural systems.

RESOURCE PROTECTION:

Issue: Areas of Environmental Concern (AEC) and Appropriate Land Use in AEC - 1998 Policy:

Perquimans County will continue to support and enforce, through its CAMA Minor Permitting capacity, the State policies and permitted uses in Areas of Environmental Concern (AEC). Such uses shall be in accord with the general use standards for coastal wetlands, estuarine waters, estuarine shorelines, and public trust areas as stated in Chapter 15A, Subchapter 7H of the North Carolina General Statutes.

Implementation Strategies:

CAMA Minor Permitting Program. The local CAMA permitting officer will insure applications are filled out correctly and guidelines are met, and refer applicants to State CAMA office for major permits.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County no longer participates in the CAMA Minor Permitting Program and relies on DCM for minor permit issuance.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Constraints to Development Including Soil Limitation, Flood Prone Areas, Hazardous and Fragile Land Areas - 1998 Policy:

The County will continue to rely on existing Regional, State and Federal regulatory programs to monitor and determine the appropriateness of future development in the fragile land areas, flood prone areas and soils with limitations to development.

Implementation Strategies:

The County, through its local Health Department, is actively managing an annual inspection and monitoring of septic systems built on provisional soils. The County will continue to enforce Health Department Regulations concerning the installation of septic systems.

The County will consider alternative systems such as low pressure septic systems. To minimize any hazardous conditions, the County will require that all developments on soils with severe limitations be built using the most responsible construction, design, and management techniques possible, and will continue to require a certified engineered plan for septic system for approval by the Health Department.

The County will request FEMA to review accuracy of flood maps. The County will continue to enforce the FEMA Construction Standards in all identified Flood Hazard Areas. The County will prevent needless development from occurring in identified flood plain areas. The County will require additional elevation monuments to be placed in all subdivisions.

The County will continue to enforce the rules and regulations of the Flood Insurance Program and use Local, CAMA permit, and 404 wetland permit regulations to regulate development in fragile land areas.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County, through the Health Department, managed inspection and monitoring of septic systems built on provisional soils. Most septic systems in the County are alternative, given soil conditions in Perquimans County. The County adopted a county-wide zoning ordinance in 2002 and received new, revised flood rate insurance maps in 2004 which are consulted with respect to development proposals. The County enforced its Flood Plain Ordinances and used the local CAMA permit process and 404 wetland permit regulations to regulate development in fragile areas.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Freshwater Swamps and Marshes – 1998 Policy:

The County will continue to encourage the use of Best Management Practices as recommended by the U.S. Soil Conservation Service in both forest and agricultural land management in order to minimize damage by either of these two vital County economic activities. The County will encourage developers to set aside these fragile areas for preservation and protection as passive community open space.

Implementation Strategies:

The County will rely on the development regulations it now has in force to control residential, commercial, and industrial development in these wetland areas.

The County will amend its Subdivision Regulations to require that developers submit plans to CAMA or Corps of Engineers for review prior to local approval if CAMA wetlands or 404 wetlands are located on site.

The County will encourage the local Soil Conservation District to maintain an ongoing educational program that emphasizes the techniques of Best Management Practices for forestry and farm management.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County adopted a county-wide zoning ordinance in 2002. With receipt of new, revised flood rate insurance maps in 2004, identified flood plain areas and non-encroachment areas were identified where development is not allowed. The County requires flood plain delineation on development proposals. The County encouraged educational programs through the U.S. Natural Resource Conservation Service and used the agency for technical support and development review for storm water related issues with respect to subdivision developments that were proposed. The County amended its subdivision ordinance (most recently in 2005) to help achieve desired land use and growth patterns.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Cultural and Historical Resources – 1998 Policy:

The County will support the efforts of the Historic Preservation Committee to establish several historic districts now being considered.

Implementation Strategies:

The County will support efforts to promote historic sites and structures in Perquimans County. The County will work with NCDOT in obtaining highway signs directing the motoring public to historic areas once established.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County supported efforts to promote historic sites and worked with NCDOT to have signs installed to direct travelers to historic places.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Use of Package Treatment Plants – 1998 Policy:

The County will rely on the permitting activities of the Department of Health and the Division of Environmental Management to control the installation, placement, and operation of sewage package treatment plants. The County will encourage the use of land application type community systems for its larger subdivision developments.

Implementation Strategies:

The County will continue to require a certified engineered plan for any proposed package treatment plants and State approval as applicable.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

Although no requests were received, the County continued its policy that requests for package treatment plants must have plans drawn and certified by an engineer registered/licensed in North Carolina.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Protection of Potable Water Supply – 1998 Policy:

The County shall cooperate fully with all State and Federal agencies to protect the ground water supplies in the County.

Implementation Strategies:

The County will rigorously enforce the public facility service requirements of its Subdivision Regulations and work closely with the District Department of Health to insure that ground water supplies are not threatened by poor placement or inadequate filtration of septic systems. This is being checked annually by the County Health Department. Of particular concern is the threat caused by septic tank failure.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County, through the Health Department, managed inspection and monitoring of septic systems built on provisional soils. Most septic systems in the County are alternative, given soil conditions in Perquimans County. The County adopted a county-wide zoning ordinance in 2002 and continued to enforce, and amend as necessary, land development ordinances. The County enforced its Flood Plain Ordinances and used the local CAMA permit process and 404 wetland permit regulations to regulate development in fragile areas.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Storm Water Run-off Residential Development – 1998 Policy:

It shall be the policy of Perquimans County to regulate residential subdivisions so as to prevent the overburdening of existing waterways and drainage systems by excessive surface run-off, with particular attention to fragile areas of the County.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County, through the Health Department, managed inspection and monitoring of septic systems built on provisional soils. Most septic systems in the County are alternative, given soil conditions in Perquimans County. The County adopted a county-wide zoning ordinance in 2002 and continued to enforce, and amend as necessary, land development ordinances. The County enforced its Flood Plain Ordinances and used the local CAMA permit process and 404 wetland permit regulations to regulate development in fragile areas. The County encouraged educational programs through the U.S. Natural Resource Conservation Service and used the agency for technical support and development review for storm water related issues with respect to subdivision developments that were proposed.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Marina, Floating Home Development, and Dry Stack Storage – 1998 Policy:

Perquimans County supports construction of marinas with County waters if all County, State and Federal permits are obtained. The size of the marina must be appropriate to the width and depth of body of water on which it is located and not present a hazard to navigation. Dry stack marinas are also encouraged.

Implementation Strategies:

The County will request the Industrial Development Director to investigate possible marina as part of Commerce Center.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County Manager assumed the duties of the industrial development Director. Hertford zoned the waterfront area in the Commerce Center to allow for marinas.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Industrial Impact on Fragile Areas – 1998 Policy:

County policy is to develop the new Commerce Center, while being sensitive to the land and water environment, to create improved economic opportunities for Perquimans County citizens. The County would support mooring buoys at the Commerce Center waterfront if they are an integral part of the Commerce Center's development.

Implementation Strategies:

County Commissioners will continue to encourage the Industrial Development Commission and Director to develop a Commerce Center the is sensitive to the environment.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County adopted a county-wide zoning ordinance in 2002 and continued to enforce, and amend as necessary, land development ordinances. The County enforced its Flood Plain Ordinances and used the local CAMA permit process and 404 wetland permit regulations to regulate development in fragile areas. The County encouraged educational programs through the U.S. Natural Resource Conservation Service and used the agency for technical support and development review for storm water related issues. The focus for development is the Commerce Center became more retail and service related as opposed to industrial and manufacturing. Development of the Commerce Center continued.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

RESOURCE PRODUCTION AND MANAGEMENT:

Issue: Productive Agricultural Lands – 1998 Policy:

Perquimans County's productive agricultural lands are not being threatened by unreasonable or unmanageable urban growth; however, it shall be the County's policy to encourage land owners to keep their lands in productive agricultural use.

Implementation Strategies:

The County will encourage continued productive use of agricultural land by granting preferential tax relief to framed lands through Land Use Plan prepared for tax appraiser. The County will also investigate the possible use of zoning as a means of protecting and preserving its farm lands.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County adopted a county-wide zoning ordinance in 2002 and continued to enforce, and amend as necessary, land development ordinances. Approximately 95% of the County is zoned rural agricultural.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Commercial Forest Land – 1998 Policy:

Perquimans County encourages the use of the most efficient and productive forestry practices and strongly encourage reforestation as an ongoing management practice. Perquimans County will also encourage conservation of existing hardwood forests as animal habitat.

Implementation Strategies:

The County will provide land use value tax assessments to property owners who maintain tracts of productive forest lands in areas with great development potential. The County will request that the Soil Conservation Service, Forest Service or Extension Service make information available to land owners if federal or State programs exist with financial incentives to put land areas adjacent to water bodies back into productive forests or protection of existing hardwood forests.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County provided land use value taxation assessments. The County encouraged educational programs through the U.S. Natural Resource Conservation Service and used the agency for technical support and development review for storm water related issues.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Commercial and Recreational Fishing – 1998 Policy:

The County encourages commercial and recreational fishing in its waters and will cooperate with other local governments, State and Federal agencies to control pollution of these waters to allow commercial and recreational fishing to increase.

Implementation Strategies:

The County will work with the North Carolina Wildlife Commission and the CAMA Public Beach Access program to provide public boating access for recreational fishing.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

Hertford zoned the waterfront area in the Commerce Center to allow for marinas. Land in the Commerce Center was offered to the North Carolina Wildlife Commission for construction of a public boat ramp.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Off-Road Recreational Vehicles – 1998 Policy:

County policy will be to regulate unauthorized use of off-road vehicles on residential and agricultural property.

Implementation Strategies:

The County Planning Board, in cooperation with Sheriff's Department, will review ordinances from other rural and agricultural communities to determine best approach to regulate use of unauthorized off-road vehicles on private property.

The Planning Board will prepare and present recommended ordinance, if appropriate, to County Commissioners for consideration following required public notice and public hearings.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County studied, but did not develop and adopt an ordinance to regulate the use of unauthorized off-road vehicles on private property.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Residential and Commercial Land Development on Resources – 1998 Policy:

The County will use its regulatory powers to insure that all new developments are designed in such a way as to avoid any negative impacts on fragile areas.

Implementation Strategies:

The County will look at utilization of Zoning Map and Zoning Ordinance to help direct future growth away from prime farmlands and fragile land and water resources.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County adopted a county-wide zoning ordinance in 2002 and continued to enforce, and amend as necessary, land development ordinances. Approximately 95% of the County is zoned rural agricultural. The zoning ordinance also includes agricultural district designations and rural historic district designations.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

ECONOMIC AND COMMUNITY DEVELOPMENT:

Issue: Types and Location of Industry Desired – 1998 Policy:

Perquimans County, Hertford, Winfall and the Economic Development Commission Executive Director will work jointly to develop the Perquimans Commerce Center as well as other existing local industrial sites. Mooring buoys, if beneficial to the development of the Commerce Center, will be allowed if all local, State and federal permits required can be obtained.

Implementation Strategies:

Details on issues such as annexation, utility extension and industrial types will be resolved. The Economic Development Commission Executive Director will continue to market the Commerce Center.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

Hertford annexed the Commerce Center which continued to be developed. Most of the site has utilities and has been zoned for specific uses. The County Manager assumed the duties and responsibilities off the Economic Development Director.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Local Commitment to Provide Services to Development – 1998 Policy:

The County will make incremental improvements to the water system each year to keep abreast of demands on the system and will undertake major improvements to the system when conditions warrant.

Implementation Strategies:

The County will follow a planned program of improvements to its water system to keep abreast of system demand and to maintain optimum service to its customers. Plans include the construction of a new treatment plant and improvements to existing plants which are currently in progress.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County, Hertford, and Winfall continued to evaluate water and sewer capabilities and needs. The County and its towns have engaged a professional engineering firm to study and make recommendations for the future status of water and sewer systems which may include consolidation of individual County and town systems into a regional entity.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Types of Urban Growth Patterns Desired – 1998 Policy:

To protect the rural quality of life enjoyed in Perquimans County, and at the same time provide guidance for future residential and non-residential development, the County may investigate establishing zoning in all or portions of Perquimans County.

Implementation Strategies:

County Commissioners may direct County Manager and County Planning Board to investigate zoning ordinances from other rural communities for possible use in formulating Zoning Ordinance and Zoning Map for County.

County may apply for CAMA planning funds to prepare Zoning Ordinance and map for consideration. Planning Board and County Commissioners may hold public meetings and public hearings to consider County zoning.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County adopted a county-wide zoning ordinance in 2002 and amended its subdivision ordinance (most recently in 2005) to achieve desired land use and growth patterns.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Redevelopment of Developed Areas – 1998 Policy:

The County will seek to eliminate substandard housing in the County.

Implementation Strategies:

The County will identify the extent and location of substandard housing the County and seek State and Federal assistance to eliminate substandard housing.

The County will continue to enforce the North Carolina Building Code and the County Minimum Housing Code as a means to reduce the frequency of substandard housing.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

A comprehensive housing study was not undertaken, but the County, Hertford, and Winfall participated in CDBG projects to improve housing conditions in certain areas.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Commitment to State and Federal Programs in the Area – 1998 Policy:

Perquimans County will continue to support State and federal programs that benefit County citizens. The County strongly supports the following programs:

- Community Development Block Grant
- Rural Development Agency
- RC & D
- Soil and Conservation Fund
- CAMA Planning and Access Program
- Department of Transportation TIP
- Parks and Recreation Trust Fund (PARTF)

Implementation Strategies:

The County will continue to apply for matching grant funds that help leverage local tax dollars for programs and facilities that benefit County citizens.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County, Hertford, and Winfall applied for funding for projects through CDBG, the Rural Center, and the USDA, among others. Hertford used USDA funds for sewer improvements. Winfall used funding from the USDA Rural Development Agency its Town Hall. The County and its towns are also receiving funds from the Federal Homeland Security Administration.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Assistance to Channel Maintenance and Beach Nourishment Projects – 1998 Policy:

Perquimans County supports channel maintenance of the Perquimans River.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

No action was taken.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Tourism, Waterfront Access and Estuarine Access – 1998 Policy:

The County believes that tourism offers great potential as a clean, safe economic development strategy and supports those efforts underway by citizen groups in the County to promote this strategy. Perquimans County will support waterfront redevelopment.

Implementation Strategies:

The County will apply for a grant through the Division of Coastal Management to study the possibilities of public waterfront access and lend assistance to local governments in development of public waterfront access.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County did not apply for public access funds from the Division of Coastal Management. However, Hertford zoned the waterfront area in the Commerce Center for to allow for marinas and a site for a boat ramp has been offered to the North Carolina Wildlife Commission. Efforts continued to promote the area's cultural and historic resources and attractions. A grass roots effort is underway involving citizens and the U.S. National Park Service to develop and eventually implement a blue ways/green ways plan.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Types, Density, Location, Units per Acre of Anticipated Residential and Industrial Development and Services Necessary to Support Such Development – 1998 Policy:

The County will direct higher density residential and high intensity industrial development to locate near areas that can provide the essential public facilities and service needed for their support, most notably, areas with centralized wastewater collection and treatment and areas with appropriate transportation facilities.

Implementation Strategies:

The County will consider the use of zoning regulations to guide higher density residential and industrial development to areas most suited for these types of land use.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County adopted a county-wide zoning ordinance in 2002 and amended its subdivision ordinance to set a minimum lot size of 43,000 square feet for lots without public sewer service and a minimum lot size of 15,000 square feet for lots that have public sewer service.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

STORM HAZARD MITIGATION, POST DISASTER RECOVERY AND EVACUATION PLANS:

Issue: Storm Hazard Mitigation – 1998 Policy:

It will be the policy of Perquimans County to enforce all controls and regulations it deems necessary to mitigate the risk of severe storms and hurricanes to life and property. Local policy shall be to consider purchase of damaged property in most hazardous areas if either Federal or State funds can be secured for such purposes.

Implementation Strategies:

High winds – Perquimans County will follow and support the N.C. State Building Codes and their requirements regarding design for high winds. The County also supports requirements for trailers such as tie-downs that help reduce wind damage.

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

Wave Action and Shoreline Erosion – Perquimans County continues to support CAMA permitting procedures concerning the estuarine shoreline. The County also supports the FEMA regulations concerning elevation and setback requirements.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County implemented its hazard mitigation strategies and procedures on as needed basis. The County began to develop a Hazard Mitigation Plan in 2004, which will be completed in June 2005. The County adopted a county-wide zoning ordinance in 2002 and continued to enforce, and amend as necessary, land development ordinances. The County enforced its Flood Plain Ordinances and used the local CAMA permit process and 404 wetland permit regulations to regulate development in fragile areas. The County encouraged educational programs through the U.S. Natural Resource Conservation Service and used the agency for technical support and development review for storm water related issues with respect to subdivision developments that were proposed.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Post-Disaster and Recovery Plan – 1998 Policies:

Perquimans County will work under the Hurricane Evacuation Plan or Emergency Operations Plan for Multi-Hazards to guide post-disaster repair and reconstruction activities. County policy shall be to continue to follow evacuation procedures outlined in Perquimans County Hurricane Evacuation Plan.

Implementation Strategies:

Evacuation: The Perquimans County Evacuation Plan was developed for evacuation of all County residents. The purpose of the plan is to “provide for an orderly and coordinated evacuation and shelter system to minimize the effects of hurricanes on the residents and visitors in Perquimans County.” Hurricane evacuation involves all areas under County and municipal jurisdiction. As joint action is required of Perquimans County and the municipal governments within the County, a joint organization for decision making and use of resources is needed. For these purposes, a Control Group has been established. Its mission is to exercise overall direction and control of hurricane evacuation operations including decisions to institute County-wide increased readiness conditions and such other actions necessary to the situation. It is composed of the following individuals:

- Chairman of County Commissioners
- Perquimans County Manager
- Perquimans County Emergency Management Coordinator
- Mayor of Hertford
- Hertford Emergency Management Coordinator
- Mayor of Winfall
- Perquimans County Sheriff
- Hertford Chief of Police
- Fire Marshal
- Captain of Rescue Squad
- Superintendent of Schools
- Director of Social Services
- Administrator of Health Department
- Register of Deeds
- Perquimans County Dispatcher
- American Red Cross
- Hertford Grammar School
- EMS Director

Evacuation Areas, Routes – Evacuation zones delineated in the Eastern North Carolina Hurricane Evacuation Study recently completed and based on inundation effects produced by various categories of storms are identified as Perquimans County Evacuation Zones below:

Zone 1 North Central Perquimans County – All areas along and within one-half mile of either side of Perquimans River from SR 1212 on the north to NC 37 in the City of Hertford on the south.

Zone 2 South Central Perquimans County – All areas along and within one-quarter mile of Perquimans River from the Town of Hertford on the north to Albemarle Sound on the

south including areas along the tributaries of the Perquimans River from SR 1310 on the north to Albemarle Sound on the south.

Zone 3 Eastern Perquimans County – All areas along and within one-quarter mile of the Little River from SR 1221 on the north to Stevenson Point on the south.

Zone 4 Southern Perquimans County – All areas along and on either side of Burnt Mill, from NC 37 on the west to Yeopim River on the east; and all areas along and within one-quarter mile of the Yeopim River, and along and either side of Yeopim Creek and other tributaries of Yeopim River.

Evacuation routes and traffic control points are identified below:

Evacuation Routes – All residents and visitors to Perquimans County who wish to evacuate shall be directed to leave the County by one of two evacuation routes, either Route 1 – Highway 37 North to Highway 32 to Highway 158, or Route 2 – Highway 17 West.

Traffic Control Points – It is the opinion of the Perquimans County Emergency Management Coordinator that no Traffic Control Points will be needed in Perquimans County during evacuation times.

Reentry – Upon cancellation of all hurricane warnings and watches which include Perquimans County and when no major damage has been experienced, the Control Group Chairman will authorize reentry to evacuated areas.

When hurricane damage has occurred, reentry to evacuated areas will be based upon damage assessments and any rescue or other relief operations in progress. Reentry will be authorized by the Control Group Chairman to specific evacuated areas and under conditions specified.

Direction and control of the reentry operations will be coordinated by the Sheriff.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County implemented its hazard mitigation strategies and procedures and Hurricane Evacuation Plan and Emergency Operations Plan for Multi-hazards on as needed basis. The County began to develop a Hazard Mitigation Plan in 2004, which will be completed in June 2005.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

CONTINUING PUBLIC PARTICIPATION:

Issue: Continuing Public Participation

The Perquimans County Planning Board and Board of Commissioners will continue to have a policy of including Perquimans County residents in the planning process on an ongoing basis. Meetings will continue to be open to the public to give citizens the opportunity to express their views and concerns about planning issues. It shall be Perquimans County policy to review the policy and implementation section of this Land Use Plan, once adopted, on an annual basis to review how policy implementation is taking place.

Implementation Strategies:

The County Manager will review policy implementation with the Board of Commissioners at the first meeting in January of each year prior to the next land use plan update.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and /or rules are deemed consistent with the County's stated policy.

Adoption of Implementation Strategies by Board of Commissioners:

The County developed a County web site and used local news media to disseminate information to the public, as well as legal, public notices in local newspapers for public meetings. The County Board of Commissioners also conducted annual strategic planning retreats and attended annual planning and information exchanges sessions with the leaders from Hertford and Winfall.

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

The County's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

B. Winfall

Winfall was included in the County's 1998 Land Use Plan Update. Winfall has aided the implementation of the plan by: establishing a historic district; working with the County and Hertford to address water and sewer needs and issues; constructing a public sewer system; and, building a Winfall Town Hall and adjacent recreation area with water access. The Town is enforcing its zoning ordinance and considering adoption of a subdivision ordinance.

C. Town of Hertford 1991 Land Use Plan Update

Hertford's current land use plan (Town of Hertford 1991 Land Use Plan Update) relied heavily on the previous land use plan developed in 1986. Both documents were prepared in cooperation with the Division of Coastal Management.

The 1991 update contains narrative about the Town's findings, policy statements, and narrative concerning policy implementation for a variety of issues under five general topic (or issue) areas: resources protection; resource production and management, economic and community development; continuing public participation, and, storm hazard mitigation.

RESOURCE PROTECTION:

- Areas of Environmental Concern (AEC) and Appropriate Land Use in AECs
- Constraints to Development Including Flood Prone Areas, Soils Suitability, and Septic Tank Use
- Development Density in Proximity to Designated Outstanding Resource Waters (ORW's)
- Other Hazardous or Fragile Land Areas
- Hurricane and Flood Evacuation Needs
- Protection of Potable Water Supply
- Use of Package Treatment Plants
- Storm Water Run-off
- Marina and Floating Home Development, and Dry Stack Storage
- Industrial Impact on Fragile Areas
- Development of Sound and Estuarine System Islands
- Restriction of Development in Areas Up to Five Feet Above Mean High Water
- Upland Excavation for Marina Basins
- Damaging of Existing Marshes by Bulkhead Installation

RESOURCE PRODUCTION AND MANAGEMENT:

- Productive Agricultural Lands
- Commercial Forest Lands
- Potential Mineral Production Areas
- Commercial and Recreational Fishing
- Off-Road Vehicles
- Residential, Commercial, and Industrial Development
- Peat and Phosphate Mining

ECONOMIC AND COMMUNITY DEVELOPMENT:

- Community Attitude Toward Growth
- Types and Locations of Industries Desired
- Local Commitment to Provide Services
- Urban Growth Patterns Desired
- Redevelopment of Developed Areas Including Relocation of Structures Due to Erosion
- Commitment to State and Federal Programs Including Erosion Control, Public Access, Highway Improvements, Port Facilities, Dredging and Military Facilities
- Channel Maintenance and Beach Nourishment Projects Including Financial Aid, Providing Spoil Areas or Providing Easements
- Energy Facility Siting
- Inshore and Offshore Exploration or Development Including Refineries, Storage
- Tourism
- Coastal and Estuarine Water Access
- Types, Densities, Location, Units per Acre of Anticipated Residential

STORM HAZARD MITIGATION, POST-DISASTER RECOVERY AND EVACUATION PLANS:

- Storm Hazard Mitigation and Post Disaster Reconstruction With Composite hazard Map

CAMA guidelines require a review and evaluation of the current land use plan to evaluate the Town's success in implementing the land use plan and the effectiveness of its policies in achieving the goals of the plan. In its review of the current land use plan, the Town considered three factors. The Town considered the consistency of 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 Town Council. Finally, it considered the efficacy of current policies in creating the desired land use patterns and protecting natural systems.

RESOURCE PROTECTION:

Issue: Areas of Environmental Concern (AEC) and Appropriate Land Use in AEC

1991 Policy:

The Town of Hertford contains four types of AEC's which are Estuarine Waters, Estuarine Shorelines, Public Trust Waters and Coastal Wetlands. Each of these AEC's is currently regulated by either the local CAMA Permit Officer for minor developments or by the State CAMA Officer for major permits. Local officials will continue to have a policy of allowing those developments that meet current zoning regulations and all other applicable local, State or federal regulations affecting the AEC area.

Implementation Strategies:

The local CAMA Permit Officer and State CAMA Permit Officer will continue to review all proposed construction activities in the AEC areas for compliance with applicable CAMA regulations. Town officials have established a new policy not to permit floating homes on water bodies within the Town jurisdiction. Permit officers shall not approve this type of water use. The Town's Zoning Ordinance shall be reviewed and revised as required to make the Ordinance consistent with this policy.

The Hertford Subdivision Ordinance shall be revised to create a Conservation district adjacent to AEC's to establish a means to preserve and maintain existing vegetative buffer between existing and future development and AEC's in an effort to provide a vegetative buffer to filter urban runoff and thereby protect the water quality of adjacent estuarine and public trust waters.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town relied on the local CAMA Permit Officer and State CAMA Permit Officer to review all proposed construction activities in the AEC areas for compliance with applicable CAMA regulations. The Town did not review the Zoning Ordinance to make the Ordinance consistent with a policy not to permit floating homes on water bodies within the Town jurisdiction. The Hertford Subdivision Ordinance was not revised to create a Conservation district adjacent to AEC's to establish a means to preserve and maintain existing vegetative buffer between existing and future development and AEC's in an effort to provide a vegetative buffer to filter urban runoff and thereby protect the water quality of adjacent estuarine and public trust waters.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Constraints to Development Including Flood Prone Areas, Soils Suitability and Septic Tank Use

1991 Policy:

Town policy shall be to discourage residential, commercial or industrial development in areas containing Dorovan muck soils or Chowan silt loam soils or in areas subject to flooding. However, such development may be permitted if all required permits can be obtained for a proposed development, and if it can be shown that such development will not adversely impact adjacent water quality and is considered to be in the best interest of Hertford to allow such development. The highest priority shall be to establish a vegetative buffer zone in areas adjacent to the Perquimans River Castleton Creek and its tributaries in those areas containing Dorovan muck and Chowan silt loam soils.

Implementation Strategies:

Revise zoning ordinance during 1992-93 budget year to establish vegetative buffers as discussed under previous policy section on AEC's. Continue to enforce the Flood Insurance Program. Continue to review proposed developments along the waterfront area to insure compliance with CAMA and the Corps of Engineers 404 Wetland Permit Program. Request that the Corps of Engineers establish the 404 Wetland line along the Perquimans River from the Municipal Boat Ramp to Missing Mill Park, with permission of affected land owners, in an effort to establish any constraints to future implementation of the Waterfront Access Plan. Once the 404 Wetland line is established, have the line surveyed and mapped for future use in developing more detailed plans for implementation of the Waterfront Access Plan. If Corps of Engineers staff is not able to conduct survey in a timely manner, the Town will consider using a private consultant to delineate the 404 wetland area.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town did not revise the zoning ordinance during 1992-93 budget year to establish vegetative buffers as discussed under previous policy section on AEC's, but did continue to enforce the Flood Insurance Program; and, continued to review proposed

developments along the waterfront area to insure compliance with CAMA and the Corps of Engineers 404 Wetland Permit Program. The Corps of Engineers established a partial 404 Wetland line along the Perquimans River from the Municipal Boat Ramp to Missing Mill Park, with permission of affected land owners, in an effort to establish any constraints to future implementation of the Waterfront Access Plan.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Development Density in Proximity to Designated Outstanding Resource Waters (ORW's)

1991 Policy:

There are no designated ORW's within Hertford's jurisdictions; therefore, no policy is required.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Not applicable.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

Not applicable.

Issue: Other Hazardous or Fragile Areas

1991 Policy:

Freshwater swamps and marsh areas provide a filtering affect between upland areas and major water bodies such as the Perquimans River. They also can serve as water recharge areas. Because of their importance, it shall be Town policy to include marsh areas and freshwater swamps in a Conservation district to provide maximum protection to these

important natural resources. Uses that are allowed in CAMA Coastal Wetlands will be permitted in designated 404 Wetlands under the Corps of Engineers program. Land uses near man-made hazards and cultural/historic resources shall be permitted based on the Hertford Zoning Ordinance.

Implementation Strategies:

Hertford officials will have appropriate State or federal agencies identify all freshwater swamps and marsh areas. Town officials will revise Zoning Ordinance to include these areas in new Conservation district or zone in the Zoning Ordinance. Specific permitted uses will be included in the Zoning Ordinance. Town officials will apply for CAMA grant funds to provide assistance in amending the Zoning Ordinance during the 1992-93 budget year.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town did not have appropriate State or federal agencies identify all freshwater swamps and marsh areas, nor did it revise the Zoning Ordinance to include these areas in new Conservation district or zone in the Zoning Ordinance. Specific permitted uses are included in the Zoning Ordinance. The Town did not apply for CAMA grant funds to provide assistance in amending the Zoning Ordinance during the 1992-93 budget year, although the Town did amend the ordinance.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Hurricane and Flood Evacuation Needs

1991 Policy:

The Town of Hertford is covered by the Perquimans County Hurricane Evacuation Plan. Specific policies pertaining to Hurricane and Flood Evacuation will be discussed under "Storm Hazard Mitigation, Post-Disaster Recovery and Evacuation Plans."

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Not applicable.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

Not applicable.

Issue: Protection of Potable Water Supply

1991 Policy:

Town policy will be to guide development in a manner which minimizes any adverse impact on the Town's water supply.

Implementation Strategies:

Analyze existing land use regulations to determine impact on water supply. Control densities and septic tank utilization adjacent to groundwater supply. Analysis will be completed during the 1993-94 budget year. Evaluate any proposals for major groundwater using development (industry – to use Town water or to be served by private wells) to determine impact on Town's capacity to provide water to existing and future development.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town analyzed existing land use regulations to determine impact on water supply and control densities and septic tank utilization adjacent to groundwater supply. The Town evaluated proposals for major groundwater using development (industry – to use Town water or to be served by private wells) to determine impact on Town capacity to provide water to existing and future development.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Use of Package Treatment Plants

1991 Policy:

Connection to the Town's sewer system is mandatory inside the Town's corporate limits. Package treatment plants and septic tanks are permitted in the ETJ area

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Not applicable.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

Not applicable.

Issue: Stormwater Runoff

1991 Policy:

Stormwater runoff occurring outside the Town's planning area can damage use of the Town's major natural and economic resources (Perquimans River) and the Town will take steps to discourage excessive runoff, particularly from agricultural uses, in the surrounding area.

Implementation Strategies:

Work closely with Perquimans County in identifying the potential adverse impact associated with uncontrolled agricultural stormwater runoff. Encourage the County to participate in the Best Management Practices Program. Notify the State Land Quality staff when land disturbing activities of greater than one acre take place and encourage Perquimans County to do the same for activity adjacent to the Perquimans River.

Establish a vegetated buffer zone along river and creeks to manage stormwater runoff. An amendment to the Zoning Ordinance will be completed during the 1992-93 budget year.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town worked closely with Perquimans County in identifying the potential adverse impact associated with uncontrolled agricultural stormwater runoff; encouraged the County to participate in the Best Management Practices Program; and, notified the State Land Quality staff when land disturbing activities of greater than one acre take place and encourage Perquimans County to do the same for activity adjacent to the Perquimans River. CAMA established a 30' vegetated buffer zone along river and creeks to manage stormwater runoff.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Marina and Floating Home Development and Dry Stack Storage Facilities

1991 Policy:

Floating homes shall not be permitted inside the Town's area of responsibility. The Town's Zoning Ordinance shall be amended to not permit floating homes on any water bodies in Hertford's planning jurisdiction. Town officials wish to establish a marina along the Perquimans River as part of the Town's Waterfront Access Plan. As in the 1986 Plan, Town officials shall continue to have a policy to allow marinas which are developed in accordance with the Division of Coastal Management standards and guidelines. Dry stack boat storage will be permitted as a conditional use in the Zoning Ordinance.

Implementation Strategies:

Town officials shall seek funding sources to develop a public marina. Town officials shall work with any entity in the development of a marina with public access. Town officials will work with State and federal agencies in locating the most appropriate site for a marina that will have the least adverse impact on water quality and aquatic resources. Amend Town Zoning Ordinance to prohibit floating homes as a permanent

use in any water body. Amend the Zoning Ordinance to allow dry stack boat storage as a conditional use following review and approval. Zoning Ordinance amendments discussed above will be completed during the 1992-93 budget year.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

Town officials examined funding sources to develop a public marina and worked with on the development of a marina with public access, but did not get any funding. The Town created a strategic plan for marina development. The Town did not amend the Zoning Ordinance to prohibit floating homes as a permanent use in any water body and did not amend the Zoning Ordinance to allow dry stack boat storage as a conditional use following review and approval.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Industrial Impact on Fragile Areas

1991 Policy:

As discussed in earlier policy sections, Town officials will establish a Conservation district in the Town's Zoning Ordinance which will include fragile areas such as wet soils, flood prone areas, marsh areas and wooded swamps, school sites, water supply wells and town park sites. Having such fragile areas included in a Conservation zone will insure protection of these areas by controlling types of development in the Conservation district.

Implementation Strategies:

Town officials will revise the Town's Zoning Ordinance to include a Conservation district to protect fragile areas by limiting uses permitted and setback requirements. Town officials will apply for CAMA grant assistance to amend the Zoning Ordinance in the 1992-93 budget year.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town did not revise the Zoning Ordinance to include a Conservation district to protect fragile areas by limiting uses permitted and setback requirements and did not apply for CAMA grant assistance to amend the Zoning Ordinance in the 1992-93 budget year.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Development of Sound and Estuarine System Islands

1991 Policy:

None exist within the planning area; therefore no policy is needed.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Not applicable.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

Not applicable.

Issue: Restriction of Development in Areas Up to Five Feet Above Mean High Water

1991 Policy:

Hertford policy shall be to not restrict development in areas up to five feet above mean high water (the potential area of impact from rising sea level) other than as currently regulated by CAMA, zoning or the Flood Insurance Program.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Upland Excavation for Marina Basins

1991 Policy:

Upland excavation for marina basin development shall be permitted if all required federal, State and local permits are secured prior to excavation.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Damaging of Existing Marshes by Bulkhead Installation

1991 Policy:

Bulkheads will be constructed landward of significant marshland or marsh grass fringes following approval of all applicable State and federal permits.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

RESOURCE PRODUCTION AND MANAGEMENT:

Issue: Productive Agricultural Lands

1991 Policy:

Only a small portion of the Town's planning area is in active agricultural production. These lands are located in the area classified as "Rural" in the Town's Land Classification Plan. The Town has determined that adequate controls are in existence to protect this agricultural land; therefore, no specific policy statement is needed.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Not applicable.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

Not applicable.

Issue: Commercial Forest Land

1991 Policy:

Commercial forest areas do not exist in Hertford. No policy is needed.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Not applicable.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

Not applicable.

Issue: Potential Mineral Production Areas

1991 Policy:

Hertford contains no known mineral production areas. If such areas do exist, Town policy shall be to allow mining of such resources if such operations are consistent with the Zoning Ordinance and all applicable local, State and federal permits are secured prior to operations beginning.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Not applicable.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

Not applicable.

Issue: Commercial and Recreational Fishing

1991 Policy:

To protect the river's aesthetic and water quality and fisheries found in the area, Hertford policy shall be to do everything within its power to work with State, federal, and local agencies to maintain and improve water quality in the River to insure the river's continued used as a spawning and nursery area.

Implementation Strategies:

Town officials will encourage County officials as feasible to take action necessary to reduce non-point pollution (agriculture) of the river. Town officials will work with the Chamber of Commerce to actively promote the Perquimans River as a commercial and recreational fishing area. Establish vegetated buffer to control runoff which will in turn protect the water quality of fisheries.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

Hertford zoned the waterfront area in the Commerce Center to allow for marinas. Land in the Commerce Center was offered to the North Carolina Wildlife Commission for construction of a public boat ramp. The Town encouraged County officials as feasible to take action necessary to reduce non-point pollution (agriculture) of the river and worked with the Chamber of Commerce to actively promote the Perquimans River as a commercial and recreational fishing area. CAMA established a 30' vegetated buffer requirement to control runoff which will in turn protect the water quality of fisheries.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Off-Road Vehicles

1991 Policy:

Town officials will revise existing Town ordinances to include a nuisance ordinance that addresses the use of off-road vehicles inside the Town's area of responsibility. Town officials are concerned about noise. The nuisance ordinance will be prepared which allows the use of off-road vehicles under certain conditions to be determined by the Planning Board and Town Council following additional discussion of the issue.

Implementation Strategies:

The Town Manager will review existing ordinances and amend as required to address the use of off-road vehicles. Target date for preparation of the nuisance ordinance will be during the 1992-93 budget year.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town Manager did not review existing ordinances and amend as required to address the use of off-road vehicles. The Town did not prepare a nuisance ordinance during the 1992-93 budget year.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Residential, Commercial and Industrial Development

1991 Policy:

Local officials will continue to encourage residential, commercial and industrial development that is consistent with the Town's Zoning Ordinance.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Peat and Phosphate Mining

1991 Policy:

There are no known peat or phosphate mining sites inside Hertford's jurisdiction; therefore, no policy is required.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Not applicable.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

Not applicable.

ECONOMIC AND COMMUNITY DEVELOPMENT:

Issue: Community Attitude Toward Growth

1991 Policy:

Local officials will continue to support local growth in the form of residential, commercial and industrial development that will provide jobs and expand the existing tax base, and that is consistent with the Zoning Ordinance and the community's character.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Not applicable.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

Not applicable.

Issue: Types and Location of Industries Desired

1991 Policy:

Town officials will continue to encourage non-polluting industries to locate in or near Hertford.

Implementation Strategies:

Local officials will continue to work with the Chamber of Commerce in keeping current information packages available for industrial prospects. Local officials will work with State economic development officials in promoting Hertford as a good location for industrial development with emphasis on the charm and quality of life found in Hertford. Officials will encourage enhancement of the education level of the local labor pool to provide a better labor pool for existing and future industry.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town continued to work with the Chamber of Commerce in keeping current information packages available for industrial prospects, and worked with State economic development officials in promoting Hertford as a good location for industrial development with emphasis on the charm and quality of life found in Hertford. Officials encouraged enhancement of the education level of the local labor pool to provide a better labor pool for existing and future industry.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Local Commitment to Provide Services

1991 Policy:

Local officials will continue to work to provide the needed infrastructure to accommodate existing and future development.

Implementation Strategies:

Local officials will prepare a Community Facilities Plan to address all the funding requirements of future public improvements as soon as financially feasible. Town officials will apply for CAMA grant assistance in preparing the Community Facilities Plan during the 1992-93 funding cycle.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

Working jointly with Perquimans County and Winfall, Hertford is currently (2005-2006) participating in a regional water and sewer needs study.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Urban Growth Patterns Desired

1991 Policy:

Town officials will continue to work with downtown property owners, downtown businesses and the Chamber of Commerce to implement the Hertford Horizons Plan recommendations and the 1989 Waterfront Access Plan recommendation. Town officials will continue to use the Zoning Ordinance and Subdivision Regulations to create the urban growth patterns desired.

Implementation Strategies:

To improve the downtown area following the Hertford Horizons recommendations, the following items have been established as high priorities for implementation:

- Improve the appearance of existing store fronts adjacent grounds.
- Continue to work to provide additional downtown parking. Begin the planning and implementation of planting street trees in the downtown area during the five-year planning period.
- Plan for and provide improved street lighting in the downtown area during the five-year planning period.
- Work to improve signage in the downtown area to direct user to existing parking facilities.
- Begin the process of nominating the CBD and adjacent residential area as a National Register Historic District. Town officials will consider the feasibility of including in the 1991 Town Budget funds to prepare the necessary application for nomination.
- Local officials will consider including in the 1991 budget adequate funds to begin making additional improvements to Missing Mill Park and the municipal boat dock. Additional funds will be considered annually until improvements completed.
- Hertford Horizons Steering Committee, Hertford Town officials or Chamber of Commerce will investigate requirements to join Historic Albemarle Tour. Funds will be budgeted, if financially feasible, to join during the next one to three years.
- Waterfront Development Sub-Committee will investigate feasibility of purchasing waterfront property next to municipal Annex building property for expansion of parking area.
- Hertford Horizons or Town of Hertford will investigate joining the N.C. Historic Preservation Foundation and N.C. Downtown Development

Association as a means of gaining valuable information on promotion of historic area. The Historic Walking Tour brochure will be revised and printed in color if financially feasible.

-Town officials will review the financial feasibility of placing in reserve funds for the acquisition of waterfront property as it becomes available to make implementation of the Waterfront Access Plan possible.

-Waterfront Development Sub-Committee and/or Town officials will begin discussions with owners of oil company on relocation of oil company to another site. Town officials and/or sub-committee will work with the Main Street Program staff, League of Municipalities, Institute of Government, N.C. Downtown Development Association and Attorney General's office on feasible incentives to encourage relocation of the oil company from the waterfront to permit desired redevelopment as called for in the Waterfront Access Plan.

-Town officials will work with the DOT to have erected two attractive highway signs on U.S. 17 encouraging tourists to visit historic area in CBD and waterfront.

-With recent designation of Hertford as a Coastal Initiative Community, local officials will continue to work with State and other agencies to help implement the goals established in the Initiative Program application.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town generally implemented the Hertford Horizons Plan and also commissioned a detailed study and downtown improvements strategic plan in 2000 to continue to improve the Hertford downtown.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Redevelopment of Developed Areas Including relocation of Structures Due to Erosion

1991 Policy:

Hertford officials will continue to work to preserve the unique character of the CBD area and adjacent residential areas. The Town will also pursue both State and federal funds to redevelop the waterfront, CBD, and identified substandard housing areas. Since Hertford is not a coastal community, developed areas are not subject to erosion.

Implementation Strategies:

Town officials and local property owners and businesses will continue to implement recommendations from the Hertford Horizons Plan and Waterfront Access Plan. The Perquimans County Historic Sites Inventory will be used to guide redevelopment away from local structures of historic or architectural significance. Town officials will continue to apply for financial assistance to improve substandard housing areas.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town and local property owners and businesses continued to implement recommendations from the Hertford Horizons Plan and Waterfront Access Plan. The Perquimans County Historic Sites Inventory was used to guide redevelopment away from local structures of historic or architectural significance. The Town continued to apply for financial assistance to improve substandard housing areas.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Commitment to State and Federal Programs Including Erosion Control, Public Access, Highway Improvements, Port Facilities, Dredging and Military Facilities

1991 Policy:

Hertford officials have a policy to remain committed to erosion control programs through support of the State Sedimentation Control Act. Estuarine access has been and continues to be of great importance to local officials. Town officials will continue efforts to secure additional public funds to develop and improve access for public use and enjoyment. Hertford currently has two CAMA Shoreline Access Grant applications pending. The recent designation of Hertford as a Coastal Initiative Community will hopefully provide additional technical assistance in implementation of waterfront improvements. Highway improvements are considered a major factor in ensuring the continued economic growth of the area. Local officials will continue to include road improvement requests in the TIP plan on an as-needed basis. Port facilities do not exist in Hertford and no policy is needed. The Town has and will continue to support efforts to dredge areas along the

Perquimans River to provide safe access for commercial and recreational boating. Spoil will be placed in approved spoil areas.

Hertford does not have any military facilities within the community and no policy is necessary.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The County, Hertford, and Winfall applied for funding for projects through CDBG, the Rural Center, and the USDA, among others. Hertford used USDA funds for sewer improvements. The County and its towns are also receiving funds from the Federal Homeland Security Administration.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Channel Maintenance and Beach Nourishment Projects Including Financial Aid, Providing Spoil Areas or Providing Easements

1991 Policy:

Channel maintenance along the Perquimans River is very important to Hertford because of the positive impact on commercial and recreational boating. Continued maintenance of this waterway is a high priority for Town officials. Beach nourishment is not applicable to Hertford and no policy is necessary.

Implementation Strategies:

Town officials will continue to work with the Army Corps of Engineers and any other State and federal agencies to ensure continued dredging and maintenance of the river as needed to keep this facility open to navigation. Providing borrow or spoil areas and provision of easements for work will be determined on a case-by-case basis. Town officials will maintain contact with congressional representatives and federal officials as dredging or other channel maintenance operations are needed, and will continue to assist local users of the river as feasible and as needs and concerns for dredging or maintenance

are brought before local officials or officials determine that need for such assistance exists.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town continued to work with the Army Corps of Engineers and any other State and federal agencies to ensure continued maintenance of the river was evaluated as needed to keep this facility open to navigation.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Energy Facility Siting

1991 Policy:

A major energy facility locating in Hertford is considered unlikely during the planning period. Waste and nuclear energy facilities shall not be permitted in Hertford. Electrical generating facilities other than nuclear reactors shall be allowed as permitted by the Town Zoning Ordinance.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Inshore and Offshore Exploration or development Including refineries, Storage

1991 Policy:

Hertford officials are opposed to the development of refinery and storage facilities inside the Town's jurisdiction.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Tourism

1991 Policy:

Hertford policy on tourism shall be to continue efforts to promote Hertford as a small historic waterfront community.

Implementation Strategies:

Hertford officials will work with Archives and History to have the historic area placed on the National Register of Historic Places. Hertford officials will request that the State prepare an inventory of archaeological sites. Hertford officials will request that the Department of Transportation include street tree plantings when the widening of U.S. 17

takes place. Trees should be planted from the U.S. 17 bridge to the western Town limits and from the U.S. 17 Bypass to the entrance of the Newbold White House Site. Hertford officials will request that DOT place brown historic site signs of the U.S. 17 Bypass directing motorists to the Hertford historic area. Hertford officials will consider joining the Historic Albemarle Tour. Hertford officials will encourage the production of the color brochure of the historic area waking tour to replace the present walking tour brochure. Hertford officials will continue to encourage downtown and waterfront improvements. Town officials will work through the Coastal Initiative Program to implement waterfront revitalization plans to encourage more tourism in Hertford by way of the Perquimans River. The Town will continue efforts to establish overnight lodging facilities to serve visitors to the community.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town worked with Archives and History to have the historic area placed on the National Register of Historic Places. Hertford requested that the State prepare an inventory of archaeological sites. Hertford requested that the Department of Transportation include street tree plantings when the widening of U.S. 17 takes place. Hertford officials requested that DOT place brown historic site signs of the U.S. 17 Bypass directing motorists to the Hertford historic area. Hertford joined the Historic Albemarle Tour and encouraged the production of a color brochure of the historic area waking tour to replace the present walking tour brochure. Hertford continued to encourage downtown and waterfront improvements. Town officials worked through the Coastal Initiative Program to implement waterfront revitalization plans to encourage more tourism in Hertford by way of the Perquimans River. The Town continued efforts to establish overnight lodging facilities to serve visitors to the community.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Coastal and Estuarine Water Access

1991 Policy:

Hertford policy shall continue to be to make every effort to improve existing waterfront access and to provide as much additional waterfront access as financially feasible while being sensitive to the impact such access has on the water quality of the Perquimans River and Castleton Creek.

Implementation Strategies:

Hertford officials will continue to work on implementation of the 1989 Waterfront Development and Access Plan which includes upgrading Missing Mill Park and providing more and better access to the water. Hertford officials will continue to pursue financial assistance from applicable State and federal agencies on the implementation of waterfront access such as CAMA Access funds or Land and Water Conservation Funds.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

The Town continued to work on implementation of the 1989 Waterfront Development and Access Plan which includes upgrading Missing Mill Park and providing more and better access to the water. Hertford continued to pursue financial assistance from applicable State and federal agencies on the implementation of waterfront access such as CAMA Access funds or Land and Water Conservation Funds.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Issue: Types, Density, Location, Units per Acre of Anticipated Residential and Industrial Development

1991 Policy:

Hertford officials will continue to use the Hertford Zoning Ordinance to determine location and units per acre of future residential development. Residential development will not be permitted in areas with hydric soils as identified in the County detail soils report.

Implementation Strategies:

None cited.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

Not applicable.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

STORM HAZARD MITIGATION, POST DISASTER RECOVERY AND EVACUATION PLANS:

Issue: Storm Hazard Mitigation and Post-Disaster Reconstruction Policies with Composite Hazard Map

1991 Policy:

The Town of Hertford will continue to control development in the AEC's and flood prone areas to protect the health, safety and welfare of the citizens of Hertford. The Town of Hertford will continue to cooperate and work in conjunction with the County's Emergency Management plans and policies to guide post-disaster repair and reconstruction activities.

Implementation Strategies:

The Zoning Ordinance will be revised to establish a Conservation District along flood plains and other areas subject to flooding, with development limited to water related uses and greenway uses. Continue to regulate development in the flood prone areas by vigorously enforcing the existing zoning and subdivision regulations and the Building Code and by establishment of a vegetated buffer area. Review and update zoning and subdivision ordinances to insure that all land within the Town's jurisdiction will continue to be adequately regulated against hurricane/storm hazards. Continue to cooperate with the Perquimans County Emergency Management Agency and encourage the completion of a Disaster Relief and Assistance Plan. Continue to use local forces to identify and remove wind-vulnerable trees and vegetation and conduct immediate cleanup and debris removal operations following a hurricane.

Consider the formation of a Recovery Task Force to support the efforts of the County Control Group. The Task Force could include:

- Mayor and Mayor Pro-Tem
- Planning Board Chairman and Vice Chairman
- Public Works Supervisor
- Member of fire and rescue squads

- Town engineer and planner

The purpose of this Task Force would be to review damage assessment reports following a hurricane and determine if supplemental repair and reconstruction policies and programs are necessary to protect the health, safety and welfare of the Hertford community. The Task Force could consider the need for temporary development moratorium, revised land use regulations and additional construction standards for repair and reconstruction.

Consider establishing the following schedule or priority system for post-disaster repair and reconstruction:

- First Priority: Replacement of essential public services such as electricity, water, sewer, telephone, streets and bridges.
- Second Priority: Minor repairs.
- Third Priority: Major repairs.
- Fourth Priority: New development.

Evaluate the structural integrity of the elevated storage tank located near the wastewater treatment plant. Assess the potential damage to the wastewater treatment plant as well as the impact of the loss of water supply should the tank be damaged by high winds.

Consistency of Existing Land Use and Development Ordinances with Policy:

Existing land use and development ordinances, procedures, and/or rules are deemed consistent with the Town's stated policy.

Adoption of Implementation Strategies by Town Council:

Hertford, Winfall, and Perquimans County developed a multi-jurisdictional Hazard Mitigation Plan in 2005.

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

The Town's stated policy is deemed effective in creating desired land use patterns and protecting natural systems.

Chapter IX: Plan for the Future

A. Introduction

The “Plan for the Future” sets a course of action for Perquimans County, Hertford, and Winfall to achieve their vision. This element has three components: land use and development goals; policies; and, future land use maps. As a whole, the plan sets out the strategies, actions, and programs the County and its towns will implement to achieve goals, and it provides a roadmap for future land use and development in the unincorporated parts of the County and within the towns.

The policies and the future land use maps address the Coastal Resources Commission’s (CRC) 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 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. The sixth, Local Areas of Concern, address local planning and development goals.

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

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

- Providing for public water access to all segments of the community including persons with disabilities
- Development of comprehensive policies that provide access opportunities for the public along the shoreline within the planning jurisdiction

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.)

- Development of local development policies that balance protection of natural resources and fragile areas with economic development
- Development of policies that provide clear direction to assist local decision making and consistency findings for zoning, divisions of land, and public and private projects
- Compatibility of County land use regulations in future municipal utility service areas such as the Hertford extraterritorial jurisdiction (ETJ)
- Development of land use and development policies that minimize adverse impacts on Areas of Environmental Concern (AEC) and which support overall CAMA goals

Infrastructure Carrying Capacity and Provision of Public Facilities and Services (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.)

- Establishment of service area boundaries for existing and future infrastructure
- Development of infrastructure service policies and criteria consistent with future land needs projections
- Correlating future land use map categories with existing and planned infrastructure such as water, sewer, and transportation facilities
- Ensuring that public infrastructure systems are appropriately sized, located, and managed so that the quality and productivity of AEC and other fragile areas are protected or restored

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

- Development of policies that minimize threats to life, property, and natural resources resulting from land development located in or adjacent to hazard areas such as those subject to erosion, high winds, storm surge, flooding, or sea level rise
- Development of location, density, and intensity criteria for new, existing development, and redevelopment (including public facilities and infrastructure) so as to avoid or better withstand natural hazards
- Ensuring that existing and planned development is coordinated with existing and planned evacuation infrastructure

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

- Development of policies to prevent or control non-point source discharges (sewage and storm water) such as impervious surface limits, vegetated riparian buffers, wetlands protection
- Establishment of policies and land use categories for protecting open shell fishing waters and restoring closed shell fishing waters
- Adoption of policies for coastal waters within the planning jurisdiction to help ensure that water quality is maintained if not impaired and improved if impaired

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

- Identify and address local concerns and issues, such as cultural and historical areas, scenic areas, economic development, or general health and human service needs

The Local Areas of Concern grouping is intended to incorporate specific issues, concerns, and opportunities that are identified by Perquimans County and/or Hertford and Winfall. Local Areas of Concern are:

- a. Commercial and Industrial Development**
- b. Community Appearance and Downtown Revitalization**
- c. Perquimans River, Little River, Yeopim River, Albemarle Sound, and Connecting Creek and Tributary Shorelines**
- d. Development Design Standards**
- e. Federal Properties and Programs**
- f. Growth Management**
- g. Intergovernmental Relations**
- h. Public Safety**
- i. Redevelopment**
- j. Residential Development**
- k. Septic Tank Use**
- l. Solid Waste Management**
- m. Storm Water Management**
- n. Transportation**

Goal(s) and policies were developed for each State management topic and Local Areas of Concern issue listed above. Policies were developed recognizing State management goals, planning objectives, and land use plan requirements.

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). Perquimans County and its towns 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.

For the purposes of the CAMA land use plan update, policies are a consistent set of principles and decision guidelines and/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 some 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(s).

The policies will guide both day-to-day and long-range decisions and actions of the local government. They may assist as the County and its towns consider requests to approve development proposals (or a zoning decision), or they may guide long-range planning. They may also provide the foundation for the specific actions that the County and its towns 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.

Perquimans County and its towns will use goals and policies statements for guidance when reviewing applications for consistency with the land use plan and as specific implementing actions are undertaken. Goals and policies provide direction, but are not laws. Moreover, ordinances, or ordinance amendments, that promote the accomplishment of goals and furtherance of stated policies have the force of law.

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.

Consider: To think carefully about; reflect upon. To apply one’s mind to something in order to increase one’s knowledge or understanding of it or to reach a decision about it.

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.

C. Goals and Policies

1. Public Access (to Public Trust Waters) (PA) Goal(s) and Policies

Goal(s): Provide adequate public access opportunities to public trust waters and realize eco-tourism benefits while maintaining natural systems.

Policies:

PA #1: Perquimans County, Hertford, and Winfall will ensure a variety of opportunities for access to public trust waters to all segments of the community, including disabled people.

PA #2: Perquimans County, Hertford, and Winfall support the State's shoreline access policies set forth in NCAC Chapter 15A, subchapter 7M.

PA#3: Perquimans County, Hertford, and Winfall will 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, including disabled people.

PA #4: Perquimans County, Hertford, and Winfall support acquisition, in accordance with an adopted access plan and funding availability, rights-of-way, fee simple title, and /or easements to allow public access along the navigable waterways.

PA #5: Perquimans County, and Hertford and Winfall as applicable, shall require residential waterfront subdivisions containing interior lots to reserve water access for owners of interior lots. The County and its towns shall, as applicable, require proposed major residential waterfront developments to develop and submit a plan for public water access as a part of the development review process.

PA #6: Perquimans County, Hertford, and Winfall will investigate the viability of eco-tourism development along waterfront areas, given that eco-tourism is a growing, environmentally friendly industry that takes advantage of existing environmental characteristics such as creeks, lakes, and rivers to promote recreational activities and attract visitors. The County and its towns support efforts to explore eco-tourism alternatives such as the development of creek trails that could be used for recreational purposes.

PA #7: Perquimans County, Hertford, and Winfall shall continue to provide for the diverse recreational needs of the permanent and seasonal populations by supporting the design and construction of waterfront areas in a manner that balances water access needs with the protection of fragile natural resources.

PA #8: Perquimans County, Hertford, and Winfall support the provision of permanent moorings in the area to provide safe and efficient docking and boat storage opportunities to local residents.

PA #9: Perquimans County, Hertford, and Winfall support the development of marinas, preferably updated marinas, to enhance access to public trust waters.

PA #10: Perquimans County will continue to provide land in the Commerce Centre for a public access site.

PA#11: Winfall will continue to provide a public access site at the Town Hall property.

PA#12: Hertford will continue to provide public access sites at the Municipal Building, Missing Mill Park, and at the Hertford Housing Authority site. Hertford will continue to develop a waterfront plan and seek funding to implement the plan.

PA#13: Perquimans County, Hertford, and Winfall support efforts to develop a greenways/blue ways trail and amenities in and through the County and its towns.

PA#14: Perquimans County, Hertford, and Winfall will seek opportunities, including memorandums of understanding, easements, and deeded property, for public access(s) and will study ordinance amendments to include provision of public water accesses within proposed developments as appropriate and practicable.

2. Land Use Compatibility (LUC) Goal(s) and Policies

Goals(s): 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. Balance growth and development and conservation/preservation of natural resources. Promote land use and public infrastructure development that is compatible with land suitability as well as capabilities to provide requisite public services. Promote land use and land development compatible with the functional purposes of Areas of Environmental Concern.

Policies:

LUC #1: Perquimans County will continue its voluntary agricultural district program (approved in 2009) for the purpose of the preservation of prime farmlands.

LUC #2: Perquimans County, Hertford, and Winfall, as part of a subdivision request, shall review the land suitability analysis map included in this plan as a source of information for determining the general suitability of land for the proposed development. Because the land suitability analysis map is a static illustration of suitability based upon numerous factors including proximity to developed land and the presence of infrastructure, consideration will be given to conditions which have changed since the

time of map preparation that may alter the suitability rating delineated on the map. Land which the County and its towns have determined, either through their own investigations or the investigations of other public agencies, to be unsuitable for development because of flooding, poor drainage, steep slopes, poor soil conditions and other such physical features which may endanger health, life, or property or necessitate the excessive expenditure of public funds for the provision and/or maintenance of public services shall not be approved for subdivision unless methods are formulated by the developer for mitigating the problems created by the subdivision of such land.

LUC #3: Perquimans County, Hertford, and Winfall shall encourage cluster- or traditional-type residential subdivision development throughout their jurisdictions in order to preserve farmland and rural open space.

LUC #4: Perquimans County, Hertford, and Winfall shall encourage land use and development activities that provide a balance between economic development needs and protection of natural resources and fragile environments.

LUC #5: Perquimans County, Hertford, and Winfall support growth and development at the densities and intensities specified in the future land use map(s) land classifications as delineated in this land use plan.

LUC #6: Perquimans County, Hertford, and Winfall support CAMA Use Standards for coastal wetlands.

LUC #7: Perquimans County, Hertford, and Winfall will allow only commercial and industrial uses that are water dependent and which cannot function elsewhere or are supportive of commercial fishing in conservation-classified areas. Examples of such uses would include but not necessarily be limited to commercial fishing and fish processing, marinas consistent with the policies of this plan, boat repair and construction facilities, any business dependent upon water as a resource, and restaurants that do not extend into or over estuarine waters and/or public trust waters. All uses must be consistent with established zoning.

LUC #8: Perquimans County, Hertford, and Winfall shall require industrial development that occurs within their planning jurisdictions to use public utilities if available. Utility systems for industrial development proposed outside of the current service areas will be reviewed and approved on a case by case basis.

LUC #9: Perquimans County, Hertford, and Winfall will not permit industries which are noxious by reason of the emission of smoke, odor, dust, glare, noise, and vibrations, and those which deal primarily in hazardous products such as explosives.

LUC #10: Perquimans County, Hertford, and Winfall do not support industrial development and/or industrial zoning that will infringe on established residential development. When reviewing proposals for new industrial development of industrial

zoning, the County and Towns will ensure that the proposals are compatible with surrounding land uses and that identified adverse impacts are mitigated.

LUC #11: Perquimans County, Hertford, and Winfall support subdivision developments and planned unit developments that are in harmony with adjoining land uses and will require such developments to provide buffering between dissimilar uses and will require building setbacks that are comparable to those of the use located on the adjacent properties.

LUC #12: Perquimans County, Hertford, and Winfall will coordinate all development activity with appropriate Regional Health Department and State regulatory personnel.

LUC #13: Perquimans County, Hertford, and Winfall will cooperate with the U.S. Army Corps of Engineers in the regulation/ enforcement of the 404 wetlands permit process.

LUC #14: Perquimans County, Hertford, and Winfall will encourage land use proposals which will have no negative impact on historic, cultural and/or archaeological resources in the County or its towns. Proposals shall be reviewed through applicable local review processes, as well as through the Historic Preservation Commission and the State Historic Preservation Office.

LUC #15: Perquimans County, Hertford, and Winfall support citizens' awareness programs and public educational opportunities for community historic and natural resources, including the conservation, preservation, and maintenance efforts.

LUC #16: Perquimans County, Hertford, and Winfall supports planned residential developments that are in harmony with adjoining single-family land uses and will require that the two-family and multi-family components of such developments, if proposed, are located more to the interior of the development rather than on the periphery.

LUC #17: Perquimans County, Hertford, and Winfall will prohibit floating homes or watercraft with any long-term occupancy.

LUC #18: Perquimans County, Hertford, and Winfall shall require that the developer of major subdivisions located adjacent to U.S. 17 or primary or secondary NC Highways, railroads, industrial or commercial developments, or watercourses, establish and maintain a continuous and uninterrupted buffer strip in addition to the normal lot depth as required by the respective locality's zoning ordinance.

LUC #19: Perquimans County, Hertford, and Winfall will work to ensure future public improvements are planned and financed using fiscal mechanisms which avoid adverse tax impacts on the owners of prime forestry lands where such lands will not directly benefit from the planned public improvements.

LUC #20: Perquimans County shall continue to promote use-value assessment as a means of preserving the forestry resource base and encourage owners of parcels of 10 acres or more to apply for use-value assessment.

LUC #21: Perquimans County, Hertford, and Winfall encourage replanting of areas cleared for timber.

LUC #22: Perquimans County, Hertford, and Winfall will manage and direct growth and development in balance with available support services.

LUC #23: Perquimans County, Hertford, and Winfall shall continue to work cooperatively in identifying suitable sites for economic development and marketing them to expanding firms that would generate new job opportunities for local residents.

LUC #24: Perquimans County, Hertford, and Winfall will support the continuing development of the Commerce Centre which offers the area an opportunity for attracting new industry and future economic development.

LUC #25: Perquimans County, Hertford, and Winfall will encourage growth to occur and expand in geographical areas in and around the Towns as portrayed in the respective future land use maps contained in this plan.

LUC #26: Perquimans County, Hertford, and Winfall will support the conversion of businesses to residences in appropriate areas of Hertford and Winfall.

LUC #27: Perquimans County, Hertford, and Winfall will support subdivision designs for new residential developments that maintain and continue the character of existing development along public roads where such development is proposed.

LUC #28: Perquimans County and Winfall shall establish and Hertford will continue to impose minimum landscaping and screening requirements that provide a visual buffer between parking and loading areas and public streets; a visual buffer between parking and loading areas and adjoining residential land uses; screening of solid waste collection dumpsters; and screening between certain incompatible uses.

LUC #29: Perquimans County and Winfall shall establish and Hertford will continue to impose appearance and operational standards for nonresidential developments located within designated highway corridors to ensure no undue interference with through vehicular traffic in gaining access to proposed developments to the highway, to require architectural design compatibility within the proposed developments, and to provide landscaping and screening to buffer adjoining residentially used or zoned properties.

LUC #30: Perquimans County, Hertford, and Winfall shall establish and/or maintain development standards (such as limitations on the hours of operation, distance/separation requirements, buffering/screening requirements, etc.) for special and/or conditional uses in order to assist with mitigating potential negative impacts.

LUC #31: Perquimans County and Winfall shall require and Hertford will continue to require commercial developments and shopping centers to comply with access, screening and buffering, landscaping, setback, building scale, architectural design, outdoor lighting, outdoor storage/activity, and signage requirements to help minimize impacts to public streets and roads and views, adjacent properties, and adjacent residentially zoned areas.

LUC #32: Perquimans County, Hertford, and Winfall support the development of subdivisions with lots fronting on internal streets (as opposed to State road frontage lot subdivisions) and will encourage, as appropriate, the creation of cluster- or traditional-type subdivision developments as a means of creating pedestrian friendly neighborhoods or walk able communities that may be comprised of a variety of housing types and densities, and designed to potentially include a mix of uses such as retail, professional and personal services, recreation, formal and informal open spaces, and public and civic uses. The County and its towns support the development of neighborhoods with clearly delineated centers and edges, limited in size, with interconnected streets and blocks that are reasonably short to promote pedestrian activity.

LUC #33: Perquimans County, Hertford, and Winfall support the use of zoning and subdivision ordinances as the primary regulatory tools to ensure desired land use and development patterns are achieved and support lower density residential development (typically one acre unit per acre) in agricultural zones.

3. Infrastructure Carrying Capacity (ICC) Goal(s) and Policies

Goal(s): 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. Promote land use and infrastructure development that is compatible with land suitability as well as compatibilities to provide requisite public services.

Policies:

ICC #1: Perquimans County, Hertford, and Winfall shall only approve development where adequate public or approved private facilities and service are available, including water, sewage disposal, roads, etc.

ICC #2: Perquimans County, Hertford, and Winfall will cooperate in the establishment of service area boundaries for existing and future water and sewer infrastructure within the County.

ICC #3: Perquimans County, Hertford, and Winfall will ensure that infrastructure systems are correlated with population projections, future land needs, and the future land use map(s) classifications as delineated in this land use plan.

ICC #4: Perquimans County and Winfall support the construction of package treatment plants which are approved and permitted by the State Division of Environmental

Management in areas located outside of utility service areas. If any package plants are approved, a specific contingency plan specifying how ongoing private operation and maintenance of the plant will be provided, and detailing provisions for assumptions of the plant into a public system should the private operation fail or management of the system not meet the conditions of the State permit must be submitted and approved. However, the County and its towns oppose the installation of package treatment plants and septic tanks or discharge of waste in any areas classified as coastal wetlands, freshwater (404) wetlands, or natural heritage areas.

ICC #5: Perquimans County, Hertford, and Winfall shall require any application for a wastewater disposal system which is to be located in the planning jurisdiction to be coordinated with existing facilities. The County and its towns will work together to assure that a waste permit is not issued without a corresponding zoning permit.

ICC #6: Perquimans County, Hertford, and Winfall will continue to work together to provide services where needed, and as feasible, for new development.

ICC #7: Perquimans County, Hertford, and Winfall, as appropriate, will explore various options for improving the sewage treatment problems that exist in developed areas.

ICC #8: Perquimans County, Hertford, and Winfall support the extension of infrastructure into desired growth areas as necessary and financially feasible.

ICC #9: Depending upon water availability and septic capability, subdivisions may develop outside of the currently developed areas served by public utilities. The location and intensity of commercial uses should be guided by the availability of public services, accessibility, and be in compliance with development standards.

ICC#10: Perquimans County, Hertford, and Winfall will evaluate the potential impacts of development proposals according to their respective future land use maps categories of this land use plan update with existing and planned infrastructure capabilities by reviewing proposals with appropriate water and sewer plans, consulting appropriate regulatory agencies, requiring, as appropriate, review of proposals by licensed engineers, and through the site plan review process.

4. Natural Hazard Area (NHA) Goal(s) and Policies

Goal(s): 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. In general, conserve and maintain areas that help protect natural hazard areas.

Policies:

NHA #1: Perquimans County, Hertford, and Winfall support conserving the natural resources and fragile environments that provide protection from natural hazards such as floods and storm surges.

NHA #2: Perquimans County, Hertford, and Winfall support minimizing the threat to life, property, and natural resources that may result from land use and development within or adjacent to identified natural hazard areas.

NHA #3: Perquimans County, Hertford, and Winfall will continue to coordinate all development within the special flood hazard area with the Planning and Inspections Department, NC Division of Coastal Management, FEMA, and the U.S. Army Corps of Engineers.

NHA #4: Perquimans County, Hertford, and Winfall will ensure that evacuation plans and needs are addressed as new development proposals are reviewed for approval.

NHA #5: Perquimans County, Hertford, and Winfall will ensure that new development is protected from flood hazard through the administration of the flood damage prevention ordinances and continued participation in the National Flood Insurance Program.

NHA #6: Perquimans County, Hertford, and Winfall shall implement the goals and recommended mitigation measures of the Perquimans County Multi-jurisdictional Hazard Mitigation Plan. The hazard mitigation goals and mitigation measures are included in APPENDIX 9.

NHA #7: Perquimans County, Hertford, and Winfall will continue to support and enforce the NC State Building Code, particularly requirements of construction standards to meet wind-resistive factors such as design wind velocity. The County also supports provisions in the State Building Code requiring tie-downs for mobile homes, which help resist wind damage.

NHA #8: Perquimans County, Hertford, and Winfall shall maintain flood damage prevention requirements that:

- 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;
- control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;
- control 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.

NHA #9: Perquimans County, Hertford, and Winfall support the CAMA development permit process for estuarine shoreline areas and the requisite development standards which encourage both shoreline stabilization and facilitation of proper drainage.

NHA #10: Perquimans County, Hertford, and Winfall shall discourage development, especially higher density residential development, in its most hazardous areas (storm surge areas, areas prone to repetitive flooding, etc.) so as to decrease the number of people living in areas that may need evacuating. In Perquimans County, higher density development includes multi-family and lot sizes of 12,000 square feet or less. The Hertford higher density development includes lot sizes of 6,000 square feet or less and multi-family. In Winfall, there is only one residential lot size which is single-family. Winfall considers multi-family development, which requires a special use permit, to be high density.

NHA #11: Perquimans County, Hertford, and Winfall, based upon the availability of Federal and State grant funds, will utilize land acquisition programs in the most hazardous areas to minimize future damage and loss of life.

NHA #12: Perquimans County, Hertford, and Winfall will allow development and redevelopment within special flood hazard areas subject to the provisions and requirements of the National Flood Insurance Program, CAMA regulations, and the County's flood plain ordinance.

NHA #13: Perquimans County, Hertford, and Winfall will periodically review and update as necessary the Perquimans County Multi-jurisdictional Hazard Mitigation Plan that addresses the localities' natural hazards and meets the requirements of the NC Division of Emergency Management and the Federal Emergency Management Agency.

5. Water Quality (WQ) Goal(s) and Policies

Goal(s): Maintain, protect, and where practicable, enhance water quality of public trust waters.

Policies:

WQ #1: Perquimans County, Hertford, and Winfall will continue to support the use of Best Management Practice (BMP) on agricultural properties and urban developments in order to reduce sedimentation and pollution run-off into Nutrient Sensitive Waters.

WQ #2: Perquimans County, Hertford, and Winfall shall require, as appropriate, subdivision developments to control and treat the storm water runoff generated by a 1.5-inch rain event; and that Hertford and Winfall shall require all buildings or related structures within waterfront subdivisions be set back 50 feet from the shoreline.

WQ #3: Perquimans County, Hertford, and Winfall will coordinate the approval of local land development projects with applicable State agencies to ensure compliance with regulations to prevent or control non-point source discharges.

WQ #4: Perquimans County, Hertford, and Winfall support the establishment of land use categories that maximize the protection of open shell fishing waters and that assist with the restoration of any closed shell fishing waters.

WQ #5: Perquimans County, Hertford, and Winfall shall establish and/or maintain requirements that, to the extent practicable, all development shall conform to the natural contours of the land and natural and pre-existing man-made drainage ways shall remain undisturbed. All developments shall be provided with a drainage system that is adequate to prevent the undue retention of surface water on the development site. No surface water may be channeled or directed into a sanitary sewer. Whenever practicable, the drainage system of a development shall coordinate with and connect to the drainage systems or drainage ways on surrounding properties or roads. All developments shall be constructed and maintained so that adjacent properties are not unreasonably burdened with surface waters as a result of such developments.

WQ #6: Perquimans County, Hertford, and Winfall will ensure that the density and intensity of land development adjacent to ground water supplies shall be in accordance with the density and intensity characteristics of the future land use designations contained in this land use plan.

WQ #7: Perquimans County, Hertford, and Winfall shall require that all impervious surfaces in new developments, except for roads, paths, and water-dependent structures, be located landward of all perennial and intermittent surface waters in accordance with locally adopted best management practices. The locations of impervious surfaces in new developments shall be subject to the more or less stringent provisions of any applicable State law.

WQ #8: Perquimans County, Hertford, and Winfall support State efforts to reduce nutrient loading in the surrounding surface waters, which include consideration of more stringent restrictions on nitrogen discharges and enhanced regulations controlling the disposal of animal wastes.

WQ #9: Because of water quality concerns, only limited construction will be allowed within a landward buffer (provided in accordance with locally adopted best management practices) of the mean high water mark on subdivision lots which adjoin the Little River, Perquimans River, Yeopim River, the Albemarle Sound, or their impounded waters and tributaries. The landward buffer shall not contain any buildings or related structure, such as decks, paved patios, or utility sheds. The primary use of the area is the growth of natural vegetation such as a grassed lawn. The only structure permissible within the waterfront set-back area is an elevated pier of wood construction constructed to provide access to the water. On-site septic systems and nitrification lines are also prohibited from the required setback area. The locations of buildings or related structures, such as decks,

paved patios, or utility sheds in new developments shall be subject to the more or less stringent provisions of any applicable State law.

WQ #10: Perquimans County, Hertford, and Winfall, in order to minimize sedimentation and erosion, shall require that all developments maintain a vegetated buffer along each side of a stream or natural drainage way. The vegetated buffer shall remain undisturbed except as may be necessary to accommodate roads, utilities and their easements, pedestrian paths and their easements and approved water-dependent uses such as marinas, docks, piers, boat ramps and bridges. In cases in which the buffer may not be practical or desirable, the Board of Adjustment may consider a special exception if it finds that an acceptable alternative means of handling storm water can be achieved without maintaining a vegetated buffer.

6. Areas of Environmental Concern (AEC) Goal(s) and Policies

Goal(s): Ensure land use and development in Areas of Environmental Concern (AEC) is in compliance with applicable State and Federal laws.

Policies:

AEC #1: Perquimans County, Hertford, and Winfall support State and Federal law regarding land use and development in Areas of Environmental Concern.

AEC #2: Perquimans County, Hertford, and Winfall will permit, within AEC, those land uses which conform to the general use standards of the North Carolina Administrative Code (15 NCAC 7H) for development within the estuarine system. Generally, only those uses which are water-dependent will be permitted in coastal wetlands, estuarine waters, and public trust areas. Examples of permitted water-dependent uses include utility easements, docks, boat ramps, bulkheads, dredging, bridges and bridge approaches, revetments, culverts, groins, navigational aids, mooring pilings, navigational channels, simple access channels, and drainage ditches.

AEC #3: Perquimans County, Hertford, and Winfall will restrict development in estuarine waters and public trust waters to those uses which will not cause significant degradation of the natural function nor condition of the estuarine waters and public trust areas.

AEC #4: Perquimans County, Hertford, and Winfall will make comments as appropriate concerning the overall interests of residents on CAMA dredge and fill permits for projects which would be detrimental to rivers and wetlands.

AEC #5: Perquimans County, Hertford, and Winfall will allow the construction of dry stack storage facilities for boats associated with or independent of marinas.

AEC #6: Perquimans County, Hertford, and Winfall will ensure water dependent development activities such as marinas including upland marinas occur in compliance

with local, State and Federal regulations and to discourage non-water dependent uses especially floating home developments in public trust waters.

AEC #7: Perquimans County, Hertford, and Winfall will restrict, through zoning ordinance and subdivision regulations, land uses in coastal wetlands to those that support wetlands conservation and which do not adversely affect their delicate balance.

AEC #8: Perquimans County, Hertford, and Winfall support bulkhead installation that is conducted using appropriate construction and resource protection techniques. Where installation is required, development plans should consider every feasible alternative to minimize the damage to existing marshes.

AEC #9: Perquimans County, Hertford, and Winfall shall require industries to use the best available technology to avoid pollution of air or water during both construction and operation of new industrial facilities.

7. Local Areas of Concern (LAC) Goal(s) and Policies

a. Commercial and Industrial Development

Goal(s): Sustainable commercial and industrial development (including eco-tourism) in areas where such activities already occur or can be reasonably accommodated by public facilities and natural systems and to encourage local support and patronage of County businesses.

Policies:

LAC #1: Perquimans County, Hertford, and Winfall will: encourage local support and patronage for local 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 its towns and to assist existing businesses and industry.

LAC #2: Perquimans County, in conjunction with NCDOT, will study amendments to the highway corridor overlay district to provide for urban/rural transitional areas and to establish and map a uniform corridor area (i.e. Distance from centerline rather than distance from right of way boundary).

LAC #3: Perquimans County will identify and map the boundaries of the highway commercial zoning district along U.S. 17.

LAC #4: Perquimans County, Hertford, and Winfall will support and pursue funding opportunities of tourism events and activities such as festivals, markets and recreational activities. The County and Towns should take advantage of the historical resources of the area to promote tourism year round. The County and Towns will also support local and regional interest groups in the promotion of tourism.

LAC #5: Perquimans County, Hertford, and Winfall will continue to work toward a diversified economy including industry, tourism, and improved technical educational opportunities.

LAC #6: Perquimans County, Hertford, and Winfall will study and perhaps use a low interest loan pool or rehabilitation grant program to encourage downtown business owners to rehabilitate their establishments.

b. Community Appearance and Downtown Revitalization

Goal(s): Remain aesthetically pleasing while maintaining rural atmosphere, open spaces, and natural areas and continuing efforts to revitalize commercial and residential areas in the towns.

Policies:

LAC #7: Perquimans County, Hertford, and Winfall will continue to enforce and promote commercial and industrial building and development design guidelines and standards in the Commerce Centre (through zoning and restrictive covenants) and consider developing such guidelines and standards for use in other areas.

LAC #8: Perquimans County, Hertford, and Winfall will use the County website and may develop a quarterly newsletter to disseminate information to residents and visitors concerning community appearance (litter, signage, design guidelines, etc.) related issues.

c. Perquimans River, Little River, Yeopim River, and Albemarle Sound and Connecting Creek and Tributary Shorelines

Goal(s): Preserve, protect, and enhance the Perquimans River, Little River, Yeopim River, and Albemarle Sound shorelines 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 while the area benefits from eco-tourism opportunities.

Policies:

LAC #9: Perquimans County, Hertford, and Winfall 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 Perquimans River, Little River, Yeopim River, and Albemarle Sound. Perquimans County and its towns support continued management of these shorelines and their attendant wetlands and shores to protect and preserve the natural resources of the water and shorelines, relying primarily on the Division of Coastal Management's permitting and enforcement program of the State's Coastal Area Management Act (CAMA), the

Dredge and Fill Law, and the Federal Coastal Zone Management Act of 1972 in designated areas of Areas of Environmental Concern (AEC). Perquimans County and its towns will review, comment, advocate, or oppose any regulations or programs that may affect the regulation of river and sound waters and/or shorelines. In their respective zoning ordinances, Perquimans County and its towns 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 as commercial and industrial uses should be included when proposed in or near residential areas or adjacent thereto; and, that any such approval must be consistent with LAC #30, page IX-22.

LAC #10: Perquimans County, Hertford, and Winfall will evaluate (during the development review process) the potential impacts of existing and planned development on existing and planned evacuation infrastructure.

LAC #11: Perquimans County, Hertford, and Winfall will work to adopt and apply development policies to require additional setback areas and landscaping and vegetative buffers that balance protection of natural resources and fragile areas with residential and economic (commercial and industrial) development and 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.

LAC #12: Perquimans County, Hertford, and Winfall will use the County website and may develop a quarterly newsletter to disseminate information to residents and visitors concerning Perquimans River, Little River, Yeopim River, Albemarle Sound, and connecting creek and tributary shorelines use and related issues.

LAC #13: Perquimans County, Hertford, and Winfall support conserving the natural and cultural resources for recreational enjoyment.

LAC #14: Perquimans County, Hertford, and Winfall support the development of a blue way, greenway and bike path network through the area.

d. Development Design Standards

Goal(s): Utilize development design standards to achieve desired general physical appearance and form.

Policies:

LAC #15: Perquimans County, Hertford, and Winfall will continue to enforce and promote commercial and industrial building and development design guidelines and standards in the Commerce Centre (through zoning and restrictive covenants) and

consider developing such guidelines and standards for use in other commercial areas as well as considering development design standards for residential development.

LAC #16: Perquimans County, Hertford, and Winfall will require new facilities to be located on land having stable, well-drained soils adequately protected from flooding and easily accessible to public utilities and transportation routes.

e. Federal Properties and Programs

Goal(s): Use of Federal properties and programs consistent with growth patterns, character, and image.

Policies:

LAC #17: Perquimans County, Hertford, and Winfall 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 goals, objectives, and policies.

LAC #18: Perquimans County, Hertford, and Winfall will monitor Federal programs affecting, or potentially affecting, Perquimans County, its towns, and/or the region on an on-going basis.

f. Growth Management

Goal(s): Promote environmentally friendly development that is sustainable, aesthetically pleasing, and consistent with the County's rural image and character.

Policies:

LAC #19: Perquimans County, Hertford, and Winfall will consider establishing 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 and will enforce, and amend as necessary, zoning ordinances including designation(s) of permitted and conditional use density and intensity criteria. New and/or enhanced erosion and sediment control standards will be developed.

LAC #20: Perquimans County, Hertford, and Winfall shall establish and/or maintain requirements that prevent the creation of conditions hazardous to aircraft operation and that prevent conflicts with land development which may result in loss of life and property.

g. Intergovernmental Relations

Goal(s): Government cooperation and interaction.

Policies:

LAC #21: Perquimans County, Hertford, and Winfall will work together to improve intergovernmental relations and promote cooperative, multi-jurisdictional efforts to solve regional and area problems.

LAC #22: Perquimans County, Hertford, and Winfall support State and Federal programs which lead to improvements of the quality of life of area residents and lessen the burdens of local government such as: highway construction and maintenance, channel maintenance, aviation enhancement, environmental protection, education, health and human services.

h. Public Safety

Goal(s): Safety of residents and visitors.

Policies:

LAC #23: Perquimans County, Hertford, and Winfall 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), the Perquimans County Sheriff's Department, Hertford Police Department, and Winfall Police Department.

i. Redevelopment

Goal(s): Redevelopment consistent with County and towns' land use and development goals.

Policies:

LAC #24: Perquimans County, Hertford, and Winfall will review and analyze development and redevelopment proposals for consistency with the future land use maps included in this land use plan.

LAC #25: Perquimans County, Hertford, and Winfall will continue to support and pursue opportunities to provide affordable housing, housing rehabilitation, and community revitalization through the State and Federal funding sources

LAC #26: Perquimans County, Hertford, and Winfall will encourage, where practicable and funding is available, the preservation of historically significant structures and sites.

j. Residential Development

Goal(s): Ensure future development is in character with existing development, is sustainable, is aesthetically pleasing, and is consistent with the County's rural character.

Policies:

LAC #27: Perquimans County, Hertford, and Winfall 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.

LAC #28: Perquimans County, Hertford, and Winfall will continue to encourage a variety of choice in existing neighborhoods through a balance of preservation, rehabilitation, and new development.

LAC #29: Perquimans County, Hertford, and Winfall will continue to support market-driven trends in redevelopment and reuse, particularly in the retirement/assisted living care facility segment of the housing market.

k. Septic Tank Use

Goal(s): Performance of septic tank systems is monitored by Albemarle Regional Health Systems; that existing systems are properly maintained; and, that proposed systems are installed according to approved plans under supervision of appropriate agencies.

Policies:

LAC #30: Perquimans County, Hertford, and Winfall support the use of individual, on-site sewage disposal systems as the primary method of wastewater treatment in the unincorporated parts of Perquimans County. The County and its towns will request Albemarle Regional Health Systems review of alternative systems when proposed. 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 appropriate State and local agencies. In Perquimans County, the organizational and legal structure of a property owners association should be formally established to ensure operational soundness.

LAC #31: Perquimans County, Hertford, and Winfall will rely on Albemarle Regional Health Systems to ensure 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. The localities will also rely on Albemarle Regional Health Systems to review proposed designs for specialized waste water systems serving development in areas with very poor soils that will not accommodate a traditional septic tank system and for monitoring, as appropriate, the operation of such systems.

I. Solid Waste Management

Goal(s): Efficient, economical collection and disposal of solid waste.

Policies:

LAC #32: Perquimans County, Hertford, and Winfall will work through the Albemarle Regional Solid Waste Authority 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 through the Albemarle Regional Solid Waste Authority.

m. Storm Water Management

Goal(s): Comprehensive storm water management.

Policies:

LAC #33: Perquimans County, Hertford, and Winfall will seek assistance in developing a storm water management plan and implementing (infrastructure) system improvements.

LAC #34: Perquimans County, Hertford, and Winfall will seek technical assistance from North Carolina Department of Transportation or appropriate State, regional, or local agencies concerning storm water drainage problem areas.

LAC #35: Perquimans County, Hertford, and Winfall support the State efforts to develop watershed management districts and the implementation of programs including clearing and snagging (debris) projects to help with storm water management problems and protect water quality.

n. Transportation

Goal(s): Safe, efficient transportation system given State and local financial resources, topography, geography, and natural systems and surrounding land uses and development.

Policies:

LAC #36: Perquimans County, Hertford, and Winfall will continue to require new subdivisions, including private gated communities, to be served by roads constructed to State standards.

LAC #37: Perquimans County, Hertford, and Winfall support the completion or implementation of transportation improvement projects contained in the NC Department of Transportation State Transportation Improvement Programs (STIP) including:

- conversion of at-grade intersections along U.S. 17 at SR 1336 (Harvey Point Road) and SR 1338 (Wayne Fork Road) (STIP project #R-4459); and along U.S. 17 at SR 1300 (New Hope Road) (STIP project #4458);
- U.S. 17 Business/NC 37, east of Perquimans River bridge (the historic Hertford “S” Bridge”) to NC 37, constructing a new roadway (0.4 miles) on pilings and replace the bridge (referred to by NCDOT as bridge no. 8) (STIP project #R-4467);
- rehabilitate the deck on bridge no. 14 (U.S. 17) over the Perquimans River (STIP project #B-5019);
- replacing bridges on SR 1110 (Bear Swamp Canal, bridge no. 62, STIP project #B-4226), SR 1222 (bridge no. 69, STIP project #B-4227), and SR 1304 (Button Creek, bridge no. 59, STIP project #B-4228); and,
- operation and/or maintenance assistance for public transportation initiatives meeting work first and employment transportation needs (STIP project #TJ-4971), transportation services to the elderly and disabled (STIP project #TL-4971), and community transportation systems to serve the rural general public (STIP project #TR-4971).

D. Statement of Local Support Regarding Areas of Environmental Concern

Perquimans County, Hertford, and Winfall support State and Federal law regarding land use and development in Areas of Environmental Concern (AEC). Specific policy statements have been developed that support the general use standards of the North Carolina Administrative Code (15 NCAC 7H) for development within the estuarine system. No policy statements have been developed which exceed the requirements of state and federal law regarding land use and development within AEC.

E. Analysis of the Impact of Policies on State 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)].

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)].

Moreover, the policies contained in this document promote joint coordination and cooperation between the County and its towns, including policies:

- to develop coordinated development design standards;
- to continue to promote and improve the Commerce Centre;
- to continue to study and discuss approaches such a regionalization of systems to coordinate the provision of water and sewer utilities and establish service area boundaries; and,
- to develop a joint storm water drainage plan.

APPENDIX 6 provides an analysis of the impact of the policies identified by the localities on the state management topics. The goals, planning objectives, and land use plan requirements for each State Management Topic have been summarized into benchmarks. References to policies are listed in the left column and each policy is compared to the State Management Topic benchmarks and whether it is beneficial, neutral, or detrimental to attainment of the policy benchmark labeled. Detrimental means a policy is potentially detrimental and mitigating actions may be required to reduce or eliminate negative environmental impacts. All actions which may adversely affect areas of environmental concern, areas least suitable for development (see Exhibit VII-C), or implementation of this plan are considered detrimental.

1. Public Water Access

Perquimans County, Hertford, and Winfall support the provision of access to public trust waters to all segments of the community as practicable. Local policies and current practices support coordinating public trust water access within proposed developments as practicable. Local policies encourage the development of a shoreline access plan to evaluate needs, opportunities, and implementation strategies in the localities. Local policies encourage the provision of public water access and the continued assessment of water access needs and opportunities for improving public water access.

2. Land Use Compatibility

Overall, existing building intensities and densities are consistent with infrastructure availability and land suitability. Generally, the most intense development is located in areas with adequate water and sewer facilities and other support infrastructure and outside of sensitive natural environments.

The local policies provide for a balance of growth and the preservation of fragile environments. Development with acceptable impacts on natural resources and which is in harmony with the existing character of the area being developed is encouraged. Local policies concerning Areas of Environmental Concern support State and Federal law regarding development within AECs. Development is encouraged in those portions of the planning jurisdictions that possess the support infrastructure necessary to sustain that growth. Local policies discourage the conversion of active, productive farm and forest

land to urban uses. Local policies support the implementation of water and wastewater systems improvements.

3. Infrastructure Carrying Capacity

Perquimans County, Hertford, and Winfall support managing and directing development in balance with the availability of municipal services. The most intensive land uses and highest residential densities are guided to those portions of the planning jurisdictions that possess the support infrastructure necessary to sustain that level of development.

Local policies support the implementation of water and wastewater systems improvements which will vastly improve each jurisdiction's ability to provide effective and reliable water and wastewater systems. The local policies ensure that public infrastructure is located and managed in harmony with fragile environments and natural resource areas.

4. Natural Hazard Areas

Local policies encourage the conservation of natural resources and fragile environments that provide protection from natural hazards. Local policies encourage the development of compatible location, density, and intensity criteria for new development, existing development, and redevelopment within flood hazard and storm surge areas. Flood damage prevention policies encourage compatible development and redevelopment within flood hazard areas. Local policies ensure that evacuation plans and needs are addressed as new land development proposals are reviewed for approval.

5. Water Quality

Local policies support the maintenance, protection, and enhancement of water quality. Local policies support land development that has minimal adverse impacts on water quality. Best management practices are encouraged to minimize storm water impacts.

Local policies support the implementation of water and wastewater systems improvements which will vastly improve each jurisdiction's ability to provide effective and reliable water and wastewater systems. Local policies also support the development of a joint storm water management plan.

F. Future Land Use

1. Land Classification Scheme

The land classification scheme utilized by the County and its towns was chosen based on its appropriateness for the goals, objectives, and policies listed above, the County's (and towns') vision, the purposes for which the land use plan update is used, and the localities' capacity to implement the plan. The main purpose of the future land use maps for each locality is to depict the County's and the towns' policies for growth and land development, and the projected patterns of future land use. The future land use maps

were prepared with consideration given to land development goals and policies, natural constraints and limitations, land suitability, the ability to provide for necessary infrastructure, and observable market forces and trends.

The future land use classification approach used is cognizant of existing and projected zoning in each locality. A future land use compatibility matrix for the County and for each of the Towns of Hertford and Winfall is found at the end of the discussion of each county/town future land use sections in this chapter. The matrices summarize the relationship between the proposed future land use map classifications and the current zoning classifications in the Perquimans County planning jurisdiction, the Hertford planning jurisdiction, and the Winfall planning jurisdiction respectively.

The land classification approach used does not pre-empt or change current zoning, nor does it imply that future applications for rezoning will be approved or denied. Land classifications and the future land use maps are guides for decision makers, and as such, should be considered with respect to land use decisions, and amended and revised as future circumstances may dictate.

Generally, growth and development is expected to occur in the areas classified for residential uses, public/semi-public/religious/institutional uses, commercial uses, and industrial uses. Areas classified as residential agricultural should not be expected to accommodate significant growth and development. However, this is not to say that no growth or development will occur in these areas, but rather that development proposals within these areas should be carefully scrutinized as discussed later in this chapter.

2. Perquimans County Future Land Use

The future land use analysis (and map) for the County's planning jurisdiction encompasses all of Perquimans County outside of the corporate limits of Hertford and Winfall, and Hertford's extraterritorial jurisdiction. The land use classifications include the following categories:

- residential (which generally encompasses Perquimans County zoning designations: RA43 residential and agricultural; RA25 residential and agricultural; RA15 residential and agricultural; and PUD);
- residential agricultural (which generally includes Perquimans County zoning designation: RA rural agricultural and HA historic agriculture);
- mobile/manufactured home parks;
- manufacturing (which generally encompasses Perquimans County zoning designations: IL light industrial and IH heavy industrial);
- commercial (which generally encompasses Perquimans County zoning designations: CR rural commercial; CN neighborhood commercial; and CH highway commercial);
- public/semi-public/religious/office & institutional;
- conservation easement(s); and
- rights of way and easements.

a. Residential

The residential classification is expected to encompass about seven (7) percent of the County. This classification is compatible with the County's RA-43, RA-25, RA-15, and PUD zoning districts.

Numerous subdivision developments are found throughout the southern portion of Perquimans County--generally "on the peninsulas." A number of residential neighborhoods have consumed waterfront access properties to create resort style communities for mostly higher end housing. As the result of the development of these resort communities, the County's median household income increased 171% between 1980 and 2000.

This classification includes land used for low- and medium-density residential purposes, with lot sizes ranging from one acre to 25,000 square feet, depending on the availability and use of public water and or sewer utilities. Lot widths range from 80' to 125'. Lot depths range from 120' to 150'. Building heights are limited to 35'. A density of one dwelling unit per lot is allowed. Some duplexes are found in this classification. The County anticipates some additional duplex type units will be added. The maximum density range is 1 to 4 dwelling units per acre.

The County's goals and policies support the use of land in medium/high density classified areas for single family, mixed-use, and planned unit development where adequate public utilities and roads are available or can be upgraded to support higher residential densities.

Corresponding Zoning Districts: RA-43, RA-25, RA-15, PUD

Appropriate Uses: Variety of low density single-family and agricultural uses. Scattered manufactured home parks in the RA-25 district.

Inappropriate Uses: Commercial and industrial development.

Allowable Density: 1 to 4 dwelling units per acre

Maximum Height: 35 feet

Minimum Lot Size: 15,000 square feet

Maximum Lot Coverage: 20% to 50%

Infrastructure: County-wide water system and waste disposal by septic or package treatment plants

Infill: No areas targeted for infill development.

b. Residential agricultural

The majority of land within the unincorporated area of Perquimans County is composed primarily of larger parcels designated for agricultural activities with scattered single-family site built residential development and mobile/manufactured homes. The residential agricultural areas are projected to encompass about 88 percent of the County's land area.

The residential agricultural classification includes some isolated commercial development that is typically associated with rural areas. At the time of this writing, the County is considering rezoning of a number of isolated commercial areas which are found within the area classified herein as residential agricultural.

The residential agricultural classification is intended to delineate lands where the predominant land use is scattered, low density (less than one dwelling unit per acre) residences dispersed among farm land and open spaces. Support public and institutional land uses are also located within this land use classification. The overall residential density within this classification is generally less than 1 dwelling unit per acre.

Long-term, those portions of the residential agricultural-classified areas that have residential units are projected to have average densities of approximately 1 dwelling unit per 5 acres. Such areas include lands immediately adjacent to major road corridors and at crossroad communities. The predominantly agricultural areas, i.e., those lands not immediately adjacent to major road corridors and at crossroad communities, within this classification are projected to have residential densities that average in excess of 1 dwelling unit per 20 or more acres.

The residential agricultural classification is compatible with the RA-Rural Agriculture and HA-Historic Agriculture zoning districts. These zoning districts are primarily intended to accommodate low density residential uses as well as associated public and institutional uses, low intensity commercial uses, and agricultural-related uses characterized as rural in nature. This district reflects the diverse nature of land uses within predominantly rural areas and, therefore, permits a wide array of land uses. However, those intensive land uses, which could have an adverse impact on the rural nature, are not permitted or are allowed only on a special use permit basis following a formal review and approval process. Generally, the district's purposes are to encourage the continued use of land for agricultural, forestry, and open space purposes, limit commercial and light industrial uses, and discourage any use, which by its character would create premature or extraordinary public infrastructure and service demands.

The designation and determination of prime agricultural lands must be made on a site-specific basis and requires the involvement of agencies such as the United States Department of Agriculture's Resource Conservation Services. An analysis of specific sites is necessary when development is proposed to determine and help protect prime agricultural lands and should be factored into any future land use decisions that may impact prime agricultural lands. However, it is estimated that approximately 50 percent

of the entire Perquimans County land area may contain soils identified as prime farmland, farmland of statewide importance, and farmland of unique importance. Large concentrations of such soils are located in the northern, northwestern, and central portions of the County, as well as on both peninsulas. An additional 25 percent of the County land area could be classified as having prime farmland soils if those soils are drained. The soil characteristics that are favorable for agricultural use are also conducive for other types of land use, including urban development.

Residential structures in agricultural areas are generally isolated homes on approximately 1-acre tracts or farmsteads along rural roads in agricultural areas which use or occupy about 1 acre of a “parent” tract and have not been deeded separately from the “parent” tract. Lot widths may be 125’ and lot depths may be 150’. Building heights are limited to 35’. A density of one dwelling unit per lot is the norm, although a second temporary for family hardship circumstances is allowed, and additional dwellings may be added for every ten (10) acres of land. Lot coverage is not restricted. The density is one dwelling unit per acre or less.

The County’s goals and policies support the continued use of land in residential agricultural classified areas for scattered, very low density residential development and agricultural and forestry purposes. The County’s policies state that the preservation of farm land and rural areas is encouraged by cluster development. In the long term, as the County’s population increases and the demand for housing rises, the character of some residential agricultural areas will likely change. In the short-term, waterfront properties where public water is available are considered prime areas for low density residential development within this classification.

Corresponding Zoning Districts: RA and HA

Appropriate Uses: Agricultural and scattered residential, as well as associated public and institutional uses, low intensity commercial uses, and agricultural-related uses characterized as rural in nature

Inappropriate Uses: All non-agricultural and scattered residential uses, except for supporting public/institutional, low-intensity commercial, and agricultural-related, rural uses

Allowable Density: Not to exceed 1 dwelling unit per 5 acres

Maximum Height: 35 feet

Minimum Lot Size: 43,000 square feet

Maximum Lot Coverage: Approximately 10%

Infrastructure: County-wide water system and waste disposal system by septic or package treatment plants.

Infill: No areas targeted for infill

c. Mobile/manufactured home parks

Areas with concentrations of mobile/manufactured homes include the Lazy Days Mobile Home Park, Longview Estate Mobile Home Park, and Burnt Mill Mobile Home Park. It is anticipated that about 0.06 percent of the County's land area will be encompassed by this classification. Any additional units that may be added to the inventory during the planning period will most likely be placed on sites already developed for such uses.

Corresponding Zoning Districts: RA-25

Appropriate Uses: Manufactured home parks

Inappropriate Uses: All uses except manufactured home parks

Allowable Density: 12 units per acre

Maximum Height: 35 feet

Minimum Lot Size: N/A

Maximum Lot Coverage: 75%

Infrastructure: County-wide water system and waste disposal by septic or package treatment plants.

Infill: No areas targeted for infill

d. Manufacturing

Only about three (3) acres or less than 0.01 percent of the County's land area will be encompassed by this classification. This type development would most likely occur on sites already developed for such uses, with little or no conversion of land currently used for other purposes.

The County's goals and policies support the use of land in manufacturing classified areas for light industry where adequate public utilities and roads are available or can be upgraded to support higher residential densities.

Corresponding Zoning Districts: IL and IH

Appropriate Uses: Manufacturing warehousing uses which will not consume water beyond the capabilities of the County's water system or uses which will not generate health hazards.

Inappropriate Uses: All non-manufacturing uses

Allowable Density: 1 or fewer units per acre

Maximum Height: 56 feet

Minimum Lot Size: 43,560 square feet

Maximum Lot Coverage: 80%

Infrastructure: County-wide water system and waste disposal by septic or package treatment plants

Infill: No areas targeted for infill

e. Commercial

Concentrations of commercial development are located on the fringes of the towns, at some crossroads in rural areas, at the Commerce Centre, and along U.S. 17 Bypass. During the planning period, additional commercial (and/or light industrial) buildings are projected. This type development would most likely occur on sites already developed for commercial uses such as near the towns, at crossroads, and along U.S. 17 and near the Commerce Centre.

About 0.09 percent of the County area is encompassed by this classification which includes land used for rural commercial, highway commercial, and neighborhood commercial purposes, with lot sizes ranging from 10,000 square feet (highway commercial) to 12,000 square feet (rural commercial and neighborhood commercial). Lot widths range from 75' (highway commercial) to 100' (rural commercial and neighborhood commercial). Lot depths are 100'. Building heights are limited to 35'.

The County's goals and policies support the use of land in the commercial classified areas for a variety of retail and commercial services uses where adequate public utilities and roads are available.

Corresponding Zoning Districts: CR, CN, and CH

Appropriate Uses: Rural commercial, highway commercial, neighborhood commercial uses, as well as light industrial as allowed by the Perquimans County zoning ordinance

Inappropriate Uses: All non-commercial uses, except for light industrial uses as allowed by the zoning ordinance

Allowable Density: 1 to 4 units per acre

Maximum Height: 35 feet

Minimum Lot Size: 10,000 square feet

Maximum Lot Coverage: 80%

Infrastructure: County-wide water system and waste disposal by septic or package treatment plants

Infill: No areas targeted for infill development

f. Public/semi-public/religious/office & institutional

About 2.6 percent of the County's land area is encompassed by this classification which includes buildings and/or site associated with public, semi-public, religious, and institutional activities. The Harvey Point Defense Facility, a secure government operations facility, encompasses 3,020 acres and accounts for nearly 77% of the total area allocated to this classification in Perquimans County.

By the year 2030, it is projected that additional public facilities associated with the utility system or public services (i.e. pump stations, well sites, emergency services, or the like) will be added, with little or no conversion of land from other uses.

g. Conservation easements

This classification includes tracts and parcels held as legally designated conservation easements and will encompass about 0.25 percent of the County's land area.

h. Rights of way and easements

The classification includes land used for predominantly publicly-controlled transportation and utility systems' right of ways and easements and will encompass about 1.7 percent of the County's land area.

i. Additional Areas of Interest

(1) Historic agriculture area

The historic agriculture district is a zoning overlay district shown on the future land use map for illustrative purposes. The underlying land use classification is residential agricultural and the underlying zoning is RA-Rural Agriculture. Historic agriculture districts have been established in two areas of Perquimans County wherein additional development restrictions are imposed for building development. These are shown and noted so that future land use decisions within or near the areas can take into account their special nature. At the time of this writing, the County is examining what is, and should

be, allowed in these areas. The County may study amendments to the subdivision ordinance with respect to minor subdivision development in historic agricultural areas.

(2) Highway corridor overlay district and communications tower overlay district

These overlay districts establish additional development requirement along U.S. 17, within a distance of 500 feet from the NCDOT right-of-way. The underlying zoning is commercial. The highway corridor overlay district and communications tower overlay district are shown on the future land use map for illustrative purposes.

(3) Designated conservation/open space areas

The precise location of protected/regulated areas that have a conservation or open space connotation such as coastal wetlands, estuarine waters, estuarine shoreline, public trust areas, and Section 404 wetlands must generally be determined by field investigation on a case by case basis. These areas, scattered throughout the County and generally found along creeks and rivers, are not individually identified on the future land use map.

At the time the future land use map prepared (November, 2010), there were no additional conservation/open space areas designated by Perquimans County. If and when the County develops and adopts a Greenways/Blueways/Conservation Area and Open Space Plan, it will amend its land use plan and future land use map to encompass these areas.

(4) Permitted (active) animal feed lots

At the time of this writing, there are four permitted (active) animal feed lots in Perquimans County. These are within the residential agricultural classification and are found in the northwest part of the County.

In addition to showing the projected future land use for the unincorporated portions of Perquimans County, EXHIBIT IX-B which follows shows the shows the 14-digit hydrologic units encompassing Perquimans County.

(5) Approved (developing) planned unit development (PUD) or conditional use development (CUD) areas

These are areas wherein specific development requirements—negotiated and agreed to by the County and the developer—have been (or will be) imposed as a condition(s) to development of the affected tracts and parcels within the respective PUD or CUD.

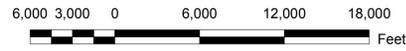
**Future Land Use Compatibility Matrix
 Consistency Review of Future Land Use Map Designations and Existing Zoning Districts for Unincorporated Perquimans County**

Zoning Districts	RA	HA	RA-43	RA-25	RA-15	CR	CN	CH	IL	IH	(CD)	(PUD)
Min. Lot Size (SF)	43,000	43,000	43,000	25,000	15,000	12,000	12,000	10,000	43,560	43,560		Note 1
Max Bldg. Height (ft.)	35	35	35	35	35	35	35	35	35	56		
Designations/Average Density (du per acre)												
Residential /2	x	x	g	g	g	x	x	x	x	x	x	g
Residential Agricultural/1	g	g	c	c	x	x	x	x	x	x	x	c
Mobile/Manufactured Home Parks/12	x	x	x	g	x	x	x	x	x	x	x	x
Manufacturing/N/A	x	x	x	x	x	x	x	x	g	g	x	x
Commercial/N/A	x	x	x	x	x	g	g	g	x	x	x	c
Public/Semi-Public/Religious/O&I/N/A	c	c	c	c	c	g	g	g	c	c	x	c

g = generally consistent
 c = conditionally consistent
 x = inconsistent

Note 1:PUDs may contain any combination of uses, permitted and conditional, listed in the Zoning Ordinance Table of Uses. All will be incorporated into the conditional use permit which is required for a PUD.

EXHIBIT IX-B PERQUIMANS COUNTY, NORTH CAROLINA PROJECTED FUTURE LAND USE UNINCORPORATED PORTIONS OF PERQUIMANS COUNTY

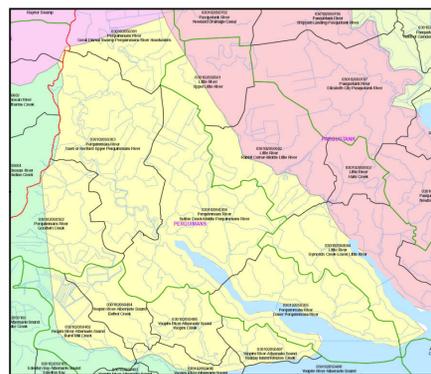
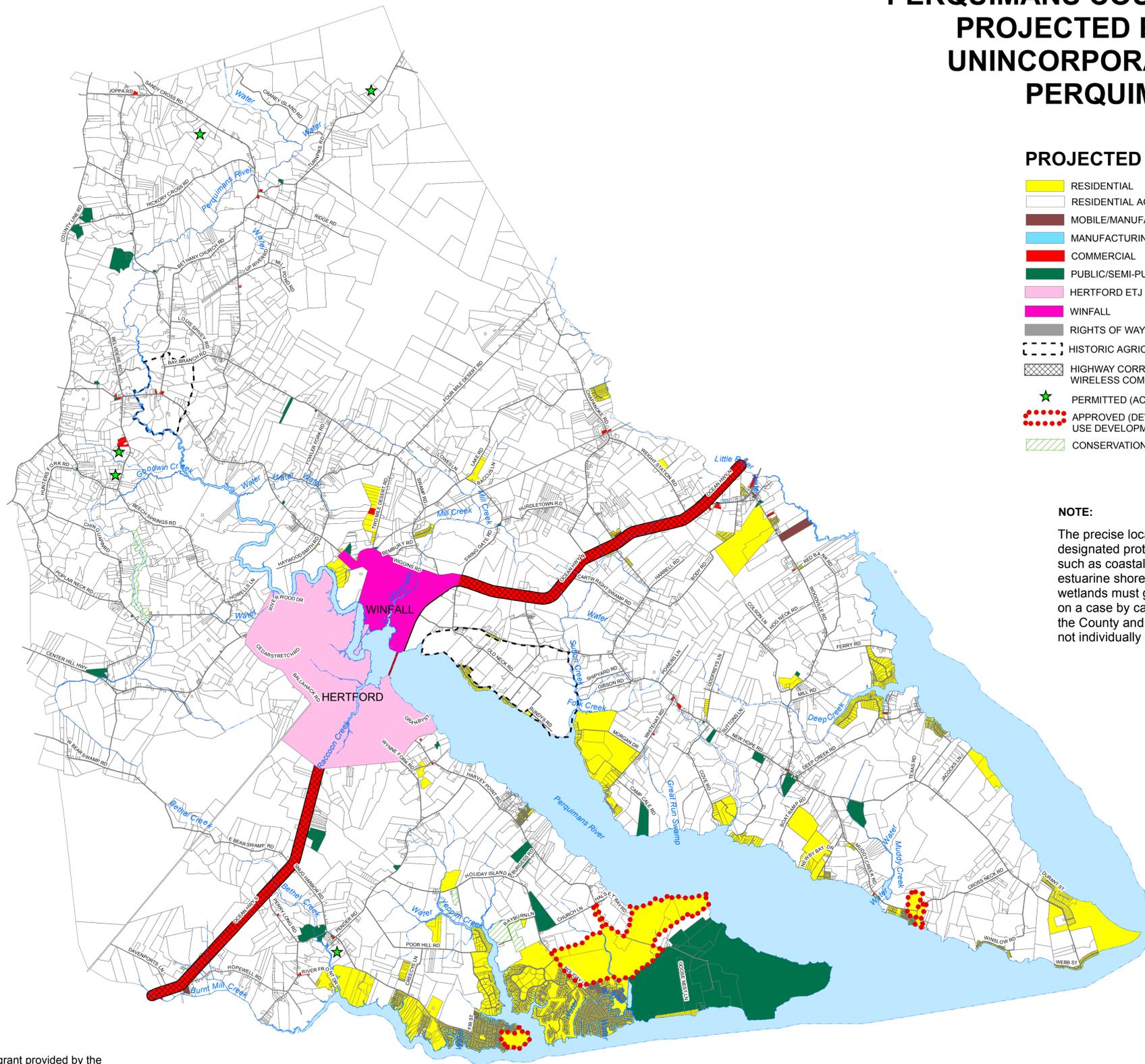


PROJECTED FUTURE LAND USE LEGEND

- RESIDENTIAL
- RESIDENTIAL AGRICULTURAL
- MOBILE/MANUFACTURED HOME PARKS
- MANUFACTURING
- COMMERCIAL
- PUBLIC/SEMI-PUBLIC/RELIGIOUS/OFFICE & INSTITUTIONAL
- HERTFORD ETJ
- WINFALL
- RIGHTS OF WAY & EASEMENTS
- HISTORIC AGRICULTURE AREA
- HIGHWAY CORRIDOR OVERLAY DISTRICT AND WIRELESS COMMUNICATIONS TOWER OVERLAY DISTRICT
- PERMITTED (ACTIVE) ANIMAL FEED LOTS
- APPROVED (DEVELOPING) PLANNED UNIT DEVELOPMENT (PUD) OR CONDITIONAL USE DEVELOPMENT (CUD) AREAS
- CONSERVATION EASEMENTS

NOTE:

The precise locations of State or Federally designated protected/regulated areas such as coastal wetlands, estuarine waters, estuarine shoreline, public trust areas, and Section 404 wetlands must generally be determined by field investigation on a case by case basis. These areas, scattered throughout the County and generally found along creeks and rivers, not individually identified on the future land use map.



HYDROLIC UNIT BOUNDARIES
NOT TO SCALE

The preparation of this map 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 Resources Management, National Oceanic and Atmospheric Administration.

3. Hertford Future Land Use

The future land use map (EXHIBIT IX-C) for Hertford's planning jurisdiction encompasses the Hertford corporate limits and the Town's extraterritorial planning and zoning jurisdiction. The Town's land use classifications include the following categories:

- residential (which generally encompasses Hertford zoning designations: R10 single family residential; R8 residential district; R6 residential district; and TR transitional residential district);
- residential agricultural (which generally encompasses Hertford zoning designation: RA residential agricultural);
- multi-family (which generally encompasses Hertford zoning designations: R8 residential district, and R6 residential district);
- mobile/manufactured home parks;
- manufacturing (which generally encompasses Hertford zoning designation: M1 manufacturing);
- commercial (which generally encompasses Hertford zoning designations: C1 commercial core area; C2 general/commercial; C3 neighborhood commercial; C4 light industrial commercial; and C5 riverfront commercial);
- public/semi-public/religious/office & institutional (which generally encompasses Hertford zoning designation: OI office, institutional);
- conservation easement(s); and
- rights of way and easements.

Generally, growth and land development is anticipated to occur primarily in the commercial category, in areas south of the Commerce Centre, along U.S. 17, and along the north side of Grubb Street and west of W. Railroad Avenue extended.

a. Residential

The majority of development within Hertford consists of single family residential located along existing streets and roads and other areas of concentrated development. Over 45% of the homes in Hertford were constructed before 1959. It is anticipated that in-fill type residential development will likely be the norm during the planning period. Existing, platted lots and limited conversion of land should meet anticipated demand.

This classification is estimated to encompass about 13 percent of the Town's total area and includes land used for low- and moderate-density residential with lot sizes ranging from 8,000 square feet to 20,000 square feet. Lot widths range from 75' to 100'. Building heights are limited to 35'. More than one unit per lot may be allowed in certain circumstances, with additional requirements imposed as appropriate. The maximum lot coverage is 40%. The maximum density per acre is 2 to 5 dwelling units. The maximum density for multi-family development is 12 to 18 dwelling units per acre, depending on the applicable zoning district.

Corresponding Zoning Districts: RA, R-10

Appropriate Uses: Single-family and mixed multi-family residential

Inappropriate Uses: All non-residential uses

Allowable Density: 2 to 5 dwelling units per acre (single-family); 12-18 dwelling units per acre (multi-family)

Maximum Height: 35 feet

Minimum Lot Size: 6,000 square feet

Maximum Lot Coverage: 40%

Infrastructure: Water and sewer service provided by the Town

Infill: All undeveloped land considered for infill development

b. Residential agricultural

Over 55 percent of the Town is projected to be in this classification. During the planning period, there will likely be some development in residential agricultural areas. However, natural features and market forces, among other factors, will help to keep significant residential agricultural areas undeveloped.

The residential agricultural classification is intended to delineate lands where the predominant land use is scattered, low density (less than one dwelling unit per acre) residences dispersed among farm land and open spaces. Institutional uses such as churches and schools, public facilities such as parks and utilities, and mining operations (as conditional uses) are also located within this land use classification. The overall residential density within this classification is generally less than 1 dwelling unit per acre.

Long-term, those portions of the residential agricultural-classified areas that have residential units are projected to have average densities of approximately 2 dwelling units per 5 acres. Such areas include lands immediately adjacent to major road corridors and at crossroad communities. The predominantly agricultural uses, i.e., those lands not immediately adjacent to road corridors, within this classification are projected to have residential densities lower than 2 dwelling units per acre.

Corresponding Zoning District: RA

Appropriate Uses: Single-family residential, supporting public facilities, institutional uses, and limited mining operations

Inappropriate Uses: Intensive commercial and industrial uses

Allowable Density: 2 dwelling units per acre

Maximum Height: 35 feet

Minimum Lot Size: 20,000 square feet

Maximum Lot Coverage: Approximately 20%

Infrastructure: Water and sewer service provided by the Town

c. Multi-family residential

This classification is anticipated to encompass about 0.59 percent of the Town's land area and includes land used for moderate-density residential with lot sizes of 6,000 square feet. This type development would most likely occur on sites already developed for multi-family uses. Lot widths are 50'. Building heights are limited to 35'. More than one unit per lot may be allowed in certain circumstances, with additional requirements imposed as appropriate. The maximum lot coverage is 40%.

Corresponding Zoning Districts: R-8, R-6, TR

Appropriate Uses: Moderate density single-family and multi-family uses

Inappropriate Uses: All non-residential uses

Allowable Density: 7 to 18 dwelling units per acre

Maximum Height: 35 feet

Minimum Lot Size: 6,000 square feet

Maximum Lot Coverage: 40%

Infrastructure: Water and sewer service provided by the Town

Infill: All undeveloped land considered for infill development

d. Mobile/manufactured home parks

Areas with concentrations of mobile/manufactured homes are on Don Juan Road (SR 1109) (Meads MHP) and Wynne Fork Road (SR1338) (Lightfoot MHP, Pine Ridge MHP, and Dogwood MHP). This classification is estimated to encompass about 1.2 percent of the Town's land area. It is projected that any additional units that may be added during the planning period will be placed at sites already similarly developed.

Corresponding Zoning Districts: R-6

Appropriate Uses: Mobile/manufactured home parks

Inappropriate Uses: All except mobile/manufactured home parks

Allowable Density: 18 dwelling units per acre

Maximum Height: 35 feet

Minimum Lot Size: 6,000 square feet

Maximum Lot Coverage: 60%

Infrastructure: Water and sewer service provided by the Town

Infill: All undeveloped land considered for infill development

e. Manufacturing

This classification, anticipated to encompass about 0.22 percent of the Town's land area, includes land used for manufacturing purposes with lot sizes and building heights approved by the Town. This type development would most likely occur on sites already developed for industrial uses. Lot widths are 100'. The Town approves maximum lot coverage with an overall objective of 40%.

Corresponding Zoning Districts: M1 and C-4

Appropriate Uses: Manufacturing and warehousing uses which do not create excessive noise, odor, smoke, dust, or other objectionable characteristic, and some limited C-4 commercial

Inappropriate Uses: All non-manufacturing and warehousing uses

Allowable Density: As approved by Town

Maximum Height: As approved by Town

Minimum Lot Size: As approved by Town

Maximum Lot Coverage: As approved by Town (overall objective of 40%)

Infrastructure: Water and sewer service provided by the Town

Infill: All land considered for infill development

f. Commercial

Concentrations of commercial development are located in the downtown area and along U.S. 17 Bypass, Church Street, and Harvey Point Road (SR 1336). The Commerce Centre, owned by Perquimans County, but located in the Hertford extraterritorial jurisdiction, encompasses 400 acres. As of 2000, there were approximately 50 commercial buildings in Hertford (or its ETJ). There are 4 child care centers within Perquimans County that are registered through the North Carolina Division of Child Development (<http://ncchildcare.dhhs.state.nc.us/general/home.asp>). Three of the four are in Hertford: Beacon Academy; Mama Nae's Child Care Center; and Stepping Stones of the Albemarle, Inc.

About 15 percent of the Town's area will be encompassed by this classification. However, the Commerce Centre, owned by Perquimans County, but located in the Town of Hertford, encompasses 400 acres or about 57 percent of the total shown in this classification within Hertford's planning area. During the planning period, additional commercial development is projected. This development would most likely occur on sites already developed for commercial uses such as downtown, along U.S. 17, an area north of Grubb Street to the Perquimans River, and in and around the Commerce Centre. Additional acreage, primarily along U.S. 17, in an area north of Grubb Street, and in and around the Commerce Centre, is likely to be used for commercial purposes.

This classification includes land used for commercial purposes with lot sizes ranging from 6,000 square feet (TR zoned areas) to 20,000 square feet. Lot widths range from 80' to 100'. Building heights are limited to 35' except in commercial riverfront areas where the height may be 60' and may be increased to a maximum of 80' if yard areas are increased appropriately. The maximum lot coverage is 30%.

Corresponding Zoning Districts: TR, O/I, C1, C2, C3, C-4, and C-5

Appropriate Uses: Retail, commercial, and some limited residential transition.

Inappropriate Uses: Except for transitional residential areas, all non-commercial uses.

Allowable Density: 2 to 5 units per acre

Maximum Height: 35 feet, except for 60 feet in C-5 commercial riverfront areas.

Minimum Lot Size: 10,000 square feet, except for 6,000 square feet in TR zoned areas.

Infrastructure: Water and sewer service provided by the Town

Infill: All undeveloped land considered for infill development

g. Public/semi-public/religious/office & institutional

This classification includes land used for typical public, semi-public, religious, or institutional purposes. Some of these buildings and facilities in Hertford include:

- Municipal Building (114 W. Grubb Street);
- Missing Mill Park
- Hertford Fire Department (324 W. Grubb Street);
- Public Works Building (326 W. Grubb Street);
- Sewer Pump Stations (9) (Various Locations);
- Public Wells (2) (Various Locations);
- Water Treatment Plant (324 W. Grubb Street);
- Electric Substation (324 W. Grubb Street); and
- Perquimans County High School (305 S. Edenton Road).

By the year 2030, it is projected that additional public buildings associated with the utility system (i.e. pump stations, well sites, or the like) may be added involving a limited area. This classification will encompass nearly 10 percent of the Town's land area.

h. Conservation easement(s)

This classification includes tracts and parcels held as legally designated conservation easements and will encompass about 0.22 percent of the Town's land area.

i. Rights of way and easements

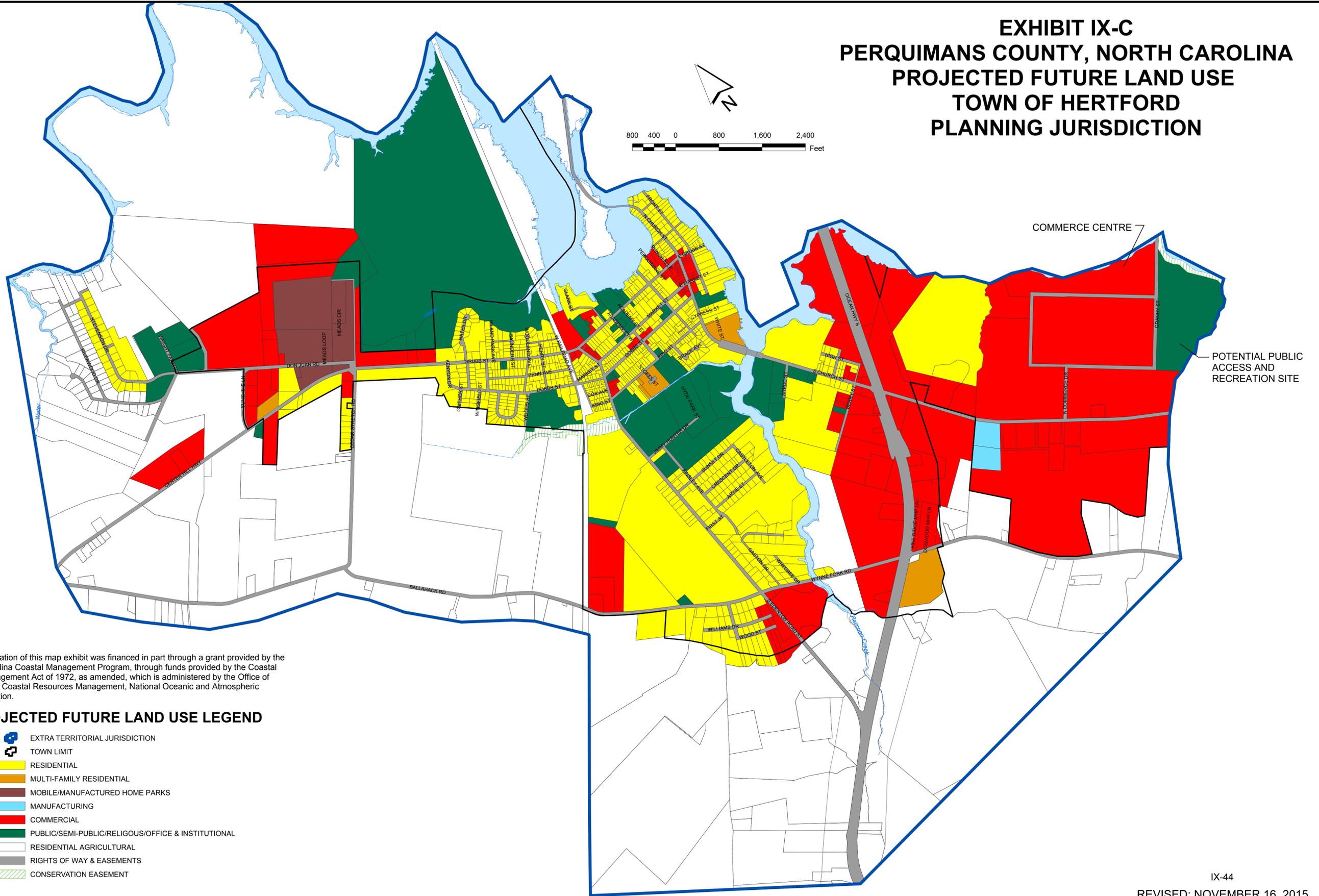
The classification includes land used for predominantly publicly-controlled transportation and utility systems' right-of-ways and easements, and is anticipated to encompass about 4.86 percent of the Town's land area.

Future Land Use Compatibility Matrix
 Consistency Review of Future Land Use Map Designations and Existing Zoning Districts for the Town of Hertford

Zoning Districts	RA	R10	R8	R6	TR	O/I	C1	C2	C3	M1	C-4	C-5
Min. Lot Size (SF)	20,000	10,000	8,000	6,000	6,000	20,000	N/A	10,000	10,000	N/A	20,000	20,000
Max Bldg. Height (ft.)	35	35	35	35	35	35	35	35	35	35	60	60
Max. Lot Coverage	40%	40%	40%	40%	40%	40%	30%	30%	30%	40%	30%	30%
Designations/Average Density (du per acre)												
Residential /3	g	g	g	g	x	x	x	x	x	x	x	x
Residential Agricultural/2	g	x	x	x	x	x	x	x	x	x	x	x
Multi-family Residential/12	x	x	x	x	g	x	x	x	x	x	x	x
Mobile/Manufactured Home Parks/12	x	x	x	g	x	x	x	x	x	x	x	x
Manufacturing/N/A	x	x	x	x	x	x	x	x	x	g	g	c
Commercial/3	x	x	x	x	g	c	g	g	g	x	g	g
Public/Semi- Public/Religious/O&I/N/A	c	c	c	c	c	g	g	g	g	c	c	g

g = generally consistent
 c = conditionally consistent
 x = inconsistent

EXHIBIT IX-C PERQUIMANS COUNTY, NORTH CAROLINA PROJECTED FUTURE LAND USE TOWN OF HERTFORD PLANNING JURISDICTION



The preparation of this map 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 Resources Management, National Oceanic and Atmospheric Administration.

PROJECTED FUTURE LAND USE LEGEND

-  EXTRA TERRITORIAL JURISDICTION
-  TOWN LIMIT
-  RESIDENTIAL
-  MULTI-FAMILY RESIDENTIAL
-  MOBILE/MANUFACTURED HOME PARKS
-  MANUFACTURING
-  COMMERCIAL
-  PUBLIC/SEMI-PUBLIC/RELIGIOUS/OFFICE & INSTITUTIONAL
-  RESIDENTIAL AGRICULTURAL
-  RIGHTS OF WAY & EASEMENTS
-  CONSERVATION EASEMENT

4. Winfall Future Land Use

The future land use map (EXHIBIT IX-D) for Winfall encompasses the Winfall corporate limits only, as the Town does not currently have extraterritorial planning and zoning jurisdiction. The Town's land use classifications include the following categories:

- residential (which generally encompasses Winfall zoning designations: R2 general residential);
- residential agricultural (which generally encompasses the Winfall zoning designation: R1 low-density residential);
- mobile/manufactured home parks;
- commercial (which generally encompasses Winfall zoning designations: HC highway commercial and GB general business);
- public/semi-public/religious/office & institutional; and
- rights-of-way and easements.

a. Residential

The majority of residential development within Winfall consists of single-family residential located along existing streets and roads and other areas of concentrated development. This includes two small subdivisions called Rivercroft Subdivision (Croft Street and River Drive) and Windemere Shores Subdivision (Windemere Drive). Over 47% of the homes in Winfall were constructed before 1959. It is anticipated that in-fill type residential development will occur during the planning period. Existing, platted lots and the limited conversion of land will likely meet anticipated demand.

This classification will encompass about seven (7) percent of the Town's land area and includes land used for low-density residential purposes with lot sizes of 8,000. Lot widths are 75'. Building heights are limited to 35'. The maximum lot coverage is 30%. The maximum density per acre is 5 dwelling units.

Winfall Landing, a residential and potentially mixed-use development adjacent to the Winfall Town Hall site, has been discussed. In addition, a 13-acre tract along Winfall Boulevard (on the east side of Winfall Boulevard, between Main Street and Albemarle Street) could be developed for townhomes in the next 5 to 20 years, and a 1.5-acre tract on the south side of Wiggins Street could be the site of single-family homes.

Corresponding Zoning Districts: R-1

Appropriate Uses: Single-family residential; and mixed use development

Inappropriate Uses: Except for mixed use development, all non-single-family residential uses.

Allowable Density: Five dwelling units per acre

Maximum Height: 35 feet

Minimum Lot Size: 8,000 square feet

Maximum Lot Coverage: 30%

Infrastructure: Water and sewer service provided by the Town

Infill: All undeveloped land considered for infill development

b. Residential agricultural

Over 55 percent of the Town is projected to be in this classification. During the planning period, there will likely be some development in residential agricultural areas. However, natural features and market forces, among other factors, will help to keep significant residential agricultural areas undeveloped.

The residential agricultural classification is intended to delineate lands where the predominant land use is scattered, low density (less than one dwelling unit per acre) residences dispersed among farm land and open spaces. Supporting public and institutional land uses are also located within this land use classification. The overall residential density within this classification is generally less than 1 dwelling unit per acre; however, the maximum density per acre may be 5 dwelling units.

Long-term, those portions of the residential agricultural-classified areas that have residential units are projected to have average densities of approximately 5 dwelling units per acre. Such areas include lands immediately adjacent to major road corridors and at crossroad communities. The predominantly agricultural areas, i.e., those lands not immediately adjacent to road corridors, within this classification are projected to have residential densities lower than 5 dwelling units per acre.

Corresponding Zoning Districts: R-2

Appropriate Uses: Single-family residential; and mixed use development

Inappropriate Uses: Except for mixed use development, all non-single-family residential uses.

Allowable Density: Five dwelling units per acre

Maximum Height: 35 feet

Minimum Lot Size: 8,000 square feet

Maximum Lot Coverage: 30%

Infrastructure: Water and sewer service provided by the Town

c. Mobile/manufactured home parks

Areas with concentrations of mobile/manufactured homes are on Hollowell Drive (Hollowell MHP) and Major Street (near the Town Hall). It is projected that additional units could be added to the inventory during the planning period and this classification will encompass about one (1) percent of the Town's land area. Additional units, if added, would occur on sites already developed for such use.

Corresponding Zoning District: Conditional in the R-2 district

Appropriate Uses: Manufactured home parks

Inappropriate Uses: All uses other than manufactured home parks

Allowable Density: 18 dwelling units per acre

Maximum Height: 35 feet

Minimum Lot Size: 8,000 square feet

Maximum Lot Coverage: 75%

Infrastructure: Water and sewer service provided by the Town

Infill: All undeveloped land considered for infill development

d. Manufacturing

Limited industrial development is anticipated during the planning period. Just over 2 percent of the Town's land area will be encompassed by this classification. This classification includes land used for commercial/manufacturing/quasi-manufacturing activities (such as fabrication, storage, warehousing, etc.) purposes with lot sizes of 20,000. Lot widths must be sufficient to provide off-street parking, loading, and maneuvering space and to incorporate visual buffer(s) between commercial/industrial uses and residential uses. Building heights are limited to 35'. The maximum lot coverage is 60%.

Corresponding Zoning District: Conditional in Highway Commercial

Appropriate Uses: Manufacturing and warehousing

Inappropriate Uses: All non-manufacturing/warehousing uses

Allowable Density: 2 units per acre

Maximum Height: 35 feet

Minimum Lot Size: 20,000 square feet

Maximum Lot Coverage: 60%

Infrastructure: Water and sewer service provided by the Town

Infill: All undeveloped land considered for infill development

e. Commercial

Concentrations of commercial development are located in the downtown area and along U.S. 17 Bypass, and Winfall Boulevard. Commercial/industrial development exists along Main Street (U.S. Post Office and Perquimans County Middle School); River Street; Winfall Boulevard (NC-37) Oil Company, small retail mall, Perquimans County Central School, a gas station/grocery store and the Town's water plant wells (7) and water tower; Creek Drive (NC Business 17) Albemarle Electric Membership Corporation, vehicle repair facility, marina, and restaurant/gas station; Jessup Street (State Youth Detention Center); Wiggins Rd. NC-37, Cotton Gin Road (Cotton Gin); Ocean Highway [US 17] oil company and used car sales; and Wiggins Road [NC-37] [Fire Department and Perquimans County Recreational Area].

Some new commercial development could occur on sites already developed for commercial uses such as downtown, along U.S. 17, and along Winfall Boulevard. Additional areas, primarily along Miller Street, with some access on U.S. 17, will likely be converted commercial use during the planning period. However, the Town, through its zoning ordinance (and the projected land use designations shown on the projected future land use map contained in this land use plan,) envisions commercial development along U.S. 17.

The commercial classification will encompass over 22 percent of the Town's land area. The Albemarle Electric Membership Corporation site (38+) acres accounts for over 12 percent of the commercial area shown. The Town's zoning map and the projected future land use map below show a large commercial area +/- 150 acres along U.S. 17 wherein the Town would likely encourage commercial development. This area accounts for nearly 50 percent of the projected commercial area shown.

This classification includes land used for commercial, trade, and service area purposes with lot sizes of 20,000 square feet. Lot widths must be sufficient to provide off-street parking, loading, and maneuvering space and to incorporate visual buffer(s) between commercial/industrial uses and residential uses. Building heights are limited to 35'. The maximum lot coverage is 60%.

Corresponding Zoning Districts: GB and HC

Appropriate Uses: Wholesale and retail commercial

Inappropriate Uses: All non-commercial uses

Allowable Density: 2 units per acre

Maximum Height: 35 feet

Minimum Lot Size: 20,000 square feet

Maximum Lot Coverage: 60%

Infrastructure: Water and sewer service provided by the Town

Infill: All undeveloped land considered for infill development

f. Public/semi-public/religious/office & institutional

In Winfall, there are 11 public buildings, including the Winfall Municipal Building and Town Park located on Parkview Lane. By the year 2030, it is projected that about seven (7) percent of the Town's land area will be devoted to this classification.

g. Rights-of-way and easements

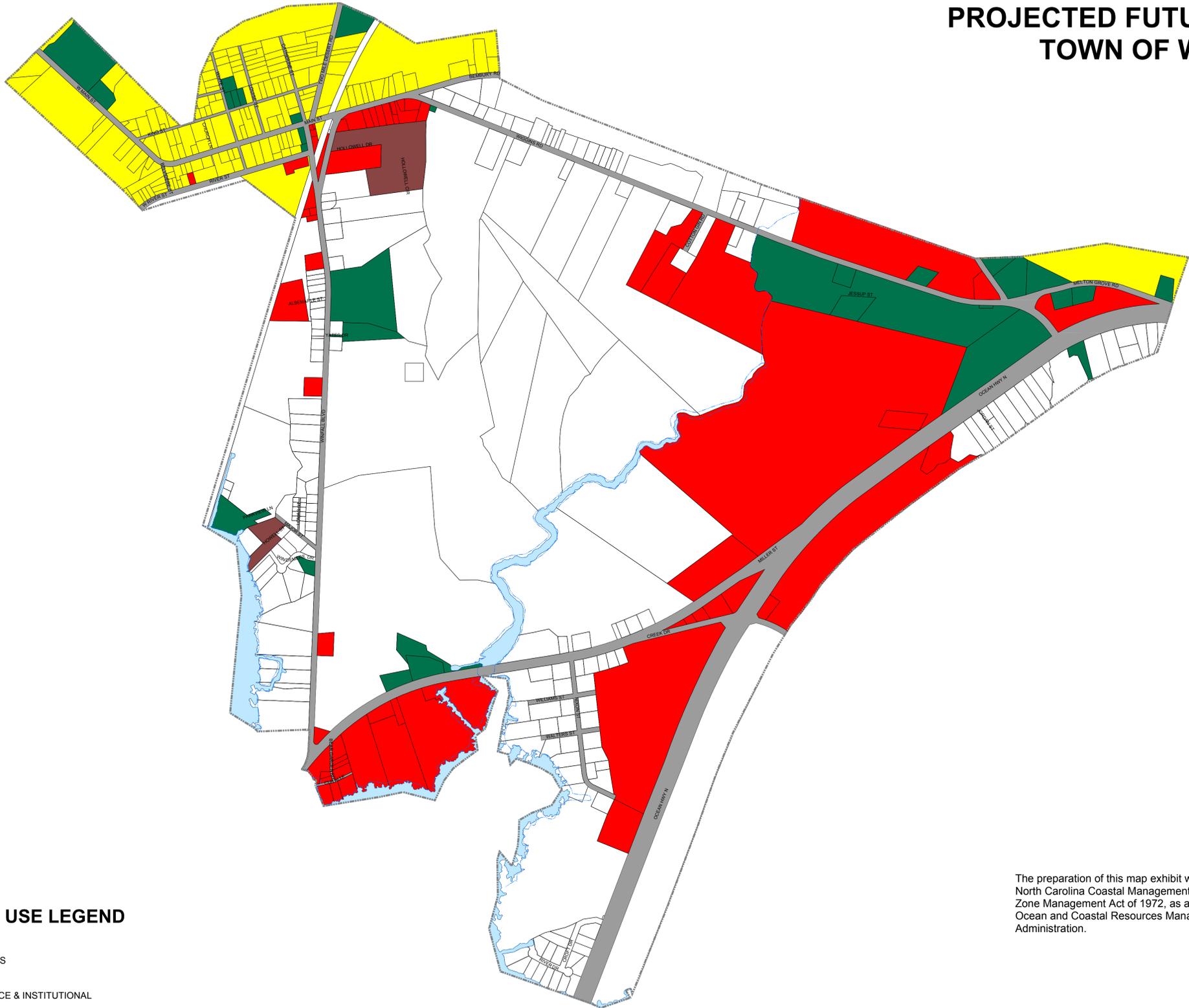
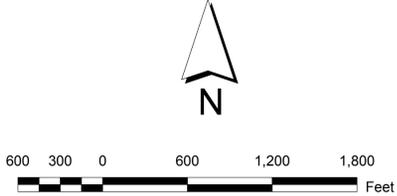
The classification includes land used for predominantly publicly-controlled transportation and utility systems' right-of-ways and easements, and will encompass nearly eight (8) percent of the Town's land area.

**Future Land Use Compatibility Matrix
 Consistency Review of Future Land Use Map Designations and Existing Zoning Districts
 for the Town of Winfall**

Zoning Districts	R-1	R-2	GB	HC
Min. Lot Size (SF)	8,000	8,000	20,000	20,000
Max Bldg. Height (ft.)	35	35	35	35
Designations/Average Density (du per acre)				
Residential /5 SF; 18 MF Conditional	g	g	x	x
Residential Agricultural/5 SF; 18 MF Conditional	g	g	x	x
Mobile/Manufactured Home Parks/18	x	c	x	x
Manufacturing/N/A	x	x	x	c
Commercial/N/A	x	x	g	g
Public/Semi-Public/Religious/O&I/N/A	c	c	g	g

g = generally consistent
 c = conditionally consistent
 x = inconsistent

**EXHIBIT IX-D
PERQUIMANS COUNTY, NORTH CAROLINA
PROJECTED FUTURE LAND USE
TOWN OF WINFALL**



PROJECTED FUTURE LAND USE LEGEND

- RESIDENTIAL
- MOBILE/MANUFACTURED HOME PARKS
- COMMERCIAL
- PUBLIC/SEMI-PUBLIC/RELIGIOUS/OFFICE & INSTITUTIONAL
- RESIDENTIAL AGRICULTURAL
- RIGHTS OF WAY & EASEMENTS

The preparation of this map 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 Resources Management, National Oceanic and Atmospheric Administration.

The purpose of the future land use maps is to graphically depict the County's and Town's policies for growth and land development in the projected patterns of future land use. The future land use maps have been prepared with consideration given to land development objectives and policies, natural constraints and limitations, overall land suitability, and the ability to provide the infrastructure to support growth and development.

The future land use maps were developed to help:

- guide the most intensive development to areas with supporting infrastructure;
- anticipate growth on the fringes of Hertford and Winfall;
- accommodate various residential densities;
- promote commercial development in the Commerce Centre, in the towns, and along U.S. 17;
- encourage downtown mixed use development and revitalization;
- discourage growth in areas with natural constraints and low land suitability ratings; and,
- conserve fragile environments.

EXHIBIT IX-E, EXHIBIT IX-F, and EXHIBIT IX-G, which follow, illustrate the distribution of existing land use acreages by future land use map classifications.

**EXHIBIT IX-E
 PERQUIMANS COUNTY, NORTH CAROLINA
 DISTRIBUTION OF ACREAGE BY EXISTING LAND USE AND PROJECTED
 FUTURE LAND USE MAP CLASSIFICATIONS
 PERQUIMANS COUNTY PLANNING JURISDICTION**

Existing Land Use Classification	Total Acres	% of Total Acres	Future Land Use Classification	Total Acres	% of Total Acres
Residential	5,847	3.94%	Residential	9,863	6.64%
Residential Agricultural	135,422	91.18%	Residential Agricultural	131,367	88.45%
Mobile/Manufactured Home Parks	89	0.06%	Mobile/Manufactured Home Parks	89	0.06%
Manufacturing	3	*	Manufacturing	3	*
Commercial	93	0.06%	Commercial	132	0.09%
Public/Semi-public/Religious/Office & Institutional	3,917	2.64%	Public/Semi-public/Religious/Office & Institutional	3,917	2.64%
Conservation Easement(s)	365	0.25%	Conservation Easement(s)	365	0.25%
Rights of Way and Easements	2,789	1.88%	Rights of Way and Easements	2,789	1.88%
TOTALS	148,525	100%**	TOTALS	148,525	100%**

* Less than 0.1%.

** Rounded

NOTE: Increases in acreage for future developed uses result from the straight conversion of existing County and Town “Residential Agricultural”.

EXHIBIT IX-F
PERQUIMANS COUNTY, NORTH CAROLINA
DISTRIBUTION OF ACREAGE BY EXISTING LAND USE AND PROJECTED
FUTURE LAND USE MAP CLASSIFICATIONS
TOWN OF HERTFORD PLANNING JURISDICTION

Existing Land Use Classification	Total Acres	% of Total Acres	Future Land Use Classification	Total Acres	% of Total Acres
Residential	238	5.19%	Residential	599	13.06%
Residential Agricultural	3,097	67.56%	Residential Agricultural	2,500	55.54%
Multi-family Residential	33	0.72%	Multi-family Residential	27	0.59%
Mobile/Manufactured Home Parks	41	0.89%	Mobile/Manufactured Home Parks	56	1.22%
Manufacturing	0	0	Manufacturing	10	0.22%
Commercial	542	11.82%	Commercial	700	15.27%
Public/Semi-public/Religious/Office & Institutional	400	8.73%	Public/Semi-public/Religious/Office & Institutional	459	10.01%
Conservation Easement(s)	10	0.22%	Conservation Easement(s)	10	0.22%
Rights of Way and Easements	223	4.86%	Rights of Way and Easements	223	4.86%
TOTALS	4,584	100%*	TOTALS	4,584	100%

*Rounded.

NOTE: Increases in acreage for future developed uses result from the straight conversion of existing County and Town “Residential Agricultural”.

**EXHIBIT IX-G
 PERQUIMANS COUNTY, NORTH CAROLINA
 DISTRIBUTION OF ACREAGE BY EXISTING LAND USE AND PROJECTED
 FUTURE LAND USE MAP CLASSIFICATIONS
 TOWN OF WINFALL**

Existing Land Use Classification	Total Acres	% of Total Acres	Future Land Use Classification	Total Acres	% of Total Acres
Residential	49	3.47%	Residential	103	7.29%
Residential Agricultural	1,025	72.59%	Residential Agricultural	773	54.75%
Mobile/Manufactured Home Parks	14	0.99%	Mobile/Manufactured Home Parks	14	0.99%
Commercial	115	8.14%	Commercial	313	22.17%
Public/Semi-public/Religious/Office & Institutional	99	7.01%	Public/Semi-public/Religious/Office & Institutional	99	7.01%
Rights of Way and Easements	110	7.79%	Rights of Way and Easements	110	7.79%
TOTALS	1,412	100%*	TOTALS	1,412	100%

*Rounded.

NOTE: Increases in acreage for future developed uses result from the straight conversion of existing County and Town “Residential Agricultural”.

5. Consistency with Natural Systems and Land Suitability Analysis

The composite environmental conditions map and the land suitability analysis map provided by DCM in 2010 were used to help to develop the future land use maps. During the land use planning process, the County and towns overlaid and compared their respective future land use maps (EXHIBIT IX-B, EXHIBIT IX-C, and EXHIBIT IX-D), the State supplied (2010) composite environmental conditions map (EXHIBIT IV-G), the State supplied (2010) land suitability analysis map (EXHIBIT VII-C), and the estimated acreage encompassed by the land suitability ratings for the unincorporated portions of Perquimans County, Hertford, and Winfall (EXHIBIT VII-D). From this process, a high level of consistency was apparent and noted between the maps. In addition, the future land use maps Perquimans County, Hertford, and Winfall generally reflect the land use districts found in each locality's zoning ordinance.

Residential agricultural areas shown on the towns' future land use maps 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 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 Perquimans County. The sewage system owned by Hertford, if expanded could serve some very limited development in areas of Perquimans County 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 17, NCSR 32, and NCSR 37.

The land classifications and spatial patterns shown on the future land use map reflect the significant amount of shoreline in Perquimans County. State and Federal regulations will help ensure natural areas will remain in a natural state. There are no open shellfish waters in Perquimans County.

Exhibits are used to display the amounts of land allocated to the various land use classifications. The land use patterns depicted on the future land use maps are consistent with the analysis of natural systems and the analysis of land suitability. The future land use maps depict generalized patterns of projected land use. The intent of the maps is to illustrate a typical pattern of use for a general area and not necessarily the specific use of

an individual parcel. The future land use maps are not intended for site-specific land planning or for regulatory purposes.

Portions of Hertford and Winfall contain some type of natural constraint, primarily floodplains. The majority of such areas are designated on the future land use maps as residential agricultural, while some are within commercial and residential areas. Areas with significant natural constraints and low suitability ratings within the Perquimans County jurisdiction are found throughout the County and along its waterways.

Other undeveloped areas are scattered throughout and include wetlands, estuarine waters, estuarine shoreline, public trust areas, and '404' wetlands. Due to the small size of such areas, they are not specifically identified on the future land use maps. Other areas with significant natural constraints and low suitability ratings are designated on the future land use map for low intensity land uses such as those anticipated to occur in the Residential Agricultural classifications.

Portions of the projected use classifications shown on the future land use maps may include land which is designated as having moderate or serious natural limitations or land which is rated as having low suitability for development. The land use plan is a guidance document and specific site development constraints must be identified and dealt with, if and when development is contemplated. Thus, inclusion of such areas within a specific projected future use classification does not denote a recommendation for future development. Rather, it means that while such areas are located within a broader general use pattern, their ultimate use may be different from other properties because of their natural constraints and regulatory limitations.

Some of the designated fragile areas may always remain in their current natural state or if permitted by regulatory authority, may be altered and any negative impacts overcome through approved mitigation measures such as enhanced storm water management or increased vegetative buffers. Some of the areas currently designated as having low suitability for development may lose that rating over time as, for example, public utilities are installed and roads are constructed. Consequently, the future use of such areas, if the low suitability conditions are eliminated, will be in accordance with the broader general use classification.

Land development activity within most environmentally fragile areas is subject to local, State, and/or Federal restrictions. Local land use regulations such as zoning ordinances, subdivision ordinances, public water supply watershed ordinances, storm water management ordinances, and flood damage prevention ordinance include specific standards for land development activities. Site-specific soil analyses are required by the Albemarle Regional Health Services Management Entity to evaluate the suitability of a particular parcel for septic system suitability. Encouraging good site planning principles and best management practices can assist with mitigating the impacts of land development of environmentally fragile areas.

Development within the designated Areas of Environmental Concern is limited by CAMA regulations and development guidelines. Generally, the development standards for coastal wetlands, estuarine waters, and public trust areas permit only water-dependent uses such as navigation channels, dredging projects, docks, piers, bulkheads, boat ramps, groins, and bridges. Priority is, however, given to the conservation of these AEC. CAMA standards for estuarine shoreline development generally require the (i) the development not cause significant damage to estuarine resources; (ii) the development not interfere with public rights of access to or use of navigable waters or public resources; (iii) the development preserve and not weaken natural barriers to erosion; (iv) impervious surfaces not exceed 30 percent of the lot area located within the AEC boundary; (v) the development comply with state soil erosion, sedimentation, and storm water management regulations; and (vi) the development comply with the CAMA Land Use Plans. Specific CAMA development standards for AEC can be found in 15 NCAC 7H. The US Army Corps of Engineers is responsible for regulating non-coastal or '404' wetlands. Authorization must be obtained from the Corps prior to disturbing such wetlands.

Areas with prime farmland soils may also be well suited to urban uses. The loss of prime farmland to other land uses is anticipated to continue particularly on the periphery of the towns where more intensive growth is more suited due to the existing infrastructure in the area. County policies and land use regulations can assist with guiding incompatible land development away from existing agricultural areas that are located within the County jurisdiction. Mechanisms such as the establishment of voluntary agricultural districts and creating additional historic agricultural districts can assist in protecting farms from non-farm development.

Opportunities exist for the conservation of fragile areas and natural resource areas through both private and public means. Private land trusts and conservancies are tax-exempt organizations that acquire and preserve natural areas, open spaces, and historical properties. Such organizations offer mechanisms such as conservation easements to protect natural resources (natural habitats, places of scenic beauty, farms, forestlands, floodplains, watersheds, etc.) while also providing compensation and possible tax incentives to private property owners. Tax incentive programs, such as the North Carolina Conservation Tax Credit Program, provide opportunities for property owners donating land for conservation purposes to receive tax credits. State and local governments may also accept land donations for conservation purposes.

Public land use regulations, such as conservation design subdivisions requirements, can be developed to assist with the conservation of environmentally sensitive areas and open space as land is being subdivided into building parcels.

The timing of the provision of infrastructure improvements, particularly water and sewer services and roads, will also have a tremendous impact on the rate and location of growth and development. Development will occur where infrastructure is available or can readily be made available to sustain that development. Consequently, achieving the future land use maps land use projections will depend in large part upon if and when

infrastructure is provided. The provision of public infrastructure generally depends upon capability to provide the service and demand for the service. Economic climate will be a major factor in the capability to make infrastructure available as well as the level of service demand.

6. Future Land Use Allocations and Projected Land Needs

EXHIBIT IX-B, EXHIBIT IX-C, and EXHIBIT IX-D above show projected future land use and development patterns in Perquimans County, Hertford, and Winfall. While it is acknowledged that some of the land area within each category shown cannot or will not be developed during the planning period, the exhibit is useful in that it shows the general projected development plan envisioned and desired by the Town. The projected future land use maps were developed considering several factors. The localities' current zoning maps were analyzed and current zoning districts were generally incorporated into the respective future land use maps. Similarly, the land suitability analysis map and composite environmental features maps provided by the State, and the existing land use maps developed for this land use plan were considered.

a. (Unincorporated Portion of) Perquimans County

The projected future land uses shown on map EXHIBIT IX-B are intended to reflect the desired future development pattern for the unincorporated portion of Perquimans County. EXHIBIT IX-B is similar to the County's current zoning map in that both are intended to group like land uses and thus help to avoid (present) and future land use conflicts. Similarly, the estimated acreages shown on EXHIBIT IX-E (above) represent calculations of the amount of land area encompassed within a given category. While the depiction of projected future land use patterns and calculation of the area encompassed by land use categories is useful and illustrative, this does not mean, and should not be construed to mean that all the areas encompassed within a given classification are available for development.

For example, some areas in the County have been divided into lots although some larger tracts remain. A vast majority of the platted residential lots in the County are within or adjacent to established residential areas, particularly on the peninsulas. However, the presence of environmental and/or other development related constraints precludes development of some of these lands. Mitigation measures that may be necessary to mitigate development constraints may be or have been deemed unpractical or cost prohibitive. Thus, some land within some classifications will remain undeveloped or unimproved, and thus may not realistically be considered as potentially developable.

The majority of Perquimans County encompassed by the projected future land use categories is undeveloped. In addition, some of the remaining undeveloped areas within some categories will likely remain so as market forces and economic factors contribute to make some parcels undesirable and thus not used as projected. Finally, some of the land areas within some categories, if even proposed for development, may require lot and site

specific analysis to accurately determine a given parcel’s development potential and subsequent mitigation measures.

EXHIBIT IX-H, which follows, shows the estimated acreages encompassed in each future land use classification at maximum build-out, estimated existing land use totals within each classification, the estimated increase or decrease in area (between projected future land use classifications at build-out and estimated existing land use totals within each classification), and needs that are projected by the end of the planning period based on population projections.

**EXHIBIT IX-H
 PERQUIMANS COUNTY, NORTH CAROLINA
 LAND ALLOCATED ON THE PROJECTED FUTURE LAND USE MAP AND
 PROJECTED NEEDS
 PERQUIMANS COUNTY PLANNING JURISDICTION**

Perquimans County Planning Jurisdiction Future Land Use Map Classifications	A Estimate of Total Acres Allocated to Each Future Land Use Classification at Build-out	B Estimate of Total Acres Allocated to Each Existing Land Use Classification	C Estimated Net Increase (+) or Decrease (-) in Acres within Each Classification (A-B)	D Projected Land Need (Acres) Based on Projected Population at the End of the Planning Period
Residential	9,863	5,847	+4,016	1,544
Residential Agricultural	131,367	135,422	-4,055	*
Mobile/Manufactured Home Parks	89	89	00	*
Manufacturing	3	3	0	59
Commercial	132	93	+39	39
Public/Semi-public/ Religious/Office & Institutional	3,917	3,917	0	32
Conservation Easement(s)	365	365	0	0
Rights-of-Way and Easements	2,789	2,789	0	0
TOTALS	148,525	148,525	0	1,674

*Included in projection for residential classification.

b. Hertford

The projected future land uses shown on (map) EXHIBIT IX-C above are intended to reflect the desired future development pattern for Hertford. EXHIBIT IX-C is similar to the Town's current zoning map in that both are intended to group like land uses and thus help to avoid (present) and future land use conflicts. Similarly, the estimated acreages shown on EXHIBIT IX-F (above) represent calculations of the amount of land area encompassed within a given category. While the depiction of projected future land use patterns and calculation of the area encompassed by land use categories is useful and illustrative, this does not mean, and should not be construed to mean that all the areas encompassed within a given classification are available for development.

For example, many areas of the Town have been divided into lots although some larger commercial tracts remain. A vast majority of the platted residential lots in Town are within or adjacent to established residential areas. However, the presence of environmental and/or other development related constraints precludes development of some lots in these areas. Mitigation measures that may be necessary to mitigate development constraints may be or have been deemed unpractical or cost prohibitive. Thus, some land within some categories may remain undeveloped, and may not realistically be considered as potentially developable.

EXHIBIT IX-I, which follows, shows the estimated acreages encompassed in each future land use classification at maximum build-out, estimated existing land use totals within each classification, the estimated increase or decrease in area (between projected future land use classifications at build-out and estimated existing land use totals within each classification), and needs that are projected by the end of the planning period based on population projections.

Much of the land shown in the more intense land use categories is already developed. In addition, some of the remaining undeveloped areas within some categories will likely remain so as market forces and economic factors contribute to make some parcels undesirable and thus not used as projected. Finally, some of the land areas within some categories, if even proposed for development, may require lot and site specific analysis to accurately determine a given parcel's development potential and subsequent mitigation measures.

**EXHIBIT IX-I
 PERQUIMANS COUNTY, NORTH CAROLINA
 LAND ALLOCATED ON THE PROJECTED FUTURE LAND USE MAP AND
 PROJECTED NEEDS
 TOWN OF HERTFORD PLANNING JURISDICTION**

Town of Hertford Planning Jurisdiction Future Land Use Map Classifications	A Estimate of Total Acres Allocated to Each Future Land Use Classification at Build-out	B Estimate of Total Acres Allocated to Each Existing Land Use Classification	C Estimated Net Increase (+) or Decrease (-) in Acres within Each Classification (A-B)	D Projected Additional Land Need (Acres) Based on Projected Population at the End of the Planning Period
Residential	599	238	+361	163
Residential Agricultural	2,500	3,097	-597	*
Multi-Family Residential	27	33	-6	*
Mobile/Manufactured Home Parks	56	41	+15	*
Manufacturing	10	0	+10	6
Commercial	700	542	+158	9
Public/Semi-Public/ Religious/Office & Institutional	459	400	+59	3
Conservation Easement(s)	10	10	0	0
Rights-of-Way and Easements	223	223	0	0
TOTALS	4,584	4,584	0	181

*Included in projection for residential classification.

c. Winfall

The projected future land uses shown on (map) EXHIBIT IX-D above are intended to reflect the desired future development pattern for Winfall. EXHIBIT IX-D is similar to the Town's current zoning map in that both are intended to group like land uses and thus help to avoid (present) and future land use conflicts. Similarly, the estimated acreages shown on EXHIBIT IX-G (above) represent calculations of the amount of land area encompassed within a given category. While the depiction of projected future land use patterns and calculation of the area encompassed by land use categories is useful and illustrative, this does not mean, and should not be construed to mean that all the areas encompassed within a given classification are available for development.

For example, many areas of the Town have been divided into lots although some larger commercial tracts remain. A vast majority of the platted residential lots in Town are within or adjacent to established residential areas. However, the presence of environmental and/or other development related constraints precludes development of some lots in these areas. Mitigation measures that may be necessary to mitigate development constraints may be or have been deemed unpractical or cost prohibitive. Thus, some land within some categories may remain undeveloped, and may not realistically be considered as potentially developable.

EXHIBIT IX-J, which follows, shows the estimated acreages encompassed in each future land use classification at maximum build-out, estimated existing land use totals within each classification, the estimated increase or decrease in area (between projected future land use classifications at build-out and estimated existing land use totals within each classification), and needs that are projected by the end of the planning period based on population projections.

Much of the land shown in the more intense land use categories is already developed. In addition, some of the remaining undeveloped areas within some categories will likely remain so as market forces and economic factors contribute to make some parcels undesirable and thus not used as projected. Finally, some of the land areas within some categories, if even proposed for development, may require lot and site specific analysis to accurately determine a given parcel's development potential and subsequent mitigation measures.

**EXHIBIT IX-J
 PERQUIMANS COUNTY, NORTH CAROLINA
 LAND ALLOCATED ON THE PROJECTED FUTURE LAND USE MAP AND
 PROJECTED NEEDS
 TOWN OF WINFALL**

Town of Winfall Future Land Use Map Classifications	A Estimate of Total Acres Allocated to Each Future Land Use Classification at Build-out	B Estimate of Total Acres Allocated to Each Existing Land Use Classification	C Estimated Net Increase (+) or Decrease (-) in Acres Within Each Classification (A-B)	D Projected Additional Land Need (Acres) Based on Projected Population at the End of the Planning Period
Residential	103	49	+54	56
Residential Agricultural	773	1,025	-252	*
Mobile/Manufactured Home Parks	14	14	0	*
Commercial	313	115	198	5**
Public/Semi-Public/ Religious/Office & Institutional	99	99	0	1
Rights-of-Way and Easements	110	110	0	0
TOTALS	1,412	1,412	0	62

*Included in projection for residential classification.

**Projection for commercial includes an allowance for limited (+/- 2 acres) potential light manufacturing.

7. Comparison of Projected Future Land Use Categories and Projected Future Needs

The preceding exhibits provide a comparison of the amount of land within each future land use map classification and project land needs. The exhibits compare the gross, developed, and undeveloped acreage of land allocated to the various future land use map classifications. The exhibits are intended to show the amount of land allocated to the various future land use map classifications and the amount of land needed to meet projected future needs based upon population growth through 2030. They illustrate a general comparison of land allocation without accounting for the variety of land uses within individual map classifications which may limit or prohibit development potential. The comparisons illustrated are of limited utility and should be used to provide broad perspective of future land allocation and land needs.

Perquimans County and the Towns of Hertford and Winfall acknowledge that the future land use plan map designations and policies accommodate residential density levels that exceed the projected need. However, the County and Towns believe that promoting higher density levels in some portions of their jurisdictions is not inconsistent with the desired objective of accommodating diverse residential development types and avoiding a strict segregation of housing types and densities. They also believe that allowing for higher residential density levels is not inconsistent with the purposes of the future land use maps categories, particularly the County's Residential Agricultural classification and the localities' Residential classification, or with the existing and proposed infrastructure within these classifications.

The land use plan may accommodate higher density levels, but this does not equate with all or even most of the future land development actually occurring at the higher levels. The land use plan sets the stage for allowing higher densities. However, the land use plan is not an approval for all future high density development requests or proposals. Every land development proposal must be reviewed and approved on a case-by-case basis with consideration given to the site-specific conditions.

Perquimans County and its towns believe that higher residential density levels can, with appropriate regulatory safeguards, be compatible with surrounding lower density land uses. Proposed higher density developments require extended and more detailed scrutiny in their review and approval processes. Decisions regarding the approval or disapproval of such developments are made on a case-by-case basis after evaluation and review, including public review and comment, and after a case-by-case independent determination of consistency or inconsistency with this plan is made pursuant to NCGS 153A-341.

Because certain types of development are permissible only as special or conditional uses, determinations can be made by the local governments to require specific mitigating actions to address identified potential negative impacts or the protection of natural resources. Regulatory authorization is currently in place to ensure that special or conditional uses (i) do not endanger the public health or safety, (ii) do not injure the value of adjoining or abutting properties, (iii) are compatible with the area in which it is proposed to be located, and (iv) will be in conformity with adopted local plans.

Perquimans County and its towns do not believe that the residential densities accommodated in the land use plan will automatically result in adverse impacts and environmental degradation and should, therefore, be excluded from their jurisdictions. Rather, the localities believe that they have the capabilities to review and assess land development proposals and to make appropriate decisions regarding their desirability and compatibility. They have statutory authorization to regulate land development activities and currently do so with their zoning ordinances and subdivision regulations. Perquimans and its towns will, through these land development regulations, continue to ensure that any identified adverse impacts resulting from increased density levels will be avoided or mitigated prior to approval.

Based upon the projects and assumptions delineated in the above exhibits, sufficient developable acreage exists within Perquimans County, Hertford, and Winfall to accommodate projected residential and nonresidential land needs. However, to efficiently accommodate projected growth, it will be imperative that the Town and County closely coordinate infrastructure development land use regulations.

8. Projected Utility Demand by the End of the Planning Period (2030)

EXHIBIT IX-K, which follows, summarizes hypothetical projected utility system(s) demand that could result if projected additional land needs (based on projected population at the end of the planning period) come to fruition in the Perquimans County planning jurisdiction (in areas served by utility systems) from the density and intensity levels included in the exhibit.

**EXHIBIT IX-K
 PERQUIMANS COUNTY, NORTH CAROLINA
 PROJECTED UTILITY DEMAND BASED ON
 PROJECTED POPULATION AT THE END OF THE PLANNING PERIOD (2030)
 PERQUIMANS COUNTY PLANNING JURISDICTION**

Perquimans County Planning Jurisdiction Future Land Use Map Classifications	Projected Additional Acres Needed Based on Projected Population*	Projected Additional DU By 2030	Projected Average DU/AC	Projected Average Nonresidential Lot Size (acres)	Projected Additional Nonresidential Users By 2030	Projected Additional Water Demand MGD By 2030+	Projected Additional Sewer Demand MGD By 2030+
Residential	1,544	425	.28	N/A	N/A	0.085	0.085
Residential Agricultural	**	**	**	N/A	N/A	**	**
Mobile/Manufactured Home Parks	**	**	**	N/A	N/A	**	**
Manufacturing	59	N/A	N/A	15	1	0.005	0.005
Commercial	39	N/A	N/A	3	13	0.007	0.007
Public/Semi-Public/Religious/Office & Institutional	32	N/A	N/A	5	6	0.03	0.03
Conservation Easement(s)	0	N/A	N/A	N/A	N/A	N/A	N/A
Rights-of-Way and Easements	0	N/A	N/A	N/A	N/A	N/A	N/A
TOTALS	1,674	425	N/A	N/A	21	0.127	0.127

*Projected population at the end of the planning period (2030).

**Included in projection for residential classification.

+Based on an average consumption of 200 gallons per day (gpd) for residential users; 5,000 gpd for manufacturing users; 500 gpd for commercial users; and 5,000 gpd for public/semi-public/religious/office & institutional users.

EXHIBIT IX-L, which follows, summarizes hypothetical projected utility system(s) demand that could result if projected additional land needs (based on projected population at the end of the planning period) come to fruition in the Hertford planning jurisdiction (in areas served by utility systems) from the density and intensity levels included in the exhibit.

**EXHIBIT IX-L
 PERQUIMANS COUNTY, NORTH CAROLINA
 PROJECTED UTILITY DEMAND BASED ON
 PROJECTED POPULATION AT THE END OF THE PLANNING PERIOD (2030)
 TOWN OF HERTFORD PLANNING JURISDICTION**

Town of Hertford Planning Jurisdiction Future Land Use Map Classifications	Projected Additional Acres Needed Based on Projected Population*	Projected Additional DU By 2030	Projected Average DU/AC	Projected Average Nonresidential Lot Size (acres)	Projected Additional Nonresidential Users By 2030	Projected Additional Water Demand MGD By 2030+	Projected Additional Sewer Demand MGD By 2030+
Residential	163	115	0.71	N/A	N/A	0.023	0.023
Residential Agricultural	**	**	**	N/A	N/A	**	**
Multi-Family Residential	**	**	**	N/A	N/A	**	**
Mobile/Manufactured Home Parks	**	**	**	N/A	N/A	**	**
Manufacturing	6	N/A	N/A	15	1	0.005	0.005
Commercial	9	N/A	N/A	3	3	0.002	0.002
Public/Semi-Public/Religious/Office & Institutional	3	N/A	N/A	5	1	0.005	0.005
Conservation Easement(s)	0	N/A	N/A	N/A	N/A	N/A	N/A
Rights-of-Way and Easements	0	N/A	N/A	N/A	N/A	N/A	N/A
TOTALS	181	115	N/A	N/A	5	0.04	0.04

*Projected population at the end of the planning period (2030).

**Included in projection for residential classification.

+Based on an average consumption of 200 gallons per day (gpd) for residential users; 5,000 gpd for manufacturing users; 500 gpd for commercial users; and 5,000 gpd for public/semi-public/religious/office & institutional users.

EXHIBIT IX-M which follows summarizes hypothetical projected utility system(s) demand that could result if projected additional land needs (based on projected population at the end of the planning period) come to fruition in Winfall (in areas served by utility systems) from the density and intensity levels included in the exhibit.

**EXHIBIT IX-M
 PERQUIMANS COUNTY, NORTH CAROLINA
 PROJECTED UTILITY DEMAND BASED ON
 PROJECTED POPULATION AT THE END OF THE PLANNING PERIOD (2030)
 TOWN OF WINFALL**

Town of Winfall Future Land Use Map Classifications	Projected Additional Acres Needed Based on Projected Population*	Additional Projected DU By 2030	Projected Average DU/AC	Projected Average Nonresidential Lot Size (acres)	Projected Additional Nonresidential Users By 2030	Projected Additional Water Demand MGD By 2030+	Projected Additional Sewer Demand MGD By 2030+
Residential	56	26	0.46	N/A	N/A	0.005	0.005
Residential Agricultural	**	**	**	N/A	N/A	**	**
Mobile/Manufactured Home Parks	**	**	**	N/A	N/A	**	**
Commercial	5	N/A	N/A	3	2	0.001	0.001
Public/Semi-Public/ Religious/Office & Institutional	1	N/A	N/A	5	1	0.005	0.005
Rights-of-Way and Easements	0	N/A	N/A	N/A	N/A	N/A	N/A
TOTALS	62	26	N/A	N/A	3	0.011	0.011

*Projected population at the end of the planning period (2030).

**Included in projection for residential classification.

+Based on an average consumption of 200 gallons per day (gpd) for residential users; 5,000 gpd for manufacturing users; 500 gpd for commercial users; and 5,000 gpd for public/semi-public/religious/office & institutional users.

9. Cost Estimates for Planned Community Facilities Improvements

The County and its towns continue to work diligently to provide utilities to serve existing and projected development. In 2008-2009, Perquimans County, Hertford, and Winfall participated in a regional study of water and sewer capabilities, facilities, and needs. As the study was being conducted, and continuing at the time of this writing, Perquimans County has worked with neighboring Pasquotank County to secure an allocation in Pasquotank County's reverse osmosis water plant.

EXHIBIT IX-N, on the following page lists some of the capital projects completed by Perquimans County and the status of on-going or planned projects to improve facilities within the planning period. EXHIBIT IX-O lists the capital projects Hertford has completed and reflects the major water and sewer system upgrades and expansions Hertford has accomplished.

In August, 2010, Perquimans County acquired Winfall's water distribution system and all of its customers (approximately 300). This was done by an agreement approved by both governing bodies. The County is now responsible for providing water directly to the Town's customers, as well as maintaining the distribution system. Winfall will still maintain its sewer collection system and will continue to bill its users.

With respect to the aforementioned Pasquotank County Reverse Osmosis Plant (RO plant), a water purchase agreement is currently being negotiated by Pasquotank and Perquimans counties wherein Perquimans County will purchase bulk water from Pasquotank County. Pasquotank County will complete construction of the RO plant which will be located on Foreman Bundy Road, approximately ½ mile from Perquimans County. The purchase agreement was finalized to allow Perquimans County to purchase up to 150,000 gallons per day. Under the agreement, additional bulk water could be purchased in the future if needed as the RO plant is expanded.

With respect to current capacities and utilization, the Bethel and Winfall water plants combined daily permitted production capacity is 1,590,000 gallons per day. The most recent 12 months daily average production was 803,000 gallons per day.

**EXHIBIT IX-N
 PERQUIMANS COUNTY, NORTH CAROLINA
 PLANNED COMMUNITY FACILITIES – PERQUIMANS COUNTY**

FACILITY/IMPROVEMENT	COST ESTIMATE	STATUS
Generator for Bethel Water Plant	\$125,000	COMPLETED 2012
Generator for Winfall Water Plant	\$75,000	COMPLETED
Generators (2) for well sites	\$50,000	COMPLETED
Pasquotank River Reverse Osmosis Plant (20%)*	\$2,000,000	PENDING
Winfall Water Plant enhancements	\$2,500,000	COMPLETED BEFORE 2008
Winfall Water Plant Expansion	\$3,000,000	COMPLETED BEFORE 2008
New Hope 12” waterline	\$2,500,000	COMPLETED
Hunnicuttt well site development	\$116,000	COMPLETED
Chappell well site development	\$270,000	COMPLETED
Future well site(s) (2) development	\$500,000	PENDING
Water tank rehabilitation (2 tanks)	\$300,000	PENDING
TOTAL	\$11,436,000	N/A

* Perquimans County contracted with Pasquotank County for an allocation (up to 150,000 gallons per day) of the finished water resulting from this project.

** As of the time of this writing, this project is 90% completed. It should be completed by the end of 2010.

***At the time of this writing, a cost estimate for the project is being developed.

**EXHIBIT IX-O
 PERQUIMANS COUNTY, NORTH CAROLINA
 PLANNED COMMUNITY FACILITIES
 TOWN OF HERTFORD**

FACILITY/IMPROVEMENT	COST ESTIMATE	STATUS
Legal & Administrative	\$57,500	COMPLETED (Spring, 2010)
Preliminary Engineering	\$27,000	COMPLETED (Spring, 2010)
Soils & Right of Way	\$43,000	COMPLETED (Spring, 2010)
Land Acquisition	\$350,000	COMPLETED (Spring, 2010)
Design	\$437,926	COMPLETED (Spring, 2010)
Construction Observation	\$318,720	COMPLETED (Spring, 2010)
Water & Wastewater System Improvements	\$6,627,528	COMPLETED (Spring, 2010)
Interest During Construction	\$168,300	COMPLETED (Spring, 2010)
Administration for Community Development Funds	\$346,286	COMPLETED (Spring, 2010)
Contingency	\$405,050	COMPLETED (Spring, 2010)
TOTAL	\$8,781,292	COMPLETED (Spring, 2010)

10. Use of the Future Land Use Plan to Guide Development

In preparing the future land use maps, consideration was given to land development goals and policies, land suitability, and the ability to provide the infrastructure to support growth and development. The future land use maps depict the general location of projected patterns of future land uses. The future land use maps are a plan or guideline for the future.

The ultimate use and development of a particular parcel of land will be determined by property owners' desires, overall market conditions, implementation tools employed by the County and towns to regulate land use and development (such as the zoning ordinance, subdivision regulations, flood hazard regulations), the absence of specific natural constraints to development, and the availability of the necessary infrastructure (water, sewer, roads, etc.) to support development. Thus, even though the future land use maps may indicate a specific projected use in a particular location, many factors come into play to determine if the projected use is appropriate and the land can be developed as

projected. Also, amendments to the zoning ordinance and subdivision ordinance may be required to authorize some of the development envisioned in the land use plan.

As an example, the future land use maps project commercial along US 17 Bypass. Thus, it has been determined through the land use plan that the commercial use of property in this area is desirable and is expected to occur. However, the actual commercial use of a specific piece of property in generally-identified areas will depend upon the following:

- Is the property owner willing to use or sell the parcel for the proposed commercial use?
- Is the parcel properly zoned for commercial use? If not, a rezoning must be requested and approved by the County Board of Commissioners, Hertford Board of Commissioners, or Winfall Town Council(s). In reviewing the rezoning request, the Boards or Town Council will determine if commercial use is appropriate and desirable for the parcel.
- If the parcel is already zoned for commercial use, a zoning and building permit must be requested and approved by the County or towns. The proposed use and layout of the proposed building will be reviewed to determine conformance with the County's or towns' land use and development regulations and standards. Water supply and sewage disposal systems must be approved.
- In reviewing rezoning requests, and zoning and building permit applications, site characteristics of the parcel will be a major consideration by the review and approval authority. Are site characteristics such that the parcel can be physically used for the proposed commercial use? Poor soils, poor drainage, wetlands, flood hazards, etc. may limit the use of all or a portion of the parcel for commercial development. A determination must be made as to whether or not adverse site conditions may be mitigated in accordance with County, town(s), State, and Federal regulations. The allowable building intensity and density of development may need to be reduced to ensure compatibility with existing site conditions.
- Are adequate utilities in place to support the proposed commercial use? If adequate utilities are not in place, improvements will have to be planned, approved, and extended to the parcel in accordance with County, town(s), State, and utility provider standards and regulations. A determination must be made as to whether improvements and extensions are economically feasible.
- Are adequate roads in place to provide access to the parcel? If new roads or improvements to existing roads are needed, they will have to be planned, approved, and constructed in accordance with NCDOT standards.

Achieving the projected patterns of land use indicated by the future land use maps will be impacted by timing. Much of the projected land use indicated on the future land use maps will not come to fruition without market demand. Therefore, market and economic conditions must be conducive for growth and development. While the land use plan attempts to provide a general expectation of growth based upon projected population change, it simply cannot predict the economic future. The demand for houses, businesses, industries, etc. will fluctuate with economic conditions.

The timing of the provision of infrastructure improvements, particularly water and sewer services and roads, will also have a tremendous impact on growth and development. Development will occur where infrastructure is available or can be made available to sustain that development. Consequently, achieving the future land use map land use projections will depend in large part upon if and when infrastructure is provided. The provision of public infrastructure depends upon capability to provide the service and demand for the service. Economic climate will be a major factor in both the capability to make infrastructure available and the level of service demand.

Perquimans County's authority to adopt and implement a long range plan, in this case a CAMA Core land use plan (as opposed to a comprehensive plan), comprehensive plan is drawn from CAMA regulations, but perhaps as important, its State authorized general police power to "define, regulate, prohibit, or abate acts, omissions, or conditions detrimental to the health, safety, or welfare of its citizens" per North Carolina General Statute §160A-174.

North Carolina zoning enabling statutes have long required that zoning be "in accordance with a comprehensive plan". Neither the North Carolina statutes nor case law mandate preparation of comprehensive plans, define their elements, or set a mandatory procedure for their adoption. The State zoning statutes were amended in 2005 to strengthen the role of adopted plans where they do exist. The law requires that Planning Board review of proposed zoning amendments include written comments on the consistency of the proposed amendment with the comprehensive plan *and any other relevant plans* (such as a land use plan) that have been adopted by the Board of Commissioners. The Board of Commissioners is also required to adopt a statement on plan consistency before adopting or rejecting any zoning amendments. These written comments are required, but do not limit the board's discretionary power to adopt or not adopt zoning amendments.

In CAMA land use planning, projections of land need may be increased up to 50% to allow for unanticipated growth and to provide market flexibility and to accommodate economic development strategies the County and its towns are, or may pursue. It is anticipated that projections of future land use in each of the land use categories will meet and exceed by 50% projected needs.

However, to comply with State law, Perquimans County and its towns, CAMA rules notwithstanding, must remain cognizant of the fact that adopted zoning regulations cannot be discounted as long range plans are developed. The County adopted a zoning ordinance in October, 2002, after its last CAMA land use plan was developed and certified, but before 2003 when CAMA amended its land use plan rules. Since it adopted zoning, the County has rezoned properties as prescribed by the Perquimans County Ordinance.

The future land use maps in this land use plan and the localities' zoning maps basically mirror each other. "Un-zoning", down-zoning, or simply ignoring approved zoning in order to comply with a rule not to exceed 50% (above) projected needs in a planning document and run contrary to adopted zoning may be difficult for the County and its towns.

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 and its towns 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 and its towns have selected to implement the 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 Perquimans County's, Hertford's, and Winfall's land use and development decisions.)
- Existing development management program. (Description of Perquimans County's, Hertford's, and Winfall's existing policies, ordinances, codes, and regulations relative to land use and growth management 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 Perquimans County, Hertford, and Winfall to implement the plan.)
- Action plan and schedule. (Description of the priority actions that Perquimans County, Hertford, and Winfall will take to implement the plan and a general schedule for accomplishing these actions.)

A. Guide for Land Use Decision-Making

The Perquimans County, North Carolina CAMA Core Land Use Plan Update 2005-2006 (land use plan update) should be used by County and towns elected and appointed officials and the community as a guide in making decisions about (or that affect) land use and development.

Effective January 1, 2006, State statutes require that all (not just CAMA) town and county planning boards comment in writing on any proposed zoning map or text amendment. The comment must address whether the proposed amendment "is consistent with any comprehensive plan that has been adopted and any other officially adopted plan that is applicable." When adopting or rejecting any proposed amendment, the city council or board of commissioners must also adopt a statement to address this issue (and also addressing why the board believes the action taken is reasonable and in the public interest). G.S. 160A-383; 153A-341. It is also important to note that other state statutes G.S. 160A-382 and 153A-342 specifically require that a statement be prepared analyzing the reasonableness of all CUP, conditional zoning, or other small-scale rezonings. The statutes allow substantial flexibility as to how these statements are prepared. Many jurisdictions have a staff analysis on this issue, often including a draft statement, prepared for planning board and governing board consideration, amendment, and adoption.

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 localities 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 land use plan update and its policies serve short-term purposes. The plan is used by various sectors. Developers and/or others seeking local 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 and towns staffs 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. County and towns 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 Perquimans County Board of Commissioners and town councils of Hertford and Winfall can take into account and weigh the policy interpretations by the petitioner, the staff, planning boards, and residents, as well as its own interpretations and priorities in making its decision.

The land use plan update 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 update’s function with respect to zoning is of prime importance to Perquimans County, Hertford, and Winfall since one of the main action items the localities will undertake is the review and possible amendment of their respective zoning ordinances. Proper administration of the localities’ zoning ordinance should require any review of a proposed text or map amendment – whether by the staff, planning boards, or elected officials – to be based on consideration of whether the proposed amendment is consistent with the land use plan update and otherwise advances the public health, safety, and general welfare.

Because the land use plan update’s standards are wide ranging but explicit, it should be the principal guide to the planning boards’ discussions and actions concerning land use management and development, particularly zoning ordinance amendments. The localities’ respective planning boards, however, should also look beyond the land use plan update and consider whether proposed developments or requests for amendments to zoning or other ordinances, even if consistent with the land use plan update, 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 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 local economy – i.e., how a proposed development or development allowed by an amendment might affect employment opportunities and the general health of the Perquimans County/Hertford/Winfall 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 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 will be taken to coordinate the ordinances and codes to implement the plan. Perquimans County's, Hertford's, and Winfall's existing development management program includes all of the ordinances, regulations, codes, policies, and directives that affect land use and development in the respective jurisdictions.

The following sections list the land use related ordinances, codes, and policies that have been adopted or implemented by Perquimans County, Hertford, and Winfall 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.

1. Perquimans County Development Management Program

a. Flood Damage Prevention Ordinance

Adopted: October, 2004 and amended periodically as needed.

Managing department/agency: Perquimans County Building Inspections Department.

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.

b. Subdivision Ordinance

Adopted: May 7, 1973 and amended periodically as needed.

Managing department/agency: Perquimans County Planning Office.

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, Natural Hazard Areas, Water Quality, and Infrastructure Carrying Capacity and Provision of Public Facilities and Services.

Needed adjustments or amendments: The County will develop and consider adopting amendments to the subdivision ordinance concerning minor subdivision standards and regulations, setbacks, road cut standards and limitations, and inclusion of cluster development concepts, as well as standards for development within historic agriculture districts.

c. Zoning Ordinance

Adopted: July 2, 2002 and amended periodically as needed.

Managing department/agency: Perquimans County Planning Office.

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, Natural Hazard Areas, Water Quality, and Infrastructure Carrying Capacity and Provision of Public Facilities and Services.

Needed adjustments or amendments: In concert with efforts to amend the subdivision regulations and zoning ordinance, as previously stated, the County will develop and consider adopting amendments concerning minor subdivision standards and regulations, setbacks, road cut standards and limitations, and inclusion of cluster development concepts, as well as standards for development within historic agriculture districts.

d. Historic Agriculture District (regulations included in zoning ordinance)

Managing department/agency: Perquimans County Planning Office.

Use in plan implementation: This instrument, a part of the zoning ordinance, is used to promote and ensure managed development and to preserve the character of historically agricultural areas and 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: In concert with efforts to amend the subdivision regulations and zoning ordinance, as previously stated, the County will develop and consider adopting amendments to the zoning ordinance concerning standards for development within historic agriculture districts, such as certificate of appropriateness or landmark designation programs.

e. Building Inspection

Managing department/agency: Perquimans County Building Inspections Department.

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.

f. CAMA local permits

Managing department/agency: 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.

g. On-site wastewater treatment policy (Albemarle Regional Health Services Management Entity)

Managing department/agency: Albemarle Regional Health Services Management Entity.

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.

h. Mobile Home Park Ordinance

Adopted: July 20, 1987 and amended periodically as necessary.

Managing department/agency: Perquimans County Planning Office.

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.

i. Perquimans County Multi-jurisdictional Hazard Mitigation Plan

Adopted: August, 2005

Managing department/agency: Perquimans County Manager's Office.

Use in plan implementation: This instrument is used to plan for and set in motion various mechanisms to minimize loss of life and property in the event of a natural or man-made disaster, 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 hazards on the man-made environment and on environmentally fragile areas.

State management topic(s) affected: **Natural Hazard Areas**, Land Use Compatibility, and Infrastructure Carrying Capacity and Provision of Public Facilities and Services.

Needed adjustments or amendments: No adjustments or amendments are envisioned during the planning period.

j. Rules and regulations of the Perquimans County Water System

Managing department/agency: Perquimans 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.

2. Hertford Development Management Program

a. Flood Damage Prevention Ordinance

Managing department/agency: Hertford Town Manager's Office and Perquimans County Building Inspections Department.

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.

b. Subdivision Regulations

Managing department/agency: Hertford Town Manager's Office.

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, Natural Hazard Areas, Water Quality, and Infrastructure Carrying Capacity and Provision of Public Facilities and Services.

Needed adjustments or amendments: Adjustments or amendments will be made as necessary during the planning period.

c. Zoning Ordinance

Managing department/agency: Hertford Town Manager's Office.

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, Natural Hazard Areas, Water Quality, and Infrastructure Carrying Capacity and Provision of Public Facilities and Services.

Needed adjustments or amendments: Adjustments or amendments will be made as necessary during the planning period.

d. Building Inspection

Managing department/agency: Perquimans County Building Inspections Department.

Use in plan implementation: This function, administered by Perquimans County, 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.

e. CAMA local permits

Managing department/agency: Hertford Town Manager's Office 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.

f. On-site wastewater treatment policy (Albemarle Regional Health Services Management Entity)

Managing department/agency: Town of Hertford Wastewater treatment Utilities.

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.

g. Manufactured Home and Manufactured Home Park Ordinance

Adopted:

Managing department/agency: Hertford Town Manager's Office.

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.

h. Perquimans County Multi-jurisdictional Hazard Mitigation Plan

Adopted: August, 2005

Managing department/agency: Perquimans County Manager's Office.

Use in plan implementation: This instrument is used to plan for and set in motion various mechanisms to minimize loss of life and property in the event of a natural or man-made disaster, 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 hazards on the man-made environment and on environmentally fragile areas.

State management topic(s) affected: **Natural Hazard Areas**, Land Use Compatibility, and Infrastructure Carrying Capacity and Provision of Public Facilities and Services.

Needed adjustments or amendments: No adjustments or amendments are envisioned during the planning period.

i. Rules and Regulations of the Hertford Water and Sewer System(s)

Managing department/agency: Hertford Wastewater Treatment Utilities.

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.

3. Winfall Development Management Program

a. Flood Damage Prevention Regulations

Managing department/agency: Winfall Mayor's Office and Perquimans County Building Inspections Department.

Use in plan implementation: This instrument, based on Perquimans County's ordinance and administered by the County, 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.

b. Subdivision Ordinance

Adopted: January, 2006.

Managing department/agency: Winfall Mayor's Office.

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, Natural Hazard Areas, Water Quality, and Infrastructure Carrying Capacity and Provision of Public Facilities and Services.

Needed adjustments or amendments: No adjustments or amendments are envisioned during the planning period.

c. Zoning Ordinance

Adopted: January, 2006.

Managing department/agency: Winfall Mayor's Office.

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, Natural Hazard Areas, Water Quality, and Infrastructure Carrying Capacity and Provision of Public Facilities and Services.

Needed adjustments or amendments: No adjustments or amendments are envisioned during the planning period.

d. Building Inspection

Managing department/agency: Perquimans County Building Inspections Department.

Use in plan implementation: This function, provided by Perquimans County, 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.

e. CAMA local permits

Managing department/agency: Winfall Mayor's Office 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.

f. Manufactured Home and Manufactured Home Park Regulations

Managing department/agency: Winfall Mayor's Office.

Use in plan implementation: This instrument, covered in the Town's zoning ordinance, 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.

g. Perquimans County Multi-jurisdictional Hazard Mitigation Plan

Adopted: August, 2005.

Managing department/agency: Perquimans County Manager's Office.

Use in plan implementation: This instrument is used to plan for and set in motion various mechanisms to minimize loss of life and property in the event of a natural or man-made disaster, 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 hazards on the man-made environment and on environmentally fragile areas.

State management topic(s) affected: Natural Hazard Areas, Land Use Compatibility, and Infrastructure Carrying Capacity and Provision of Public Facilities and Services.

Needed adjustments or amendments: No adjustments or amendments are envisioned during the planning period.

h. Rules and Regulations of the Winfall Water and Sewer System(s)

Managing department/agency: Winfall Water and Sewer Utilities.

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 Perquimans County Planning Office, the Hertford Town Manager's Office, and/or the Winfall Mayor's 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 Perquimans County, Hertford, and Winfall.

1. Ordinances

At the time of this writing, a study is on-going with respect to the County's soil and water conservations districts. In conjunction with this study, and the aforementioned subdivision and zoning ordinance amendments that will be considered, Perquimans County, Hertford, and Winfall should study the development of new or enhanced erosion and sediment control regulations. Smart growth principles should, and will be investigated to promote desirable design guidelines and standards, compatible development(s), and walk able communities.

2. Capital Improvements Program

At the time of this writing, Perquimans County is developing a capital improvements plan. Perquimans County has a history of budgeting for capital expenditures in its annual operating budget, as does Hertford and Winfall. Hertford and Winfall do not envision developing "stand alone" capital improvements plans during the planning period, but rather, will continue to analyze capital needs, most notably those associated with water and sewer facilities annually. At the time of this writing, all Perquimans County, Hertford, and Winfall are cooperating and participating in a study of the feasibility of consolidating water and sewer facilities utilizing a regional approach. The study was completed in 2008. Meanwhile, projects to upgrade the systems' are underway, or are being discussed.

3. Acquisition Program

Perquimans County, Hertford, and Winfall envision the acquisition of private property for public uses during the planning period will be limited, and on an as needed basis, to implement water and sewer system(s) improvements that may be undertaken. In addition, the communities may pursue or help promote the dedication of conservation easements to assist the development of a blue ways/greenways trail system through the County and towns.

4. Specific Projects

Specific projects geared toward Perquimans County include: consider developing a thoroughfare plan to identify and designate key thoroughfares in the County and to consider developing zoning overlays with regulations applicable to development proposed along designated thoroughfares; consider developing or enhancing residential

development design guidelines and standards; consider developing or enhancing commercial and industrial building and development design guidelines and standards; monitor Federal and State programs; continue to market the Commerce Centre; 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; 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.

Specific projects geared toward Hertford include: consider developing or enhancing residential development design guidelines and standards; consider developing or enhancing commercial and industrial building and development design guidelines and standards; monitor Federal and State programs; continue to market the Commerce Centre; and, interact with Federal and State agencies and local governments in the region.

Specific projects geared toward Winfall include: consider developing or enhancing residential development design guidelines and standards; consider developing or enhancing commercial and industrial building and development design guidelines and standards; monitor Federal and State programs; continue to market the Commerce Centre; and, interact with Federal and State agencies and local governments in the region.

Locality specific projects, and the needed adjustments and amendments to ordinances and regulations cited above, are listed in the next section as action items in the Action Plan/Schedule(s) for Perquimans County, Hertford, and Winfall.

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 Perquimans County, Hertford, and Winfall 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 which follows, is the Perquimans County action plan and schedule.

EXHIBIT X-B on page X-19 is Hertford's action plan and schedule.

EXHIBIT X-C on page X-22 is Winfall's action plan and schedule.

EXHIBIT X-A
PERQUIMANS COUNTY, NORTH CAROLINA
PERQUIMANS COUNTY ACTION PLAN AND SCHEDULE

Perquimans County developed the following action plan and schedule to implement the land use plan:

a. Public Access Implementation Actions

Review through the subdivision plat and site plan review and approval process, proposed waterfront land development projects to ensure consistency with public access goals and policies.

Ongoing

Seek funding from DCM for a grant to prepare a shoreline access plan.

Begin: 2017

Complete: 2018

Initiate implementation of the recommendations of the shoreline access plan, seeking funding approval for recommended acquisitions/improvements and developing specific criteria and standards for the provision of public shoreline access.

Begin: 2018

Complete: 2020

b. Land Use Compatibility Implementation Actions

Amend the subdivision regulations as necessary, including but not limited to standards for minor subdivisions in historic agricultural areas, provision of public water accesses, and enhanced erosion and sediment control standards.

Begin: 2016

Complete: 2017

Amend the zoning ordinance as necessary, including but not limited to clustering of development, provision of public water accesses, enhanced erosion and sediment control standards, additional overlays, and sediment control standards, additional overlays, and develop enhanced highway corridor overlay provisions including access controls, the identification of transitional areas, and mapping of the overlay boundary, particularly along U.S. 17.

Begin: 2016

Complete: 2017

Develop residential development design guidelines and standards.

Begin: 2018

Complete: 2019

Develop commercial and industrial building and development design guidelines and standards.

Begin: 2018

Complete: 2019

Undertake a study to identify prime agricultural areas within the County.

Begin: 2018

Complete: 2019

Develop, in cooperation with NCDOT, requirements for regulating vehicular access to State roadways, and amend the County's zoning and subdivision ordinances accordingly.

Begin: 2017

Complete: 2017

Work with Hertford and Winfall, as applicable, to develop coordinated land use and development regulations as applicable for areas of common interest such as within the Hertford ETJ and along U.S. 17.

Begin: 2016

Complete: 2017

Study and/or adopt text amendments to the zoning ordinance and/or subdivision regulations concerning:

- stormwater and drainage management standards;
- family/private subdivisions, and other related lot and road requirements;
- new placement of residence on nonconforming lot;
- wind energy devices;
- rural commercial initiative;
- manufactured home regulations;
- planned unit development conditional use (PUD[CU]) district;
- public sewage disposal systems, individual septic systems, and "appropriate certification" to support rezoning requests;
- North Carolina Fire Code recommendations pertaining to road, water system, and fire hydrant standards;
- final plats under bind;
- court ordered subdivisions; and,
- design standards.

Begin: 2015

Complete: 2016

c. Infrastructure Carrying Capacity and Provision of Facilities and Services Implementation Actions

Develop, in cooperation with NCDOT, a thoroughfare plan.

Begin: 2017

Complete: 2018

Develop a capital improvements plan.

Begin: 2017

Complete: 2017

Support efforts to develop a blue ways/greenways trail system in and through the County.

Ongoing

Work with Hertford to clarify and determine service provision responsibilities within the Hertford ETJ, establishing formal utility service area boundaries and agreements and to develop coordinated land use and development regulations within such areas.

Begin: 2017

Complete: 2017

Work with Hertford and Winfall to correct problems associated with public water and wastewater systems.

Ongoing

Review future proposed water system extensions for consistency with the goals and policies of the land use plan.

Ongoing

d. Natural Hazard Areas Implementation Actions

Review the zoning ordinance, subdivision ordinance, and flood damage prevention regulations to determine if more specific location and density regulations regarding development or redevelopment activities within identified flood hazard areas and storm surge areas are warranted. Issues to be addressed include restrictions on land uses that utilize or store hazardous materials on-site, establishment of riparian buffers, increasing the minimum freeboard floor height above base flood elevations, etc.

Ongoing

Avoid zoning areas susceptible to storm surge for high density residential or intensive nonresidential uses.

Ongoing

Consider seeking Federal or State grant funding to acquire land in the most hazardous areas to minimize future property damage and loss of life.

Ongoing

Consider the feasibility of relocating or modifying affected public facilities if any portion of such facilities is significantly damaged by a major storm event to prevent the reoccurrence of storm damage.

Ongoing

Coordinate the review and approval of development plans for major subdivisions, multi-family developments, and large public and institutional uses located within identified natural hazard areas with emergency service providers.

Ongoing

Continue enforcement of the State Building Code provisions regarding wind resistance requirements and participation on the National Flood Insurance Program.

Ongoing

e. Water Quality Implementation Actions

Seek assistance in developing a multi-jurisdictional storm water management plan.

Begin: 2016

Complete: 2017

Review the zoning ordinance and subdivision ordinance to determine if revisions are needed to include additional measures, such as riparian buffers and impervious surface limitations, to control stormwater discharges.

Begin: 2017

Complete: 2018

Consider the adoption of a wellhead protection ordinance to regulate land uses within areas that replenish groundwater supply.

Begin: 2017

Complete: 2018

Continue to require, through its subdivision ordinance, adequate stormwater drainage systems for new developments.

Ongoing

Continue to promote the use of best management practices to minimize the degradation of water quality resulting from stormwater runoff.

Ongoing

Continue to coordinate the approval of land development projects with the applicable State agencies.

Ongoing

f. Areas of Environmental Concern (AEC) Implementation Strategies

Review the zoning ordinance and subdivision ordinance to determine if revisions are need to include additional protective measures for AEC.

Begin: 2016

Complete: 2017

g. Local Areas of Concern Implementation Actions

Promote development in the Commerce Centre.

Ongoing

Continue public participation program.

Ongoing

EXHIBIT X-B
PERQUIMANS COUNTY, NORTH CAROLINA
TOWN OF HERTFORD ACTION PLAN AND SCHEDULE

Hertford developed the following action plan and schedule to implement the land use plan:

a. Public Access Implementation Actions

Seek funding through DCM for a grant to prepare a shoreline access plan.

Begin: 2017

Complete: 2018

Initiate implementation of the recommendations of the shoreline access plan, seeking funding approval for recommended acquisitions/improvements and developing specific criteria and standards for the provision of public shoreline access.

Begin: 2018

Complete: 2020

Maintain the public access at Missing Mill Park.

Ongoing

b. Land Use Compatibility Implementation Actions

Develop residential development design guidelines and standards.

Begin: 2018

Complete: 2019

Develop commercial and industrial building and development design guidelines and standards

Begin: 2018

Complete: 2019

Develop, in cooperation with NCDOT, requirements for regulating vehicular access to State roadways, and amend the County's zoning and subdivision ordinances accordingly.

Begin: 2017

Complete: 2017

Work with Perquimans County and Winfall, as applicable, to develop coordinated land use and development regulations as applicable for areas of common interest such as within the Hertford ETJ and along U.S. 17.

Begin: 2016

Complete: 2017

c. Infrastructure Carrying Capacity and Provision of Facilities and Services Implementation Actions

Develop a capital improvements plan.

Begin: 2016

Complete: 2016

Support efforts to develop a blue ways/greenways system in and through the Town.

Ongoing

Update, in cooperation with NCDOT, the thoroughfare plan.

Begin: 2017

Complete: 2018

Work with Perquimans County and Winfall to correct problems associated with water and wastewater systems.

Ongoing

Work with Perquimans County to clarify and determine service provision responsibilities within the Hertford ETJ, establishing formal utility service area boundaries and agreements and to develop coordinated land use and development regulations within such areas.

Begin: 2017

Complete: 2017

Review future proposed water and wastewater system extensions for consistency with the goals and policies of the land use plan.

Ongoing

d. Natural Hazard Areas Implementation Actions

Review the zoning ordinance, subdivision ordinance, and flood damage prevention regulations to determine if more specific location and density regulations regarding development or redevelopment activities within identified flood hazard areas and storm surge areas are warranted. Issues to be addressed include restrictions on land uses that utilize or store hazardous materials on-site, establishment of riparian buffers, increasing the minimum freeboard floor height above base flood elevations, etc.

Ongoing

Avoid zoning areas susceptible to storm surge for high density residential or intensive nonresidential uses.

Ongoing

Consider seeking Federal or State grant funding to acquire land in the most hazardous areas to minimize future property damage and loss of life.

Ongoing

Consider the feasibility of relocating or modifying affected public facilities if any portion of such facilities is significantly damaged by a major storm event to prevent the reoccurrence of storm damage.

Ongoing

Coordinate the review and approval of development plans for major subdivisions, multi-family developments, and large public and institutional uses located within identified natural hazard areas with emergency service providers.

Ongoing

e. Water Quality Implementation Actions

Seek assistance in developing a joint storm water management plan.

Begin: 2016

Complete: 2017

Review the zoning ordinance and subdivision ordinance to determine if revisions are needed to include additional measures, such as riparian buffers and impervious surface limitations, to control stormwater discharges.

Begin: 2017

Complete: 2018

Consider the adoption of a wellhead protection ordinance to regulate land uses within areas that replenish groundwater supply.

Begin: 2017

Complete: 2018

Continue to require, through its subdivision ordinance, adequate stormwater drainage systems for new developments.

Ongoing

Continue to promote the use of best management practices to minimize the degradation of water quality resulting from stormwater runoff.

Ongoing

Continue to coordinate the approval of land development projects with the applicable State agencies.

Ongoing

f. Areas of Environmental Concern Implementation Strategies

Review the zoning ordinance and subdivision ordinance to determine if revisions are need to include additional protective measures for AEC.

Begin: 2016

Complete: 2017

g. Local Areas of Concern Implementation Actions

Promote development in the Commerce Centre.

Ongoing

Continue public participation program.

Ongoing

Continue efforts to market and redevelop downtown Hertford.

Ongoing

EXHIBIT X-C
PERQUIMANS COUNTY, NORTH CAROLINA
TOWN OF WINFALL ACTION PLAN AND SCHEDULE

Winfall developed the following action plan and schedule to implement the land use plan:

a. Public Access Implementation Actions

Maintain the public access site at the Town Hall.

Ongoing

Seek funding through DCM for a grant to prepare a shoreline access plan.

Begin: 2017

Complete: 2018

Initiate implementation of the recommendations of the shoreline access plan, seeking funding approval for recommended acquisitions/improvements and developing specific criteria and standards for the provision of public shoreline access.

Begin: 2018

Complete: 2020

b. Land Use Compatibility Implementation Actions

Develop residential development design guidelines and standards.

Begin: 2018

Complete: 2019

Develop commercial and industrial building and development design guidelines and standards.

Begin: 2018

Complete: 2019

Develop, in cooperation with NCDOT, requirements for regulating vehicular access to State roadways, and amend the County's zoning and subdivision ordinances accordingly.

Begin: 2017

Complete: 2017

Work with Perquimans County and Hertford, as applicable, to develop coordinated land use and development regulations as applicable for areas of common interest such as along U.S. 17.

Begin: 2016

Complete: 2017

c. Infrastructure Carrying Capacity and Provision of Facilities and Services Implementation Actions

Develop a capital improvements plan.

Begin: 2016

Complete: 2016

Support efforts to develop a blue ways/greenways system in and through the Town.

Ongoing

Update, in cooperation with NCDOT, the thoroughfare plan.

Begin: 2017

Complete: 2018

Continue to work with Perquimans County and Hertford to correct problems associated with water and wastewater systems.

Ongoing

Work with Perquimans County to clarify and determine service provision responsibilities, establishing formal utility service area boundaries and agreements and to develop coordinated land use and development regulations within such areas.

Begin: 2017

Complete: 2017

Review future proposed water and wastewater system extensions for consistency with the goals and policies of the land use plan.

Ongoing

d. Natural Hazard Areas Implementation Actions

Review the zoning ordinance, subdivision ordinance, and flood damage prevention regulations to determine if more specific location and density regulations regarding development or redevelopment activities within identified flood hazard areas and storm surge areas are warranted. Issues to be addressed include restrictions on land uses that utilize or store hazardous materials on-site, establishment of riparian buffers, increasing the minimum freeboard floor height above base flood elevations, etc.

Ongoing

Avoid zoning areas susceptible to storm surge for high density residential or intensive nonresidential uses.

Ongoing

Consider seeking Federal or State grant funding to acquire land in the most hazardous areas to minimize future property damage and loss of life.

Ongoing

Consider the feasibility of relocating or modifying affected public facilities if any portion of such facilities is significantly damaged by a major storm event to prevent the reoccurrence of storm damage.

Ongoing

Coordinate the review and approval of development plans for major subdivisions, multi-family developments, and large public and institutional uses located within identified natural hazard areas with emergency service providers.

Ongoing

Continue enforcement of the State Building Code provisions regarding wind resistance requirements and participation on the National Flood Insurance Program.

Ongoing

e. Water Quality Implementation Actions

Seek funding and technical assistance in developing a joint storm water management plan.

Begin: 2016

Complete: 2017

Review the zoning ordinance and subdivision ordinance to determine if revisions are needed to include additional measures, such as riparian buffers and impervious surface limitations, to control stormwater discharges.

Begin: 2017

Complete: 2018

Consider the adoption of a wellhead protection ordinance to regulate land uses within areas that replenish groundwater supply.

Begin: 2017

Complete: 2018

Continue to require, through its subdivision ordinance, adequate stormwater drainage systems for new developments.

Ongoing

Continue to promote the use of best management practices to minimize the degradation of water quality resulting from stormwater runoff.

Ongoing

Continue to coordinate the approval of land development projects with the applicable State agencies.

Ongoing

f. Areas of Environmental Concern Implementation Strategies

Review the zoning ordinance and subdivision ordinance to determine if revisions are need to include additional protective measures for AEC.

Begin: 2016

Complete: 2017

g. Local Areas of Concern Implementation Actions

Promote development in the Commerce Centre.

Ongoing

Continue public participation program.

Ongoing

Continue efforts to market and redevelop Winfall's commercial areas.

Ongoing

E. Activities to Assist in Monitoring Plan Implementation

To assist in monitoring implementation of the land use plan, the County and its towns, through their staffs and their respective planning boards, will meet annually to conduct a review of the proposed implementation activities delineated in Exhibit X-A, Exhibit X-B, and Exhibit X-C to determine the following:

- The status of the implementation actions proposed during the previous fiscal year.
- If the implementation action has been completed, evaluate the general effectiveness of the implementation action taken and make recommendations on any follow-up action deemed necessary to assist in implementing the goals, objectives, and policies of the land use plan.
- If the implementation action has not been undertaken, assess the reasons that the action has not been completed, evaluate the current need to undertake the action, and make recommendations regarding a revised schedule for carrying out the action.

In addition to reviewing specific implementation actions outlined in the exhibits, the County and its towns will conduct an assessment of the general effectiveness of the policies outlined in this land use plan and make recommendations on any follow-up action deemed necessary to improve the effectiveness of the policies.

Following the annual review, the results of the evaluation and any recommendations will be forwarded to the respective governing bodies, which will make a determination of what actions, if any, should be taken to ensure the continued implementation of the land use plan. All planning board and governing body meetings are open to the public and citizen comments are welcomed.

F. Land Use Plan Amendments

When the Perquimans County CAMA Core Land Use Plan needs to be amended, the County will apply the guidelines for Land Use Plan Amendments under Subchapter 7B, Section 0.900 of the North Carolina Administrative Code. A brief summary of the County's amendment process is provided below.

- The Land Use Plan may be amended as a whole by a single resolution or in parts by successive resolutions. The successive resolution may address geographical sections, county divisions, or functional units of a subject matter. Participating municipalities may make amendments to the land use plan as it affects their jurisdictions.
- The County/participating municipality must hold a public hearing of which the public has been properly notified.

- Copies of the proposed amendment(s) must be available for review at the County's Planning Office or participating municipalities' primary governmental office during designated hours.
- The executive secretary or a designated agent of the Coastal Resources Commission shall be given notice of the public hearing, a copy of the proposed amendment(s), and a reason for the amendment(s).
- Amendments must be consistent with the Coastal Resources Commission's Land Use Planning Guidelines (15A NCAC 7B) and, if possible, with the Land Use Plans of adjacent jurisdictions.
- If possible, the County/participating municipality will adopt the plan amendments expeditiously following the close of the public hearing.
- The County/participating municipality will provide the executive secretary of the Coastal Resources Commission with a copy of the amended text or maps, and certification of adoption within seven days of adoption.
- Any changes to this plan affecting areas within the jurisdiction of a participating municipality will not be considered/approved without prior review and recommendation by the governing body of the affected municipality.
- The advertising cost of amendments to this plan which are not initiated by the Perquimans County Board of Commissioners will be paid for by the individual, organization, other entity requesting the amendment.

WORKSHOPS AND MEETINGS

This section will be completed upon adoption of the Perquimans County CAMA Core Land Use Plan Update 2005-2006 by the Perquimans County Board of Commissioners.

February 17, 2005	Land Use Plan Update Committee meeting (Phase 1 orientation)
February 19, 2005	Perquimans County Board of Commissioners strategic planning retreat
March 17, 2005	Initial public input session/Land Use Plan Update Committee meeting
April 22, 2005	Joint planning meeting (Perquimans County Board of Commissioners, Town of Hertford, and Town of Winfall Representatives
September 27, 2005	Public Input Session - Winfall Town Hall
September 27, 2005	Public Input Session - Hertford Town Hall
September 29, 2005	Public Input Session - Bethel Volunteer Fire Department
October 4, 2005	Public Input Session - Belvidere Ruritan Club
October 6, 2005	Public Input Session - Durant's Neck Ruritan Club
October, 2005 - December, 2005	Staff/consultant work sessions
April 6, 2006	Meeting with trailblazers representatives to discuss goals and policies
April 6, 2006	Future Land Use Planning Workshop – Perquimans County Planning Board, Hertford Planning Board, and representatives from Winfall Town Council and Planning Board
April 27, 2006	Staff/consultant work session to review draft Future Land Use maps
May 26, 2006	Work session with Winfall representatives to review Future Land Use map
June 26, 2006	Staff/consultant work session to review Future Land Use maps
September 12, 2006	Planning Board meeting (discussion of Chapters IX and X)
September 13, 2006	Staff/consultant work session to review Planning Board concerning Chapters IX and X
October, 2006 – November , 2007	Staff/consultant work sessions to prepare for and then respond to DCM review comments. (Staff and consultant met monthly and sometimes bi-monthly during the period.)
October 28, 2009	Staff/consultant work session to respond to DCM review comments.
November 20, 2009	Staff/consultant work session to respond to DCM review comments.

January 22, 2010	Staff/consultant work session to respond to DCM review comments.
March 12, 2010	Staff/consultant work session to respond to DCM review comments.
April 16, 2010	Staff/consultant work session with Hertford and Winfall representatives to respond to DCM review comments
May 17, 2010	Hertford Planning Board (future land use map review and revisions)
June 7, 2010	Staff/consultant work session with Hertford and Winfall representatives to respond to DCM review comments.
July 19, 2010	Hertford Planning Board (goals and policies review and revision)
July 20, 2010	Staff/consultant work session with Hertford and Winfall representatives to respond to DCM review comments.
September 17, 2010	Staff/consultant work session to respond to DCM review comments.
October 28, 2010	Staff/consultant work session to respond to DCM review comments.

Perquimans County developed and adopted a Citizen Participation Plan (CPP) at the beginning of the CAMA Core Land Use Plan Update 2005-2006 development process. The CPP was adopted by the Board of Commissioners on April 4, 2005. The CPP is on file in the Perquimans 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.

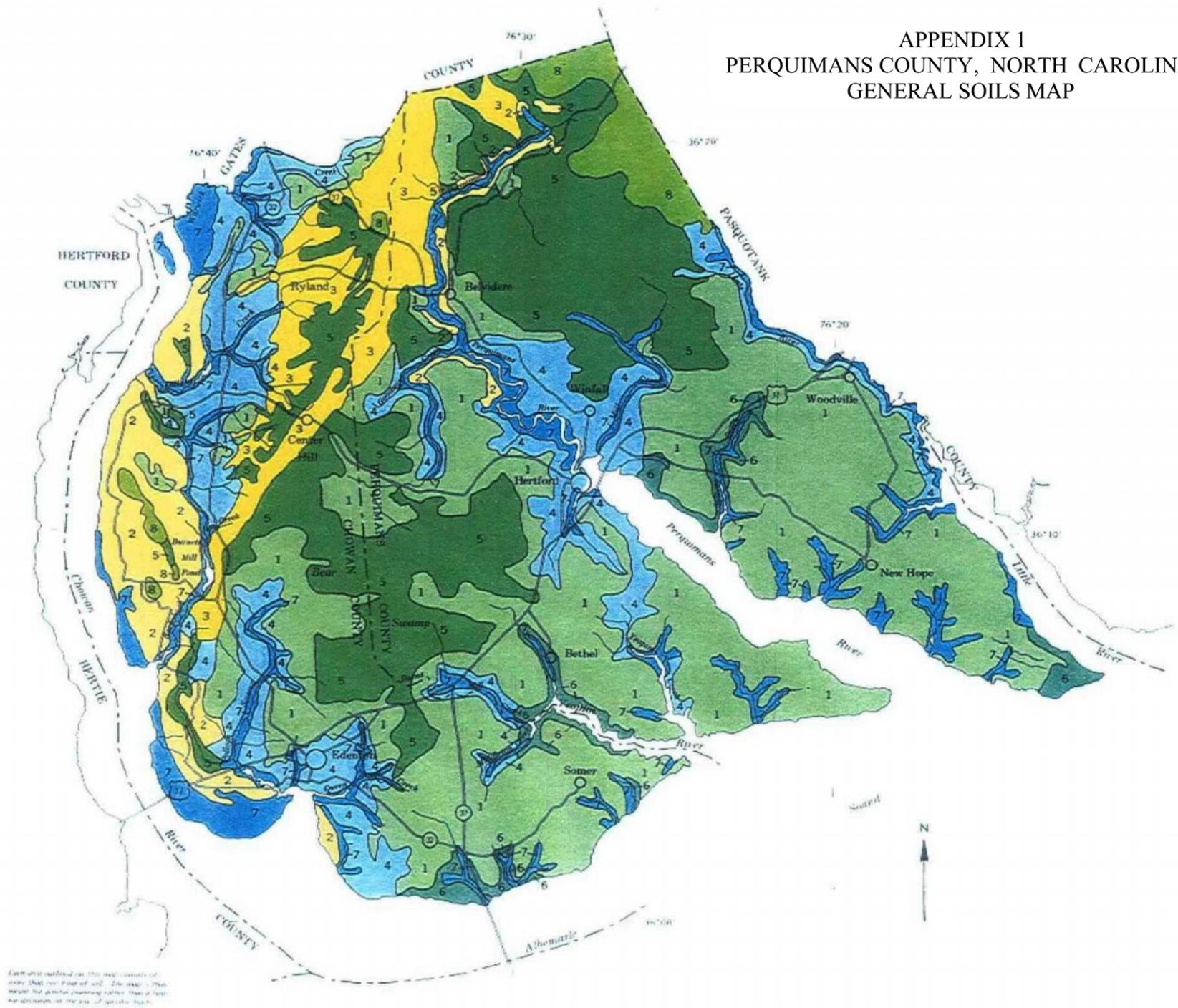
SOURCES CONSULTED

This section will be completed upon adoption of the Perquimans County CAMA Core Land Use Plan Update 2005-2006 by the Perquimans County Board of Commissioners.

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Diehl & Phillips, Inc. (base mapping)
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NC Department of Transportation
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NC Division of Soil and Water Conservation
NC Division of Water Resources
NC Division of Water Quality
NC Division of Waste Management
NC Forest Service
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NC Natural Heritage Program
NC Office of State Archaeology
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Perquimans County Planning Board
Perquimans County Planning Office
Perquimans County Public Schools
Perquimans County Sheriff's Department
Perquimans County Tax Department (Geographic Information System)
Perquimans County Water Department
Perquimans County Water System Policies, Rules, and Regulations August 2, 2004
Preliminary Engineering Report Water System Improvements Town of Hertford, Green Engineering, P.L.L.C., August 2003

Preliminary Engineering Report Waste Water System Improvements Town of Hertford,
Green Engineering, P.L.L.C., December 2004
Soil Survey of Chowan and Perquimans Counties, North Carolina (US Department of
Agriculture)
Town of Hertford
Town of Winfall
US Army Corps of Engineers
US Census Bureau
US Department of Agriculture
US Environmental Protection Agency
US Fish and Wildlife Service
US Geological Survey
Water and Wastewater Regionalization Study, Perquimans County, NC, April 13, 2007,
The Wooten Company
Winfall Local Water Supply Plan 1997

APPENDIX 1
 PERQUIMANS COUNTY, NORTH CAROLINA
 GENERAL SOILS MAP



Each area outlined on this map consists of soils that are part of one. The map is thus meant for general planning rather than a later determination of the soil of specific fields.

LEGEND

- 1 ROANOKE-TOMOTLEY-PERQUIMANS: Nearly level, poorly drained soils that have a loamy surface layer and a loamy or clayey subsoil
- 2 CONETOE-WANDO-SEABROOK: Nearly level and gently sloping, well drained, excessively drained, and moderately well drained soils that have a sandy surface layer and a loamy or sandy subsoil
- 3 TOMAHAWK-ECHAW-VALHALLA: Nearly level and gently sloping, moderately well drained, somewhat poorly drained, and well drained soils that have a sandy surface layer and a loamy or sandy subsoil
- 4 DOUGUE-AUGUSTA-STATE: Nearly level and gently sloping, moderately well drained, somewhat poorly drained, and well drained soils that have a sandy or loamy surface layer and a loamy or clayey subsoil
- 5 PORTSMOUTH-ARAPAHOE-CAPE FEAR: Nearly level, very poorly drained soils that have a loamy surface layer and a loamy or clayey subsoil
- 6 CHAPANOKE-YEOPIM: Nearly level and gently sloping, somewhat poorly drained and moderately well drained soils that have a loamy surface layer and a loamy subsoil
- 7 CHOWAN-DOROVAN: Nearly level, very poorly drained soils that are loamy and are underlain by muck and soils that are muck throughout
- 8 SCUPPERNONG: Nearly level, very poorly drained soils that have a surface layer of muck and mucky and loamy underlying material

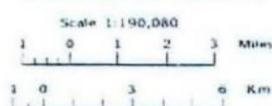
Compiled 1962

NOTE: This exhibit was reproduced from a permanent display format (pdf) map exhibit included in the Soils Survey of Chowan and Perquimans Counties, North Carolina, a bi-county study published and distributed by the United States Department of Agriculture. The soils survey includes both counties and thus the map exhibit shows both counties.

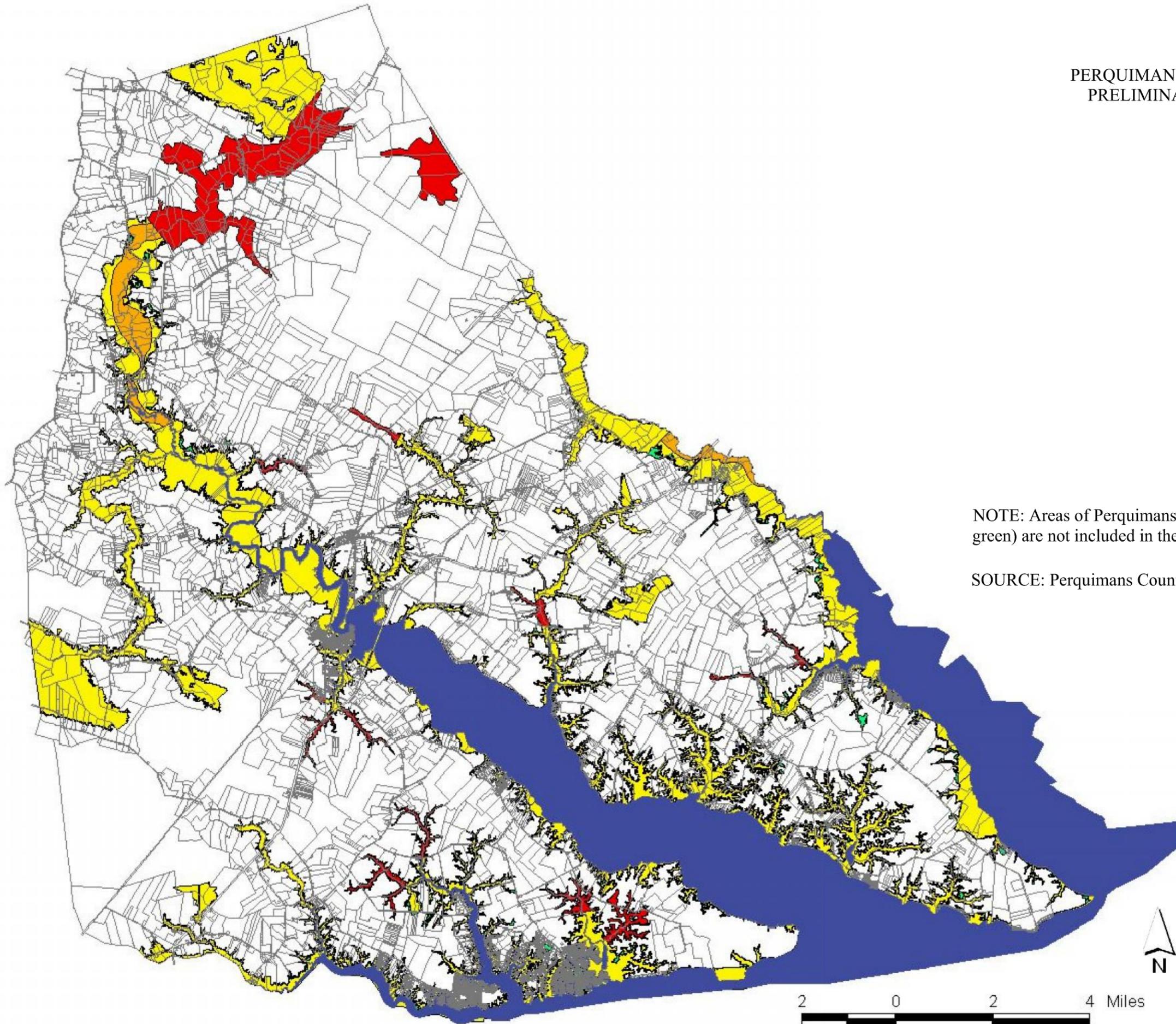
SOURCE: Soils Survey of Chowan and Perquimans Counties, North Carolina, United States Department of Agriculture.

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 NORTH CAROLINA
 DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
 NORTH CAROLINA AGRICULTURAL RESEARCH SERVICE
 NORTH CAROLINA AGRICULTURAL EXTENSION SERVICE
 CHOWAN COUNTY BOARD OF COMMISSIONERS
 PERQUIMANS COUNTY BOARD OF COMMISSIONERS

GENERAL SOIL MAP
 CHOWAN AND PERQUIMANS COUNTIES
 NORTH CAROLINA



APPENDIX 2
PERQUIMANS COUNTY, NORTH CAROLINA
PRELIMINARY FLOOD HAZARD AREAS



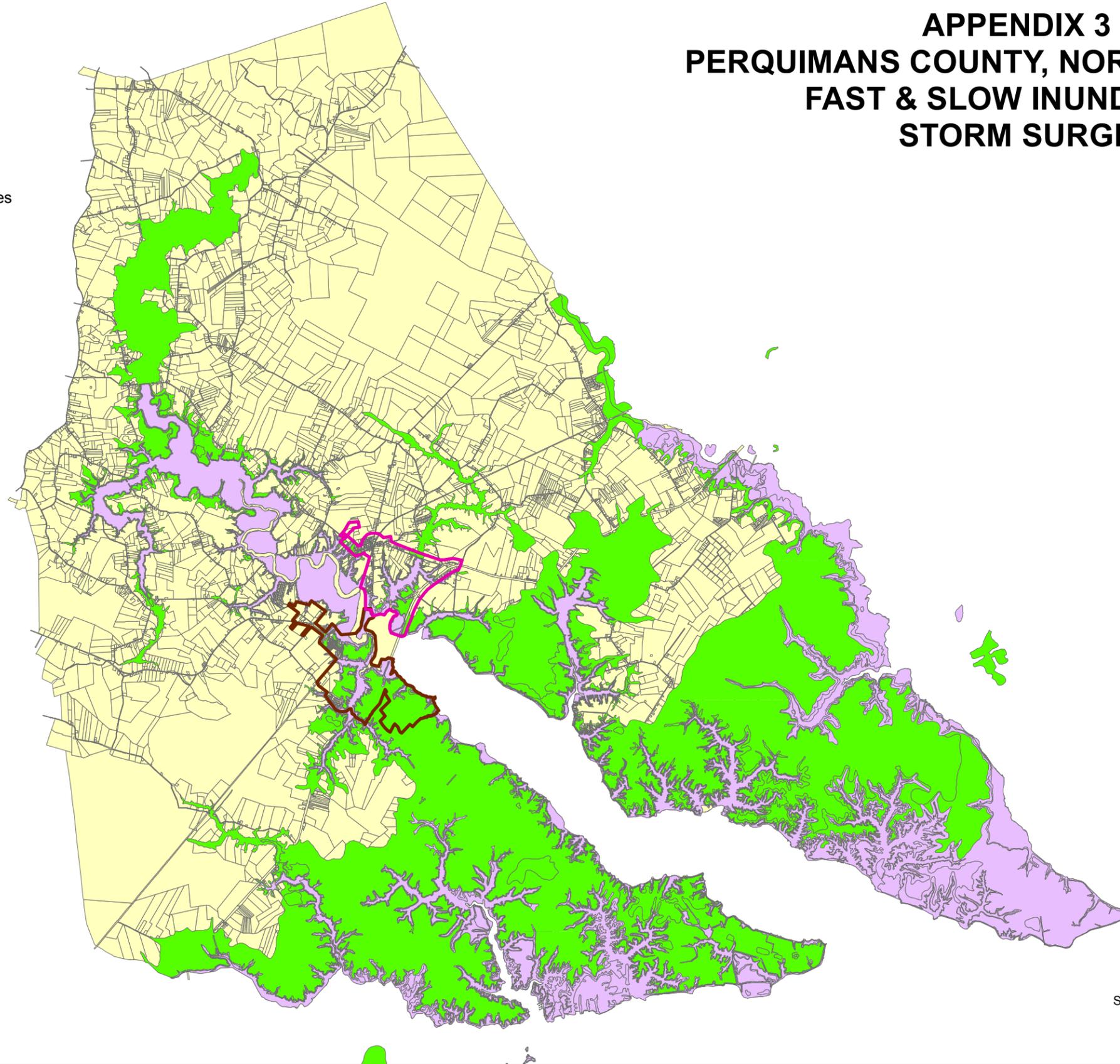
NOTE: Areas of Perquimans County that are not color coded (red, yellow, orange, or green) are not included in the flood hazard areas that the color coding depicts

SOURCE: Perquimans County Geographic Information system.

Flood Hazard Legend

-  A 100 Year Flood plain (no base flood elev.)
-  AE 100 Year Flood plain (w/ base flood elev.)
-  AEFW Floodway
-  SHADED X 500 Year Flood plain

APPENDIX 3 PERQUIMANS COUNTY, NORTH CAROLINA FAST & SLOW INUNDATION STORM SURGE

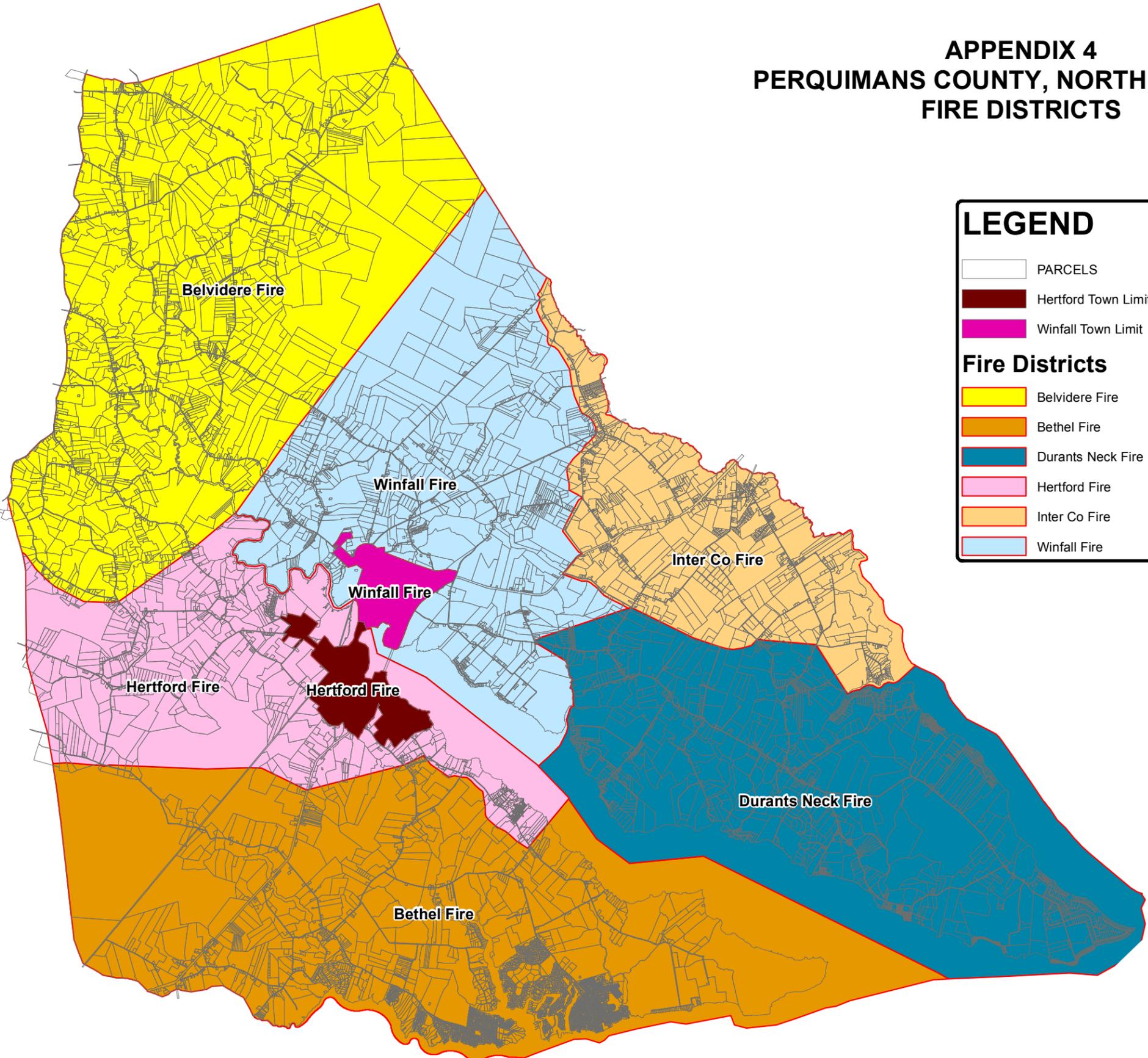
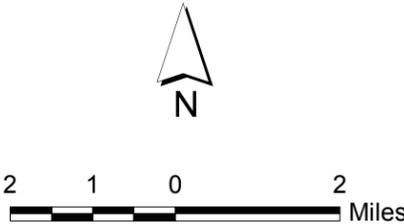


Legend

- FAST INUNDATION
- SLOW INUNDATION
- PARCELS
- WINFALL TOWN LIMITS
- HERTFORD TOWN LIMITS

SOURCE: Perquimans County Geographic Information System.

APPENDIX 4 PERQUIMANS COUNTY, NORTH CAROLINA FIRE DISTRICTS



LEGEND

- PARCELS
- Hertford Town Limit
- Winfall Town Limit

Fire Districts

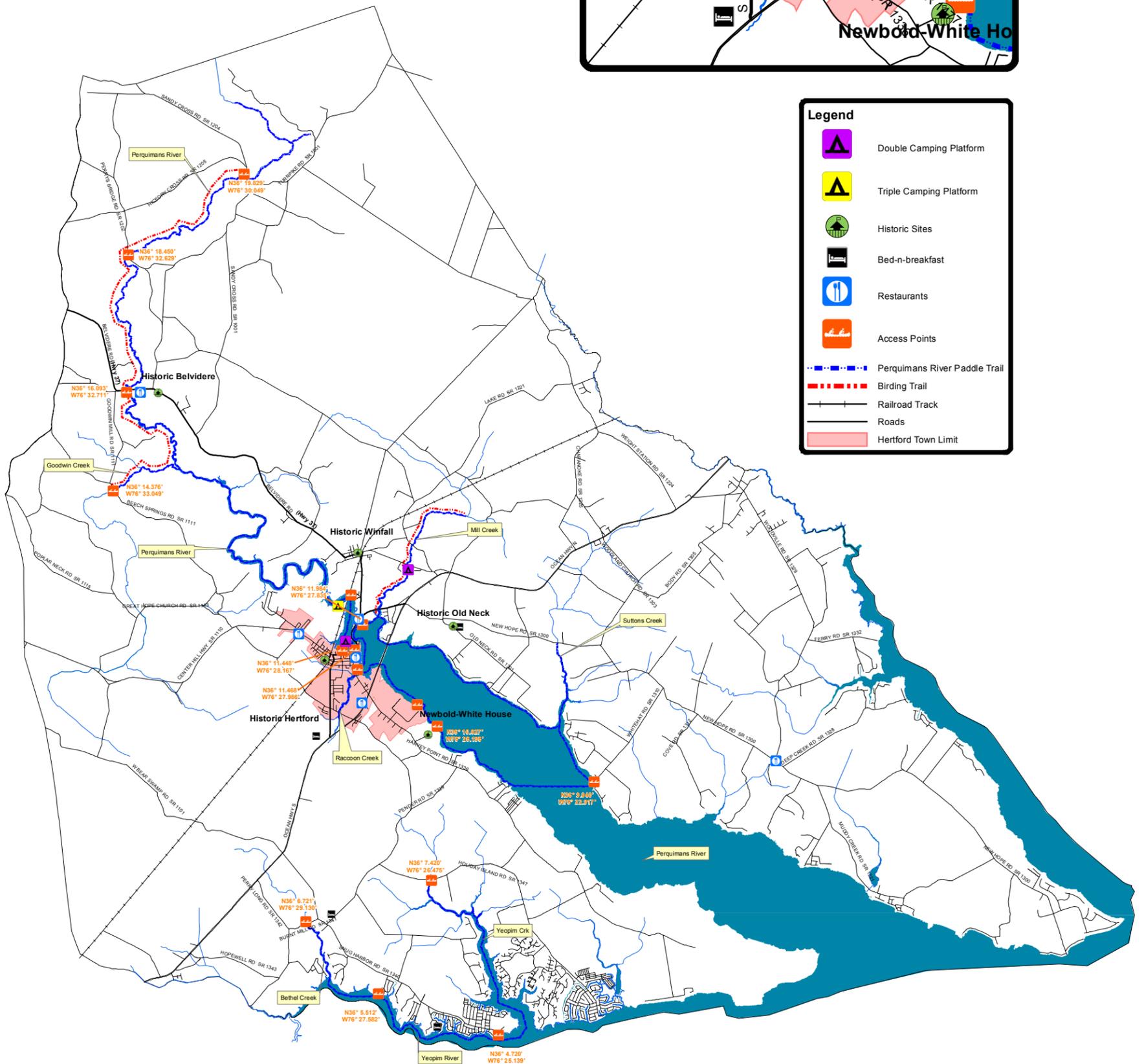
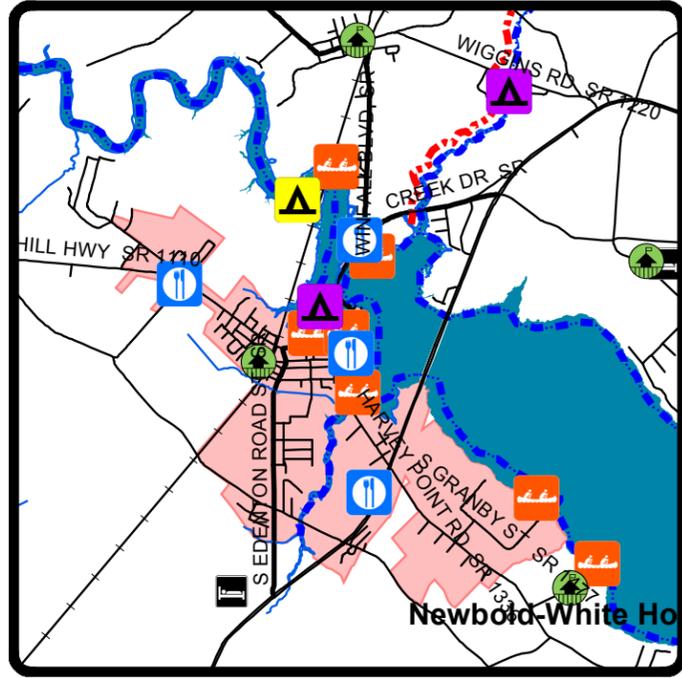
- Belvidere Fire
- Bethel Fire
- Durants Neck Fire
- Hertford Fire
- Inter Co Fire
- Winfall Fire

SOURCE: Perquimans County Geographic Information System

APPENDIX 5

Perquimans County, NC

Blueways



Legend

- Double Camping Platform
- Triple Camping Platform
- Historic Sites
- Bed-n-breakfast
- Restaurants
- Access Points
- Perquimans River Paddle Trail
- Birding Trail
- Railroad Track
- Roads
- Hertford Town Limit

0 1 2 3 4 Miles

Created By Rhonda Money
Perquimans Co. GIS Mapper
February 2010

AP-5

APPENDIX 6 *(See NOTE at end of table)
PERQUIMANS COUNTY, NORTH CAROLINA
IMPACT OF PERQUIMANS COUNTY, HERTFORD, AND WINFALL POLICIES ON CRC LAND USE PLAN MANAGEMENT TOPICS
PUBLIC ACCESS (TO PUBLIC TRUST WATERS) (PA) POLICIES

	PUBLIC WATER ACCESS	LAND USE COMPATIBILITY	INFRASTRUCTURE CARRYING CAPACITY	NATURAL HAZARDS	WATER QUALITY	LOCAL AREAS OF CONCERN
POLICY (See Pages IX-6 & IX-7 for details of each policy)	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	Sustainable commercial development Eco-tourism & recreation Conserve natural, cultural, and historic resources Growth management standards & adequate infrastructure
PA#1	BENEFICIAL					BENEFICIAL
PA#2	BENEFICIAL					
PA#3	BENEFICIAL					
PA#4	BENEFICIAL					BENEFICIAL
PA#5	BENEFICIAL					BENEFICIAL
PA#6	BENEFICIAL					BENEFICIAL
PA#7	BENEFICIAL					BENEFICIAL
PA#8	BENEFICIAL					
PA#9	BENEFICIAL					
PA#10	BENEFICIAL		BENEFICIAL			BENEFICIAL
PA#11	BENEFICIAL					BENEFICIAL
PA#12	BENEFICIAL					BENEFICIAL
PA#13	BENEFICIAL		BENEFICIAL			BENEFICIAL
PA#14	BENEFICIAL	BENEFICIAL	BENEFICIAL			

APPENDIX 6 (continued)
PERQUIMANS COUNTY, NORTH CAROLINA
IMPACT OF PERQUIMANS COUNTY, HERTFORD, AND WINFALL POLICIES ON CRC LAND USE PLAN MANAGEMENT TOPICS
LAND USE COMPATIBILITY (LUC) POLICIES

	PUBLIC WATER ACCESS	LAND USE COMPATIBILITY	INFRASTRUCTURE CARRYING CAPACITY	NATURAL HAZARDS	WATER QUALITY	LOCAL AREAS OF CONCERN
POLICY (See Pages IX-7 - IX-11 for details of each policy)	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	Sustainable commercial development Eco-tourism & recreation Conserve natural, cultural, and historic resources Growth management standards & adequate infrastructure
LUC#1		BENEFICIAL				BENEFICIAL
LUC#2		BENEFICIAL				BENEFICIAL
LUC#3		BENEFICIAL				BENEFICIAL
LUC#4		BENEFICIAL				BENEFICIAL
LUC#5		BENEFICIAL				
LUC#6		BENEFICIAL				
LUC#7		BENEFICIAL		BENEFICIAL		
LUC#8		BENEFICIAL				
LUC#9		BENEFICIAL	BENEFICIAL			
LUC#10		BENEFICIAL				
LUC#11		BENEFICIAL				BENEFICIAL
LUC#12		BENEFICIAL				
LUC#13		BENEFICIAL				
LUC#14		BENEFICIAL				

LUC#15		BENEFICIAL				BENEFICIAL
LUC#16		BENEFICIAL				
LUC#17		BENEFICIAL			BENEFICIAL	
LUC#18		BENEFICIAL	BENEFICIAL			
LUC#19		BENEFICIAL	BENEFICIAL			
LUC#20		BENEFICIAL				
LUC#21		BENEFICIAL				
LUC#22		BENEFICIAL				BENEFICIAL
LUC#23		BENEFICIAL				
LUC#24		BENEFICIAL				
LUC#25		BENEFICIAL				
LUC#26		BENEFICIAL				BENEFICIAL
LUC#27		BENEFICIAL	BENEFICIAL			BENEFICIAL
LUC#28		BENEFICIAL				BENEFICIAL
LUC#29		BENEFICIAL				BENEFICIAL
LUC#30		BENEFICIAL				BENEFICIAL
LUC#31		BENEFICIAL				BENEFICIAL
LUC#32		BENEFICIAL				
LUC#33		BENEFICIAL				

APPENDIX 6 (continued)
PERQUIMANS COUNTY, NORTH CAROLINA
IMPACT OF PERQUIMANS COUNTY, HERTFORD, AND WINFALL POLICIES ON CRC LAND USE PLAN MANAGEMENT TOPICS
INFRASTRUCTURE CARRYING CAPACITY (ICC) POLICIES

	PUBLIC WATER ACCESS	LAND USE COMPATIBILITY	INFRASTRUCTURE CARRYING CAPACITY	NATURAL HAZARDS	WATER QUALITY	LOCAL AREAS OF CONCERN
POLICY (See Pages IX-11& IX-12 for details of each policy)	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	Sustainable commercial development Eco-tourism & recreation Conserve natural, cultural, and historic resources Growth management standards & adequate infrastructure
ICC#1			BENEFICIAL			BENEFICIAL
ICC#2			BENEFICIAL			BENEFICIAL
ICC#3		BENEFICIAL	BENEFICIAL		BENEFICIAL	
ICC#4			BENEFICIAL		BENEFICIAL	BENEFICIAL
ICC#5			BENEFICIAL			
ICC#6			BENEFICIAL			
ICC#7			BENEFICIAL			
ICC#8			BENEFICIAL			
ICC#9			BENEFICIAL			BENEFICIAL
ICC#10			BENEFICIAL			BENEFICIAL

APPENDIX 6 (continued)
PERQUIMANS COUNTY, NORTH CAROLINA
IMPACT OF PERQUIMANS COUNTY, HERTFORD, AND WINFALL POLICIES ON CRC LAND USE PLAN MANAGEMENT TOPICS
NATURAL HAZARD AREAS (NHA) POLICIES

	PUBLIC WATER ACCESS	LAND USE COMPATIBILITY	INFRASTRUCTURE CARRYING CAPACITY	NATURAL HAZARDS	WATER QUALITY	LOCAL AREAS OF CONCERN
POLICY (See Pages IX-13 & IX-14 for details of each policy)	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	Sustainable commercial development Eco-tourism & recreation Conserve natural, cultural, and historic resources Growth management standards & adequate infrastructure
NHA#1				BENEFICIAL		
NHA#2		BENEFICIAL		BENEFICIAL		
NHA#3				BENEFICIAL		
NHA#4				BENEFICIAL		
NHA#5		BENEFICIAL		BENEFICIAL		
NHA#6				BENEFICIAL		
NHA#7		BENEFICIAL		BENEFICIAL		BENEFICIAL
NHA#8				BENEFICIAL		BENEFICIAL
NHA#9				BENEFICIAL		BENEFICIAL
NHA#10				BENEFICIAL		BENEFICIAL
NHA#11				BENEFICIAL		
NHA#12				BENEFICIAL		
NHA#13				BENEFICIAL		

APPENDIX 6 (continued)
PERQUIMANS COUNTY, NORTH CAROLINA
IMPACT OF PERQUIMANS COUNTY, HERTFORD, AND WINFALL POLICIES ON CRC LAND USE PLAN MANAGEMENT TOPICS
WATER QUALITY (WQ) POLICIES

	PUBLIC WATER ACCESS	LAND USE COMPATIBILITY	INFRASTRUCTURE CARRYING CAPACITY	NATURAL HAZARDS	WATER QUALITY	LOCAL AREAS OF CONCERN
POLICY (See Pages IX-14 - IX-16 for details of each policy)	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	Sustainable commercial development Eco-tourism & recreation Conserve natural, cultural, and historic resources Growth management standards & adequate infrastructure
WQ#1		BENEFICIAL			BENEFICIAL	
WQ#2					BENEFICIAL	
WQ#3		BENEFICIAL			BENEFICIAL	
WQ#4		BENEFICIAL			BENEFICIAL	
WQ#5			BENEFICIAL		BENEFICIAL	
WQ#6					BENEFICIAL	
WQ#7					BENEFICIAL	BENEFICIAL
WQ#8					BENEFICIAL	
WQ#9		BENEFICIAL			BENEFICIAL	BENEFICIAL
WQ#10		BENEFICIAL			BENEFICIAL	BENEFICIAL

APPENDIX 6 (continued)
PERQUIMANS COUNTY, NORTH CAROLINA
IMPACT OF PERQUIMANS COUNTY, HERTFORD, AND WINFALL POLICIES ON CRC LAND USE PLAN MANAGEMENT TOPICS
AREAS OF ENVIRONMENTAL CONCERN (AEC) POLICIES

	PUBLIC WATER ACCESS	LAND USE COMPATIBILITY	INFRASTRUCTURE CARRYING CAPACITY	NATURAL HAZARDS	WATER QUALITY	LOCAL AREAS OF CONCERN
POLICY (See Pages IX-16 & IX-17 for details of each policy)	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	Sustainable commercial development Eco-tourism & recreation Conserve natural, cultural, and historic resources Growth management standards & adequate infrastructure
AEC#1		BENEFICIAL			BENEFICIAL	
AEC#2		BENEFICIAL			BENEFICIAL	
AEC#3		BENEFICIAL			BENEFICIAL	
AEC#4		BENEFICIAL				
AEC#5		BENEFICIAL				
AEC#6		BENEFICIAL				
AEC#7		BENEFICIAL				BENEFICIAL
AEC#8		BENEFICIAL		BENEFICIAL	BENEFICIAL	BENEFICIAL
AEC#9		BENEFICIAL				BENEFICIAL

APPENDIX 6 (continued)
PERQUIMANS COUNTY, NORTH CAROLINA
IMPACT OF PERQUIMANS COUNTY, HERTFORD, AND WINFALL POLICIES ON CRC LAND USE PLAN MANAGEMENT TOPICS
LOCAL AREAS OF CONCERN (LAC) POLICIES

	PUBLIC WATER ACCESS	LAND USE COMPATIBILITY	INFRASTRUCTURE CARRYING CAPACITY	NATURAL HAZARDS	WATER QUALITY	LOCAL AREAS OF CONCERN
POLICY (See Pages IX-17 - IX-24 for details of each policy)	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	Sustainable commercial development Eco-tourism & recreation Conserve natural, cultural, and historic resources Growth management standards & adequate infrastructure
Comm. & Ind. Development (LAC # 1)		BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL
Comm. & Ind. Development (LAC # 2)		BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL
Comm. & Ind. Development (LAC #3)						BENEFICIAL
Comm. & Ind. Development (LAC #4)						BENEFICIAL
Comm. & Ind. Development (LAC #5)						BENEFICIAL

Comm. & Ind. Development (LAC #6)						BENEFICIAL
Community Appearance (LAC #7)						BENEFICIAL
Community Appearance (LAC #8)						BENEFICIAL
Perq. River Shoreline (LAC #9)	BENEFICIAL	BENEFICIAL		BENEFICIAL	BENEFICIAL	BENEFICIAL
Perq. River Shoreline (LAC #10)				BENEFICIAL		BENEFICIAL
Perq. River Shoreline (LAC #11)		BENEFICIAL		BENEFICIAL	BENEFICIAL	BENEFICIAL
Perq. River Shoreline (LAC #12)		BENEFICIAL		BENEFICIAL	BENEFICIAL	BENEFICIAL
Perq. River Shoreline (LAC #13)	BENEFICIAL	BENEFICIAL		BENEFICIAL	BENEFICIAL	BENEFICIAL
Perq. River Shoreline (LAC #14)		BENEFICIAL	BENEFICIAL			BENEFICIAL
Development Design Stds. (LAC #15)						BENEFICIAL
Development Design Stds. (LAC #16)		BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL

Federal Properties & Programs (LAC #17)						BENEFICIAL
Federal Properties & Programs (LAC #18)						BENEFICIAL
Growth Management (LAC #19)		BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL
Growth Management (LAC #20)		BENEFICIAL				BENEFICIAL
Intergovernmental Relations (LAC #21)		BENEFICIAL				BENEFICIAL
Intergovernmental Relations (LAC #22)		BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL
Public Safety (LAC #23)				BENEFICIAL		BENEFICIAL
Redevelopment (LAC #24)		BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL
Redevelopment (LAC #25)		BENEFICIAL				BENEFICIAL
Redevelopment (LAC #26)		BENEFICIAL				BENEFICIAL
Residential Development (LAC #27)		BENEFICIAL	BENEFICIAL			BENEFICIAL

Residential Development (LAC #28)		BENEFICIAL				BENEFICIAL
Residential Development (LAC #29)						BENEFICIAL
Septic Tank Use (LAC #30)			BENEFICIAL		BENEFICIAL	BENEFICIAL
Septic Tank Use (LAC #31)			BENEFICIAL		BENEFICIAL	BENEFICIAL
Solid Waste Management (LAC #32)			BENEFICIAL		BENEFICIAL	BENEFICIAL
Storm Water Management (LAC #33)			BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL
Storm Water Management (LAC #34)			BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL
Storm Water Management (LAC #35)			BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL
Transportation (LAC #36)			BENEFICIAL			BENEFICIAL
Transportation (LAC #37)						BENEFICIAL

***NOTE:** Blank spaces in the tables that comprise this APPENDIX 6 indicate neutral impact. All local policies have been determined to have either a positive or neutral impact on CRC management topics. No specific actions are required to mitigate negative impacts.

APPENDIX 7
PERQUIMANS COUNTY, NORTH CAROLINA
EXCERPT (SECTION 3.0 EXISTING FACILITIES AND SECTION 4.0 DEMAND
PROJECTIONS, pages 4 through 26) FROM WATER AND WASTEWATER
REGIONALIZATION STUDY, PERQUIMANS COUNTY, NC, APRIL 13, 2007,
THE WOOTEN COMPANY

3.0 EXISTING FACILITIES

3.1 Perquimans County

3.1.1 Perquimans County Water System

The county's water system consists of two water treatment plants (WTP's), five elevated storage tanks, one ground storage tank, and twelve wells (including 8 wells normally used, two that are under construction, one that is for emergencies only, and one that is out of service). Generally, the Bethel WTP, located at 458 Snug Harbor Road, supplies the county on the south side of Perquimans River and the Winfall WTP located at 109 Melton Grove Road supplies water to the county on the north side of the river. Perquimans County will be divided into 2 regions for the purposes of this study: the area

to the north of Perquimans River and the area to the south of Perquimans River. The only connection between the northern and southern systems is an 8-inch line located along Goodwin Mill Road in the northwestern portion of the County.

Perquimans County has emergency, non-contractual connections with the surrounding counties and both the Towns of Winfall and Hertford. There are four connections with the Town of Winfall, three connections with the Town of Hertford, two connections with Chowan County, and one connection with both Gates and Pasquotank County (See Appendix B). Perquimans County cannot receive water through the connections with the Towns of Hertford or Winfall due to operating on a higher pressure gradient.

3.1.1.1 Bethel Water Treatment Plant

The Bethel WTP is a pressure filter and ion exchange softening plant treating groundwater supplied by the following wells: Bethel Plant Long Well, Bethel Plant Well, Bethel Plant Well 2 and Chappell Well. Bethel Plant Well 3 is used strictly as an emergency well because of water quality problems; therefore, it will not be used when determining well capacities for the purpose of this study. The Chappell Well has not been constructed but the site has been purchased, a test well has been completed and final construction will follow. It will be used when determining capacities for this study. Presently, the Bethel Plant Long Well and the Bethel Plant Well are alternated weekly running in conjunction with the Bethel Plant Well 2 to deliver water to the WTP when needed. When more water is needed than two wells can deliver, the operator can manually override the automatic Supervisory Control and Data Acquisition (SCADA) allowing all three wells to pump. All existing wells pump from the Yorktown Aquifer and are experiencing high levels of trihalomethane (THM) precursors, iron (Fe), and manganese (Mn).

The 2002 North Carolina Local Water Supply Plan (LWSP) for Perquimans County lists the permitted capacity of the Bethel WTP at 0.864 mgd (See Appendix C). However, the Bethel WTP was re-rated from 600 gpm to 800 gpm effective October 1, 2006, giving it a

capacity of 1.152 mgd. All raw water is pumped from the wells to the WTP through an aerator and into a 300,000 gallon detention tank when the water level in the detention tank drops to a preset level. The detention tank overflows into a pump tank where filter pumps then push water through the WTP (filters and softeners) to the 1.0 million gallon clearwell. There are three 11-foot diameter filters with a combined 800 gpm filtering capacity. Currently, the WTP is pumping approximately 500 gpm through the filters. There are two 7-foot diameter softeners which regenerate automatically as needed. The filters are manually backwashed 3 times per week. Backwash from the WTP is retained in a 300,000 gallon lagoon before discharged into Bethel Creek (Class C, swamp waters). See Appendix D for a copy of the NPDES permit.

From the 1.0 million gallon clearwell, the water is pumped by the finished water high service pumps (HSP's) out into the water distribution system generally to two elevated tanks, the 200,000 gallon Bethel Tank and the 300,000 gallon Rayburn Tank. The Bethel Tank is located at the WTP and has an altitude valve to prevent overflowing. The Rayburn Tank is located 6-7 miles away from the WTP and controls the finished water high service pumps at the WTP. Both elevated tanks have an overflow elevation of 128.68 feet. Although a small amount, some of the finished water from the Bethel WTP makes it to the Belvidere elevated tank (200,000 gallon capacity and overflow of 131.68 feet) located in the northern portion of the county's water system.

3.1.1.2 Winfall Water Treatment Plant

The Winfall WTP is also a pressure filter and ion exchange softening plant being supplied by wells providing finished water to the county system north of the Perquimans River. Although the plant is located in the Town of Winfall, it is owned and operated by Perquimans County. The Winfall WTP has five existing wells that supply raw water to the WTP and one well under construction that will be operational in 2007. The five existing wells are the Winfall Plant Hurdle Well, Winfall Plant Miller Well, Winfall Plant Winslow Well, Winfall Plant Lake Road Well, and the Winfall Plant Well. The well under construction will be known as the Winfall Plant Hunnicutt Well.

The 2002 North Carolina Local Water Supply Plan for Perquimans County lists the permitted capacity of the Winfall WTP at 0.720 mgd. Water is pumped from the wells to the WTP, through an aerator and into two 20,000 gallon storage tanks. From the storage tanks, one of two HSP's then pumps the water through the WTP to three elevated storage tanks: 200,000 Belvidere Tank, 200,000 gallon New Hope Tank, and the 300,000 gallon Muddy Creek Tank. The New Hope Tank which has an overflow of 125.98 feet mean sea level controls the high service pumps. The Belvidere and Muddy Creek tanks have overflow elevations of 131.68 and 128.68 feet mean sea level, respectively.

The Winfall WTP consists of two 10-foot diameter filters and two 7-foot diameter softeners. Filter No. 1 was rebuilt in 2006 while Filter No. 2 still has its original media which was put in operation in 1985. The softeners were rebuilt approximately 5 years ago. Both the filters and softeners are manually backwashed daily. The backwash water is held in a 250,000 gallon storage tank where it settles in 7 to 9 hours before the supernatant is pumped out to a ditch that drains to Mill Creek.

Perquimans County is in the process of signing a contract with Pasquotank County for water. Pasquotank County is building a Reverse Osmosis (RO) WTP approximately ½ mile from the Perquimans and Pasquotank County line along Foreman Bundy Road. Perquimans County has requested, and is expected to get, 350,000 gpd from Pasquotank County's new RO WTP. For the purpose of this study, the 350,000 gpd from Pasquotank County will be considered as source water for Perquimans County, and the line work necessary to deliver this water to the County will be considered in place.

The following table shows the current well capacities, WTP capacities, Average Daily Demand (ADD) and Maximum Daily Demand (MDD), and the total ADD and MDD for Perquimans County.

Table 3.1: Perquimans County Wells and WTP Capacities

Wells (Raw Water Available)	Pumping Rate (GPM)	# Pumps	12 Hour Pumping Rate (MGD)	Permitted Capacity (MGD)
Bethel Plant Longwell	450	1	0.324	0.324
Bethel Plant Well	450	1	0.324	0.324
Bethel Plant Well 2	200	1	0.144	0.144
Bethel Plant Chappell Well ¹	500	1	0.360	0.360
Bethel Plant Well 3 (Emer. Well) ²	200	1	0.144	0.144
Total Bethel Wells	1600	N/A	1.152	1.152
Winfall Plant Hurdle Well	130	1	0.094	0.094
Winfall Plant Miller Well	100	1	0.072	0.100
Winfall Plant Winslow Well	200	1	0.144	0.180
Winfall Plant - Lake Rd Well	200	1	0.144	0.144
Winfall Plant Well	50	1	0.036	0.054
Winfall Plant - Hunnicutt Well ³	120	1	0.086	0.090
Winfall Plant Gin Well	Out of Service	N/A	N/A	N/A
Total Winfall Wells	800	N/A	0.576	0.662
Total of All Wells	2400	N/A	1.728	1.814

WTP (Total Treated Water Available)	Plant Capacity (MGD)	Current Production Rate (MGD)	ADD (MGD)	MDD (MGD)
Bethel Plant ⁴	1.152	0.864	0.374	0.601
Winfall Plant	0.720	0.648	0.495	0.694
Pasquotank RSO WTP ⁵	0.350	0	N/A	N/A
Total Plant Capacity for County	2.222	1.512	0.869	1.295

- Notes: 1)Future well. Sight is bought and test well is complete. Its capacity has been included.
 2)Totals do not include Bethel Plant Well 3 b/c it's an emergency well only. Well loaded with iron.
 3)Hunnicutt Well will be operational in 2007. Its capacity is included.
 4)The Bethel WTP was re-rated from 600 GPM to 800 GPM effective October 1, 2006.
 5)Perquimans County is requesting 0.350 mgd from Pasquotank Co. RSO WTP.
 6)The above pumps pump at the rate listed and are cycled on and off equally.

3.1.2 Problems with Perquimans County Water System

Perquimans County continues to experience difficulties with the process of obtaining discharge permits for its WTP's. As stated earlier, the Bethel WTP discharges into Bethel Creek (a Class C creek). Within the next three years, Perquimans County will have to relocate the discharge location to the mouth of the creek at the Yeopim River.

The Winfall WTP is currently operating at 0.648 mgd, near its permitted capacities for its Winfall wells and WTP of 0.662 mgd and 0.720 mgd, respectively. Perquimans County cannot continue to add wells for the Winfall WTP without an increase in plant capacity. Due to the demand on the Winfall WTP, the plant is experiencing water quality issues (See Appendix E) and there have been several discolored water complaints. In addition, the County feels there is not enough room at the Winfall WTP to support an office space and the lab testing area needed to run the plant. The Bethel WTP wells, with the exception of Chappell Well (final quality unknown), are experiencing high levels of trihalomethane (THM) precursors, iron (Fe), and manganese (Mn).

As stated previously, the water systems on the north and south sides of the river are connected by only a single 8-inch line. Hydraulically, the WTP's are not capable of serving the area on the opposite side of the river without utilizing booster pumps to push the water to the elevated tanks. The County does not have a permanent booster pump station in place to use as needed. Perquimans County has used portable booster pumps in the past to get water from the north side of Perquimans County to the south side of Perquimans County and vice versa. However, currently Perquimans County does not have any portable booster pumps in the case one of the WTP's has to be shut down for an extended period of time and the other WTP would be needed to supply water to the entire county. In addition to no booster pumps to connect the two sides of the County, Perquimans County is also experiencing water quality issues due to too many dead ends throughout the system.

Perquimans County is a coastal county, and therefore often experiences the harshest conditions when hurricanes come through the North Carolina coast. Both Perquimans County WTP's do not have backup generators to keep the WTP's online during power outages. They currently have a "hurricane plan" for generators contracted with Gregory Poole. The County has to pay for the contract, shipping fees, and rental fees for the generators. In order to obtain the backup generators, the County has to notify Gregory Poole within 24 hours of the need. During hurricane Isabel, Perquimans County went without water for 3 days.

Currently, there are no contracts in place for the emergency connections with the surrounding counties. Therefore, there is no guarantee on the availability of water in the time of need.

3.1.3 Perquimans County Wastewater System

Perquimans County does not operate a wastewater collection system. Residents and businesses in Perquimans County use septic tanks for wastewater disposal. Septic tanks are an increasing problem for the county. Each year there are increasing numbers of septic tank failures due to unsuitable soils and a seasonal high groundwater table. From July 1, 2001, through July 1, 2006, there were 184 repair applications for septic failures in Perquimans County. Areas along Perquimans River and the Albemarle Sound have the greatest number of the failures with the most concentrated areas being Snug Harbor and Holiday Island. With future growth projected to occur in waterfront areas, septic tank usage and failures will continue to be an issue for the county.

3.2 Town of Winfall

3.2.1 Town of Winfall Water System

The water system was constructed in 1967 and consists of approximately 8 miles of water mains, two wells, a water treatment plant, a 100,000 gallon elevated storage tank, and

four emergency connections to Perquimans County. The WTP is located along Yates Road right off of NC HWY 37. Well No. 1 is located adjacent to the elevated tank next to the WTP. Well No. 2 (only two years old) is located approximately 500 yards behind the WTP. The water system is supplied by groundwater pumped from the Yorktown aquifer. The top of the aquifer is about 40 feet below ground and is approximately 200 feet thick.

The capacity of both Wells No. 1 and 2 are rated at 82 gpm or 0.059 mgd each (12 hours pumping). The WTP normally utilizes only one well at a time. The 2002 North Carolina Local Water Supply Plan for the Town of Winfall lists the permitted capacity of the WTP at 0.100 mgd. However, according to the Town, the WTP has a design capacity of 129,600 gpd as rated by the North Carolina Department of Environment and Natural Resources (NCDENR).

The average runtimes for Well No. 1 and Well No. 2 are 12 and 11.2 hours per day, respectively. Floats in the detention tank determine when the wells come on; however, which well runs each day is controlled manually by the operator. Typically, the wells are alternated to run every other day. The WTP consists of an induced draft type aerator with a 600 cfm blower.

Chlorine is added prior to aerating to reduce the amount of iron and sulfide in the raw groundwater. Chlorination is provided by a 150 pound cylinder and a single chlorinator. Potassium permanganate is added after aeration prior to a 6,700 gallon detention tank to further remove the iron.

The softener consists of a 36-inch diameter ion exchange unit. Based on a desired blended hardness of 100 mg/L of CaCO_3 , the unit is required to treat at a rate of 49 gpm or approximately 60% of the pumped capacity. The plant has an 84-inch diameter pressure sand filter. The maximum filter rate at 3 gpm/ft² is 115 gpm or 165,600 gpd.

The water system is equipped with two 110 gpm high service pumps (HSP's). The average runtime for each HSP is 14 hours per day. They are alternated every other day with the wells. The HSP's are turned on and off based on a pressure switch. A reading of 46.5 psi turns HSP's on and 49 psi turns HSP's off. Based on a reading of 49 psi and an elevation of 8 feet above mean sea level where the pressure reading was taken, an approximate overflow elevation of 121 feet above mean sea level was calculated. According to the Town, when the HSP's are turned on, they run at 75 gpm but the filters clog quickly causing the HSP's to be only able to pump at approximately 60 gpm.

The water treatment plant has a discharge permit from the North Carolina Division of Water Quality to discharge the filter backwash water and the brine recharge water into Mill Creek. Violations of the settleable solids limit have occurred (See Appendix E). The WTP operates 24 hours per day automatically. Both the backwashing of the filters and softener regeneration are done on a daily basis manually. Blending is being done, but there is no way of monitoring how much. The bulk brine is refilled approximately every 6 months directly from the tank.

The WTP was designed for 100 gpm but currently runs at 75 gpm because of water quality issues. It is uncertain if the capacity will change once the ammonia is added. There is no current problem with meeting demand. The WTP has no problem filling up the elevated storage tank each afternoon unless there has been a line break in the system.

From the 2002 Local Water Supply Plan, it was determined to use 97.5 gallons per capita per day (gpcd) for any population projections. In 2005, the Average Daily Demand (ADD) was 0.054 mgd, and the Maximum Daily Demand (MDD) was 0.090 mgd for a MDD/ADD ratio of 1.66. It should be noted that the MDD occurred during March 2005 while flushing the system. The following table illustrates the water produced by the WTP from 2000 through August 2006. The data was given to The Wooten Company by the Town of Winfall.

Table 3.2: Total Water Produced by WTP from 2000-August 2006

Year	Total Gallons Per Year	ADD (MGD)
2000	17,902,000	0.049
2001	16,947,000	0.046
2002	17,225,000	0.047
2003	13,862,000	0.038
2004	16,875,000	0.046
2005	19,809,000	0.054
2006*	14,034,000	0.058

* Through August 2006

3.2.2 Problems with the Town of Winfall Water System

Winfall has high levels of iron (Fe), manganese (Mn), and disinfection by-product precursors in their raw water. As a result, the Town has received a number of violations for high levels of total trihalomethanes (TTHM's) in the water system (See Appendix E). To reduce TTHM's in the system, at the time of our visit in August 2006, the Town was planning to add an ammonia feed system before the end of 2006. It is our understanding that this work was completed.

The plant has an 84-inch diameter pressure sand filter that was put into service when the WTP was constructed in 1967. Although the filter media has been replaced, the Town of Winfall is expecting the filter to have to be replaced in the near future due to its structural deterioration. The Town of Winfall is also expecting the softener to have to be replaced in the near future due to its age. The bottom of the softener has already been repaired once using J-B Weld. The complete chlorination system needs to be updated to provide backup capabilities and to meet all safety requirements. There are currently no alarm systems for chlorine.

NOTE: On January 5, 2007, the filter failed and the Town began purchasing water from Perquimans County until the filter could be repaired and the WTP put back in operation. For the purposes of this study, it is assumed that the filter has been repaired and the WTP is operating at the capacities discussed herein.

There are currently 272 potential lots for building. If all lots are built on, the WTP will not be capable of supplying the increased demand. Currently, the Town of Winfall's connections with Perquimans County are non-metered and non-contractual for emergency use only. When the Town needs emergency water, they call Perquimans County and the County opens the necessary valves. However, because there is no contract in place, there is no guarantee on the availability of water.

3.2.3 Town of Winfall Wastewater System

The Town of Winfall currently maintains its own wastewater collection system that collects the Town's wastewater and then pumps it to the Town of Hertford for treatment. The collection system consists of 8-inch through 12-inch gravity sewer lines, a 10-inch HDPE force main, and 6 duplex pump stations. Five duplex pump stations are located throughout the system that pumps wastewater to Pump Station No. 6. In turn, Pump Station No. 6 pumps the collected wastewater under the Perquimans River through a 10-inch HDPE force main to the Town of Hertford's WWTP for treatment. Refer to Table 3.3 for capacities of the six pump stations. The Town of Winfall currently has an agreement with the Town of Hertford for the treatment of 100,000 gpd (See Appendix F) and is currently asking for an increase of 100,000 gpd to 200,000 gpd.

Table 3.3: Pump Station Capacities

Duplex Pump Stations	Design Capacity (GPM)	
	Pump 1	Pump 2
1	211	194
2	88	200
3	176	176
4	88	106
5	154	150
6 (actual)	235	313
6 (design)	345	376

There is no meter at Pump Station No. 6 to meter the amount of wastewater being pumped to the WWTP, and there is no meter at the Town of Hertford's WWTP to meter the amount of wastewater entering the plant. Because there are no meters, a break in the

line under Perquimans River would result in an undetected wastewater spill. The Town of Winfall used to be billed by the Town of Hertford based on the design capacity of Pump Station No. 6 times the pump run times. After conducting a drawdown test at the pump station, it was determined that the actual capacities of pumps 1 and 2 in Pump Station No. 6 are 235 and 313 GPM, respectively. Therefore, the volume of wastewater being generated by Winfall is now calculated based on each pump's run time times its respected capacity as determined during the drawdown test. The following table represents the total gallons and daily average of wastewater pumped to the Town of Hertford by Pump Station No. 6 from January through August 2006.

Table 3.4: Wastewater Pumped by Pump Station No. 6

Before Drawdown

Month (2006)	Total Gallons	Average (MGD)
January	2,220,078	0.072
February	1,786,128	0.064
March	1,898,232	0.061
April	1,816,968	0.061

After Drawdown

Month (2006)	Total Gallons	Average (MGD)
May	1,461,792	0.047
June	2,309,226	0.077
July	1,536,960	0.050
August	1,730,478	0.056

The average wastewater pumped before the drawdown was higher than those after the drawdown with the exception of the month of June. May, July, and August were all much lower than the months before the drawdown. Both before and after the drawdown, according to the monthly reports outlined above, the Town of Winfall is at least 0.023 mgd below their 0.100 mgd contracted amount.

3.2.4 Problems with the Town of Winfall Wastewater System

The Town of Winfall has infiltration problems within the collection system. Inspections of the system twice a year must be done in areas where the line was not constructed according to specifications. The Town of Winfall had to modify their wastewater system

permit for high priority lines (See Appendix G). There are a total of 94 out of 185 manholes in the collection system that are listed as high priority and have to be inspected twice a year.

Pump Station No. 2 is a single phase station. The Town of Winfall has to change the pump frequently (10 to 12 times per year on average). Because of the constant pump failures, this station is susceptible to overflows.

The Town of Winfall has a portable generator that can be used at both the WTP and pump stations in the case of a power failure. However, it can be difficult to get to all the pump stations during a significant power outage before the situation becomes problematic. In addition, they are on the “hurricane plan” with Gregory Poole to get additional generators as needed during emergencies but there can be a significant wait if not requested very early on before a natural disaster.

3.3 Town of Hertford

3.3.1 Town of Hertford Water System

The Town of Hertford operates and maintains its own water system. The system consists of a lime softening water treatment plant, two wells, and two elevated storage tanks. The Town also has three emergency connections with Perquimans County. The water treatment plant was first constructed in the early 1900’s and was updated more than forty years ago. It is rated to produce 0.400 mgd according to the 2002 North Carolina Water Supply Plan for the Town of Hertford. Both wells are located on Ballahack Road and draw water from the Yorktown aquifer. One elevated storage tank is located on Mead’s Circle adjacent to the wastewater treatment plant and holds 500,000 gallons. The second elevated storage tank is located on Grubb Street next to the water treatment plant and holds 100,000 gallons. Therefore, the town has a total elevated storage capacity of 600,000 gallons.

There are two deep wells servicing the WTP, one approximately 120 ft deep and the other approximately 140 ft deep drawing water from the Yorktown Aquifer. According to the Town's July 2006 Capital Improvement Plan, the wells are the limiting factor for the Town of Hertford's water system. The Town of Hertford is only using Well No. 1 on a regular basis. Well No. 1 can supply 0.262 mgd based on a 12-hour day according to the 2002 Local Water Supply Plan. Well No. 2 is used only for emergencies. The wells are operated manually from the WTP.

Water comes into the WTP through a 6-inch raw water line where it is initially treated with chlorine. It then comes up through the center of the mixing capsule. The mixer in the inlet well mixes hydrated lime with the raw water. Lime is added to the lime feeder in 50 pound bags manually every hour and a half. The lime falls to the bottom while clear water rises to the top. The clear water then flows by gravity to the sand filters. Water goes through the sand filters and on to the clearwell. It is then pumped by 1 of 2 HSP's to the elevated tanks. When both pumps are online, they can pump 528 gpm out into the distribution system. Both elevated tanks are at the same elevation and neither is equipped with an altitude valve. The overflow elevation on both elevated storage tanks is 109 feet above mean sea level. There is a level indicator on the elevated storage tank at the WTP which monitors the water level inside the tank. When the tank is full, a switch turns the HSP's off. If this tank overflows, the water overflows back into the clearwell so no water is lost. The Town of Hertford has indicated there are times in which water is seen overflowing the elevated storage tank at the WWTP before the HSP's have been cut off, creating a large loss of finished water. If the tank at the WWTP reaches the overflow elevation before the tank at the WTP, one of two situations would appear to be occurring. One situation could be the switch that controls the HSP's is not functioning properly and thereby not turning the HSP's off once the tank at the WTP is full. The second situation could be that the tank at the WWTP has a lower overflow elevation than the tank at the WTP.

The only meter in the plant is on the HSP measuring the amount of water being pumped out of the plant. The WTP does not currently know how much raw water is entering the

plant, nor the amount of water lost. The WTP currently runs 12 to 13 hours per day with the filters being manually backwashed a minimum of once per day.

The Town of Hertford had an ADD of 0.256 mgd in 2005. The MDD was 0.349 mgd with a MDD/ADD ratio of 1.36 for 2005. Through September 2006, the ADD was 0.258 mgd. The MDD was 0.369 mgd with a MDD/ADD ratio of 1.43. These numbers illustrate a slight increase in both the ADD and MDD over the last two years.

3.3.2 Problems with the Town of Hertford Water System

The Town does not have a backup power source available at the WTP or the wells to keep the water system operational during a power outage. Additionally, the Town does not own any type of portable generator nor are they contracted with anyone to supply generators in case of an emergency.

As stated previously, the well capacity is the limiting factor for water production with Hertford's system. The Town only operates one well on a normal basis. Neither well has a perimeter fence or any other type of security. High levels of iron have been measured in both wells.

There are no flow meters measuring the water from the wells to the plant or from the sand filters to the clearwell. Therefore, the Town of Hertford does not know how much raw water is entering the plant, how much water is being sent from the sand filters to the clearwell, or how much water is lost in the treatment process. Both wells should have flow meters as mandated by the North Carolina Public Water Supply.

The WTP formerly fed alum to assist coagulation and improve filtration. However, the alum feeder broke years ago, and the Town of Hertford removed the feeder. Now lime is not filtered out of the finished water as effectively as before. Lime buildup has been seen in the clearwell and in the distribution system. There have been complaints from customers about yellow water in the system, possibly from still suspended lime. There is

currently no flushing system in place to flush any lime buildup from the system. In addition, all pipes in the plant are increasingly becoming clogged with lime which reduces the effective diameter of the pipes. The lime added does not get filtered out of the water before it goes out into the distribution system due to a high pH. Recarbonation or acid addition can be used to precipitate and filter out excess lime and reduce lime scaling throughout the system.

3.3.3 Town of Hertford Wastewater System

The Town of Hertford operates and maintains its own wastewater collection and treatment system. The wastewater treatment plant (WWTP) was constructed in 1966 and is located on Mead's Circle. The collection system consists of 6-inch through 12-inch gravity sewer line, 230 manholes, 3-inch through 10-inch force mains, and 9 duplex pump stations which pump the wastewater to the WWTP. The WWTP utilizes an activated sludge process with a grit chamber, an aeration basin, a clarifier, chlorine contact chamber, 7 drying beds (when needed), and an area for land application.

In addition to treating wastewater from the Town of Hertford, the Town of Hertford's WWTP treats wastewater from the Town of Winfall. The Town of Winfall is currently allocated up to 100,000 gpd capacity to be treated at the Town of Hertford's WWTP. The force main from the Town of Winfall to the Town of Hertford WWTP runs underneath the Perquimans River. There are currently no flow meters metering the amount of wastewater being sent to the WWTP from the Town of Winfall. As stated previously, a drawdown test was recently done to use in conjunction with pump run times to determine the volume of wastewater being sent to Hertford by Winfall.

Hertford's wastewater entering the WWTP flows first into the grit chamber where it was designed to be slowed to 1.2 ft/s as it travels through the grit chamber and screen. However, parts of the grit chamber designed to regulate the flow have corroded and the wastewater now travels too fast through the chamber causing splattering outside of the chamber. The wastewater from the Town of Winfall flows directly into the aeration

basin and is not screened. The WWTP is old and in need of repair. Everything in the WWTP is manual. The plant produces an effluent which is in compliance with state and federal regulations as it discharges into an unnamed creek and then on to the Perquimans River. The Town of Hertford has been using land application for approximately 3 to 4 years. Lime is applied to the solids in order to raise the pH enough for land application. When fields are too wet for land application, drying beds at the WWTP are used.

The Town of Hertford's WWTP has a current capacity of 400,000 gpd. The Town has completed a design to expand their existing WWTP capacity from 400,000 gpd to 700,000 gpd and bids have been received. Construction is expected to begin by May, 2007. Cemetery Pump Station, Mead Circle Pump Station, and Whedbee Pump Station are being upgraded with the WWTP expansion.

The Town of Hertford's WWTP had an average effluent of 0.456 mgd with a max day effluent of 0.840 mgd in 2005. Through August 2006, the WWTP had an average effluent of 0.386 mgd with a max day effluent of 0.837 mgd. The average effluent in 2005 was greater than the 0.400 mgd capacity. Both the max day effluent in 2005 and 2006 are over 0.100 mgd higher than the WWTP upgrade capacity of 0.700 mgd.

3.3.4 Problems with the Town of Hertford Wastewater System

The WWTP is stressed and has the need for many repairs. The drying beds at the WWTP are old and have not been maintained. The blowers for the clarifier have not been operational in years and the WWTP building is in very poor condition. Since October 1, 2001, the Town of Hertford's WWTP has been operating under a Special Order by Consent (SOC) from the North Carolina Division of Water Quality for being unable to consistently comply with final effluent limitations for Flow, Biochemical Oxygen Demand, Total Suspended Solids, and Fecal Coliform (See Appendix H). The grit chamber and aeration basin are subject to overflowing (3 times reported in 2006). The high average day and max day effluent can be attributed to high levels of infiltration

into the collection system and growth in the Towns of Hertford and Winfall. Both Towns are continually working on decreasing infiltration into their collection systems.

4.0 DEMAND PROJECTIONS

4.1 Population and Water System Connections Projections

Perquimans County population projections are based solely on the North Carolina State Demographer's Office. The projections increase the current population of 11,368 in 2000 to 12,810 by 2010, 13,831 by 2020, and 14,650 by 2030. These projections show a 12.7% increase from 2000 to 2010, an 8.0 % increase from 2010 to 2020, and a 6.0% increase from 2020 to 2030.

The residential water system had 3,893 connections in 2000 as provided by the County. Perquimans County's residential water system connections were projected using three different options. In 2000, the percentage of residential water system connections to total population was 34.25%. Option 1 assumes that the percentage of residential water system connections to total population will remain the same for 2010, 2020, and 2030. Therefore, for those years, the residential water system connections are considered to be 34.25% of the projected population for each respective year. Option 2 assumes that all future population will connect to the water system but no current well users will connect to the water system through 2030. The residential water system connections per decade increase by the population increase divided by 1.88 people per connection. Option 3 projections are based on 1998 through 2006 water system data provided by the County. The method correlates between the year and number of residential water system connections for each year 1998 through 2006, and then projects the residential water system connections for 2010, 2020, and 2030 based on correlation. Table 4.1 shows the population and residential water system connections projected for 2010, 2020, and 2030.

Table 4.1: Perquimans County Residential Water System Connections Projections

Year	Perquimans County					
	Option 1		Option 2		Option 3	
	Population	Residential Water System Connections	Population	Residential Water System Connections	Population	Residential Water System Connections
2000	11,368	3,893	11,368	3,893	11,368	3,893
2010	12,810	4,387	12,810	4,483	12,810	4,946
2020	13,831	4,737	13,831	4,900	13,831	6,004
2030	14,650	5,018	14,650	5,233	14,650	7,062

Notes:

- 1) Population in 2000 is from 2000 US Census Data. Projected populations for 2010, 2020, and 2030 from North Carolina State Demographic's Office.
- 2) Option 1 residential water system connections projections based on percentage of water system connections to population of 34.25% as determined in 2000.
- 3) Option 2 residential water system connections projected based on all future County population connecting to the water system and no existing wells connecting to the system. The number of connections for 2010, 2020, and 2030 were determined by taking the population increase for the County minus each Town's population from 2000 to the year in question divided by 1.88 people per connection and adding that number to the number of connections in 2000.
- 4) Option 3 residential water system connections projected using population versus water system connections data from 1998 to 2006 as supplied by the County. For the purposes of this study, the number of future connections as determined by Option 3 will be used in this report.

Figure 4.1 below illustrates the residential water system connections comparison from 1998 to 2006 as used to project the connections for 2010, 2020, and 2030.

Figure 4.1: Residential Water System Connections vs. Year (1998-2006)

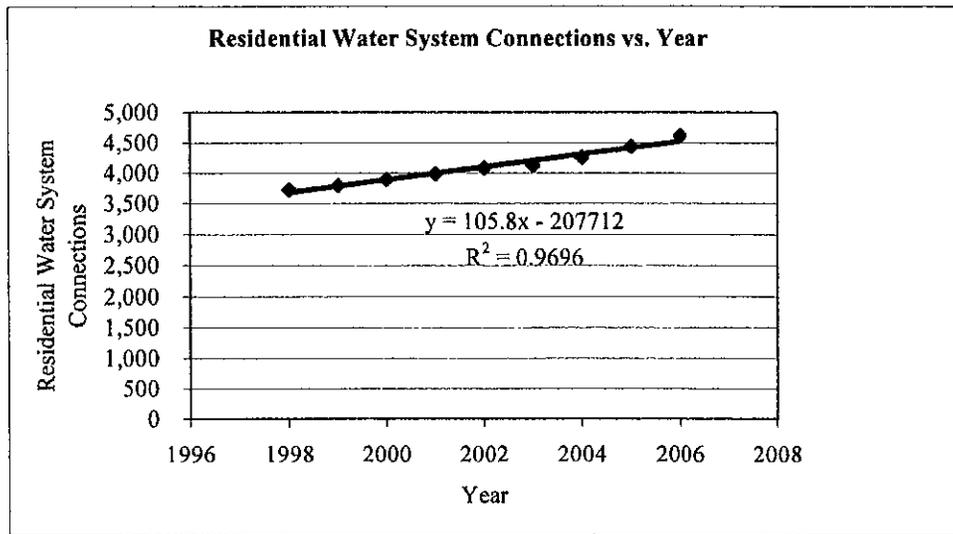
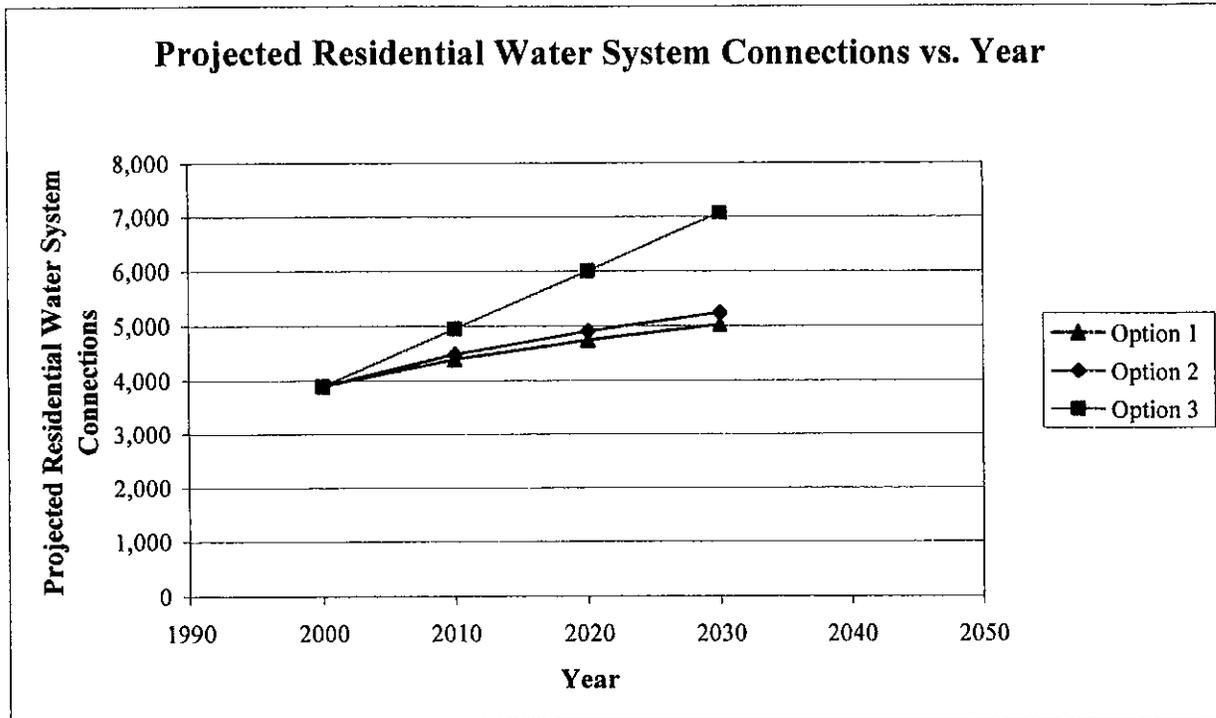


Figure 4.2 below illustrates the difference in residential water system connections by year between the three options outlined above.

Figure 4.2: Projected Residential Water System Connections Comparison



For the purposes of this study, The Wooten Company will use projections from Option 3 above for all demand projections for Perquimans County. Option 3 is the most conservative option with the highest residential water system population.

The populations in 2000 for the Towns of Winfall and Hertford were obtained from the 2000 US Census Data. Population projections for 2010, 2020, and 2030 are based on the same growth rate as Perquimans County as predicted by the NC State Demographic's Office. The Town of Winfall's population increases from 554 in 2000 to 625 by 2010, 675 by 2020, and 716 by 2030. The Town of Hertford's population is projected to increase from 2,070 in 2000 to 2,333 by 2010, 2,520 by 2020, and 2,672 by 2030. Table 4.2 illustrates the population and water system customers from 2000 through 2030 of the Town of Winfall and the Town of Hertford.

Table 4.2: Population and Water System Projections 2000 to 2030

Water System	2000		2010		2020		2030	
	Population	Residential Water System Connections						
Town of Winfall ^{1,2,3}	554	254	625	287	675	310	716	329
Town of Hertford ^{4,5}	2,070	828	2,333	934	2,520	1,009	2,672	1,070

Notes:

- 1) Population in 2000 is from 2000 US Census Data. Population projected for 2010, 2020, and 2030 based on same growth rate as County as predicted by the NC State Demographic's Office.
- 2) Residential water system connections in 2000 based on information provided by the Town. All future population considered to be served by the water system.
- 3) Based on population and residential water system connections in 2000, it was determined to use 2.18 people per connection for 2010, 2020, and 2030 projections.
- 4) Residential water system connections in 2000 based on information from 2002 WSP. All future population considered to be served by the water system.
- 5) Based on population and residential water system connections in 2000, it was determined to use 2.5 people per connection for 2010, 2020, and 2030 projections.

4.2 Projected Water Demands

The ADD and MDD for 2000 used in this report were given to The Wooten Company by Perquimans County. The future ADD's were determined based on residential water system connections projected by Option 3 from above times the average usage per connection from year 2000. The MDD/ADD ratio of 1.64 from 2000 was used to project the future MDD for Perquimans County (See Table 4.3 below).

The Town of Winfall provided The Wooten Company with the total gallons produced by the WTP from 2000 through 2006. The 2000 ADD was based on the information provided by the Town. The MDD was projected using a MDD/ADD ratio of 1.66 as calculated from 2005 data.

The 2000 ADD and MDD for the Town of Hertford were those reported in the 2002 WSP. The projected MDD's were calculated using a MDD/ADD ratio of 1.6 from the 2002 WSP. The ADD's for the Towns of Winfall and Hertford were projected based on the projected residential water system population for each times each Town's average usage per connection. The following table illustrates the ADD and MDD projections for each entity.

Table 4.3: Projected Water Demands 2000-2030

Water System	2000		2010		2020		2030	
	ADD (MGD)	MDD (MGD)						
Perquimans County ¹	0.683	1.122	0.868	1.423	1.053	1.728	1.239	2.030
Town of Winfall ²	0.049	0.081	0.055	0.091	0.060	0.100	0.063	0.105
Town of Hertford ³	0.296	0.474	0.334	0.535	0.361	0.577	0.383	0.612

Notes:

- 1) 2000 ADD based on data provided by system. Projected ADD based on 2000 ADD divided by 2000 connections times projected connections. Projected MDD's based on MDD/ADD ratio of 1.64 from 2000.
- 2) 2000 ADD based on data provided by system. Projected ADD based on 2000 ADD divided by 2000 connections times projected connections. Projected MDD's based on MDD/ADD ratio of 1.66 from 2005.
- 3) 2000 ADD is the ADD reported in 2002 WSP. Projected ADD based on 2000 ADD divided by 2000 connections times projected connections. Projected MDD's based on MDD/ADD ratio of 1.6 from the 2002 WSP.

4.3 Storage Requirements

North Carolina state regulations provide minimum requirements for storage. The state recommends that 100% of the ADD be placed in storage (ground and elevated combined), but only requires that the storage be at least 50% of the ADD. In addition, the state requires that the elevated storage must be at least 75,000 gallons.

Current design guidelines divide storage into operating storage, fire storage, and emergency reserve storage. Operating storage is that portion of elevated storage used to meet instantaneous demands and should be approximately 25% of the MDD. Fire storage is that portion of total storage held in reserve for a conflagration. Emergency reserve is the portion of total storage held in reserve for emergencies and should be approximately 25% of the total storage volume. It is recommended that all of this storage be elevated if possible.

The minimum total storage required by the State regulations for Perquimans County, the Town of Winfall, and the Town of Hertford amount to 0.342 MG, 0.025 MG, and 0.148 MG respectively in 2000. These amounts increase to 0.620 MG for Perquimans County, 0.032 MG for the Town of Winfall, and 0.192 MG for the Town of Hertford in 2030. However, the State recommended minimum storage capacities for Perquimans

County, the Town of Winfall, and the Town of Hertford amount to 0.683 MG, 0.049 MG, and 0.296 MG respectively in 2000. These amounts increase to 1.239 MG, 0.063 MG, and 0.383 MG in 2030. Using the theoretical design guidelines detailed above, the Town of Winfall and the Town of Hertford should have 0.267 MG and 0.275 MG in 2000 with 0.398 MG and 0.444 MG in 2030, respectively. Perquimans County does not have a theoretical storage design because the county does not provide fire flow. Therefore, the recommended storage for the years 2000 and 2030 will be used for analysis for Perquimans County. As much of this storage as possible should be elevated. Table 4.4 shows the storage requirements required in 2030.

Table 4.4: Storage Requirements

Water System	Existing Storage (MG)*	Existing Required Storage (MG)	Existing Recommended Storage (MG)	Existing Theoretical Storage (MG)	2030 Required Storage (MG)	2030 Recommended Storage (MG)	2030 Theoretical Storage (MG)
Perquimans County	2.250	0.342	0.683	---**	0.620	1.239	---**
Town of Winfall	0.100	0.025	0.049	0.267	0.032	0.063	0.275
Town of Hertford	0.700	0.148	0.296	0.398	0.192	0.383	0.444

Notes:

* Existing requirements are based on year 2000.

** Perquimans County does not provide fire flow.

Perquimans County currently has 5 elevated tanks accounting for 1.2 MG elevated storage. In addition, Perquimans County has 1.05 MG ground storage resulting in 2.25 MG total storage. The Town of Winfall has 1 elevated tank accounting for 0.100 MG elevated storage located behind the WTP. The Town of Hertford currently has 2 elevated storage tanks accounting for 0.600 MG elevated storage. In addition, they have a 0.100 MG ground storage tank resulting in 0.700 MG total storage.

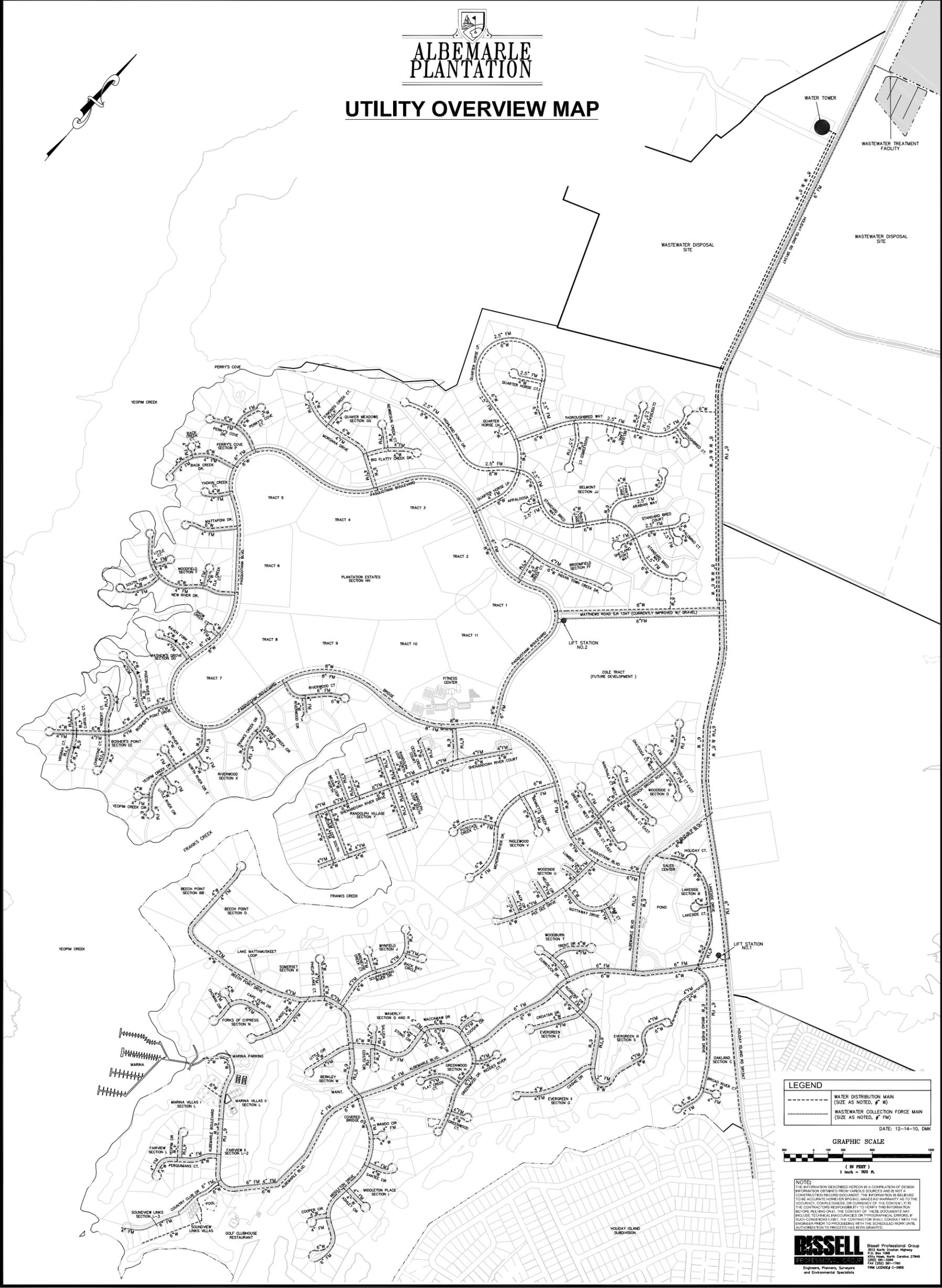
For the purposes of this report, it is suggested that each entity satisfy the state's recommended storage requirement. Therefore, as seen in the table, all entities have sufficient storage up to 2030.

APPENDIX 8
PERQUIMANS COUNTY, NORTH CAROLINA
ALBEMARLE PLANTATION UTILITY SYSTEM MAP SHOWING SEWER
FORCE MAINS (FM), LIFT STATIONS, AND
WATER (DISTRIBUTION) LINES (W)
(SOURCE: BISSELL PROFESSIONAL GROUP)

SOURCE: Bissell Professional Group, P.O. Box 1068, 3512 N. Croatan Highway, Kitty Hawk, North Carolina 27949, www.bissellprofessionalgroup.com, 2010.

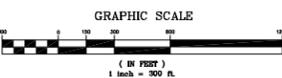
ALBEMARLE PLANTATION

UTILITY OVERVIEW MAP



LEGEND	
	WATER DISTRIBUTION MAIN (SIZE AS NOTED, #\" W)
	WASTEWATER COLLECTION FORCE MAIN (SIZE AS NOTED, #\" FM)

DATE: 12-14-10, DMK



NOTE:
THE INFORMATION DESCRIBED HEREON IS A COMPILATION OF DESIGN INFORMATION OBTAINED FROM VARIOUS SOURCES AND IS NOT A CONSTRUCTION RECORD DOCUMENT. THE INFORMATION IS BELIEVED TO BE ACCURATE, HOWEVER, ENGINEERS MAKE NO WARRANTY AS TO THE ACCURACY, COMPLETENESS, OR CURRENTNESS OF THE CONTENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE INFORMATION BEFORE RELYING ON IT. THE CONTENT OF THESE DOCUMENTS MAY INCLUDE TECHNICAL INACCURACIES OR TYPOGRAPHICAL ERRORS. IF SUCH CONCERNS EXIST, THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER PRIOR TO PROCEEDING WITH THE SCHEDULED WORK UNTIL AUTHORIZATION TO PROCEED HAS BEEN OBTAINED.

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APPENDIX 9
PERQUIMANS COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
AUGUST 1, 2005
SECTION II: MITIGATION ACTION PLAN

II. Mitigation Action Plan

This section of the Plan summarizes study conclusions, outlines community goals and objectives, and describes the action plan to reduce community vulnerability to the effects of natural hazards in Perquimans County. Mitigation objectives are designed to support community goals while further defining the parameters for development of mitigation actions. Mitigation actions describe specific steps that are to be undertaken to achieve the stated objectives. Mitigation actions are intended to serve as benchmarks for evaluating progress on plan implementation.

A. Study Conclusions

With limited financial and staff resources to dedicate to hazard mitigation, it is essential that those hazards with the highest likelihood of occurrence and the greatest potential impact receive immediate attention. Through hazard identification and analysis and vulnerability assessment, it has been determined that Perquimans County and the participating municipalities of Hertford and Winfall are susceptible to the impact of certain natural hazards as summarized at the conclusion of Appendix A Hazard Identification and Analysis.

Through the hazard mitigation planning process, the three cooperating governmental units determined that the Perquimans County area is not at risk for tsunamis or volcanoes and that there is a “low” risk of earthquakes and landslides/sinkholes. There are also no records of any dam or levee failures within the County. Seven hazards were rated “moderate” risk – coastal and riverine erosion, droughts and heat waves, floods, hurricanes and coastal storms, severe storms and tornadoes, wildfires, and winter storms and freezes.

Moderate Hazard Threats

Coastal/Riverine Erosion (including storm surge)

Coastal/Riverine erosion potential is limited to a small area of the County along the Chowan River and the most inland portions of the Albemarle Sound that are susceptible to storm surges associated with hurricanes and coastal storms.

Droughts and Heat Waves

In general, communities can have little influence or impact on mitigating the impact of droughts/heat waves on the local government level except through ensuring adequate water supplies for normal circumstances and through implementation of water conservation measures when drought conditions are imminent. Similarly, heat waves have wide ranging effects that are almost impossible to combat on a level government level. Communities, therefore, depend upon State and Federal agencies for assistance.

Floods

Flooding is often associated with hurricanes and coastal storms (most often general flooding) as well as with severe summer storms (typically flash flooding). Floods are the easiest hazard to quantify and isolate as flooding occurs only in known locations. The severity of a flood is generally dependent upon the amount of rainfall and prior soil conditions (including ground cover). Flood hazard vulnerability can be decreased through adoption and enforcement of local land use regulations and through cooperative, regional efforts to ensure that upstream jurisdictions are not contributing to downstream flooding problems.

High Winds (Severe Storms/Tornadoes and Hurricanes/Coastal Storms)

Severe storms and tornadoes as well as hurricanes and coastal storms present high wind hazards. This hazard is mainly combated through building codes and construction. Enforcement of the current State building code and enhancement of the code in regards to wind resistance will prove the most beneficial in addressing high winds.

Wildfires

Fortunately, wildfires in North Carolina, although frequent, are not normally a serious threat to large areas as is the case in western states where dry weather conditions and large expanses of timber increase the likelihood and extent of the impact of a wildfire. The North Carolina Division of Forest Resources has the responsibility for protecting state and privately owned forest land from wildfires. The program is managed on a cooperative basis with all one hundred counties in the State. The State fire program emphasizes fire prevention efforts; pre-suppression activities (including extensive training of personnel); aggressive suppression efforts on all wildfires; and law enforcement follow-up.

Winter Storms and Freezes

Local governments also look to the State and to private utility companies for leadership in dealing with winter storms/freezes. The typical effects of snow and ice accumulation - loss of electrical power, phone, and cable service and treacherous road conditions - can be only minimally addressed at the local level.

Statement of Commitment to Mitigating Impacts of Natural Hazards

Based on this analysis, the primary responsibility of the participating local governments should be to take action to reduce the level of vulnerability of people and property to future flooding and, as possible at the local level, to the threat of damage from high winds. Thus, the elected and appointed leadership and the citizens of Perquimans County and the participating municipalities commit to engage in activities and practices, both as individuals and as members of the larger community of Perquimans County, to mitigate the impacts of future natural hazards with particular emphasis on mitigating the effects of flooding and secondarily on mitigating the effects of high winds, as practicable at the local government level.

B. Community Goals

The primary goal of all local governments is to promote the public health, safety, and welfare of the citizens of the community. In keeping with this standard, Perquimans County and the participating municipalities have developed four goal statements for local hazard mitigation planning. Each goal, purposefully broad in nature, serves to establish parameters that were used in developing more specific objectives and mitigation actions. Consistent implementation of objectives and actions will over time ensure that community goals are achieved.

- Goal #1** Protect the public health, safety and welfare by increasing public awareness of hazards and by encouraging collective and individual responsibility for mitigating hazard risks.
- Goal #2** Improve technical capability to respond to hazards and to improve the effectiveness of hazard mitigation actions.
- Goal #3** Enhance existing or create new policies and ordinances that will help reduce the damaging effects of natural hazards.
- Goal #4** Protect the most vulnerable populations, buildings, and critical facilities through the implementation of cost-effective and technically feasible mitigation actions.

C. Mitigation Objectives

Mitigation objectives are designed to support community goals while further defining parameters for development of mitigation actions. Objectives are numbered to correspond with the goal that each supports.

- Objective 1.1** The County and municipalities will engage in activities and practices that will help mitigate the impacts of natural hazards.
- Objective 1.2** The County and municipalities will implement a public awareness campaign to educate citizens of the possible hazards associated with locating in floodplains and of measures that can be taken to lessen impacts of future floods.
- Objective 2.1** The County and municipalities will work to ensure that emergency services are adequate to protect public health and safety.
- Objective 3.1** The County and municipalities will work together to seek ways to protect wetlands, floodplains, and other natural features that serve to reduce flood hazard susceptibility.
- Objective 3.2** The County and municipalities will enforce National Flood Insurance Program (NFIP) development standards and also study additional methods that would help prevent increases in flood velocities and levels that endanger both people and property. (Some of the municipalities will be adopting flood damage prevention regulations for the first time by November 1, 2004 as required by NCEM/FEMA.)
- Objective 4.1** The County and municipalities will continue to restrict development in known or predictable pathways of natural hazards such as in identified floodplains. Where hazard locations cannot be predicted, as in the case of hurricane force winds, the County and municipalities will continue to ensure that new structures are built to be as resilient as possible to the impacts of a natural hazard.

D. Mitigation Actions

The Perquimans County Mitigation Action Plan is depicted in Table II-1. Mitigation actions that are to be undertaken by the County as the lead agency with the municipalities serving in a supporting role where appropriate. Mitigation actions were developed with an eye toward reducing vulnerability to all natural hazards that can be addressed in a practicable way at the local level. The listed actions do, however, primarily focus on ways Perquimans County and the municipalities can act to lessen and, ideally, eventually eliminate repetitive flood losses and prevent future flood losses from inappropriate new development.

Mitigation actions were developed and prioritized by County and town staff responsible for implementation of the specific action (see Tables II-1 and II-2). The planning team reviewed the results of the hazard identification and analysis; vulnerability assessment; and the community capability assessment in determining which mitigation actions should be undertaken. The County and towns also worked together to determine:

1. Cost effectiveness, i.e., do returns or savings produced by implementation of the action outweigh the cost of implementation?
2. Environmental impact, i.e., are actions designed to protect environmentally fragile areas as natural stormwater storage areas? and
3. Technically feasibility, i.e., can the action be undertaken by the County/towns using current staff and local funds, State, or Federal funds, or do other funding sources need to be identified?

The County and towns categorized actions as low, moderate or high priority based on assessment of the need for the specific action, the projected cost of implementation, the potential beneficial effects from implementation of the action, and available funding sources. The implementation years – between 2005 and 2010 – were determined using projected resources (personnel, vehicles, etc.) and operating funds. As discussed under Study Conclusions, the planning team determined that some potential actions were more appropriately addressed at the State level due to long established priorities and responsibilities assumed by the State of North Carolina and local governments. A cost-benefit review was given special emphasis, in light of its possible use in environmental reviews for HMGP, FMA and other federal hazard mitigation projects.

A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation advisory committee used the following criteria for prioritization of hazard mitigation strategies:

- 1) effectiveness in meeting hazard mitigation goals and comprehensive plan goals

In developing actions, the County and municipalities relied on the following six mitigation policy categories provided by FEMA:

1. Prevention (P) Measures
Preventive measures are intended to keep hazard problems from getting worse. They are particularly effective in reducing a community's future vulnerability, especially in areas where development has not occurred or where capital improvements have not been substantial. Examples of prevention measures include:
 - (a) Comprehensive land use planning
 - (b) Zoning regulations
 - (c) Subdivision regulations
 - (d) Open space preservation
 - (e) Building code
 - (f) Floodplain development regulations
 - (g) Stormwater management

2. Property Protection (PP) Measures
Property protection measures protect existing structures by modifying the building to withstand hazardous events, or removing structures from hazardous locations. Examples of property protection measures include:
 - (a) Building relocation
 - (b) Acquisition and clearance
 - (c) Building elevation
 - (d) Barrier installation
 - (e) Building retrofit

3. **Natural Resource (NR) Protection**
Natural resource protection activities reduce the impact of natural hazards by preserving or restoring natural areas and their mitigative functions. Such areas include floodplains, wetlands, and dunes. Parks, recreation or conservation agencies and organizations often implement these measures. Examples include:
 - (a) Wetland protection
 - (b) Habitat protection
 - (c) Erosion and sedimentation control
 - (d) Best management practices (BMPs)
 - (e) Stream dumping
 - (f) Forestry practices

4. **Emergency Services (ES) Measures**
Although not typically considered a mitigation technique, emergency service measures do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event. Examples include:
 - (a) Hazard warning system
 - (b) Emergency response plan
 - (c) Critical facilities protection
 - (d) Health and safety maintenance
 - (e) Post-disaster mitigation

5. **Structural Projects (S)**
Structural mitigation projects are intended to lessen the impact of a hazard by modifying the environmental natural progression of the hazard event. The projects are usually designed by engineers and managed or maintained by public works staff. Examples include:
 - (a) Reservoirs, retention and detention basins
 - (b) Levees and floodwalls
 - (c) Channel modifications
 - (d) Channel maintenance

6. **Public Information Activities (PI) Activities**
Public information and awareness activities are used to advise residents, business owners, potential property buyers, and visitors about hazards, hazardous areas, and mitigation techniques that the public can use to protect themselves and their property. Examples of measures to education and inform the public include:
 - (a) Map information
 - (b) Outreach projects
 - (c) Library
 - (d) Technical Assistance
 - (e) Real estate disclosure
 - (f) Environmental education

Mitigation Action Tables - Explanation of Columns and Acronyms

Action

Action # corresponds to FEMA mitigation policy categories listed above.

Action

Description of action to be undertaken.

Hazard

Hazard which the action addresses.

Objective(s) Addressed

Reference to the numbered objective which the action supports.

Relative Priority

Low, moderate or high priority for funding and implementation.

Funding Sources

State and Federal sources of funds are noted, where applicable.

Responsible Party

Note: The Perquimans County Board of Commissioners and the individual Town boards have ultimate authority to approve any policy, program or regulation revisions. Implementing mitigation actions specific to each participating town are the responsibility of the Town Mayor or a designated Town employee.

Acronyms

PW – Perquimans County Public Works
BOC – Perquimans County Board of Commissioners
ES – Perquimans County Emergency Services
PL – Perquimans County Planning Department
PB – Perquimans County Planning Board
BI – Perquimans County Building Inspections
FEMA - Federal Emergency Management Agency
NCDENR – NC Department of Environment and Natural Resources
NCDOT - North Carolina Department of Transportation
NCEM - North Carolina Division of Emergency Management
NRCS – Natural Resources Conservation Service
USACE – US Army Corps of Engineers

Target Completion Date

Date by which the action should be completed.

Table II-1: Perquimans County Mitigation Action Plan

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
Preventive Actions							
P-1	Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county property when they would pose an immediate threat to property, utility lines, or other significant structures or critical facilities in the county.	All	1.1	Moderate	Local	PW	Ongoing
P-2	Any additional planting of trees preformed by the county or residents there of should consider the use of wind-resistant trees and plants to reduce the risk of breaking in high wind events. Consider revising the Zoning Ordinance to include such recommendations.	All	1.1	Moderate	Local	BOC	Ongoing
P-3	Record all tax parcel information and floodplain locations in a GIS system including repetitive loss areas, areas of greatest risk, and vulnerable populations.	Flood	3.1	Moderate	Local	ES PL	Ongoing
P-4	The County Tax Department will consider instituting a tax abatement program that encourages development outside of the floodplain and discourages development within it, at the next scheduled Tax Re-evaluation period in 2008.	Flood	3.1	Moderate	FEMA	PC PL	2008
P-5	Consider participating in the Community Rating System (CRS).	Flood	2.2	Moderate	Local	PC	2007
P-6	Zoning and Subdivision ordinances have recently been revised to increase lot sizes in areas with poor soils. As flooding is exacerbated by soils that cannot adequately absorb the water, areas with poor soil conditions should be avoided as much as possible in future developments. Increasing lot size within subdivisions will provide more area for soil absorption and lessen damages to properties in the area. The county land use plan policy should be implemented by revising the zoning and subdivision ordinances so that the minimum lot size in future subdivisions is increased.	Flood	1.1	Moderate	Local	BOC PB PL	2008

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
P-7	The county will consider amending the zoning ordinance to include regulations for underground chemical and gasoline storage to minimize risks to groundwater resources.	All	1.1	Moderate	Local	BOC PL	2006
P-8	The county should consider amended the zoning, mobile home parks, and subdivision ordinances to require storm shelters in all mobile home areas and other areas without basements or underground protection.	All	1.1	Moderate	Local	BI ES	2006
P-9	Continue to review rebuilding activities after major storm events to determine how revisions to existing policies and procedures could help minimize repetitive losses.	All	1.1	Moderate	Local	BI	Ongoing
P-10	Consider delineating environmentally sensitive areas that are unsuitable for growth and development as part of the CAMA land use plan update.	All	3.1 3.2	Moderate	Local	PL	2006
P-11	Ensure that mobile manufactured homes are installed and secured properly.	All	4.1	High	Local	BI	Ongoing
P-12	Consider adding drainage as an issue to be discussed during Technical Review Committee meetings of new development plans.	Flood	2.1	High	Local	PL PW	2005-2006
Property Protection Actions							
PP-1	Continue to enforce the North Carolina Building Code. The requirement that new structures or structures undergoing significant renovations be resistant to wind loads of 110 mph is of particular importance.	Wind	1.1	Moderate	Local State	BI	Ongoing
PP-2	Continue to acquire destroyed or substantially damaged properties and relocate households. Seek State and Federal funding. (voluntary program)	All	2.2	Moderate	FEMA NCEM	BOC	On-going
PP-3	Encourage use of wind-resistant construction techniques used in coastal regions.	Wind	1.1	High	Local	BI	On-going
PP-4	Consider a policy for contractors to pick up building material and building debris prior to coastal storms.	All	1.1	Moderate	Local	BI PD	2006-2007
Emergency Services							
ES-1	In order to minimize injury from lightening strikes, shelters should be placed every 10 acres in all public open space recreation areas.	All	1.1	Moderate	Local	BOC	2008

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
ES-2	Develop and adopt an Emergency Operations Plan. This plan should contain detailed information on responsible parties and contact information. This information should be updated as positions and contact information change.	All	1.1 1.3	High	Local	ES ES	Ongoing
ES-3	Maintain evacuation routes.	All	1.1	Moderate		BOC	Ongoing
ES-4	Warning System Improvements. Several options exist and the county will explore and decide upon the most feasible option to warn county residents.	Tornado / High Wind	1.1	Moderate	Local	ES	Ongoing
ES-5	Ensure adequate evacuation time in case of major hazard events.	All	1.1 1.3	High	Local	ES	Ongoing
Natural Resource Protection							
NR-1	In order to reduce storm water runoff, the county should minimize construction of additional impervious surfaces within floodplains. This should include limiting construction of impervious surface parking lots in the areas near the rivers.	All	1.1 3.1	Moderate	Local	BOC	Ongoing
NR-2	Although the presence of hydric soils may indicate the location of wetlands, an on-site analysis is needed to positively identify and designate wetlands within the Perquimans County area. Such analysis will have to be completed by the US Army Corp of Engineers at the request of Perquimans County.	All	3.1	Moderate	USACE	PL	2007
NR-3	Continue to support NC Sedimentation Control Commission efforts to ensure erosion and sedimentation control measures are properly installed and maintained during construction.	Flood	3.2	High	Local NCDENR	PL PW	Ongoing
Public Information Activities							
PI-1	As with other hazards of concern to Perquimans County, the county should sponsor a hazard mitigation symposium for county residents, including information on preparedness for all significant hazards. The symposium should address the options of elevation, relocation, and flood proofing.	Flood	1.2	Moderate	Local	BOC ES	Ongoing
PI-2	Post information about emergency evacuation routes.	All	1.2	High	Local	ES	2007
PI-3	Use written materials to educate contractors about principles for quality redevelopment and safe housing	All	1.2	Moderate	Local	BI	Ongoing

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
	development.						
PI-4	Provide new home and property buyers with information on wind proofing. The information is probably most effectively dispersed by the tax assessor's office as all home transactions are recorded there.	Wind	1.1 1.2	Moderate	Local	PC	2006
PI-5	Create and disperse information about the plan and relevant emergency response actions the public can take. Also, ensure each county department has a clear list of department responsibilities as outlined in the plan. Update department contacts as they change.	All	1.2	High	Local	ES	2007
PI-6	Continue to provide flood maps for public use with staff continuing to be available for public assistance.	Flood	1.1 1.2	High	Local	PL	Ongoing
PI-7	Collect FEMA and NCEM educational material on natural hazards and place in public library.	All	1.1 1.2	High	Local	PL	2004-05

Source: Perquimans County.

Table II-2: Mitigation Action Plan - Town of Hertford

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party*	Target Completion Date
P-1	Update the CAMA Land Use Plan in conjunction with the County's Core Land Use Plan	All	1.1	Moderate	Local	HM	2007
P-2	Consider revising Hertford's Zoning Ordinance and Subdivision Regulations to improve storm water management practices in developments.	All	1.1 3.1	Moderate	Local	HM	2007
P-3	Update the Town of Hertford's Zoning Ordinance and Subdivision Regulations.	All	1.1	Low	Local	HM	2009
P-4	Work in conjunction with NCDOT and other agencies to ensure that storm water facilities are maintained to allow for reasonable flows.	All	1.1 3.1	Moderate	State	NCDOT HM	Ongoing
PP-1	In cooperation with Perquimans County, continue to review areas adversely impacted by major storm events and to examine existing policies that can minimize repetitive losses in those areas.	Flood	1.1 3.1	Moderate	Local	PC HM	Ongoing
ES-1	In cooperation with Perquimans County, study the feasibility of combining water and sewer facilities.	All	2.1	High	Local	PC HM	2006
S-1	In conjunction with NCDOT, continue to examine the roadways of the town to determine if improvements are needed in areas affected by development.	All	1.1	Moderate	State	NCDOT HM	Ongoing

Source: Town of Hertford

*Abbreviations: Hertford Town Manager (HM), North Carolina Department of Transportation (NCDOT), and Perquimans County (PC).

Table II-3: Mitigation Action Plan - Town of Winfall

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
Preventive Actions							
P-1	Complete Land Use Plan and ensure that hazard mitigation objectives are addressed.	All	1.1	High	Local	TC PB PC	2006
P-2	Review, update and evaluate new zoning ordinance to ensure objectives in the Hazard Mitigation Plan are addressed and that growth is consistent with the land classification map, land use plan, and within the capabilities of the waste water collection system and water supply.	All	1.1	High	Local	PB TC	2005
P-3	Complete new subdivision regulations and ensure that hazard mitigation objectives are addressed.	All	1.1	High	Local	PB TC	2006
P-4	As needed, review and update the Flood Damage Prevention Ordinance.	Flood	3.2	Moderate	Local	PB TC	2006
P-5	Update as needed the wastewater collection system and water system ordinances to meet hazard mitigation objectives.	All	2.1	Moderate	Local	PB TC	2006
P-6	Continue to encourage efforts towards countywide water and sewer systems with Perquimans County and the Town of Hertford.	All	1.1	Moderate	Local	TC	Ongoing
P-7	Continue efforts to improve roads and bridges (both public and private) for critical services – fire, rescue, medical, evacuation, etc.	All	3.1	Moderate	State	TC	Ongoing
Property Protection Actions							
PP-1	Seek funding and/or action to clear debris in canals, waterways and drainage ditches to prevent flooding and to improve drainage and water quality.	Flood Storms	1.1	Moderate	NCDOT NCDENR	TC	Ongoing
PP-2	Work with the County Building Inspector to continue to enforce the NC Building Code, in particular, the tie down of buildings and resistance to wind loads.	High Winds	4.1	Moderate	Local	PC TC	Ongoing

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
Natural Resources							
NR-1	Minimize construction of impervious surfaces adjacent to floodplains or near storm water drainage routes that empty into the river.	All	4.1	Moderate	Local	ZA	Ongoing
Emergency Services							
ES-1	Establish program for evacuation and improvement of Town critical services and facilities – water system and wastewater collection system.	All	1.1 2.1	Moderate	Local	TC FD Staff	Ongoing
ES-2	Continue to partner with Perquimans County in the development of the Emergency Operations Plan (i.e. evacuation warnings, removal of persons in flood prone areas).	All	1.1	High	PC Town	PC TC	Ongoing
ES-3	Partner with Perquimans County to improve warning system, to ensure residents understand the system and that homebound residents are notified.	All	1.1 1.2	Moderate	Local	TC PD FD	Ongoing
ES-4	Evaluate flood or access problems for critical facilities; develop protection options. Identify command post and alternates.	All	1.1	High	Local	PD Staff TC	Ongoing
Structural Projects							
S-1	Continue to work on removal of projectile/debris such as junked vehicles, mobile homes and dilapidated homes.	All	1.1	Moderate	Local	TC Staff	Ongoing
S-2	Evaluate those businesses with potential hazardous liquids for adequate protection of the public.	All	1.1 4.2	Moderate	Town Private	TC	Ongoing
Public Information Activities							
PI-1	Establish an annual schedule for reviewing and updating the Hazard Mitigation Plan.	All	1.1	High	Local	PB TC	2005
PI-2	Establish both a regular and emergency plan to communicate with residents.	All	1.2	High	PC Town	TC	Ongoing
PI-3	Create and disseminate information on emergency actions procedures – notification, shelters, evacuation routes, etc.	All	1.2	High	Local	TC Staff	Ongoing
PI-4	Each Town department establish/update plans for their respective operations for emergency operation situations.	All	1.1	High	Local	TC Staff FD	Ongoing

Source: Town of Winfall

Abbreviations: TC – Town Council, PB – Planning Board, PC – Perquimans County, ZA – Zoning Administrator, FD – Fire Department, PD – Police Department, Staff – Mayor, Clerk, Public Utilities.

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