



Pasquotank County
Elizabeth City
North Carolina



2004 Advanced Core Land Use Plan

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SECTION I INTRODUCTION AND EXECUTIVE SUMMARY

1.1 Purpose

Land development generally involves a series of decisions by both private individuals and the public sector. In order to promote the public interest in the land development process, the North Carolina Coastal Area Management Act (CAMA) requires that local governments prepare, adopt, and keep current a land use plan. The land use plan is intended to provide a framework that will guide local governmental officials as they make day-to-day and long-range decisions that affect land development. The land use plan will also be used by state and federal agencies in making project consistency, project funding, and CAMA permit decisions. Section 4.3.5 provides specific information concerning use of the Future Land Use Plan in guiding decisions about future development.

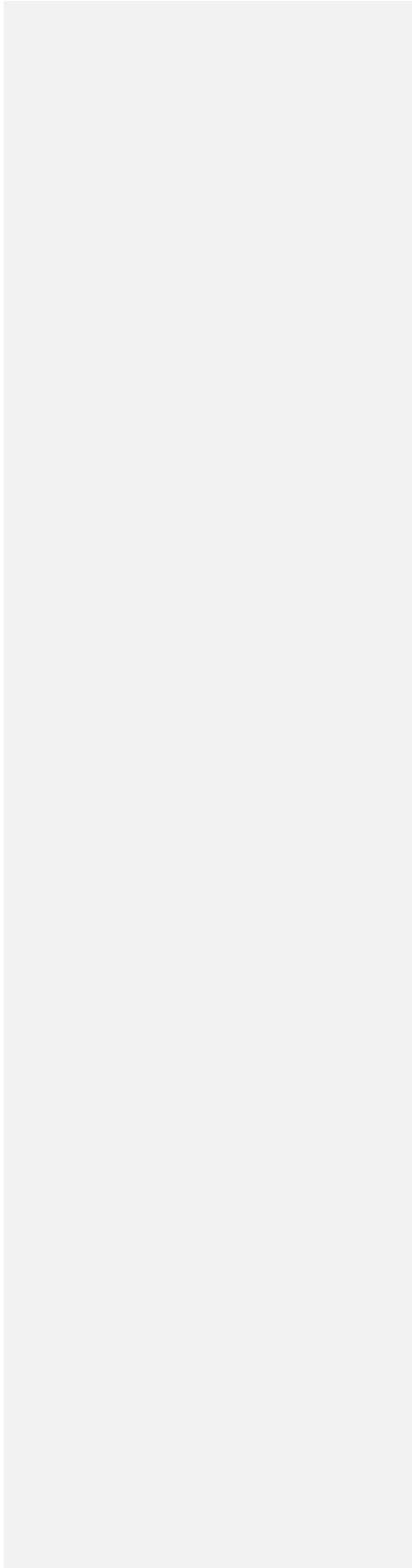
CAMA regulations require that an update be made of land use plans every five years. The update is designed to ensure that all current land development issues are reviewed and reflected in the land use plan. Also, the Coastal Resources Commission (CRC) recently adopted revised planning guidelines which include requirements not addressed in previous land use plans. The land use plan update also provides an opportunity to evaluate the local government's policy statements and to determine their effectiveness in implementing the land development objectives of the community.

The study area for this joint land use plan is Pasquotank County, including the corporate area of the City of Elizabeth City and its extraterritorial planning and zoning jurisdiction (see Figure 1, General Location Map). When this Plan references the term 'Planning Jurisdiction' it is referring to the area within which each unit of government has authority to administer and enforce zoning, subdivision regulations, and other land development regulations. The Elizabeth City Planning Jurisdiction includes the corporate limits of the City of Elizabeth City as well as the City's extraterritorial area. The Pasquotank County Planning Jurisdiction includes the remainder of Pasquotank County not included in the Elizabeth City Planning Jurisdiction. The 2004 Pasquotank County/Elizabeth City Land Use Plan represents an update to the 1996 Pasquotank County Land Use Plan and the Elizabeth City 1994 Land Use Plan. The plan includes both a short term (5-10 year) and long term (20-year) evaluation of land use and land development. Implementation activities are based upon a five-year action plan.

The goals and objectives of the joint land use plan are to:

- Identify and analyze new and emerging land use issues and concerns.
- Reexamine existing land use policies to determine their effectiveness.
- Revise existing land use policies and develop new policies that address current land use and land development issues and concerns.
- Reexamine the existing land use maps to determine what revisions are necessary to address new land use issues and concerns as well as revised and newly developed policy statements.
- Further develop implementation strategies and an implementation schedule.
- Promote a better understanding of the land use planning process.
- Promote citizen involvement in the process of preparing the joint plan.

Figure 1: General Location Map



This 2004 Advanced Core Land Use Plan also focuses on several land use issues that are of strategic importance to both Elizabeth City and Pasquotank County. These focal issues included:

- Elizabeth City Downtown Waterfront area (see Section 3.3.1, D.)
- US 17 Bypass Corridor (see Section 3.4.3, D.)
- Halstead Boulevard Corridor (see Section 3.4.3, E.)
- Joint implementation strategies regarding storm water management (see Section 3.3.4, E.)
- Joint implementation strategies regarding infrastructure planning (see Section 3.4.5)
- Local watershed protection and restoration (see Section 3.3.5)

1.2 Overview of the Plan

The Joint Pasquotank County/Elizabeth City Land Use Plan follows the methodology mandated by the Division of Coastal Management in its Land Use Planning Guidelines (Subchapter 7B of the North Carolina Administrative Code). This Plan is organized to adhere to the format outlined in Subchapter 7B. In addition to requirements for land use plan format and content, the guidelines also require that the land use plan update process include a variety of educational efforts and participatory techniques to assure that all segments of the community have a full and adequate opportunity to participate in all stages of the preparation of the land use plan. A formal Citizen Participation Plan was developed to involve, inform and educate a broad cross-section of the community's populace. Pasquotank County and the City of Elizabeth City implemented a continuous citizen participation and education process that achieved these purposes.

A Planning Committee representing a cross-section of the community was appointed to serve as the body responsible for guiding the Joint Land Use Plan formulation effort. The Planning Committee served in a review and advisory capacity to the elected officials of Pasquotank County and Elizabeth City and to the project planning consultant, The Wooten Company. The Planning Committee met on a periodic basis with the planning consultant and local planning department staffs to assist the planning consultant in defining land use and development issues and concerns, reviewing draft land use plan components prepared by the planning consultant, providing recommendations regarding land use plan content, and providing general input. The Planning Committee members kept their respective elected governing/appointed board apprised of their activities and progress through regular oral and/or written reports.

The public involvement activities undertaken during the preparation of this plan are described in the Citizen Participation Plan, a copy of which is provided in Appendix M. No written comments, including comments regarding the review of the preliminary draft land use plan by adjoining jurisdictions, were received by the Pasquotank County or Elizabeth City.

Section I of the plan includes introductory material and an executive summary of the plan document. It is possible that this section of the plan can be reformatted into a simplified brochure that could be utilized for general public informational purposes.

Section II of this land use plan involves an analysis of community concerns and aspirations in the Pasquotank-Elizabeth City including existing and emerging conditions related to population, economy, land use, water quality, and transportation. Key planning issues are identified in Section II. These issues concern public access, land use suitability, infrastructure, natural hazards, and water quality. How these issues are implicated with the future use of land is

identified as well. A vision statement, included in Section II, sets the tone for the community's goals and desires for the future.

Section III entails an analysis of existing and emerging conditions in the Pasquotank County area including population, economic, natural systems, major community facilities, and land use as well as an analysis of current plans and regulations that affect land use. Demographic, economic, and land use trends are identified and their implications for the future use of land are analyzed. Section III also provides an assessment of environmental conditions and trends as well as a land suitability analysis. The analysis of land suitability is particularly useful in preparing the Future Land Use Map and land development policies. Data utilized in the preparation of the land use plan include local, state, and federal sources.

Through an analysis of existing and emerging conditions in **Section III**, an assessment of the general suitability of land for development and a discussion of physical limitations for development, fragile land and water areas, and areas with resource potential are provided. The analysis of conditions is particularly useful in preparing the land classifications, goals and objectives, and the Future Land Use Map which is discussed in Section IV. Section III also contains an evaluation of the previous Land Use Plans policy statements and evaluates the consistency of the policies with local land use and development ordinances. Action Plan implementation techniques designed to address land development and growth management issues are reviewed. The efficacy of the current policies in creating the desired land use patterns and protecting natural systems is evaluated. The policy statements were developed based upon the previously described analysis of existing conditions, land use trends, and constraints to land development as well as citizen input obtained through the public participation process.

A plan for the future is developed in **Section IV**. Land use goals and objectives and development policies are created as the basis of the plan. Consistency of the future policies and an analysis of the impact of these policies on the management topics are provided in Section IV. A statement of local support for Areas of Environmental Concern (AEC) expresses the intent of Pasquotank County and Elizabeth City to develop in a manner that is cognizant of sensitive environmental areas. The Future Land Use Map described in Section IV assists local planning officials in the implementation of the land development policy statements. The Future Land Use Map provides a basic framework for identifying the future use of land and illustrates the policies as to where and to what density the community wants growth to occur. The Future Land Use Map also delineates where the community wants to conserve natural and cultural resources. Section IV provides a description of the land uses proposed within each future land use classification. The Future Land Use Map presented in this section graphically illustrates the land classification system as applied to the local planning jurisdictions. Section 4.3.5 provides specific information concerning use of the Future Land Use Plan in guiding decisions about future development.

Tools for managing land development are outlined in **Section V** of the plan. A description of the specific management tools that the communities will utilize to implement the plan are provided in Section V as is a five-year implementation plan and schedule. This section of the plan also includes a description of the public participation activities that will be used to monitor implementation of the joint land use plan.

1.3 Executive Summary

1.3.1 Summary of Land Use Issues

The major land use and development issues identified during the preparation of this land use plan update that will affect Elizabeth City and Pasquotank County during the next ten year period include the following:

Public Access

- 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

- Establishment 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.

Infrastructure Carrying Capacity

- 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

- 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) to avoid or better withstand natural hazards.
- Ensuring that existing and planned development is coordinated with existing and planned evacuation infrastructure.

Water Quality

- 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, etc.
- 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.

Areas of Local Concern

- Establishment of land use and development policies that minimize adverse impacts on Areas of Environmental Concern (AEC) and which support overall CAMA goals.
- Identify and address local concerns and issues, such as cultural and historic areas, scenic areas, economic development, or general health and human service needs

1.3.2 Summary of Data Collection and Analysis

The data analyzed in Section III were collected from a wide variety of sources (see Appendix A, Index of Data Sources) including published documents, governmental and private organizations, and individuals. Printed and digital map data were utilized in the preparation of this section of the plan. The major conclusions resulting from the data collection and analysis include:

Population

- In 2000, the total County population was 34,897. Elizabeth City's total corporate population increased 20.3% from 1990-2000 to 17,188. The County's population growth rate during the same period increased 11.5% to 17,654. The statewide average was 21.4%. Approximately 75% of the 2000 total population was located within three of the six townships --- Elizabeth City (35.0%), Nixonton (20.2%), and Providence (19.7%) Townships. Township boundaries are delineated in Figure 1, General Location Map.
- Projections indicate an increase in the total permanent County population to 42,063 in 2010, 47,228 in 2020 and 51,611 in 2030. Within the planning jurisdiction of Elizabeth City, permanent population is projected to increase to 23,736 in 2010, 26,651 in 2020 and 29,124 in 2030. Projections indicate that the population growth rate of Pasquotank County and the entire state will slow over the next 25 years. Complete population projections are provided in Section 3.1.4.
- Population growth will result in increased demand for additional goods, services, and housing as well as public services—utilities, roads, schools, police and fire protection, parks, etc. The expanding population growth from southeastern Virginia is anticipated to continue.

Housing

- Between 1990 and 2000, the number of housing units increased over 16% in Pasquotank County and Elizabeth City to a total of 14,289 dwelling units. The majority of these housing units are located within Elizabeth City
- Single family detached homes are the predominate housing type in both the County and the City. Elizabeth City being an urban area has a higher percentage of multifamily housing units and a lower percentage of manufactured housing than does Pasquotank County.
- Building permit data from 1996 to 2003 indicate that Pasquotank County has averaged about 232 new residential dwellings per year with the

majority of the dwellings being manufactured homes. Data for Elizabeth City during the same period show an annual average of some 91 new residences per year.

Economy

- Elizabeth City has developed as an employment, retail trade, services, governmental, and housing center for northeastern North Carolina. The City's economy has traditionally been services-driven. According to state figures, government employment accounts for approximately 35% of all workers.
- Tourism is increasingly becoming an important part of the local economy.
- The unemployment rate for Pasquotank County in April 2004 was 3.3% compared to the statewide rate of 5.0%.
- The average weekly wage for all workers in Pasquotank County was \$504 while the state average was \$628.
- The 2000 US Census indicates that the majority of the County and City workforce (workers 167 years and older) were employed within Pasquotank County; 77.1% and 76.8% respectively.
- In 2000, the US Census indicated that a small percentage, 13.0 percent for Pasquotank County and 15.1 percent for Elizabeth City, worked outside of Pasquotank County. Those who work outside the state of their residence account for approximately 10 percent of the workforce of Pasquotank County and approximately 8 percent of that of Elizabeth City.
- There has been a shift in destinations for Pasquotank County commuters from the Hampton Roads area to the North Carolina counties surrounding Pasquotank County. In 2000, approximately 57% of all workers commuting outside of Pasquotank County went to other North Carolina counties, while 39% traveled to the Hampton Roads area.
- The widening of US 17 to four lanes in Virginia is anticipated to increase the commuting between Pasquotank County and the Hampton Roads area, as well as the demand for housing.

Natural Constraints for Development

- Being coastal communities, Pasquotank County and Elizabeth City have environmentally fragile areas that influence development. These areas include floodplains, non-coastal wetlands, soils, storm surge, Areas of Environmental Concern (AEC) and public water supply watersheds. Based upon the environmental conditions assigned to each land class as delineated on the Environmental Conditions Composite Map (Figure 2), the majority (70%) of the land area in Pasquotank County falls into Class II. This classification is for land that has moderate hazards and limitations for development. Due to the limitations, land within the classification is best suited for less intense development, such as low density residential without a significant investment in public services. The soils with severe limitations for septic systems can be mitigated in areas where public sewer is available.
- Approximately 38% of the County's land area is located within a 100-year floodplain. The largest, most significant floodplain areas are located along the shoreline of the Albemarle Sound in the southern peninsula area of the county.

- Non-coastal wetlands (aka '404' wetlands) are found in the northwestern, western, and south central portions of Pasquotank County and make up approximately 29% of the County's land area.
- Generally, most of the soils in the County have substantial limitations for septic tank and light industrial uses. Due to the wetness, low strength, and restricted permeability, these soils have limitations for urban uses.
- Due to the low-lying nature of the region, approximately 46% of the County's land area is subject to flooding from a storm surge of the most intense storm intensity and speed.
- Approximately 15% of the County's total land area is encompassed in a water supply watershed located in the northern portion of the County along the Pasquotank River, north of Knobbs Creek (see Figure 2).
- The City of Elizabeth City no longer uses the Pasquotank River as a water supply source and instead utilizes the wellfield in western Elizabeth City. The wellfield contains 10 well sites that supply water to the City.
- Water quality is generally good within the Pasquotank River Basin. The main water quality issue within the Pasquotank River Basin is habitat degradation, including loss of riparian vegetation, channelization, and erosion. The Little River is the only water body within Pasquotank County not meeting water quality standards or which have impaired uses. There are no productive shell fishing or primary nursery areas located in Pasquotank County.
- Identified Natural Heritage Areas within Pasquotank County are located in the extreme northwest tip of the County (Great Dismal Swamp National Wildlife Refuge) and in southern peninsula area of the county bordering on the Albemarle Sound (particularly the Big Flatty Creek and Little Flatty Creek areas).

Existing Land Use

- With the exception of Elizabeth City, the majority of developed land within the County is located along the fringe of the City and the US 17 Business corridor. Elsewhere, developed lands are comprised primarily of widely scattered residential subdivisions and clusters of low density residential development.
- The predominant land use in the County is single-family detached dwellings and manufactured homes on individual lots.
- Agricultural land uses encompass approximately 45% of the total County land area. Farmland is scattered throughout the County and developed land uses are oftentimes randomly interspersed with agriculturally-used tracts.
- Along the US 17 corridor is where the overwhelming majority of commercial uses are found.
- The largest institutional land use within the Pasquotank County planning jurisdiction is the U.S. Coast Guard Base and the Elizabeth City-Pasquotank County Regional Airport property located southeast of Elizabeth City adjacent to NC Highway 34.
- The largest concentration of industrial uses within the County's planning jurisdiction is located in the Pasquotank County Commerce Park.
- The majority of large agriculturally-used tracts are located in the west central portion of the County.

- Approximately 50% of the County's land area is in forestry or undeveloped and underdeveloped properties. Much of this land is within floodplains and wetlands areas.
- Elizabeth City is a diverse urban area that serves as a commercial, governmental, and housing center for the region, and it contains a wide variety of developed land uses including several commercial marine service businesses located along the Pasquotank River waterfront. Residential uses are more varied and include a wider range of density types. The City also contains a higher intensity of nonresidential land use.
- The predominant land use in the City is single-family detached dwellings and multi-family units which comprise approximately 22% of the City's total land area. The majority of the medium and high density residential development is found surrounding the downtown area. Low density residential land uses are found on the periphery of the medium and high density residential area.
- In Elizabeth City, retail, personal services, and business services are concentrated in the downtown area and adjacent to major highways. Major retail shopping facilities are located in the western portion of the City.
- Major institutional uses within the City jurisdiction include public facilities such as Elizabeth City State University, Albemarle Hospital, and College of the Albemarle.
- The majority of the industrially-used land in the Elizabeth City planning jurisdiction is along Knobbs Creek Drive and the CSX Railroad.
- Large tracts of undeveloped and/or underdeveloped land exist in the northeastern and northwestern portions of the City and along the southern fringe of the ETJ. Much of the undeveloped land is located within floodplain and wetland areas.
- Elizabeth City contains five designated historic districts.
- Projections indicate that some 2,100 acres of additional residential land will be needed in Elizabeth City and 3,300 acres in the County's jurisdiction to accommodate the anticipated growth through 2020.

Community Facilities

- Three separate water supply systems operate within Pasquotank County. These systems include the City of Elizabeth City municipal water system, the Pasquotank County water system, and the South Mills Water Association.
- The City's existing water treatment plant was originally built in 1926 and has been modernized and upgraded throughout the years. This facility can not meet the intended design capacity due to the need of filter media replacement and has a limited capacity to serve the projected growth.
- The County's water supply and treatment facilities are adequate to meet current and future demand. Anticipated growth areas can be served by the existing facilities.
- The South Mills Water Association provides water service to customers in the northwest corner of Pasquotank County.

- Wastewater treatment systems within Pasquotank County include the City of Elizabeth City municipal wastewater system and the Pasquotank County wastewater system.
- The City's existing wastewater treatment plant design capacity will meet current and future demands.
- Pasquotank County currently operates a wastewater treatment facility located on Northside Road. Plans are to tie this system to the Elizabeth City sewer system.
- The County's wastewater treatment facility may be abandoned if sufficient capacity is obtained from Elizabeth City.
- In 1988, a Thoroughfare Plan was adopted for Elizabeth City. NCDOT prepared existing and projected population and employment prediction in 1997 to aid in traffic forecasting. Pasquotank County has not yet prepared a thoroughfare plan.
- In 2003, when the US Highway 17 By-Pass was completed it satisfied the need for a controlled access and improving traffic conditions around the Elizabeth City area.
- Halstead Boulevard has been extended out to connect with the US 17 By-Pass. This completion further improved access to the City and provided opportunities for altering the existing land use patterns of the area.
- The City has four primary drainage basins which flow, or are pumped into, the Pasquotank River. To address excessive flooding conditions, the City has two pumping stations in the downtown area. The City currently lacks a master drainage plan.
- The County has drainage problems stemming from lack of maintenance over the years. The drainage channels need to be cleared of fallen debris and sediments.

Land Suitability

- A land suitability analysis was prepared to determine the supply of land suited for development based upon the following considerations: natural system constraints; compatibility with existing land uses and development patterns; existing land use and development criteria of local, state, and federal agencies; and availability and capacity of water, sewer, storm water management facilities, and transportation systems.
- The primary purpose of the land suitability analysis is to provide local governments with information regarding the best areas for development in order to guide the formulation of policies and the preparation of the Future Land Use Map.
- The Land Suitability Map (see Figure 8) classifies land as High Suitability, Medium Suitability, Low Suitability, and Least Suitable. In general, approximately 63 percent of Pasquotank County is within the higher suitability ratings (High and Medium Suitability).
- In general, the areas with the higher suitability ratings are located within the Elizabeth City urban area; along the US Highway 17 Business, US Highway 158, and NC Highway 34 corridors; and in areas where public water and/or sewer services are available. Lower suitability ratings are found in areas subject to flooding, wetlands areas, and areas without public utilities.

- A considerable number of vacant/under-utilized tracts are located within the areas with the higher suitability ratings. Large amounts of acreage currently used for agricultural and/or forestry purposes are also located within the high and medium suitability classified areas.

1.3.3 Summary of Policy Statements

The formulation of land use and development policies is based upon a review and analysis of policy statements contained in the 1994 Elizabeth City and the 1996 Pasquotank County CAMA Land Use Plans (see Appendix I for a summary of policies from these plans); an evaluation of identified concerns and aspirations (Section II) and the needs and opportunities identified in the analysis of existing and emerging conditions (Section III); input from the Joint Land Use Plan Committee, local planning boards, and elected officials; and input obtained through citizen participation efforts including public informational meetings, public forums, and Joint Land Use Plan Committee meetings.

Updated policy statements, which are outlined in Section 4.2, have been formulated which address the following topics:

- Public access to public trust waters
- Land use compatibility
- Infrastructure carrying capacity
- Natural hazard areas
- Water quality
- Areas of environmental concern
- Areas of local concern

Pasquotank County and Elizabeth City 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 regarding land use and development within AECS.

1.3.4 Summary of Future Land Use Projections

The Future Land Use Map (Figure 9A) for the County's planning jurisdiction encompasses all of Pasquotank County outside of the Elizabeth City corporate limits and extraterritorial planning jurisdiction. The County Future Land Use Map classifications include the following categories and subcategories:

- Agricultural
- Conservation/Open Space
- Residential
 - Rural Agricultural
 - Low Density Residential
 - Medium/High Density Residential
 - Mixed Residential
- Commercial
- Mixed Use
- Industrial
- Public and Institutional

Generally, growth and development is expected to occur in the areas classified as Residential, Public and Institutional, Commercial, Mixed Use, and Industrial. Areas classified as Agriculture and Conservation/Open Space are not projected to accommodate significant growth and development. The type and intensity of projected development varies within each Future Land Use Map classification.

Pasquotank County Future Land Use Classifications

Agricultural Classification. Agricultural classified land is estimated to encompass approximately 20% of the total County land area.

The Agriculture classification is intended to delineate lands primarily devoted to active agricultural and forestry land uses. However, this classification may also include some low intensity public and institutional land uses that support rural land uses. Long-term, the Agricultural-classified areas are not projected to develop into residential uses. The intensity of support nonresidential uses, such as agribusinesses, in the Agricultural classified areas are projected to average approximately one establishment per 257 acres.

Conservation/Open Space Classification. Conservation/Open Space areas include coastal wetlands, estuarine waters, estuarine shoreline, public trust areas, and non-coastal ('404') wetlands. Conservation/Open Space classified land is estimated to encompass approximately 6% of the total County land area.

The Conservation/Open Space classification is intended to delineate areas where traditional land uses are not desirable or expected to develop. Land development may include public building and facilities necessary to support existing land uses within the areas classified as Conservation/Open Space.

Rural Agricultural Classification. The Rural Agricultural classification constitutes the majority of land area, approximately 54%, within the County's planning jurisdiction. The Rural Agricultural classification is intended to delineate lands where the predominant land use is scattered, very low-density residences dispersed among farmland and open spaces. The residential density within this classification is generally one dwelling unit or less per acre.

Low Density Residential Classification. The Low Density Residential classification encompasses approximately 4% of the total County land area. The Low Density Residential classification is intended to delineate lands where the predominant land use is low-density residences, one dwelling unit per acre, particularly properties with waterfront access and areas where public water service is readily available.

Medium/High Density Residential Classification. The Medium/High Density Residential classification encompasses about 0.3% of the total County land area. The Medium/High Density Residential classification is intended to delineate lands where the predominant land use is higher density single-family residential developments and/or multifamily developments. Long-term, the Medium/High Density Residential classified areas are projected to develop at average densities of approximately four dwelling units per acre.

Mixed Residential Classification. The Mixed Residential classification encompasses approximately 6% of the total County land area. The Mixed Residential classification is intended to delineate lands where there is a variety of residential densities and building types within the same development. Traditional residential development with consistent densities and similar building types are encouraged in this classification as well. These areas are projected to develop at average densities of approximately two dwelling units per acre. The Mixed Residential areas are anticipated to accommodate the majority of future residential growth.

Commercial Classification. The Commercial classification encompasses about 2% of the total County land area. The Commercial classification is intended to delineate lands that can accommodate a wide range of retail, wholesale, office, business services, and personal services. Areas classified as Commercial may also include some heavy commercial uses, light manufacturing and warehousing uses as well as intensive public and institutional land uses. Generally, the density of commercial development is projected to average one commercial establishment per two acres.

Mixed Use Classification. The Mixed Use classification encompasses just less than 1% of the total County land area. The Mixed Use classification is intended to delineate lands, in areas where there is no established urban land use pattern, that can accommodate traditional residential, general commercial, and support institutional land uses or a mixture of these land uses in a single development. The residential density within this classification ranges from low (one dwelling per acre) to high density (8 to 12 dwellings per acre). Residential building types encouraged within this classification include single-family detached and attached dwellings, duplexes, and multifamily dwellings. Commercial uses include a variety of retail, wholesale, office, business services, and personal services. Generally, the density of commercial development is projected to average one commercial establishment per acre.

Mixed Use classified areas designate properties that are suitable for multiple land uses. The areas identified as Mixed Use are potential growth areas that may develop primarily as one use type or may evolve into multi-use areas. Public and institutional land uses that support and that are compatible with this type of mixed development are also encouraged.

Industrial Classification. The Industrial classification encompasses approximately 5% of the County land area. The Industrial classification is intended to delineate lands that can accommodate industrial and manufacturing establishments. Some heavy commercial uses as well as services and businesses which support industrial land uses are also appropriate land uses within the Industrial classification. Generally, the intensity of industrial development is projected to average one industrial establishment per twenty acres.

Public and Institutional Classification. The Public and Institutional classification encompasses approximately 1% of the total County land area. The Public and Institutional classification is intended to delineate large land areas that are used for intensive public purposes. Land uses within this classification include primarily government buildings and facilities, public recreational facilities, schools, and large private institutional uses. Generally, the intensity of development is expected to average one public or institutional use per ten acres.

Elizabeth City Future Land Use Map Classifications

The Future Land Use Map for the Elizabeth City planning jurisdiction (Figure 9B) encompasses the Elizabeth City corporate limits and the City's extraterritorial planning and zoning jurisdiction. With the approval of the County Board of Commissioners, Elizabeth City may exercise its planning and jurisdictional powers in an area which does not exceed two miles past the City limits. At the present time, the ETJ extends approximately one mile past the City Limits. The City's Future Land Use Map classifications include the following categories and subcategories:

- Residential
 - Low Density Residential
 - Medium/High Density Residential
- Commercial
 - General Commercial
 - Downtown Mixed Use
 - Mixed Use
- Public and Institutional
- Industrial
- Conservation/Open Space

Generally, growth and land development is anticipated to occur in all future land use categories except for the Conservation/Open Space classification. The type and intensity of projected development varies within each Future Land Use Map classification. The Future Land Use Map classifications are considered part of the Land Use Plan's policy.

Low Density Residential Classification. The Low Density Residential classification encompasses about 27% of the total City planning jurisdiction. The Low Density Residential classification is intended to delineate lands where the predominant land use is low density detached residences. The residential density within this classification is generally two to four dwelling units per acre. Single-family detached residences on individual lots are the predominant types of dwellings within these areas manufactured homes are also found in this classification.

Medium/High Density Residential Classification. The Medium/High Density Residential classification encompasses approximately 19% of the total City planning jurisdiction. The Medium/High Density Residential classification is intended to delineate lands where the predominant land use is higher density single family residential developments and/or multifamily developments. Some manufactured home parks are also located with this classification. The residential density in this classification ranges from approximately four to seven single family homes per acre with the multi-family density ranging from 12 to 25 units per acre.

General Commercial Classification. The General Commercial classification encompasses about 14% of the total City planning jurisdiction. The General Commercial classification is intended to delineate lands that can accommodate a wide range of retail, wholesale, office, business services, and personal services. Areas classified as General Commercial may also include some heavy commercial uses, light manufacturing and warehousing uses as well as intensive public and institutional land uses. Generally, the

density of commercial development is projected to average one commercial establishment per acre.

Downtown Mixed Use Classification. The Downtown Mixed Use classification encompasses approximately 1% of the total City planning jurisdiction. The Downtown Mixed Use classification is intended to delineate properties that can accommodate a variety of retail, office, business services, and personal services. Areas classified as Downtown Mixed Use may also include medium and high density residential and public and institutional land uses, particularly government buildings and facilities. The Downtown Mixed Use classification also specifically includes waterfront tourist-oriented land uses. Generally, the density of commercial development in Mixed Use-designated areas is projected to average ten commercial establishments per acre and 20 residential dwelling units per acre

Mixed Use Classification. The Mixed Use classification encompasses approximately 8% of the total City planning jurisdiction. The Mixed Use classification is intended to delineate lands, in areas where there is no established urban land use pattern, that can accommodate a variety of residential, general commercial, and support institutional land uses or a mixture of these land uses within a single development. Land uses within the Mixed Use designated areas are generally compatible with the medium/high residential and business zoning designations. Generally, the density of development in the Mixed Use designated areas is projected to average one to three commercial establishments per acre and up to 30 dwelling units per acre with an average of approximately 10 dwelling units per acre.

Public and Institutional Classification. The Public and Institutional classification encompasses about 9% of the total City planning jurisdictional area. The Public and Institutional classification is intended to delineate large land areas that are used for intensive public and educational purposes. Land uses within this classification include primarily government buildings and service facilities, cemeteries, public and private educational facilities, large medical facilities, and large private institutional uses. Generally, the intensity of development is expected to average one public or institutional use per five acres.

Industrial Classification. The Industrial classification encompasses approximately 4% of the total City planning jurisdiction. The Industrial classification is intended to delineate lands that can accommodate industrial and manufacturing establishments. Some heavy commercial uses as well as services and businesses which support industrial land uses are also appropriate land uses within the Industrial classification. Generally, the intensity of industrial development is projected to average one industrial establishment per three acres.

Conservation/Open Space Classification. The Conservation/Open Space classification encompasses approximately 18% of the total City planning jurisdictional area. Conservation/Open Space areas are scattered throughout the Elizabeth City jurisdiction and include parks, coastal wetlands, estuarine waters, estuarine shoreline, public trust waters, and non-coastal ('404') wetlands.

The Conservation/Open Space classification is intended to provide long-term management and protection of significant, limited, or irreplaceable areas and open space. To conserve the natural, cultural, recreational, scenic or biologically productive

values of these areas, proper land management is required. Land development, except extremely low-density residential development, open space, and park facilities, is not desirable, nor expected to develop. Land development may, however, include public building and facilities necessary to support existing land uses within the areas classified as Conservation/Open Space. Due to the environmental constraints, it anticipated that residential development will be at a density of approximately one home per five acres unless a larger lot is required to meet health department septic and/or well regulations.

Summary

The land use patterns depicted on the Future Land Use Map are consistent with the analysis of natural systems and the analysis of land suitability. The Future Land Use Map depicts very generalized patterns of projected land use. The intent of the map is to illustrate a typical pattern of use for a general area and not the specific use of an individual parcel. The Future Land Use Map is not intended for site-specific land planning or for regulatory purposes.

The northern, northwestern, central, and southwestern portions of the Elizabeth City jurisdiction contain some type of natural constraint, primarily floodplains and wetlands. The majority of such areas are designated on the Future Land Use Map as Conservation/Open Space. Major areas with significant natural constraints and low suitability ratings within the Pasquotank County jurisdiction are designated as Conservation/Open Space on the Future Land Use Map. Examples of such areas include the Dismal Swamp National Refuge in the northwestern corner of the County and the area along the Pasquotank River in the northern section of the County. 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 Agricultural, Rural Agricultural, and Low Density Residential classifications.

1.3.5 Summary of Implementation Strategies

The Joint Land Use Plan was developed as a guiding tool for land use, land development, and long range planning for elected officials and the general public.—Every land use policy decision, such as a rezoning request or approval of a conditional or special use permit, will be measured for consistency with the goals, policies, and recommendations of the Plan.

To aide implementing the Land Use Plan, Elizabeth City and Pasquotank County will evaluate the current regulatory tools to eliminate inconsistencies. During the process, the land development ordinance and regulations will be amended, joint task forces will be created and studies will be performed. Anticipated amendments and regulations include:

- Amendments to the Pasquotank County Zoning Ordinance and Subdivision Ordinance to craft standards for the variety of residential densities and building types and the mixtures of land uses envisioned in the 'Mixed Residential' and 'Mixed Use' classifications as delineated in Section 4.3.1 (C) and (E); to develop alternative land development techniques such as clustering and open space subdivisions to ensure compatible land uses; to develop site plan standards for multi-family, and non-residential developments.
- The County will pursue the funding for the development and implementation of a waterfront access plan. The County will develop and

coordinate a countywide storm water management plan with the City. The plan will include requirements for riparian buffers and reducing impervious surfaces.

- Amendments to the Elizabeth City UDO include developing alternative land development techniques to mitigate the impacts of high intensity developments on surrounding land uses; the creation of overlay districts for the waterfront and downtown areas; and the implementation of conditional zoning; and require major residential subdivisions to dedicate public access to public trust waters.
- To advance in preserving water quality, consider amendments to the UDO to reduce impervious areas within developments; establish vegetative buffers along wetlands, streams, estuarine shorelines and major drainage ditches; encourage alternative storm water management techniques; and develop standards for open space subdivisions.
- The City will pursue the approval and implementation of the Waterfront Master Plan; develop a greenway master plan; seek funding and land acquisition for an open space/greenway system; coordinate with NCDOT to update the Thoroughfare Plan, and continue the City/County joint efforts on developing a Conference Center in the downtown area.
- Establish joint tasks forces with the City and County to develop coordinated land use and development regulations for an aviation center proximate, to the Elizabeth City Regional Airport; to put into effect a regional storm water plan; to delineate utility service area boundaries; to establish coordinated land use and development regulations for areas of common interest such as the extraterritorial planning area, municipal utility service areas and airport land use regulations.

To meet future demands, Elizabeth City's major capital improvements include the expansion of the raw water supply, upgrading existing lines, repair and replacement of sewer lines and pump stations, and the extension of sewer services. Pasquotank County's planned capital improvements include the construction of a reverse osmosis water treatment facility, extension of water services, and tying into the City's wastewater treatment plant. The City and County will implement recommendations within the Comprehensive Parks and Recreation Master Plan including the development of two sports complexes.

Pasquotank County and Elizabeth City will ensure a continuous planning process by conducting periodic reviews of the Land Use Plan's policies and implementation strategies. This review will be the responsibility of their respective Planning Departments and Planning Boards who will coordinate such reviews with the applicable elected officials.

SECTION II COMMUNITY CONCERNS AND ASPIRATIONS

This section of the Plan is organized in accordance with the requirements of Subchapter 7B .0702(b). Section II includes a description of the dominant growth-related conditions that influence land use, development, water quality, and other environmental concerns within Pasquotank County and Elizabeth City. Descriptions of the land use and development topics most important to the future of the County and City as well as a community vision statement are also provided in Section II.

2.1 Significant Existing and Emerging Conditions

2.1.1 Land Use

A. General County Growth Trends

The majority of the developed land within the Pasquotank County planning jurisdiction is located on the fringe of Elizabeth City and along the major road corridors that radiate from the Elizabeth City urban area. Major concentrations of developed uses are located northwest of Elizabeth City along the US 17 North Business and Main Street Extension corridors and southwest of Elizabeth City along the US 17 South corridor and in the Mt. Hermon area. Much of the County's future intensive growth is anticipated along the recently completed Halstead Boulevard Connector and within the general area formed by the US 17 Bypass, US 17 North Business, and the Halstead Boulevard Connector.

B. General Municipal Growth Trends

Elizabeth City, being a commercial, governmental, and housing center for the region, contains a wide variety of developed land uses. Residential uses are more varied and include a wider range of density types. The City also contains a higher intensity of nonresidential land use. The majority of Elizabeth City's population growth since 1990 has resulted from annexation. The City's corporate land area increased from 4.5 square miles in 1990 to 8.9 square miles in 2002. The City continuously evaluates the feasibility of the annexation of urban development on the unincorporated periphery of Elizabeth City. The City also has a desire to ensure that land development patterns occurring on the fringe of Elizabeth City are consistent with its land use, zoning, street planning, and utility service goals and objectives. To facilitate orderly and compatible growth and development and the provision of efficient water, sewer, and streets on the Elizabeth City's fringe, the City has an interest in expanding its extraterritorial planning and zoning jurisdiction to more closely match its future urban growth and utilities service areas. Within the Elizabeth City planning jurisdiction, the northwestern, western, and southwestern fringes of the current corporate area are expected to experience the majority of the new development within the next five to ten years.

C. Urban Development Impacts

Unplanned and indiscriminate development can threaten the basic fabric of a community. This type of development undermines the ability of the natural environment to support man's activities. Urban sprawl indiscriminately consumes productive farm land and open space and results in a burden on public services and facilities. Pasquotank County and the City of Elizabeth City must cooperate and coordinate their efforts to guide land development to the most appropriate locations,

provide efficient public services, avoid duplication of services, and promote desirable land development that is in harmony with the character of the community.

D. Land Suitability and Natural Constraints on Development

Most property in Pasquotank County has significant soil limitations for septic tank drainfields due to the high clay content of the soil and the high water table. Also, approximately 38% of the land area in the County lies within a floodplain designation based on Flood Insurance Rate Maps prepared by FEMA. Similar to Pasquotank County, Elizabeth City also has significant soil limitations for septic systems with approximately 75% of the City's soils being unsuitable for septic systems. Approximately 40% of Elizabeth City's land area lies with a floodplain designation.

E. Waterfront and Estuarine Access

Private development directly adjacent to waterways is a popular development trend. Given that waterfront property is a finite resource and that future populations will demand more water access, it is imperative that the community plan for a balance of public and private water access. The development of a comprehensive public water access plan can assist in evaluating access needs, opportunities, and implementation strategies.

F. Redevelopment

A number of low-income City and County residents live in areas which have substandard housing and community services. The City and County have obtained grant funds to rehabilitate deteriorated housing and improve public services in some low-income areas. Additional redevelopment efforts are needed to address other existing substandard housing and infrastructure conditions.

2.1.2 Economic Conditions

A. General Economic Conditions

Elizabeth City is the employment, services, governmental, and housing center for the northeastern portion of North Carolina. The Pasquotank County economy is driven by retail trade, services, manufacturing, and government jobs. Tourism is an increasingly important component of the local economy. Growth in the Chesapeake-Portsmouth- Norfolk area, coupled with highway improvements linking Virginia and North Carolina, is expected to have a 'spill-over' effect on all of Pasquotank County.

B. Population Growth

From 1990 to 2000, the total population growth for Pasquotank increased 11.5% to a total population of 34,897. The Elizabeth City corporate portion of the population was 17,188, a 20.3% increase. These growth rates are about average when compared to other coastal communities. The statewide average during this period was an increase of 21.4%. The 2002 State certified total population estimate for the County is 35,816 with 17,490 residents located within the Elizabeth City corporate limits, 48.8% of the total population. The state certified projections reflect an increase in the County population to 36,432 in 2003, 42,062 in 2010, and 47,228 in 2020. By 2010, the corporate Elizabeth City population is expected to be 20,821 and 23,378 in 2020.

The increase in the County population is due more to migration than by a natural increase while the majority of the City's grown rate is due to annexations. Reflective

of the statewide growth trends, the County's population growth rate is projected to decline each decade through 2030.

Population growth will result in increased demand for additional goods, services, and housing as well as public services—utilities, roads, schools, police and fire protection, parks, etc. The expanding population growth from southeastern Virginia is anticipated to continue.

C. Industrial and Economic Development

Portions of the Pasquotank County Commerce Park, located in the southeast corner of the US 17 Bypass and US 17 Business intersection, in the Providence Township have been developed with water and sewer provided. The 5200-acre Tanglewood Mega Site is a planned industrial/commercial development on the west side of the US Highway 17 Bypass in the vicinity of the Halstead Boulevard Connector. Two commercial parks are also being developed in the Mount Hermon Township just off of US Highway 17 South. Along the Halstead Boulevard Connector, the Tanglewood site is planned for commercial and residential development. Approximately 205 acres of the Tanglewood site have been annexed to the City. A thrust of commercial/retail activity has recently started on the Halstead Boulevard Connector, which is expected to continue over the next decade. Other land within the unincorporated limits of the County may be suitable for industrial development where sufficient potable water and adequate sewage treatment can be provided or extended to commercial and industrial developments. Protection of such areas from encroachment by competing land uses will be necessary.

D. Downtown Revitalization and Waterfront Development

Elizabeth City has recently completed a Waterfront Master Plan and has completed the initial phases of streetscape improvements. Downtown rejuvenation and waterfront development will be important economic asset to the community. An effort is underway to attract interest in the construction of a hotel and conference facility.

Waterfront residential subdivisions in the Pasquotank County jurisdiction have occurred primarily in the southern peninsula along the Pasquotank and Little Rivers.

E. Fiscal/Capital Improvements Programming

Pasquotank County and Elizabeth City are facing new and greater demands which warrant sound fiscal management and capital improvements programming. Economic development will be halted if the community is unable to fund police, fire and emergency services, construct new schools, extend water and sewer lines, and provide for solid waste disposal. Balancing growth and the provision of public services and facilities is an important objective for both the County and City.

2.1.3 Transportation

A. Completion of the US Highway 17 Bypass

The US 17 Bypass, located on the west side of Elizabeth City, was completed in December 2002. This new, controlled-access thoroughfare not only provides for the more efficient movement of through traffic but also creates opportunities for vehicular access to undeveloped and/or underdeveloped tracts of land.

B. Halstead Boulevard Connector

The Halstead Boulevard Connector opened to traffic in May 2004. This approximate 3.6-mile roadway connects the US Highway 17 Bypass with Elizabeth City at Hughes Boulevard. This new roadway provides a unique opportunity to create an efficient and attractive gateway into Elizabeth City. Much concern has been expressed regarding the need for Pasquotank County and Elizabeth City to work together to create a comprehensive zoning plan and development guidelines concerning landscaping, signage, driveway connections, and site development to ensure that this corridor is an efficient and aesthetically pleasing entranceway into the community.

C. Safeguarding Highways by Controlling Access

Widening roadways does not solve the root problem of roadway capacity deterioration. As highway frontage is developed the proliferation of driveways reduces the level of service. State roadways are vital economic arteries and the evacuation routes in the event of a disaster. Access management and land use regulations can help to ensure development patterns compatible with roadway capacity.

2.1.4 Infrastructure

A. Adequate Levels of Service

The City and County provide public services and facilities that service existing and new development. The community is blessed with a quality of life that includes a number of outdoor recreational opportunities. These same opportunities attract tourist and weekend visitors from other parts of North Carolina and Virginia. Growth demands can overtax the local governments' ability to provide services if allowed to occur without consideration for the cost-effectiveness of providing services.

B. Water and Sewer Utilities

Pasquotank County is currently seeking funding and state approval of a discharge permit for a 1.0 MGD reverse osmosis filtration plant to be located in the vicinity of the Tanglewood Industrial Park. This filtration plant is also proposed to have an expansion capacity to 5.0 MGD. Elizabeth City has recently invested \$20 million to improve its water and wastewater treatment facilities. However, the majority of the water distribution and sewer collection system is outdated and in need of replacement. Substantial capital improvements are needed to rehabilitate the City's utility system.

2.1.5 Water Quality

A. Potable Water Supply

Potable water supplies need to be conserved in order to assure the availability for future populations. At present, potable water is obtained from the groundwater aquifer. While Elizabeth City, which is the largest supplier, has not used their emergency intake located on the Pasquotank River in past years, state law required the passage of a watershed/water supply management plan and ordinance for portions of Providence and Newland Townships which are within the Pasquotank River watershed. Elizabeth City has recognized a need to seek an alternative source of raw water. The Public Works Director has recommended that the City consider the construction of deep wells to allow for the implementation of a reverse osmosis system.

B. Storm Water Runoff

To assist with reducing the impact of Storm water runoff on water quality, Elizabeth City adopted a Storm Water Management Ordinance in November 2001. The City is in the process of developing a storm water management program and capital improvements plan. Pasquotank County is currently seeking grant funds for the development of a countywide drainage study and the establishment of water management service districts throughout the County. Coordination of the City and County storm water management efforts is essential to ensuring an effective storm water management program.

2.1.6 Other Environmental Concerns

A. Cultural and Historical Resource Protection

The scope and importance of the colonial period in Pasquotank County is significant. The North Carolina Division of Archives inventoried sites and structures statewide. They have identified several of the sites which are located in unincorporated Pasquotank County. These treasures need safeguarding from being destroyed by ill-planned development. Knowledge concerning the importance of these features or structures will help mitigate such future destruction if this knowledge is readily available. The City of Elizabeth City contains five designated historic districts and continues its commitment to the preservation of its many historic and cultural resources. Currently there are no planned growth conditions which will impact the cultural or historic resources within Elizabeth City.

B. Fragile Lands and Localized Resource Protection

Wetlands cover a significant portion of both Elizabeth City's and Pasquotank County's land area and are habitat for important marine and wildlife species. Many of the recreational and commercially important fish and shellfish species spend a portion of their life cycle in the tributaries of the Little and Pasquotank Rivers with the headwaters being the Dismal Swamp. The harvesting of these fish and shellfish add to the local economies of the Albemarle region. Unfortunately, much of the Pasquotank River and Little River have been closed to shell fishing for some time. Activities associated with the development of land affect adjacent waterways and wetlands directly and indirectly, often polluting the water. Regulation of land uses and the land development practices adjacent to shell fishing areas is a particularly important challenge. It is also important to minimize the direct destruction of the remaining area of the Dismal Swamp and indirect pollution of all of the City and County's wetlands found to be vital to the natural ecosystem.

C. Accessibility while Protecting Public Trust Waters

There are very few non-water dependent uses in public trust waters of Pasquotank County and no floating home developments at present along the Albemarle Sound. Marina development and the dry storage of boats have been occurring mostly in Elizabeth City.

D. Storm Hazard Mitigation and Evacuation

Pasquotank County is a low-lying area with the potential for significant storm damage. Hazard mitigation involves actions which would reduce the impact of any disaster including evacuation and cleanup. Pasquotank County is currently preparing a new mitigation plan for both the unincorporated portion of the County and the City of Elizabeth City that is expected to be completed by November 2004.

E. Manmade Hazards and Hazardous Waste Management

There are significant manmade hazards to the cultural and natural environment. The most alarming are the threats to life and property posed by hazardous waste spills. Hazardous waste spills are associated with the transportation and storage of petrochemicals. As the community grows there will be more storage facilities and their location needs to be regulated. The approach zones for flight operations at the US Coast Guard Air Station are in the path of new development located in the County. Elizabeth City and Pasquotank County have adopted an airport height restriction ordinance to protect flight approaches to the airport. Regulating the types of land uses developing in the vicinity of the airport will be necessary to ensure development that is compatible with airport operations.

2.2 Key Planning Issues

2.2.1 Public Access

- 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.

2.2.2 Land Use Compatibility

- Establishment 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.

2.2.3 Infrastructure Carrying Capacity

- 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 AECS and other fragile areas are protected or restored

2.2.4 Natural Hazard Areas

- 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) to avoid or better withstand natural hazards.

- Ensuring that existing and planned development is coordinated with existing and planned evacuation infrastructure.

2.2.5 Water Quality

- Development of policies to prevent or control nonpoint source discharges (sewage and storm water) such as impervious surface limits, vegetated riparian buffers, wetlands protection, etc.
- 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.

2.2.6 Areas of Local Concern

- Establishment of land use and development policies that minimize adverse impacts on Areas of Environmental Concern (AEC) and which support overall CAMA goals.
- Identify and address local concerns and issues, such as cultural and historic areas, scenic areas, economic development, or general health and human service needs

Many of the important land use and land development issues delineated in this updated Land Use Plan have also been identified in previous land use plans. A summary of the land use and development issues contained in the previous Pasquotank County (1996) and Elizabeth City (1994) Land Use Plans is provided in Appendix C.

2.3 Community Vision Statement

Located on the Pasquotank River, rich in history, tradition, natural resources and scenic beauty; Pasquotank County and Elizabeth City provide an attractive living environment as well as opportunities for economic prosperity. Home of a large US Coast Guard Base, a regional medical facility, and a regional airport; closely situated to the NC Outer Banks and Southeastern Virginia; these entities offer commercial, industrial and governmental employment opportunities; professional and business services; historic, family and water-oriented recreational attractions; and a variety of living accommodations that range from urban to farming communities.

Pasquotank County Officials and residents desire to maintain the 'farming community' while providing areas for occupational and residential development. Waterfront property, a valuable asset to the County, is increasingly being developed to provide attractive/beautiful/desirable neighborhoods that will preserve the wholesome quality of the community.

Elizabeth City Officials and residents desire to continue nurturing and developing the community's tax base in order to maintain and expand services to its citizenry. Such opportunities will encourage the expansion of economic development venues, continued residential growth, and community vitality.

The policies set forth in this Land Use Plan will guide land use and development decisions that will be made in the future by Pasquotank County and Elizabeth City. These policies will aid in achieving balanced and environmentally responsible growth.

SECTION III ANALYSIS OF EXISTING AND EMERGING CONDITIONS

This section of the Plan is organized in accordance with the requirements of Subchapter 7B .0702(c). The purpose of this section is to provide a sound factual and analytical base to support the land use and development policies formulated in this Plan. Specific elements of Section III include:

- Population, housing, and economic analysis
- Natural systems analysis
- Environmental conditions analysis
- Land use and development analysis
- Community facilities analysis
- Land suitability analysis
- Review of the current CAMA Land Use Plans

3.1 Population, Housing, and Economy

An important component to land use planning is information regarding Pasquotank County and Elizabeth City's permanent and seasonal population and the degree to which it will change during the planning period. Population trend analysis provides information on expected impacts on the area's natural resources and future infrastructure needs. Estimating demand for various housing types and related land uses can be determined by analyzing the population age and income characteristics.

3.1.1 Population Analysis

- Eighteen of the twenty counties under Coastal Area Management Act (CAMA) regulation, including Pasquotank County, showed an increase in population from 1990 to 2000. Two coastal counties lost population (Bertie and Washington Counties) during this ten-year period. Pasquotank was the eleventh fastest growing county of the 20 CAMA Counties.
- The total Pasquotank County population in 1990 was 31,298 and increased to 34,897 in 2000; Elizabeth City's corporate area population was 14,292 in 1990 and 17,188 in 2000. The 2002 State certified population estimate for the County is 35,816 and 17,490 for the Elizabeth City corporate area. The certified 2003 Pasquotank County population estimate is 36,432.
- The total 2000 Pasquotank County population is split almost evenly between the Elizabeth City corporate area (49.4%) and the unincorporated portion of the County (50.6%).
- Elizabeth City's total corporate population increased 20.3% from 1990 to 2000, while the population of the Elizabeth City Township decreased 4.22%. The County's population growth rate during the same time period was 11.5%. The statewide average was 21.4%. The City's and County's growth rates since 1990 are about average compared to other coastal North Carolina communities.
- Approximately 75% of the 2000 total population was located within three of the six townships --- Elizabeth City (35.0%), Nixonton (20.2%), and Providence (19.7%) Townships.
- Between 1990 and 2000, the Pasquotank County townships that had the highest growth rates were the Providence (40.0%), Nixonton (20.5%), and

Mount Hermon (17.0%) Townships. The lowest growth rates were in the Elizabeth City (-4.2%) and Salem (-0.99%) Townships.

- Between 1990 and 2000, Pasquotank County's total population increased more by migration than by natural increase. The County's migration rate of 8.0% was lower than the statewide rate of 15.1%.
- The majority of Elizabeth City's growth since 1990 has resulted from annexation.
- Pasquotank County's population density of 154 persons per square mile in 2000 was considerably higher than surrounding counties but slightly lower than the statewide average of 165 persons per square mile.
- Elizabeth City's 2000 population density of 1,923 persons per square mile was higher than most major coastal communities.
- Projections indicate an increase in the total permanent County population to 42,063 in 2010; 47,228 in 2020; and 51,611 by 2030. Elizabeth City's corporate population is projected to increase to 20,821 in 2010; 23,378 in 2020; and 29,124 by 2030. Complete population projections are provided in Section 3.1.4.
- Projections indicate that the population growth rate of Pasquotank County and the entire state will slow over the next 25 years.
- Anticipated population growth will result in increased demand for additional goods, services, and housing as well as public services—utilities, roads, schools, police and fire protection, recreational facilities, etc.
- The proximity to employment centers in southeastern Virginia is expected to increase commuting and thereby impact the traffic handling capacity of major highways.

A. Population Growth Trends

While the populations of both the City of Elizabeth City and Pasquotank County have increased since 1980, the County's rates of growth have been more consistent. The City and the County have experienced growth rates that are below the statewide average. In 2002, the municipal population of Elizabeth City, the only incorporated municipality within Pasquotank County, comprised approximately 49% of the total County population.

<i>Table 1 Population Size and Growth Rates Elizabeth City, Pasquotank County, and the State 1980-2002</i>				
Population Size				
	1980	1990	2000	2002
Elizabeth City	14,007	14,292	17,188	17,490
Pasquotank County	28,462	31,298	34,897	35,816
North Carolina	5,880,095	6,628,637	8,046,962	8,323,375
Population Growth Rates				
	1980-1990	1990-2000	2000-2002	
Elizabeth City	2.0%	20.3 %	1.8%	
Pasquotank County	10.0%	11.5%	2.6%	
North Carolina	13.0%	21.4%	3.4%	

Sources: U.S. Census of Population, 1980-2000; NC State Data Center

The County's total population increased 11.5% from 1990 to 2000. Pasquotank County's growth rate during this period was higher than the neighboring counties of Chowan and Perquimans but lower than that of Currituck, Camden, and Gates Counties. During the same time period, Elizabeth City grew by 20.3%—a growth rate that was comparable to the statewide average of 21.4%. The following table provides a comparison of the recent growth rates of Pasquotank County and Elizabeth City with selected coastal counties and municipalities.

<i>Table 2 Comparison of Population Growth Rates Selected Coastal Communities 1990 and 2000</i>				
Jurisdiction	1990	2000	Change	% Change
County				
Camden County	5,904	6,885	981	16.6%
Chowan County	13,506	14,526	1,020	7.5%
Currituck County	13,736	18,190	4,454	32.4%
Gates County	9,305	10,516	1,211	13.0%
<i>Pasquotank County</i>	<i>31,298</i>	<i>34,897</i>	<i>3,599</i>	<i>11.5%</i>
Perquimans County	10,447	11,368	921	8.8%
Municipality				
<i>Elizabeth City</i>	<i>14,292</i>	<i>17,188</i>	<i>2,896</i>	<i>20.3%</i>
Edenton	5,268	5,394	126	2.4%
Jacksonville	30,013	66,715	36,702	122.3%
Morehead City	6,046	7,691	1,645	27.2%
New Bern	17,363	23,128	5,765	33.2%
Washington	9,075	9,583	508	5.6%
Wilmington	55,530	75,838	20,308	36.6%
North Carolina	6,628,637	8,049,313	1,420,676	21.4%

Source: US Census 2000

Within Pasquotank County, the Elizabeth City Township contains the largest proportion of the total County population (township boundaries are delineated in Figure 1, General Location Map). Between 1990 and 2000, the fastest growing townships were the Providence (40.0% increase) and Nixonton (20.5% increase) Townships. The townships with the lowest growth rates from 1990 to 2000 were the Elizabeth City (-4.22%) and Salem (-0.99%) Townships which actually lost population during this time period.

<p style="text-align: center;">Table 3 Population Size and Growth Rates Pasquotank County Townships 1990 and 2000</p>						
Township	1990	Percent of Total	2000	Percent of Total	Change 1990-2000	% Change
Elizabeth City	12,759	40.8%	12,220	35.0%	-539	-4.22%
Mount Hermon	4,340	13.9%	5,080	14.6%	740	17.05%
Newland	2,046	6.5%	2,301	6.6%	255	12.46%
Nixonton	5,839	18.7%	7,035	20.2%	1,196	20.48%
Providence	4,903	15.7%	6,864	19.7%	1,961	40.00%
Salem	1,411	4.5%	1,397	4.0%	-14	-0.99%
Totals	31,298	100.0%	34,897	100.0%	3,599	11.50%

Source: US Census, 1990 and 2000.

B. Population Characteristics

1. Age Characteristics

Age characteristics for the population within Elizabeth City and Pasquotank County are generally similar to those for the state as a whole. The largest general age category in both the City and County is the working age group (25-64 years of age) although this category is lower than that statewide. Elizabeth City, with several institutions of higher learning within its boundaries, contains a higher percentage of college age persons (18-24 years of age) than both Pasquotank County and the state. Elizabeth City and Pasquotank County have a higher percentage of retirement age persons (65 years or greater) than does North Carolina.

<p style="text-align: center;">Table 4 Age Characteristics 2000</p>						
Age Group	Elizabeth City		Pasquotank County		North Carolina	
	Total	Percent	Total	Percent	Total	Percent
Under 18 years, School Age	4,424	25.7%	8,683	24.9%	1,964,047	24.4%
18-24 years, College Age	2,594	15.1%	3,941	11.3%	806,821	10.0%
25-64 Years, Working Age	7,479	43.5%	17,362	49.8%	4,309,397	53.5%
65 years+, Retirement Age	2,691	15.7%	4,911	14.1%	969,048	12.0%
Totals	17,188	100.0%	34,897	100.0%	8,049,313	100.0%

Source: US Census, 2000

In 2000, the median age of the population in Pasquotank County (35.9 years) was very similar to the statewide average (35.3 years). Elizabeth City's median age (32.9 years) is lower than both the County and state average, reflecting, in part, the influence of a larger college age population.

2. Distribution of Males and Females

Pasquotank County's proportion of males and females is more similar to the statewide average than is Elizabeth City's population which contains a higher percentage of females.

Table 5 Distribution of Males and Females in the Total Population 2000					
	Male	Percent	Female	Percent	Total
Elizabeth City	7,645	44.2%	9,640	55.8%	17,285
Pasquotank County	16,813	48.2%	18,084	51.8%	34,897
North Carolina	3,940,711	49.0%	4,108,602	51.0%	8,049,313

Source: US Census, 2000

3. Racial Characteristics

Racial characteristics of the populations of both Elizabeth City and Pasquotank County indicate a higher level of racial diversity. The City and the County contain greater proportions of Black/African American populations and lower proportions of White and Hispanic/Latino populations than the state average.

Table 6 Race and Hispanic or Latino Origin 2000						
Race Category	Elizabeth City		Pasquotank County		North Carolina	
	Number	Percent	Number	Percent	Number	Percent
White	6,975	40.4%	19,862	56.9%	5,802,165	72.1%
Black/African American	9,762	56.5%	13,947	40.0%	1,734,154	21.5%
American Indian/Alaska Native	70	0.4%	153	0.4%	100,956	1.3%
Asian	112	0.6%	369	1.1%	111,292	1.4%
Hawaiian/Pacific Islander	0	0.0%	7	0.0%	3,699	0.0%
Other Race	109	0.6%	190	0.5%	185,138	2.3%
Two or More Races	257	1.5%	369	1.1%	111,909	1.4%
Total	17,285	100.0%	34,897	100.0%	8,049,313	100.0%
Hispanic or Latino Origin	285	1.6%	420	1.2%	372,964	4.6%

Source: US Census, 2000

4. Components of Population Change

In migration of population accounted for the majority of Pasquotank County's growth between 1990 and 2000 resulting in over two-thirds of the total increase in population. While the County's 1990 to 2000 migration rate was among the highest in the region, it was substantially below the statewide average of 15.1%.

Table 7 Components of Population Change Pasquotank County and North Carolina 1990 TO 2000		
	Pasquotank County	North Carolina
Population Change	3,599	1,416,865
Births	4,518	1,054,045
Deaths	3,416	638,171
Natural Increase ¹	1,102	415,874
Net Migration ²	2,497	1,000,991
Migration Rate ³	8.0%	15.1%

Data Center

¹ Natural increase is the difference between total births and total deaths.

² Net migration is the difference between total population change and natural increase.

³ Migration rate is the difference between in-migration and out-migration expressed as a percentage of the base year total population. It is calculated by dividing net migration by the base year total population.

Recent data from the NC State Data Center indicate that in-migration has continued to exceed natural increase in the population of Pasquotank County as well as in neighboring counties.

Table 8 Components of Population Change Selected Counties and North Carolina 2000 to 2002						
	Population Change April 2000 to July 2002	Births	Deaths	Natural Increase	Net Migration*	Migration Rate
Camden	443	166	144	22	421	6.1%
Chowan	154	436	413	23	131	0.9%
Currituck	1,442	494	364	130	1,312	7.2%
Gates	192	253	290	-37	229	2.2%
Pasquotank	919	1,036	820	216	703	2.0%
Perquimans	239	266	348-82		321	2.8%
North Carolina	276,511	266,954	160,431	106,523	169,988	2.1%

Source: Certified County Population Estimates, NC State Data Center, October 2003.

Projections by the NC State Data Center indicate that migration into Pasquotank County will continue to play a more important role in population growth than will natural increase. However, as shown in the table below, the County's total population growth rate, reflective of statewide trends, is projected to decrease each decade through 2030. While in-migration is a major component of Pasquotank County's population growth, it is an even greater factor in the growth of neighboring counties---particularly in Currituck and Camden Counties.

*Table 9
Projected Components of Population Growth
Selected Counties in the Region
2000-2030*

	2000-2010			2010-2020			2020-2030		
	Pop Growth %	Natural Increase %	Net Migration %	Pop Growth %	Natural Increase %	Net Migration %	Pop Growth %	Natural Increase %	Net Migration %
Camden County	23.3%	2.2%	21.1%	12.8%	2.5%	10.3%	10.9%	2.4%	8.5%
Chowan County	4.5%	0.7%	3.8%	3.2%	-0.01%	3.2%	1.5%	-1.1%	2.6%
Currituck County	30.5%	3.2%	27.4%	19.7%	2.5%	16.7%	15.7%	2.1%	13.5%
Gates County	9.8%	-0.6%	10.4%	9.3%	-0.5%	9.8%	7.5%	-1.1%	8.5%
<i>Pasquotank County</i>	10.1%	2.5%	7.6%	7.2%	1.5%	5.7%	5.2%	-0.02%	5.2%
Perquimans County	8.0%	-2.3%	10.4%	6.0%	-3.0%	9.0%	4.3%	-3.9%	8.2%
North Carolina	17.3%	5.9%	11.4%	15.9%	5.7%	10.2%	13.9%	5.3%	8.7%

Source: County Population Growth 2000-2030, NC State Data Center, July 2004.

Note: Natural increase percentage is the natural increase growth divided by the base year total population.

Most of the City of Elizabeth City's population growth has occurred as a result of annexation, accounting for almost all of the population gain since 1990. As illustrated in the following table, this method of growth is common among other coastal municipalities as well.

*Table 10
Municipal Growth
Selected Coastal Municipalities
1990-2002*

Municipality	Total Population Growth	Population Annexed	Urban Growth	% Population Growth Annexed
<i>Elizabeth City</i>	3,143	3,126	17	99.5%
Edenton	116	10	106	8.6%
Jacksonville	37,958	36,535	1,534	6.5%
Morehead City	1,680	1,591	89	94.7%
New Bern	6,052	4,469	1,583	73.8%
Washington	570	991	-421	173.9%
Wilmington	35,928	25,855	10,073	72.0%

Sources: Municipal Growth, April 1990 to April 2000 and April 2000 to July 2002, NC Data Center, September 2002 and October 2003

Note: Urban growth is the difference between total population growth and population annexed.

5. Income Characteristics

Pasquotank County's 2000 per capita income of \$14,815 was 73% of the statewide per capita income of \$20,307. The 2000 per capita income level in Elizabeth City of \$13,333 was 65.7% of the North Carolina average. The County's 2000 median household income of \$30,444 ranked it as 78th statewide. Elizabeth City's median household income of \$24,193 was considerably below the North Carolina average of \$39,184.

According to data from the 2000 U.S. Census, the percentage of families below the poverty level in Pasquotank County was 15.5% compared to the statewide rate of 12.3% and the Elizabeth City rate of 25.1%.

6. Population Density

Pasquotank County's population density of 154 persons per square mile in 2000 was considerably higher than surrounding counties but slightly lower than the statewide average of 165 persons per square mile. Elizabeth City's 2000 population density of 1,923 persons per square mile was higher than most major coastal communities. The following table provides population density data for selected coastal communities:

Table 11 Population Density* Selected Coastal Communities 1960-2000					
County	1960	1970	1980	1990	2000
Camden County	23	23	24	25	29
Chowan County	65	62	73	78	84
Currituck County	24	27	42	52	70
Gates County	27	25	26	27	31
<i>Pasquotank County</i>	112	118	125	138	154
Perquimans County	35	34	38	42	46
Municipality					
<i>Elizabeth City</i>	3,430	2,824	2,980	3,155	1,923
Edenton	2,026	1,362	1,488	1,066	1,076
Jacksonville	4,352	3,815	2,159	2,310	1,500
Morehead City	3,722	3,489	2,180	2,299	1,507
New Bern	6,287	3,858	2,510	1,699	895
Washington	5,231	2,358	1,913	1,592	1,475
Wilmington	5,791	2,638	2,047	1,870	1,850
North Carolina	93	104	121	136	165

Sources: *County Densities 1970-1995, State Data Center, May 2001; NC State Statistical Abstract, NC State Data Center, 1984.*

* Persons per square mile

Based upon projections by the NC State Data Center, Pasquotank County's population density will increase through 2030 but at a much lower rate than the statewide average. The following table provides projected population density data for the County and North Carolina.

Table 12 Projected Population Density* 2005-2030						
	2005	2010	2015	2020	2025	2030
Pasquotank County	160	167	174	179	184	188
North Carolina	180	195	210	225	240	256

Source: *County Densities, 2000-2030, State Data Center, May 2002.*

* Persons per square mile

3.1.2 Housing Stock

The number of housing units in Pasquotank County increased over 16% between 1990 and 2000 from 12,298 units to 14,289 units. In 2000, 7,438 units or approximately 52% of all the housing units were located within the Elizabeth City corporate limits. The 2003 estimated number of housing units in the Elizabeth City jurisdiction is 7,760 and 7,841 in the Pasquotank County jurisdiction.

The predominant housing type is the single-family detached dwelling---68% of all housing units in Pasquotank County and 64%, in Elizabeth City. As expected in an urban area, Elizabeth City has a higher percentage of multifamily housing units (28.9%) and a lower percentage of manufactured housing (7.0%) than does Pasquotank County (16.0% and 15.7%, respectively). The following table provides a comparison of housing by structural type for Elizabeth City, Pasquotank County, and the State of North Carolina.

Table 13 Comparison of Housing by Structural Type 2000			
Structural Type	Elizabeth City	Pasquotank County	North Carolina
Single-Family	64.0%	68.2%	67.4%
Multi-Family	28.9%	16.0%	16.0%
Manufactured Home	7.0%	15.7%	16.4%
Other	0.1%	0.1%	0.2%
Totals	100.0%	100.0%	100.0%

Source: *US Census 2000.*

Detailed housing data by structural types for townships and for the City of Elizabeth City is provided in Appendix B.

The median year built for all housing in Pasquotank County is 1974 and 1965 for Elizabeth City. The statewide average median year built is 1978. Pasquotank County's and Elizabeth City's 2000 median value of owner-occupied housing (\$78,000 and \$69,900, respectively) are below the statewide median value of \$95,800. Median rents in Pasquotank County (\$358) and Elizabeth City (\$348) are also below the North Carolina average of \$431.

A. Building Permits Issued

Building permit data since 1996 indicate that Pasquotank County has averaged about 232 new residential dwellings per year—approximately 60% of those were

manufactured homes. Data for Elizabeth City during the same time period show an annual average increase of some 91 new residences per year. Between 1996 and 2003, no multi-family dwellings were constructed within the County's planning jurisdiction. During the same period in Elizabeth City seven duplexes and 13 multi-family units were constructed in addition to five transient buildings with a total of 418 rooms.

The following tables provide residential building data for both unincorporated Pasquotank County and the City of Elizabeth City.

Table 14 Residential Building Permits 1996-2003							
Pasquotank County				Elizabeth City			
Year	SFR	Mfg. Homes	Total	Year	SFR	Mfg. Homes	Total
1996	96	134	230	1996	82	59	141
1997	86	106	192	1997	63	38	101
1998	98	117	215	1998	62	22	84
1999	81	153	234	1999	46	32	78
2000	65	163	228	2000	49	18	67
2001	80	143	223	2001	54	18	72
2002	116	125	241	2002	80	10	90
2003	166	132	298	2003	80	13	93
Total	788	1073	1861	Total	516	210	726
Average	98.5	134.1	232.6	Average	64.5	26.3	90.8
Percent	42.3%	57.7%	100.0%	Percent	71.1%	28.9%	100.0%

Source: Pasquotank County

Source: City of Elizabeth City

Subdivision lot approvals in Pasquotank County since 1996 have resulted in the creation of an average of 174 new residential building lots per year. In Elizabeth City, approximately 190 new residential building lots have been created since 1996. Since 1996, the estimated number of lots platted, but unbuilt, in the Pasquotank County planning jurisdiction totals 837 lots.

Section 3.3.4 provides additional data concerning recent building trends since 1996.

B. Seasonal Housing

The majority (71%) of seasonal housing units in Pasquotank County is composed of hotel, motel, and bed and breakfast units. Seasonal dwellings comprise about 24% of the County's total seasonal housing. Approximately 86% of all seasonal housing units are located within the Elizabeth City corporate limits.

<i>Table 15</i> <i>Seasonal Housing</i> <i>2000</i>			
Elizabeth City Corporate	Total Seasonal Housing Units	% of Seasonal Housing W/ Jurisdiction	% of All Seasonal Housing
Seasonal Dwellings	78	11.1%	9.5%
Hotel, Motel, B&B	581	82.6%	71.0%
Campsites	0	0.0%	0.0%
Transient Marina Slips	44	6.3%	5.4%
Totals	703	100.0%	85.9%
Unincorporated Pasquotank County	Total Seasonal Housing Units	% of Seasonal Housing W/ Jurisdiction	% of All Seasonal Housing
Seasonal Dwellings	115	100.0%	14.1%
Hotel, Motel, B&B	0	0.0%	0.0%
Campsites	0	0.0%	0.0%
Transient Marina Slips	0	0.0%	0.0%
Totals	115	100.0%	14.1%
Total Pasquotank County	Total Seasonal Housing Units		% of All Seasonal Housing
Seasonal Dwellings	193		23.6%
Hotel, Motel, B&B	581		71.0%
Campsites	0		0.0%
Transient Marina Slips	44		5.4%
Totals	818		100.0%

Sources: US Census Summary File 3, Table H1, Housing Summary and Table H33, Population by Units in Structure by Tenure. Estimates by The Wooten Company. The number of 'Hotel, Motel, and B&B' units provided by the Elizabeth City Area Chamber of Commerce. The number of 'Transient Marina Slips' were provided by local marinas.

3.1.3 Local Economy

A. Economic Trends

Elizabeth City has developed as an employment, retail trade, services, governmental, and housing center for northeastern North Carolina. The City's economy has traditionally been services-driven with the governmental, health services, educational services, and accommodation and food services subsectors accounting for the largest employment. Other important employment sectors include retail trade, public administration, manufacturing, and transportation and warehousing. Third quarter 2003 employment data from the NC Department of Commerce for Pasquotank County indicate that government employment accounts for approximately 35% of all workers. Local government employment constitutes over 56% of all government employment and state government employment, 31%.

The unemployment rate for Pasquotank County in April 2004 was 3.3% compared to the statewide rate of 5.0%. The number of new jobs announced in 2003 totaled 95 and the total amount of investment announced was \$19,950,000. The recent economic slowdown has resulted in business closings and layoffs in Elizabeth City and Pasquotank County. The NC Employment Commission reported that Pasquotank County in 2003 had 4 business closing affecting 112 people and 1 layoff affecting 18 people. The retail trade and services sectors have been particularly impacted.

Employment data contained in the 2000 U.S. Census indicate that 14.4% of the total County workforce was employed outside of Pasquotank County. For Elizabeth City, the percentage of workers employed outside of Pasquotank County was slightly higher—16.4%.

B. Employment by Major Sectors

The following table provides a comparison of recent employment and wages data for Pasquotank County and the State of North Carolina.

Table 16
Employment and Wages by Sector
Pasquotank County and the State
Third Quarter 2003

	Pasquotank County			North Carolina		
	Avg Emp	% Total	Avg Wkly Wage	Avg Emp	% Total	Avg Wkly Wage
Total All Industries	15,593	100.0	\$505	3,708,636	100.0	\$629
Total Government	5,312	34.1	\$726	597,650	16.1	\$745
Total Private Industry	10,281	65.9	\$428	3,110,986	83.9	\$622
Agriculture Forestry Fishing & Hunting	186	1.2	\$340	33,889	0.9	\$409
Mining	*	*	*	3,943	0.1	\$889
Utilities	*	*	*	15,255	0.4	\$1,062
Construction	606	3.9	\$460	213,184	5.7	\$617
Manufacturing	739	4.7	\$554	593,062	16.0	\$744
Wholesale Trade	555	3.6	\$516	162,150	4.4	\$871
Retail Trade	2,550	16.4	\$391	435,927	11.8	\$422
Transportation and Warehousing	681	4.4	\$642	131,654	3.5	\$716
Information	93	0.6	\$627	76,237	2.1	\$910
Finance and Insurance	367	2.4	\$650	137,128	3.7	\$1,035
Real Estate and Rental and Leasing	124	0.8	\$283	48,924	1.3	\$551
Professional and Technical Services	397	2.5	\$605	145,518	3.9	\$923
Management of Companies and Enterprises	*	*	*	61,293	1.7	\$1,184
Administrative and Waste Services	280	1.8	\$305	217,040	5.9	\$421
Educational Services	1,959	12.6	\$603	293,926	7.9	\$618
Health Care and Social Assistance	3,018	19.4	\$588	457,968	12.3	\$653
Arts, Entertainment and Recreation	362	2.3	\$165	56,409	1.5	\$415
Accommodation and Food Services	1,385	8.9	\$186	300,580	8.1	\$236
Other Services Ex. Public Admin	354	2.3	\$353	98,351	2.7	\$424
Public Administration	1,856	11.9	\$695	215,509	5.8	\$673
Unclassified	24	0.2	\$267	10,689	0.3	\$526

Source: NC Department of Commerce

C. Community Economic Activity

Major government employers include the Elizabeth City-Pasquotank County School System, Elizabeth City State University, the US Coast Guard, the Albemarle Regional Hospital, Pasquotank Correctional Institute, Pasquotank County, and the City of Elizabeth City.

The City of Elizabeth City and most of Pasquotank County have been designated by the North Carolina Department of Commerce as a State Development Zone. Such designation allows for economic incentives to stimulate new investment and job creation in economically distressed urban areas.

Tourism is increasingly becoming an important part of the local economy. According to data from the NC Department of Commerce, domestic tourism in Pasquotank County generated an economic impact of \$33.31 million in 2002. More than 430 jobs in Pasquotank County were directly attributable to travel and tourism in 2002. The travel industry generated a \$6.46 million payroll in 2002. State and local tax revenues from travel amounted to \$2.75 million. In 2002, Pasquotank ranked 56th in travel impact among the State's 100 counties.

<i>Table 17 Insured Employment Pasquotank County 2003</i>			
Industry	No. of Units	Annual Average Employment	Percent of Total
Federal Government	15	660	4.2%
State Government	28	1,697	11.0%
Local Government	32	3,059	19.8%
Private Industry	891	10,053	65.0%
Totals	966	15,469	100.0%

Source: NC Department of Commerce

*Table 18
Pasquotank County's Largest Employers – Private Sector Only
Ranked in Order According to Employment Size
Third Quarter 2003*

Name	Industry Description	Employment Range
LEAR SIEGLER SERVICE, INC	TRADE, TRANSPORTATION, AND UTILITIES	250 - 499
WAL-MART ASSOCIATES, INC	TRADE, TRANSPORTATION, AND UTILITIES	250 - 499
FOOD LION, LLC	TRADE, TRANSPORTATION, AND UTILITIES	100 - 249
W R WINSLOW MEMORIAL HOME INC	EDUCATION AND HEALTH SERVICES	100 - 249
LOWES HOME CENTERS INC	TRADE, TRANSPORTATION, AND UTILITIES	100 - 249
VENCOR NURSING CENTERS EAST LLC	EDUCATION AND HEALTH SERVICES	100 - 249
ALBEMARLE PLANTATION	LEISURE AND HOSPITALITY	100 - 249
J W JONES LUMBER CO INC	MANUFACTURING	100 - 249
PERRY MOTORS INC	TRADE, TRANSPORTATION, AND UTILITIES	100 - 249
COURTESY FORD	TRADE, TRANSPORTATION, AND UTILITIES	100 - 249

Source: NC Department of Commerce

The total valuation of real, personal, and public service company property in Pasquotank County totaled \$1,456,734,663.00 in 2003. Real property constitutes approximately 75% of the total County-wide valuation. The City of Elizabeth City total valuation in 2003 was \$635,038,548.00. Of that total, \$632,434,082.00 or 99.5% was within Pasquotank County and the remainder in Camden County. Elizabeth City comprised approximately 43% of the total Pasquotank County valuation.

Table 19 Valuations and Tax Rates for 2002 - 2003		
	Total Valuation	Tax Rate (per \$100)
County		
Camden County	429,567,997	\$0.750
Chowan County	783,623,172	\$0.690
Currituck County	2,548,717,557	\$0.620
Gates County	477,082,506	\$0.810
<i>Pasquotank County</i>	1,456,734,663	\$0.860
Perquimans County	735,355,429	\$0.610
Municipality		
<i>Elizabeth City</i>	635,038,548	\$0.620
Edenton	256,703,667	\$0.395
Jacksonville	1,796,709,105	\$0.590
Morehead City	899,596,917	\$0.380
New Bern	1,655,971,313	\$0.470
Washington	559,045,912	\$0.550
Wilmington	8,330,246,635	\$0.470

Source: NC Department of Revenue, Tax Research Division

D. Commuting Patterns

Data from the US Census indicate that the net number of workers commuting to Pasquotank County has increased each year since 1970. Therefore, more workers are coming into Pasquotank County for jobs than are leaving the County for work. As shown in the following table, the largest numerical increase in workers commuting into Pasquotank County occurred between 1990 and 2000, while the largest percentage of increase occurred between 1970 and 1980.

Table 20 Commuting Patterns 1970-2000				
	1970	1980	1990	2000
Incommuters	1,551	2,511	3,584	4,628
Outcommuters	1,517	2,248	3,034	3,328
Net Number Commuting Into Pasquotank County	34	263	550	1,300
Percent Increase	---	673%	109%	136%

Sources: US Census Bureau and the US Bureau of Economic Analysis

Due to the close proximity of the State of Virginia and the Chesapeake, Norfolk, and Portsmouth employment market, a higher percentage of workers living in Pasquotank County and Elizabeth City are employed outside of their state of residence. However, as shown in the following table, the overall percentage of workers employed within their County of residence is slightly higher than the statewide average.

*Table 21
Place of Work--Workers 16 years of age or older
2000*

	Pasquotank County		Elizabeth City		North Carolina	
	Number	Percent	Number	Percent	Number	Percent
Worked in State of Residence						
Worked in County of Residence	11,224	77.1%	4,951	76.8%	2,826,122	73.6%
Worked outside County of Residence	1,896	13.0%	972	15.1%	936,047	24.4%
Worked outside State of Residence	1,432	9.8%	525	8.1%	75,604	2.0%
Total Workers	14,552	100.0%	6,448	100.0%	3,837,773	100.0%

Source: US Census 2000

The top five destinations for workers commuting outside of Pasquotank County and the percentage of all workers leaving Pasquotank County are Dare County, 13.5%; Perquimans County, 10.8%; Currituck County, 10.2%; Chesapeake, VA, 9.8%; and Norfolk, VA, 8.8%. Approximately 57% of all workers commuting outside of Pasquotank County in 2000 went to other North Carolina counties, 39% traveled to Virginia counties and cities, and 4% commuted to other destinations.

The percentage of workers that commute outside of Pasquotank County has remained at approximately 23 percent since 1980; in 1970 the percentage was higher at 27%. The percentage of outcommuters traveling to the Virginia Tidewater area decreased between 1990 and 2000, dropping from 46% to 37%.

As shown in the following table, the major destinations for workers that commute from Pasquotank County to jobs outside of the County have recently shifted from the Norfolk-Portsmouth-Chesapeake area to the North Carolina counties surrounding Pasquotank County.

*Table 22
Top 5 Destinations of Workers Commuting
Out of Pasquotank County*

1970	1980	1990	2000
Norfolk	Norfolk	Norfolk	Dare Co.
Portsmouth	Portsmouth	Chesapeake	Perquimans Co.
Perquimans Co.	Chesapeake	Dare Co.	Currituck Co.
Camden Co.	Perquimans Co.	Portsmouth	Chesapeake
Currituck Co.	Camden Co.	Perquimans Co.	Norfolk

Sources: US Census and US Bureau of Economic Analysis

Appendix H provides more detailed information regarding commuting data.

3.1.4 Population Projections
A. Permanent Population Projections

The following table is based on population projections provided by the NC State Data Center. Pasquotank County's population growth rate, reflective of statewide and local trends, is predicted to decline over the next few decades. This reduced growth rate will culminate in a slower population growth.

*Table 23
Permanent Population Projections*

	US Census 2000	Certified Estimate July 2002	Projections					
			2005	2010	2015	2020	2025	2030
Pasquotank County	34,897	35,816	38,894	42,063	44,720	47,228	49,599	51,611
Elizabeth City Corporate Area	17,188	17,490	19,253	20,821	22,136	23,378	24,552	25,547
Elizabeth City Planning Jurisdiction	19,596*	n/a	21,948	23,736	25,235	26,651	27,989	29,124
Pasquotank County Planning Jurisdiction	15,301*	n/a	16,946	18,327	19,485	20,577	21,610	22,487

Sources: US Census, 2000. 2002 Certified Population Estimates, NC State Data Center, October 2003. County Population Growth 2000-2030, NC State Data Center, July 2004. Pasquotank County projections by the NC State Data Center. Elizabeth City projections by The Wooten Company based upon a proportional relationship of the Elizabeth City municipal population to the Pasquotank County total population from 1970-2000. The municipal projections assume that (i) the average ratio of the City's population to the Pasquotank County population for the 1970-2000 period will remain constant through 2030 and (ii) the ratio of the estimated 2000 City planning jurisdiction population to the 2000 Elizabeth City corporate population will remain constant through 2030.

* Estimated 2000 population by The Wooten Company

B. Seasonal and Peak Population

The impact of seasonal population is felt more in Elizabeth City than throughout the unincorporated areas of Pasquotank County. As shown in the following table, it is estimated that the seasonal population in Elizabeth City in 2000 totaled 1,787 persons and resulted in a peak population of 18,975. The seasonal population for the unincorporated portion of Pasquotank County in 2000 is estimated to total 365 persons. For the County as a whole, the 2000 seasonal population is estimated to total 2,152 persons thereby resulting in a peak population of 37,049. Countywide, peak population is estimated at approximately 106% of the permanent population.

Table 24
Seasonal and Peak Population Estimates
2000

Elizabeth City Corporate	Total	PPH*	Pop
Seasonal DU	78	3.17	247
Hotel, Motel, B&B	581	2.41	1,400
Campsites	0	3.17	0
Transient Marina Slips	44	3.17	139
Totals	703		1,787
Seasonal Population 2000	1,787		
Permanent Population 2000	17,188		
Peak Population 2000	18,975		
Peak to Permanent Ratio	110.40%		
Unincorporated Pasquotank County	Total	PPH*	Pop
Seasonal DU	115	3.17	365
Hotel, Motel, B&B	0	2.52	0
Campsites	0	3.17	0
Transient Marina Slips	0	3.17	0
Totals	115		365
Seasonal Population 2000	365		
Permanent Population 2000	17,709		
Peak Population 2000	18,074		
Peak to Permanent Ratio	102.06%		
Total Pasquotank County	Total	PPH*	Pop
Seasonal DU	193	3.17	612
Hotel, Motel, B&B	581	2.41	1,400
Campsites	0	3.17	0
Transient Marina Slips	44	3.17	139
Totals	818		2,152
Seasonal Population 2000	2,152		
Permanent Population 2000	34,897		
Peak Population 2000	37,049		
Peak to Permanent Ratio	106.17%		

Sources: US Census Summary File 3, Table H1, Housing Summary and Table H33, Population by Units in Structure by Tenure. Estimates by The Wooten Company. The number of 'Hotel, Motel, and B&B' units provided by the Elizabeth City Area Chamber of Commerce. The number of 'Transient Marina Slips' were provided by the local marinas.

* PPH = persons per household

Based upon the estimated 2000 seasonal and peak population as delineated above and the assumption that the ratio of seasonal population to permanent population will remain constant, the following projections have been prepared for Pasquotank County and the City of Elizabeth City.

<i>Table 25</i>						
<i>Seasonal and Peak Population Projections</i>						
Pasquotank County Planning Jurisdiction						
	2005	2010	2015	2020	2025	2030
Permanent Population	16,946	18,327	19,485	20,577	21,610	22,487
Seasonal Population	349	378	401	424	445	463
Peak Population	17,295	18,704	19,886	21,001	22,055	22,950
Elizabeth City Corporate Jurisdiction						
	2005	2010	2015	2020	2025	2030
Permanent Population	19,253	20,821	22,136	23,379	24,552	25,548
Seasonal Population	2,002	2,165	2,301	2,431	2,553	2,656
Peak Population	21,255	22,986	24,438	25,809	27,105	28,204

Source: *The Wooten Company, July 2006*

3.2 Natural Systems Analysis

Subchapter 7B .0702(c)(2) requires that the land use plan describe and analyze the natural features and environmental conditions within Pasquotank County (including within the City of Elizabeth City) and to assess their capabilities and limitations for development. Section 3.2 provides an inventory of natural features; a description of a composite map of environmental conditions that shows the extent and overlap of natural features; and an assessment water quality, natural hazard, and natural resource conditions and features and their limitation or opportunity for land development. The 14-digit hydrological units delineated by the Natural Resources Conservation Service (see Figure 2) are used as the basic unit of analysis for natural systems.

3.2.1 Inventory of Natural Features

The inventory of natural features includes a description of Areas of Environmental Concern (AEC), soil characteristics, water quality classifications and use support designations, flood hazard areas, storm surge areas, non-coastal wetlands, water supply watersheds, and other environmentally fragile areas.

A. Areas of Environmental Concern (AEC)

Areas of Environmental Concern within the Pasquotank County area include the following:

- **Public Trust Waters**

The coastal waters and the submerged lands where the public has the right to use the waters for activities such as boating, fishing or swimming. Public trust waters often overlap with estuarine waters, but they also include many inland fishing waters. These areas include the Pasquotank River, Little River, Albemarle Sound, and all navigable creeks and natural water bodies.

- **Estuarine Waters**
Estuarine Waters of the Atlantic Ocean and all the water of bays, sounds, tidal rivers, and their tributaries thereto seaward of the dividing line between coastal fishing waters and inland fishing waters. Includes the Albemarle Sound, the Pasquotank River seaward of the US 158/NC 34 bridge on the Camden Causeway, and the Little River seaward of the US 17 bridge.
- **Coastal Shorelines**
Coastal shorelines include estuarine and public trust shorelines. Estuarine shorelines are non-ocean shorelines that extend a distance of 75' landward from the normal high water level of estuarine waters. The public trust shoreline includes lands within 30 feet of the normal high water level of public trust waters inland from the dividing line between coastal and inland fishing waters.
- **Coastal Wetlands**
Any salt marsh or other marsh subject to regular or occasional flooding by tides, including lunar and wind tides, but not including hurricane nor tropical storm tides. The precise location of coastal wetlands must be determined by field investigation.

Development within the designated Areas of Environmental Concern is limited by CAMA regulations and development guidelines.

B. Soil Characteristics

Generally, most of the soils in Pasquotank County have limitations for many urban uses due to wetness, low strength, and restricted permeability. Overall, for septic tank and light industrial uses, the soil types in most of the County have substantial limitations. Less than three-tenths of one percent of all the soils in Pasquotank County are rated as having slight limitations for septic tank absorption fields. All remaining soils within the county are rated as very limited for septic system use. Site-specific soil analyses are required by the Albemarle Regional Health Services to evaluate the suitability of a particular parcel for a septic system. Centralized sewer facilities are needed to support intensive urban development.

Prime farmland soils are soils that are defined by the US Department of Agriculture as soils that have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Such soils have properties that favor the economic production of sustained high yields of crops. However, soils that are well suited to crops are also well suited to urban uses. The loss of prime farmland to other land uses puts pressure on marginal lands which are generally less productive and not as easily cultivated. It is estimated that approximately 3% of the total Pasquotank County land area contains soils that are identified as prime farmland soils. The largest concentrations of such classified soils are located in the southern peninsula area southeast of the Elizabeth City urban area. An additional 23% of the County land area is classified as having prime farmland soils if those soils are drained.

Hydric soils are soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to support the growth and

reproduction of hydrophytic vegetation. Hydrophytic vegetation along with hydric soils and wetland hydrology are considered the three essential characteristics of wetlands. Consequently, the presence of hydric soils is one indicator of probable wetlands locations. The precise location of wetlands must, however, be determined through field investigation.

Specific soil limitation data for sewage disposal and data for defining prime farmland and hydric soils as well as information regarding measures for mitigating particular soils limitations can be obtained at the local office of the Natural Resources Conservation Service located at Beechtree Plaza, 1023-5 US Highway 17 South, Elizabeth City, NC.

C. Water Quality Classifications and Use Support Designations

Water Quality Classifications. All surface waters in North Carolina are assigned a primary water quality classification by the North Carolina Division of Water Quality under the authority of the Environmental Management Commission. Classifications are designations applied to surface water bodies that define the best uses to be protected within these waters, as required by the Clean Water Act. The most common primary classification within North Carolina is Class C, which protects waters for the propagation of aquatic life and for secondary recreation. Other primary freshwater classifications provide for additional levels of protection for uses consisting of water supplies (Class WS-I through Class WS-V) and for primary recreation (Class B). Saltwater primary classifications are denoted as SC, SB, and SA.

In addition to the primary classification, one or more supplemental classifications may be assigned to specific surface waters to provide additional protection to waters with special uses or values. North Carolina's supplemental classifications include NSW (nutrient sensitive waters), Tr (trout waters), HQW (high quality waters), ORW (outstanding resource waters), and SW (swamp waters).

Section 3.2.3 provides an assessment of water quality within the Pasquotank River Basin and the sub-basins within which Pasquotank County are located.

All primary and secondary water quality classifications are described in the following table:

Table 26
North Carolina Water Quality Classifications

Freshwater Primary Classifications	
Classification	Best Usage of Waters
C	Aquatic life propagation and maintenance of biological integrity (including fishing, and fish), wildlife, secondary recreation, agriculture and any other usage except for primary recreation or as a source of water supply for drinking, culinary, or food processing purposes. All freshwaters shall be classified to protect these uses at a minimum.
B	Primary recreation (which includes swimming on a frequent or organized basis) and any other best usage specified for Class C waters.
WS I - WS V	Source of water supply for drinking, culinary, or food-processing purposes for those users desiring maximum protection of their water supplies and any best usage specified for Class C waters.
Saltwater Primary Classifications	
Classification	Best Usage of Waters
SC	Aquatic life propagation and maintenance of biological integrity (including fishing, fish and functioning primary nursery areas (PNAs)), wildlife, secondary recreation, and any other usage except primary recreation or shell fishing for market purposes.
SB	Primary recreation (which includes swimming on a frequent or organized basis) and any other usage specified for Class SC waters.
SA	Shell fishing for market purposes and any other usage specified for Class SB or SC waters.
Supplemental Classifications	
Classification	Best Usage of Waters
HQW	High Quality Waters. Waters which are rated as excellent based on biological and physical/chemical characteristics through Division monitoring or special studies, native and special native trout waters (and their tributaries) designated by the Wildlife Resources Commission, primary nursery areas (PNAs) designated by the Marine Fisheries Commission and other functional nursery areas designed by the Marine Fisheries Commission.
NSW	Nutrient Sensitive Waters. Waters that experience or are subject to excessive growths of microscopic or macroscopic vegetation. Excessive growths are growths which the Commission determines impair the use of the water for its best usage as determined by the classification applied to such waters.
ORW	Outstanding Resource Waters. Unique and special surface waters of the state that are of exceptional state or national recreational or ecological significance that require special protection to maintain existing uses.
Sw	Swamp Waters. Waters which are topographically located so as to generally have very low velocities and other characteristics which are different from adjacent streams draining steeper topography.
Tr	Trout Waters. Waters which have conditions that shall sustain and allow for trout propagation and survival of stocked trout on a year-round basis.

Source: NC Division of Water Quality

The waters in the Pasquotank County area include a wide range of primary and secondary water quality classifications, including C, SC, SB, Sw, and WS-IV. Appendix F includes a listing of the water quality classifications for the various water bodies in Pasquotank County. There are no major productive shell fishing areas in Pasquotank County.

Use Support Ratings. Surface waters are classified according to their best intended uses. Determining how well a waterbody supports its uses (use support status) is an important method of interpreting water quality data and assessing water quality. Surface waters are currently rated supporting, impaired, and not rated. These ratings refer to whether the classified uses of the water (such as water supply, aquatic life protection and recreation) are being met. For example, waters classified for fish consumption, aquatic life protection and secondary recreation (Class C for freshwater or SC for saltwater) are rated Supporting if data used to determine use support meet certain criteria. However, if these criteria were not met, then the waters would be rated as Impaired. Waters with inconclusive data are listed as Not Rated. Waters lacking data are listed as No Data.

In previous use support assessments, surface waters were rated fully supporting (FS), partially supporting (PS), not supporting (NS) and not rated (NR). FS was used to identify waters that were meeting their designated uses. Impaired waters were rated PS and NS, depending on their degree of degradation. NR was used to identify waters lacking data or having inconclusive data. The 2002 Integrated Water Quality Monitoring and Assessment Report Guidance issued by the EPA requested that states no longer subdivide the impaired category. In agreement with this guidance, North Carolina no longer subdivides the impaired category and rates waters as Supporting, Impaired, Not Rated or No Data.

In the *Pasquotank River Basinwide Water Quality Plan*, which was prepared by the NC Division of Water Quality, the waters within sub-basin 03-01-50 and 03-01-52 were rated as fully supporting for aquatic life/secondary recreation and for primary recreation. The table below provides more detailed information regarding use support ratings for each sub-basin:

Sub-basin 03-01-50 Ratings	Fully Supporting	Not Rated
Aquatic Life/ Secondary Recreation	28,665.8 ac	23,208.9 ac
Primary Recreation	37,851.5 ac	93.3 ac
Sub-basin 03-01-52 Ratings	Fully Supporting	Not Rated
Aquatic Life/ Secondary Recreation	72,795.5 ac	18,924.6 ac
Primary Recreation	72,795.5 ac	9,840.3 ac

Source: Pasquotank River Basinwide Water Quality Plan, January 2002

D. Flood Hazard Areas

The 100-year floodplain is land within a floodplain subject to a one percent or greater chance of flooding in any given year. Approximately 38% of the County's land area is within a 100-year floodplain. The most significant floodplains are located in the south peninsula area of the County along the shoreline of the Albemarle Sound and Pasquotank River, particularly adjacent to New Begun Creek, Little Flatty Creek, Big Flatty Creek, and Symond's Creek. Other major floodplains are adjacent to Knobbs Creek in Elizabeth City and along the Pasquotank River from Elizabeth City northward to the Great Dismal Swamp area in the northwestern tip of the County. Less significant

floodplains are located adjacent to Little River. The 100-year floodplain is delineated in Figure 2.

E. Storm Surge Areas

Maps delineating hurricane surge inundation areas have been provided to Pasquotank County and Elizabeth City by the Division of Coastal Management. Storm surge is the rise in sea level caused by water being pushed towards land by hurricane winds. The storm surge inundation areas are based upon National Hurricane Center model maps and have been recompiled by the North Carolina Center for Geographic Information and Analysis. Surge inundation areas have been mapped to illustrate the extent of hurricane-induced flooding based upon slow moving (forward velocity less than 15 mph) and fast moving (forward velocity greater than 15 mph) category 1 and 2, category 3, and category 4 and 5 hurricanes.

Storm surge areas for fast moving hurricanes are shown in the Figure 2. The areas subject to storm surge inundation delineated on this map are based upon the most intense storm intensity and storm speed. Under this worst-case scenario, approximately 46% of the County’s land area is subject to flooding from a storm surge. More detailed storm hurricane surge maps are available for review in the offices of the City of Elizabeth City and Pasquotank County Planning Departments.

Flooding as well as high winds would impact the Pasquotank County area during a major coastal storm. The table below describes the impact of the various categories of hurricanes:

*Table 28
Description of Hurricane Categories*

Category	Winds	Storm Surge	Damage Expected
Category 1	74-95 MPH	4-5 Feet	Minimal Damage
Category 2	96-110 MPH	6-8 Feet	Moderate Damage
Category 3	111-130 MPH	9-12 Feet	Extensive Damage
Category 4	131-155 MPH	13-18 Feet	Extreme Damage
Category 5	155+ MPH	18+ Feet	Catastrophic Damage

While the identified hurricane storm surge inundation areas often parallel the 100-year flood hazard area shown in Figure 2, there are some additional portions of Pasquotank County and Elizabeth City that are particularly subject to Category 4 and 5 hurricane-induced flooding. These areas are generally located in the southern peninsula area of the County between the Pasquotank and Little Rivers.

Figure 2: Natural Features Map

F. Non-coastal ('404') Wetlands

Non-coastal wetlands include all other wetlands not classified as coastal wetlands, including wetlands delineated as Exceptional Wetlands. Wetlands receive an Exceptional functional significance if two of the primary wetland functions are rated high. Also, if the wetland meets any one of the overriding considerations, it is rated as being of Exceptional functional significance.

Overriding considerations are:

1. Meets the North Carolina statutory definition of a "coastal wetland," or is an estuarine forested or estuarine scrub-shrub wetland,
2. Is adjacent to a primary nursery area, or
3. Is known habitat for threatened or endangered species, or is identified by the Natural Heritage Program as a unique natural ecosystem or special wildlife habitat

Wetlands receive a Substantial functional significance rating whenever only one of the wetland functions is highly functioning or when no more than one of the functions is rated low (i.e. two of the functions are performing at moderate or higher levels). Wetlands that perform functions at low levels, but also are located adjacent to wetlands of Exceptional functional significance receive a Substantial significance rating because of their buffering capabilities. Wetlands receive a beneficial functional significance rating whenever any two primary functions are of low significance for the wetland and none are high.

These non-coastal wetlands are not covered by CAMA regulations (unless the Coastal Resource Commission designates them as a natural resource AEC) but are protected by the Clean Water Act. Consequently, the US Army Corps of Engineers is responsible for regulating these '404' wetlands. Authorization must be obtained from the Corps prior to disturbing such wetlands. As with coastal wetlands, the precise location of non-coastal wetlands can only be determined through a field investigation and analysis. The general location of coastal and non-coastal wetlands is shown on the Natural Features Map, Figure 2. Major non-coastal wetlands areas are located in the northwestern, western, and south central portions of Pasquotank County. Non-coastal wetlands account for approximately 29% of the total Pasquotank County land area.

The *Pasquotank River Local Watershed Plan*, 2003 inventoried existing watershed conditions in a 454.5 square-mile area that includes portions of Pasquotank County and all of the City of Elizabeth City. A discussion of the findings of the Plan and recommended strategies for improving and protecting watershed function is provided in Section 3.3.5.

G. Public Water Supply Watershed

The land area that drains to a surface public water supply intake includes a critical and protected area. These portions of the watershed are defined as follows:

- **Critical Area**
The area adjacent to a water supply intake where risk associated with pollution is greater than for the remaining portions of the

watershed. The critical area in Pasquotank County is defined as extending one-half mile upstream from and draining to the intake located directly in the Pasquotank River. Major landmarks such as highways or property lines may be used to delineate the outer boundary of the critical area if these landmarks are immediately adjacent to the appropriate outer boundary of one-half mile.

- **Protected Area**

The area adjoining and upstream of the watershed critical area. The boundaries of the protected area are defined as within 10 miles upstream and draining to the intake located directly in the Pasquotank River.

In Pasquotank County, a WS-IV public water supply watershed is located in the northern portion of the County along the Pasquotank River north of Knobbs Creek (see Figure 2). Approximately 21,894 acres or 15% of the County's total land area are encompassed within this public water supply watershed.

The City of Elizabeth City has recently disconnected the Pasquotank River intake as a water supply source. Since the Pasquotank River is not longer used for public water supply, the river could be reclassified for non-water supply use. To date, a request for reclassification has not been submitted to the State.

H. Primary Nursery Areas

Primary Nursery Areas are identified by the Marine Fisheries Commission. The North Carolina Division of Marine Fisheries is responsible for preserving, protecting, and developing Primary Nursery Areas for commercially important finfish and shellfish.

No Primary Nursery Areas have been identified within the waters of Pasquotank County.

I. Other Environmentally Fragile Areas

Significant Natural Heritage Areas

The NC Natural Heritage Program compiles a list of natural heritage areas based upon an inventory of natural diversity across the state. Natural areas are evaluated on the basis of the occurrences of rare plant and animal species, rare or high quality natural communities, and geologic features. Designation as a Significant Natural Heritage Area does not imply that any protection or public access exists.

Identified Natural Heritage Areas within Pasquotank County are located in the extreme northwest tip of the County (Great Dismal Swamp National Wildlife Refuge) and in southern peninsula area of the county bordering on the Albemarle Sound (particularly the Big Flatty Creek and Little Flatty Creek areas). These areas contain high quality tidal freshwater marsh, nonriverine swamp forest, maritime forests, and nonriverine wet hardwood forests. These areas serve as important natural vegetated buffers and provided wildlife habitat. The general locations of Natural Heritage Areas are shown on the Natural

Features Map, Figure 2. Appendix G contains an inventory of natural areas and rare species found in Pasquotank County.

Elizabeth City Wellfield

The Elizabeth City wellfield, encompassing approximately 400 acres on the south side of Wellfield Road in west Elizabeth City, is an environmentally fragile area. The wellfield contains 10 well sites that supply water to the City of Elizabeth City. The location of the wellfield is delineated on Figure 4B.

3.2.2 Composite Environmental Conditions Map

Subchapter 7B .0702(c)(2)(B) requires that the land use plan include an environmental conditions composite map that shows the extent and overlap of natural features such as AECS, soil characteristics, water quality classifications, flood hazard areas, storm surge areas, non-coastal wetlands, and other environmentally fragile areas. The composite map must show, based on the local government's determination of the capabilities and limitations of these natural features and the conditions for development, three categories of land which include the following:

- **Class I** is land that contains only minimal hazards and limitations for development which can be addressed by commonly accepted land planning and development practices. Class I land will generally support the more intensive types of land uses 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 public services.
- **Class III** is land that has serious hazards and limitations for development or lands where the impact of development may cause serious damage. Land in this class will generally support very low intensity uses, such as conservation and open space.

The table below delineates the environmental features which are included in each land class for the Pasquotank County Environmental Conditions Composite Map:

<i>Table 29 Features Included in Environmental Conditions Land Classes</i>			
Feature	Class I	Class II	Class III
Coastal Wetlands			✓
Exceptional or Substantial Non-Coastal Wetlands			✓
Beneficial Non-Coastal Wetlands	✓		
Estuarine Waters			✓
Soils with Slight or Moderate Septic Limitations	✓		
Soils with Severe Septic Limitations		✓	
100-Year Flood Hazard Areas		✓	
Storm Surge Areas		✓	
Public Water Supply Watersheds		✓	
Significant Natural Heritage Areas		✓	
Protected Lands			✓
HQW/ORW Watersheds	Data not available		

Based upon the environmental conditions assigned to each land class as delineated in the above table, the majority (69.9%) of the land area in Pasquotank County falls into Class II, moderate hazards and limitations. Class III lands account for approximately 30% of the County's land area. Very little land area is classified as Class I (0.1%), minimal hazards and limitations.

The Environmental Conditions Composite Map, Figure 3 is a very general depiction of the three land classes as defined above. The model utilized to produce this map uses one acre of land area to delineate a pixel or cell on the map. Consequently, the information provided by this map is intended to show generalized patterns and is not intended for permitting or regulatory purposes.

Based upon an evaluation of the individual environmental features included within each individual land class category, it appears that soils with severe limitations for septic systems skews the composite analysis since so much land area contains soils with severe limitations. However, severe soil limitations for septic systems can be mitigated in areas where public sewer service is available, as is the case within the corporate limits of Elizabeth City. The impact of adequate infrastructure to overcome environmental limitations is demonstrated in Section 3.5, Land Suitability Analysis; Figure 8, Land Suitability Map; and Section 4.3.3, Consistency with Natural Features and Land Suitability Analyses.

Figure 3: Environmental Conditions Composite Map

3.2.3 Assessment of Environmental Conditions

A. Water Quality Assessment

Pasquotank County is located entirely within the Pasquotank River Basin. The July 2002 *Pasquotank River Basinwide Water Quality Plan* prepared by the NC Division of Water Quality has been used as the primary source for the assessment of water quality.

Pasquotank River Basin. The basin lies within the Coastal Plain Physiographic Region. The geology of this area consists of alternating layers of sand, silt, clay, and limestone. The land is relatively flat sloping downward at a rate of only a few feet per mile. The average drainage area per stream mile is 0.13 square mile, the lowest drainage density per stream mile in the state. Areas with low drainage density are characterized with low flood peaks, low sediment production, and relatively high suitability for traditional agriculture.

Pasquotank County is within sub-basins 03-01-50 and 03-01-52. The northern, eastern, and southeastern portions of Pasquotank County, including the City of Elizabeth City, are within sub-basin 03-01-50. The County comprises approximately 40% of this sub-basin. Portions of eastern Camden County are also with sub-basin 03-01-50. The western, southwestern, and southern portions of Pasquotank County are within sub-basin 03-01-52. The County comprises approximately 20% of this sub-basin. The majority of sub-basin 03-01-52 is within Perquimans County.

Table 30
General Characteristics of Sub-basins

Area and Population	Basinwide	Sub-basin 03-01-50	Sub-basin 03-01-52
Area (Sq. Miles)			
Total Area	3,635	454	541
% Total Area	100%	12.5%	14.9%
Total Land Area	2,130	390	399
% Total Land Area	100%	18.3%	18.7%
Total Water Area	1,504	64	142
% Total Water Area	100%	4.3%	9.4%
Population			
1990 Population	97,215	31,369	18,399
% 1990 Population	100%	32.3%	18.9%
Population Density (persons per sq. mile)	46	80	46

Source: *Pasquotank River Basinwide Water Quality Plan, January 2002*

Table 31
Land Cover within Sub-basins

Type of Land Cover	Basinwide	Sub-basin 03-01-50	Sub-basin 03-01-52
Forest/Wetland	38%	46%	32%
Surface Water	41%	18%	28%
Urban	1%	<1%	<1%
Cultivated Crop	19%	34%	39%
Pasture/Managed Herbaceous	1%	1%	1%

Source: *Pasquotank River Basinwide Water Quality Plan, January 2002*

Water quality is generally good within the Pasquotank River Basin. The main water quality issue within the Pasquotank River Basin is habitat degradation, including loss of riparian vegetation, channelization, and erosion. The Little River is the only water body within Pasquotank County that is on the 303(d) list of waters not meeting water quality standards or which have impaired uses (see details in description of sub-basin 03-01-52).

Sub-basin 03-01-50. The *January 2002 Basinwide Assessment Report for the Pasquotank River Basin* noted that the rapid conversion of wetlands in this sub-basin, specifically those located within the headwaters of the Pasquotank River, to agriculture or silviculture use. Negative changes to water quality in New Begun Creek were associated with large amounts of agricultural and/or urban land use. Few water quality problems were found for the portion of the Albemarle Sound within this sub-basin. Nutrient levels were low and there were few signs of algal blooms. In the Pasquotank River, however, nutrients were elevated and some blooms had been documented. Because nutrient concentrations were the greatest upstream of Elizabeth City and the City's wastewater treatment plant, it was determined that non-point sources were the major sources of nutrients. Effluent toxicity monitoring at the Elizabeth City wastewater treatment plant and at the US Coast Guard Base facility showed no failures in 2000, although the Elizabeth City discharge had shown occasional failures prior to 2000. Analysis of sediment contamination in the Pasquotank River near Elizabeth City indicated elevated concentrations of metals and pesticides.

The surface waters within this sub-basin are fully supporting designated uses or not rated based upon recent Division of Water Quality monitoring. However, monitoring data revealed some impacts to water quality. While the *2002 Basinwide Water Quality Plan* recommended no required action, voluntary implementation of Best Management Practices is encouraged and continued monitoring is recommended.

The *2002 Basinwide Plan* noted that there are indications that urban storm water runoff may be adversely affecting water quality in the Pasquotank River near Elizabeth City. Chronic overflows to Knobbs Creek from the Elizabeth City wastewater treatment plant were noted as a possible source. The Division of Water Quality determined the overflows did not warrant a Special Order by Consent and concluded that the facility has maintenance issues with insufficient operational oversight.

Sub-basin 03-01-52. The *January 2002 Basinwide Assessment Report for the Pasquotank River Basin* noted that non-point source runoff seems to be the greatest problem in this sub-basin. The non-point source pollution potential from cropland was determined to be moderate to high.

The Little River, from its source to the mouth of Halls Creek, is currently rated as partially supporting due to low dissolved oxygen levels. The rating refers to whether the classified uses of the waterbody (the Little River is classified as C, Sw) are being fully supported, partially supported, or are not supported. A summary description of surface water classifications and the classifications of

waters within Pasquotank County is provided in Appendix F. Potential sources included land development, non-irrigated crop production, off-farm animal holding/management areas, land development and septic systems. Swamp conditions combined with agricultural runoff were thought to be contributing to the low dissolved oxygen levels. The *2002 Basinwide Plan* stated that the Division of Water Quality will determine if the low dissolved oxygen in the Little River is due to natural conditions or other causes. The Division of Water Quality will continue to develop biocriteria to better assess use support in waters with swamp characteristics. Special attention to impacts to identified basinwide local primary nursery areas was recommended. Growth management was determined to be imperative to maintain good water quality.

The surface waters within this sub-basin are fully supporting designated uses or not rated based upon recent Division of Water Quality monitoring. However, monitoring data revealed some impacts to water quality. While the *2002 Basinwide Water Quality Plan* recommended no required action, voluntary implementation of Best Management Practices is encouraged and continued monitoring is recommended.

Growth management techniques for mitigating the negative impacts of land development on water quality include limiting the amount of impervious cover and retaining and restoring vegetated riparian buffers and wetlands. A wetlands restoration project for portions of the two sub-basins is targeted by the North Carolina Ecosystem Enhancement Program (NCEEP). A Local Watershed Restoration Plan is currently underway that will identify wetland areas, contiguous reaches of stream, and contiguous strips of buffer vegetation that, once restored, will provide significant water quality and other environmental benefits. The NC Ecosystem Enhancement Program is a non-regulatory program established by the NC General Assembly in 1996 to restore wetlands, streams and streamside (riparian) areas throughout the state. The goals of the NCEEP are to:

- Protect and improve water quality by restoring wetland, stream and riparian area functions and values lost through historic, current and future impacts.
- Achieve a net increase in wetland acreage, functions and values in all of North Carolina's major river basins.
- Promote a comprehensive approach for the protection of natural resources.
- Provide a consistent approach to address compensatory mitigation requirements associated with wetland, stream, and buffer regulations, and to increase the ecological effectiveness of compensatory mitigation projects

The *Pasquotank River Local Watershed Plan*, 2003 inventoried existing watershed conditions in a 454.5 square-mile area that includes portions of Pasquotank County and all of the City of Elizabeth City. A discussion of the findings of the Plan and recommended strategies for improving and protecting watershed function related to water quality, hydrology, and habitat is provided in Section 3.3.5.

B. Impaired Waters

Section 303(d) of the Clean Water Act requires states to develop a list of waters not meeting water quality standards or which have impaired uses. Listed waters must be prioritized and a management strategy or total maximum daily load must subsequently be developed for all listed waters.

The 2004 North Carolina 303(d) Impaired Waters List includes 11.8 miles of the Little River, located within sub-basin 03-01-52, from its source to the mouth of Halls Creek. The impaired use is aquatic life propagation and the reason for the listing is low dissolved oxygen. Potential sources for this impairment include non-irrigated crop production, off-farm animal holding/management area, land development, and onsite wastewater systems. This particular waterbody has been listed as impaired since 1998. No waterbodies within sub-basin 03-01-50 are listed as impaired.

C. Closed Shell fishing Areas

The North Carolina Shellfish Sanitation and Recreational Water Quality Section of the Department of Environment and Natural Resources is responsible for protecting 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 which process shellfish and crustacean for sale to the general public. Waters are sampled regularly and closed if levels of fecal coli form indicate that harvesting shellfish from those waters could cause a public health risk.

Closed shell fishing areas in the waters in Pasquotank County include New Begun Creek, Halls Creek, Symonds Creek, Big Flatty Creek, the Pasquotank River from north of Elizabeth City to New Begun Creek, and Little River from Halls Creek to Big Flatty Creek. Closed shell fishing areas are delineated in Figure 2, Natural Features Map. These waters have been closed to shell fishing for many years. There are no major productive shell fishing areas in Pasquotank County.

Land uses that potentially adversely impact shell fishing waters include the conversion of undeveloped and underdeveloped land to more intensive land uses, wastewater treatment plants, industrial uses, and the intensive urban development in and near the downtown waterfront. Increased storm water runoff from developed uses also can adversely impact shell fishing waters.

D. Natural Hazards

The table below provides information concerning the major hurricane and tropical storms that have impacted the Pasquotank County area since 1950:

*Table 32
Hurricane and Tropical Storm Events 01/01/1950 to 02/29/2004*

Pasquotank County								
Name	Date	Time	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
Bertha	7/12/1996	5:00 PM	Hurricane	N/A	0	0	200K	30K
Fran	9/5/1996	6:00 PM	Hurricane	N/A	0	0	1.0M	0
Josephine	10/7/1996	6:00 PM	Tropical Storm	N/A	0	0	100K	0
Bonnie	8/26/1998	8:00 PM	Hurricane	N/A	1	0	13.4M	0
Dennis	9/1/1999	12:00 AM	Hurricane	N/A	0	0	35K	0
Floyd	9/15/1999	12:00 PM	Hurricane	N/A	0	0	12.0M	63.4M
Irene	10/17/1999	4:00 PM	Hurricane	N/A	0	0	31K	0
Isabel	9/18/2003	3:00 AM	Hurricane/typhoon	N/A	1	0	16.9M	0
Totals:					2	0	43.666M	63.430M

Source: National Climatic Data Center, July 2004

In addition to the hurricane and tropical storms that have impacted the Pasquotank County area since 1950, other major weather-related events include thunderstorm wind and high winds (52), hail (12), tornados (11), winter storms (10), and floods (5).

Both Pasquotank County and Elizabeth City participate in the National Flood Insurance Program by adopting and enforcing floodplain management ordinances to help reduce future flood damage. In exchange, the National Flood Insurance Program makes Federally-backed flood insurance available to homeowners, renters, and business owners. As of December 2003, there were 976 National Flood Insurance Program policies in force within the Elizabeth City jurisdiction and 622 within the County's jurisdiction. The amount of the policies totaled \$100.2 million in Elizabeth City and over \$89.9 million within the County. According to loss statistics data from the Federal Emergency Management Agency (FEMA) for the period January 1978 to December 2003, 162 claims were filed in Elizabeth City and the amount of payments made totaled approximately \$1.43 million. During the same time period, 116 claims were filed in Pasquotank County and over \$552,000 in payments were made.

The *Pasquotank County/Elizabeth City Hazard Mitigation Plan*, July 2005, identifies and analyzes natural hazards, evaluates vulnerability to natural hazards, assesses the county and City's capability to mitigate the effects of natural hazards, and outlines mitigation strategies and policies.

The Pasquotank County and Elizabeth City hazard mitigation goals, as outlined in the Hazard Mitigation Plan, are to:

- To regulate the location and type of development to mitigate the effects of natural hazards and promote public safety.
- To provide for open space and other natural areas in areas vulnerable to hazards.
- To provide for protection of critical institutions and infrastructure from the effects of natural and technological hazards.

- To accommodate future growth in disaster-resistant areas.

As part of the Hazard Mitigation Planning process, Critical Facilities were identified within Pasquotank County and the City of Elizabeth City essential to the health, safety and viability of the community. These are buildings, services and utilities without which residents and businesses cannot survive for long. Each facility has a brief summary, contact, description of its crucial role and estimated replacement value. Critical Facilities located in areas that are particularly vulnerable to flooding and damages from hurricanes have been identified from past history and geographic location. Future development of Critical Facilities includes a new Public Safety Building which will house the Pasquotank-Camden 911 Center and Emergency Management Agency and the Pasquotank Sheriff Office to be located at Colonial and Poole Street in Elizabeth City. Also under development is a new Albemarle District Jail to be relocated at the Pasquotank Commerce Park off U.S. 17 North.

The Critical Facilities identified in the Hazard Mitigation Plan include:

- A. Parker Midgette Building
- Albemarle District Jail
- Albemarle Hospital
- Albemarle Regional Health Services
- American Red Cross
- Camden Causeway Bridge/Bridges
- College of the Albemarle
- Elizabeth City Fire Department-Station 1
- Elizabeth City Fire Department-Station 2
- Elizabeth City – Pasquotank Regional Airport
- Elizabeth City/Pasquotank School Administrative Offices
- Central Elementary School
- Elizabeth City Middle School
- H.L. Trigg Community School
- J.C. Sawyer Elementary School
- Northside Elementary School
- Pasquotank Elementary School
- Pasquotank High School
- P.W. Moore Elementary School
- Northeastern High School
- River Road Middle School
- Sheep-Harney Elementary School
- Weeksville Elementary School
- Elizabeth City Police Department
- Elizabeth City Public Utilities
- Elizabeth City State University
- Food Bank of the Albemarle
- H. Rick Gardner Building (Elizabeth City Administrative Offices)
- K.E. White Continuing Education Center
- Knobbs Creek Recreation Center
- National Guard Armory
- NC Department of Transportation
- NC Department of Forestry District 7 Office
- NC Dominion Power
- Pasquotank-Camden Central Communications
- Pasquotank-Camden Emergency Management
- Pasquotank-Camden Emergency Medical Services
- Pasquotank Correctional Institution
- Pasquotank County Center of Cooperative Extension Service
- Pasquotank County Courthouse (Pasquotank Administrative Offices, Sheriff Office, & Tax Assessor Office)
- Pasquotank County Water Department
- Pasquotank-Newland Volunteer Fire Dept.
- Pasquotank-Nixonton Volunteer Fire Dept.
- Pasquotank-Providence Volunteer Fire Dept.
- Pasquotank Social Services
- Roanoke Bible College
- Salvation Army
- Weeksville Volunteer Fire Dept. (Soundneck Substation)

A map delineating the general location of the Critical Facilities is provided in the Hazard Mitigation Plan.

Implementation actions and strategies contained in the Hazard Mitigation Plan specifically related to land use planning include:

- Amend the Pasquotank County Flood Damage Prevention Ordinance and the Elizabeth City Flood Hazard Overlay requirements to increase the minimum lowest floor elevation of structures located within flood hazard areas to 1 feet above the base flood elevation.
- Minimize construction of impervious surfaces within the floodplain.
- Zoning ordinances should incorporate shoreline vegetation buffers as a stipulation to development in and near Areas of Environmental Concern (AEC).
- Amend the zoning ordinances to include regulations for underground chemical and gasoline storage tanks
- Revise the zoning and subdivision ordinances to increase lot sizes in areas with poor soils.
- Amend the zoning ordinances to require lightning detection devices in public outdoor gathering areas such as school stadiums and ball fields.
- Amend the zoning ordinance to require storm shelters in all mobile home areas and subdivisions.

Areas of repetitive flooding that have been identified by the Emergency Management Coordinator include the following:

Northern Portions of Pasquotank County

- Property extending along Millpond Road to approximately 4/10 mile along Morgan's Corner Road.
- Property extending along Blindman Road.
- Property extending along US Highway 158 West beginning approximately 3/10 mile east of Blindman Road to the Gates County line.
- Property extending along Lynch's Corner Road.
- Property extending along Tadmore Road, Long Lane and Upriver Road.
- Property extending along Lambs Grove Road and Temple Road
- Property extending along Crooked Run Road from its intersecting point at Fire Tower Road including property along Palmer Drive and Wet Patch Road.

Southern Portion of Pasquotank County

- Property extending along Halls Creek Road from Four Forks Road to Old US 17 South.
- Property extending along Twiford Road, Commander Road, Sawmill Road and extending to areas along Salem Church Road and into the lower lying areas just a few hundred feet into Griffin Swamp Road.

- Property extending along Weeksville Road from its intersecting point with Peartree Road and Salem Church Road to approximately 2/10th mile south of Ball Road.
- Property extending along Soundneck Road from its intersecting point with Esclip Road, including property along Frog Island Road and property located within Glen Cove subdivision.

City of Elizabeth City

- Property extending along the following roads:
 - A Street
 - Agawam Street
 - Albemarle Street
 - B Street
 - Barlett Avenue
 - Boston Avenue
 - Brooks Avenue
 - Cahoon Lane
 - Cale Street
 - Camden Avenue
 - Catalina Avenue
 - Cedar Street
 - Cobb Street
 - Culpepper Street
 - Dawson Street
 - E. Church Street
 - E. Colonial Avenue
 - E. Main Street
 - Elliot Street
 - Fairfax Avenue
 - Flora Street
 - Goodwin Avenue
 - Grice Street
 - Hampton Drive
 - White Street
 - Witherspoon Street
 - Wood Street
 - Hunter Street
 - Jones Avenue
 - Madrin Street
 - Massachusetts Avenue
 - Morgan Street
 - North & South Dyer Street
 - North & South Martin Street
 - Park Street
 - Perquimans Avenue
 - Pool Street
 - Preyer Avenue
 - Raleigh Street
 - Riverside Avenue
 - Roanoke Avenue
 - Robbins Avenue
 - Shannon Street
 - Shephard Street
 - Southern Avenue
 - Spellman Street
 - Tatem Lane
 - Tuscarora Avenue
 - Walston Street
 - Wareham Street
 - Washington Street

See also section 3.4.4 C Existing Drainage Problems for streets that are not within the 100-year floodplain, but still have drainage problems.

E. Natural Resources

Environmentally fragile areas and natural resource areas that may be impacted as a result of incompatible development are delineated in Section 3.2.1. Identified environmentally fragile areas include AEC, flood hazard areas, storm surge areas, non-coastal wetlands, and public water supply watersheds. Natural resource areas include prime farmland areas and Significant Natural Heritage Areas.

F. Summary of Limitations on and Opportunities for Development

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 to evaluate the suitability of a particular parcel for a septic system. Encouraging good site planning principles and Best Management Practices can assist with mitigating the impacts of land development on environmentally fragile areas.

Development within the designated Areas of Environmental Concern (AEC) 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 given to the conservation of these AECs. The CAMA standards for estuarine shoreline development generally require that: (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% 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 are also well suited to urban uses. The loss of prime farmland to other land uses is anticipated to continue particularly on the immediate periphery of the Elizabeth City urban area where more intensive growth is also well 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. Mechanisms such as the establishment of voluntary agricultural districts can also 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 subdivision 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 potential for sand, rock, and gravel deposits suitable for extraction is limited in Pasquotank County. According to ratings made by the Natural Resources Conservation Service of soils as a source of sand and gravel, all of the soils in Pasquotank County are rated as 'fair' or 'poor' as a sand source and all of the soil classifications are rated as 'poor' as a gravel source. Currently, there are twenty-nine excavation operations within the county. DEHNR's mining permit inventory lists seventeen active sand and gravel mining permits that involve a total of 407 permitted acres.

According to *Forest Statistics for North Carolina, 2002*, 41,000 acres (or approximately 38%) of Pasquotank County's total land area is forest land. Of that total amount of timberland, 13,600 acres (33%) is owned by the forestry industry, 5,300 acres (13%) is owned by the State of North Carolina, and 22,100 acres (54%) is in non-industrial, private ownership.

3.3 Analysis of Land Use and Land Development

Subchapter 7B .0702(c)(3) requires that the land use plan describe and quantify existing land use patterns, identify potential land use and land use/water conflicts, determine future development trends, and project future land needs.

3.3.1 Existing Land Use Analysis

Section 3.3.1 provides a description and analysis of existing land uses in Pasquotank County and Elizabeth City as well as maps of existing land use patterns.

A. Pasquotank County

The major amount of developed land in Pasquotank County outside of the Elizabeth City planning and zoning jurisdiction is located immediately on the fringe of Elizabeth City and along the US 17 Business corridor. Elsewhere, developed lands are comprised primarily of widely scattered residential subdivisions and clusters of low density residential development at crossroad communities like Morgan's Corner, Weeksville, and Nixonton and along the Pasquotank River and Little River waterfronts. Single-family detached residences and manufactured homes on individual lots are the most predominant types of developed land uses. Farmland is scattered throughout the County and developed land uses are oftentimes randomly interspersed with agriculturally-used tracts.

Residential. Residential land uses consist primarily of single-family detached dwellings and manufactured homes on individual lots. Pockets of low density residential development are located on the northwest fringe of Elizabeth City off of Main Street Extension, adjacent to the US 17 Business North and the US Highway 17 South corridors, and along the Pasquotank River waterfront southeast of the US Coast Guard Base. Other concentrations of low density residential development are widely scattered throughout the southeastern peninsula of the County, particularly along the

Pasquotank and Little River waterfronts. Existing low density residential ranges from less than 1-2 dwelling units per acre. Existing medium to high density residential ranges from approximately 3-8 units per acre.

Commercial. The overwhelming majority of commercially-used land is located along the US 17 corridor southeast and northwest of Elizabeth City. These commercial corridor areas contain retail, personal and business services, and office uses. A very small amount of commercial property is located in the Morgan's Corner and Lynch's Corner crossroad communities.

Institutional/Public. The largest institutional land use is the U.S. Coast Guard Base and the Elizabeth City-Pasquotank County Regional Airport property located southeast of Elizabeth City adjacent to NC Highway 34. Other institutional land uses include the Pasquotank Correctional Institute at Commerce Park, public schools, churches and places of worship, and cemeteries. The northwest tip of the County is within the Dismal Swamp National Wildlife Refuge.

Industrial. The largest concentration of industrial uses is located in the Pasquotank County Commerce Park in the southeast quadrant of the US 17 Business and US 17 Bypass intersection. Widely scattered single-parcel industrial uses are located in several portions of the County. There are no water-dependent industrial uses within the County's planning jurisdiction.

Agricultural. The majority of large agriculturally-used tracts are located in the west central portion of the County. Farmland is scattered throughout much of the northeastern and southeastern portions of Pasquotank County. Several large-scale confined animal feeding operations are located in the County.

Forestry. The forestry category includes general areas identified in aerial photographs that are predominantly forested. There are no significant commercial forestry operations within the County's planning jurisdiction.

Undeveloped. Undeveloped and underdeveloped properties are widely scattered throughout much of the County. Much of the undeveloped land is within floodplains and wetlands areas. The majority of the vacant tracts are currently zoned as A-1 or A-2, Agricultural. Most of the vacant tracts have potential for low density residential development.

*Figure 4A: Pasquotank County Existing
Land Use Map*

B. Elizabeth City

Elizabeth City, being a commercial, governmental, and housing center for the region, contains a wide variety of developed land uses. Residential uses are more varied and include a wider range of density types. The City also contains a higher intensity of nonresidential land use.

Residential. The City contains a variety of residentially-used properties. Most of the medium and high density residential development surrounds the downtown area and is generally bounded by Ward Street on the north, the Pasquotank River on the east, Halstead Boulevard/NC 34 on the south, and Hughes Boulevard on the west. Five nationally registered historic districts comprise much of the medium density residential development. These districts include the Main Street Residential District, Northside Historic District, Shepard Street-South Road Street Historic District, Riverside Historic District, and Elizabeth City State Teachers College Historic District. Other medium and high density residential properties include scattered multifamily developments and manufactured home parks. Existing low density residential ranges from 1-5 dwelling units per acre. Existing medium to high density residential ranges from approximately 7-20 units per acre.

Low density residential properties are situated on the periphery of the medium and high density residential area described above and include numerous scattered subdivision developments. Major low density residential areas are located off of Parkview Drive, Rivershore Road, Main Street Extension, Forest Park Road, Oak Stump Road, and Peartree Road.

Commercial. Retail, personal services, and business services are concentrated in the downtown area and adjacent to major highways—Hughes Boulevard, Ehringhaus Street, and Halstead Boulevard. Major retail shopping facilities are located in the eastern and southern quadrants of the Ehringhaus Street/Halstead Blvd. intersection and at the intersection of Hughes Boulevard and Ehringhaus Street.

A portion of the downtown area is within the Main Street Commercial Historic District. The downtown area contains a mixture of commercial, office, institutional, and public land uses. Several marine commercial service businesses are located along the Pasquotank River waterfront in the downtown/Camden Causeway area.

Institutional/Public. Major institutional uses include public facilities such as Elizabeth City State University, Albemarle Hospital, College of the Albemarle, Museum of the Albemarle, municipal parks and recreational facilities, City and County governmental offices and facilities, and public schools. Private institutional uses include the Roanoke Bible College, numerous churches and places of worship, and cemeteries.

Industrial. The majority of the industrially-used land is located north of Ward Street and along Knobbs Creek Drive; along the US 17 Business corridor from Elizabeth Street to Knobbs Creek; in the Elizabeth City-Pasquotank County Industrial Park between NC 34 and the CSX Railroad; north and

southeast of the central business district; and at the US 17 Industrial Park at George Wood Drive. Due to wetlands and CAMA regulations, development along the waterfront is limited. Currently, there are very limited water-dependent industrial uses: one use consists of a barge shipping raw materials; another use is a boatyard.

Undeveloped. Large tracts of undeveloped and/or underdeveloped land exist within the City's ETJ north of Knobbs Creek Road, along the northeast and southwest sides of Parsonage Street Extension, between Main Street Extension and West Church Street Extension, and in the southwestern, southern, and southeastern fringes of the ETJ. However, much of this undeveloped land is located within the floodplains of the Pasquotank River, Knobbs Creek, and Charles Creek or within wetlands areas and, therefore, presents constraints for future development. Undeveloped acreage along Wellfield Road is within the City's wellfield protection area. A small amount the undeveloped acreage within the City's ETJ is actively used for agricultural purposes, particularly in the northwestern and southeastern portions of the ETJ. The majority of the vacant tracts are currently zoned R-15, Residential. Most of the vacant tracts have potential for low to medium density residential development. Vacant parcels along the US Highway 17 Business corridor are primarily zoned as GB, General Business; HB, Highway Business; and I-2, General Industrial. The vacant parcels in the Camden County portion of Elizabeth City along US Highway 158 are zoned as CMU, Causeway Mixed Use.

C. Historic, Cultural, and Scenic Areas

Elizabeth City has six National Register historic districts -- Northside, Shepard-South Road Street, Riverside, Elizabeth City State Teachers College, Elizabeth City, and Expansion to the Elizabeth City. Two these districts, the Elizabeth City and Expanded Elizabeth City are also local historic districts and are overseen by the Elizabeth City Historic Preservation Commission for the purposes of protecting and conserving the heritage of Elizabeth City. The additional districts are recognized by the National Register for their landmarks, resources, and connection to the City's past. To the extent that City staff is able to work with property owners and preservationists, effort is made to protect, preserve, enhance and promote the historic character of these additional historic neighborhoods, structures and resources. The locations of the historic districts are shown in Figure 4C.

A comprehensive survey of Pasquotank County and Elizabeth City resulted in the publication in 1989 of an architectural survey entitled, *On the Shores of the Pasquotank: The Architectural Heritage of Elizabeth City and Pasquotank County in 1989*. Pasquotank County listings in the National Register of Historic Places include the following properties and districts (the date given is the date listed in the National Register).

Figure 4B: Elizabeth City Existing Land Use Map

Figure 4C: Elizabeth City Existing Historic Sites Map

Elizabeth City Historic District
(Elizabeth City) 10/18/1977

Elizabeth City Water Plant
(Elizabeth City) 3/4/1994

Elizabeth City Historic District
Boundary Expansion
(Elizabeth City) 3/7/1994

Elizabeth City State
Teachers College Historic
District (Elizabeth City)
2/28/1994

Episcopal Cemetery
(Elizabeth City) 4/21/1994

Grice-Fearing House
(Elizabeth City) 10/18/1977

Morgan House (Morgan's
Corner) 2/1/1972

Newland Road (nine ft brick
rd) Site 31PK5 (Archaeology)
(Providence) 4/14/1983

Norfolk Southern Railroad
Passenger Station (Elizabeth
City) 2/25/1994

Northside Historic District
(Elizabeth City) 3/4/1994

Old Brick House (Elizabeth
City) 3/16/1972

Riverside Historic District
(Elizabeth City) 3/11/1994

Shepard Street-South Road Street Historic District (Elizabeth City) 3/11/1994

Elizabeth City boasts a rich architectural history within its six nationally recognized historic districts. These districts contain excellent examples of Victorian, Antebellum, Greek, Gothic, Federal, and Italianate Revival Styles. Elizabeth City currently has one locally designated Historic District, which is comprised of portions of the West Main Street District and the Downtown District. The purpose of the locally designated District is to assist in the protection of important social, economic, cultural, architectural and historical elements within the City by regulating all exterior changes for properties within its boundaries.

Issues and concerns regarding historic preservation include:

- New structures have been built with little sensitivity to their context with the surrounding environment.
- There are a high percentage of residential structures within the City that are not owner occupied. Many of these residences are historic structures which are poorly maintained and have a higher density than is allowed by current zoning regulations.

The City's historic preservation objectives include:

- Protect historic properties, while promoting their rehabilitation and use.
- Facilitate and support the revitalization of neighborhoods and the downtown business district.
- Promote the use of landscaping and preserve existing trees to improve community appearance.
- Utilize and enhance the waterfront for the enjoyment of citizens and visitors alike.

Recommended implementation strategies to assist with historic preservation efforts include:

- Support the locally designated Historic District and National Register Districts.
- Seek state and federal grant monies for historic preservation and community revitalization.
- Develop a public education outreach program utilizing the City's public access channel, educational materials on preservation techniques, and an internet site featuring information on the locally designated Historic District.
- Support the adoption of stronger minimum housing standards and a demolition by neglect ordinance.
- Strengthen sign regulations and increase enforcement activities.
- Encourage new construction to reflect the context and character of the existing neighborhood and the adaptive reuse of existing buildings.
- Continue relationships with organizations that promote historic preservation in the community including the Elizabeth City Historic Neighborhood Association, Elizabeth City Downtown, Inc., Museum of the Albemarle, and Preservation NC.
- Enhance historic neighborhoods with streetscape and infrastructure improvements consistent with period and style.
- Update the inventory of all historic properties within the City's jurisdiction.

The North Carolina State Historic Preservation Office inventory contains information on almost 100 prehistoric and historic archaeology sites in Pasquotank County. Activities have included an archaeological survey of the county in which numerous sites were identified and assessed. Twenty-three shipwrecks located in Pasquotank County were recorded in 1984.

No officially designated scenic areas existing within the planning areas.

D. Agricultural Land Use

Based upon information in the 2002 Census of Agriculture, the total number of farms in Pasquotank County has decreased since 1997 but the number of acres devoted to farming and the average farm size has increased. Approximately 95% of the farmland in Pasquotank County is devoted to crop production compared to 60% statewide. Major crops produced in the County include soybeans, corn, wheat, and potatoes. The following table provides a comparison of agricultural statistics for Pasquotank County and the State of North Carolina.

Table 33 Agricultural Profile						
	Pasquotank County			North Carolina		
	2002	1997	% Change	2002	1997	% Change
No. Farms	157	203	-23%	53,930	59,120	-9%
Ac. In Farms	99,432	87,701	+13 %	9,079,001	9,444,867	-4%
Av. Farm Size	633 ac.	432 ac.	+47%	168 ac.	160 ac.	+5%
Market Value of Production	\$34.6m	\$33.3m	+4%	\$6,961.6m	\$7,832.4m	-11%
Government Payments	\$1.7m	\$0.8m	+121%	\$97.7m	\$52.5m	+86%

Source: Census of Agriculture, 2002

E. Downtown Waterfront Development

The downtown area is one of the oldest parts of Elizabeth City and covers the original site of the town. As with many cities across the nation, it has experienced the problem of deterioration and flight from the downtown area. However, Elizabeth City has continued to experience a healthy downtown mix and an active business community. Having its beginnings on the banks of the Pasquotank River, at one time it was a thriving port community, Elizabeth City's downtown today is a scenic but underutilized waterfront, and is faced with important questions concerning future growth and development. There is a great potential for economic enhancement by fully utilizing its waterfront. Therefore, the City must carefully consider the options available for managing its precious shoreline resources.

With the financial assistance of a CAMA grant, the City hired Allison Platt & Associates to create a waterfront master plan. The *Elizabeth City Waterfront Master Plan, June 2001* was prepared as a framework for redevelopment of the waterfront over a 5-10 year period. The Waterfront Plan has not been officially adopted by the City. The study area for the Waterfront Plan included Water Street from the backs of buildings on the west side of Water Street to the river, from the Camden Causeway bridge to the intersection of Water Street with Riverside Avenue/Shepard Street, and then east from there along both side of Riverside Avenue to the end of the marina property. Figure 4B shows the general location of the waterfront study area. The majority of the downtown waterfront is located within a historic district which would impact redevelopment in the area with regards to historic preservation.

The Waterfront Master Plan included a review of waterfront strengths, issues, and existing land use patterns, including an assessment of pedestrian and public access. A summary of the inventory and analysis section of the Plan includes the following revitalization strategies:

- Current development and property ownership patterns make it impossible to create a continuous waterfront promenade. Therefore, Water Street should be improved to become the principal

- waterfront pathway;
- Waterfront walkways should be extended to the maximum extent possible, and future opportunities to acquire rights-of-way should be pursued;
- Gateways should be installed at the intersections of Water Street with Ehringhaus and Elizabeth Streets;
- Walkways from Water Street to the water should be improved to bring people to the water's edge; and
- All vacant land underutilized properties (parking, vacant land and buildings, and underutilized buildings shown in the drawing as orange stripes) should be considered as potential sites for new development that will add to the life of the waterfront.

The Waterfront Master Plan included basic recommendations that represent possible revitalization opportunities. The Plan was intended as a guide to solidify community support for goals, objectives, and implementation strategies for redevelopment of the waterfront area. The basic elements of the Plan included the following recommendations:

- Two sites in particular are recommended for development. The first site is in the center of the waterfront immediately south of Main Street. The plan recommends a mixed-use project for this site including retail, restaurant, and residential. The second site includes the municipal parking lots on the northwest corner of Ehringhaus and Water Streets, across from the Museum of the Albemarle. On the southern portion of this site, a conference center/hotel and open space is recommended. The northern portion of the site could become a mixed use project including retail and restaurants on the ground floor and office or residential above. Each of these sites was chosen because of its key location and also because the City controls a significant portion of the properties involved, making redevelopment easier to manage.
- The second site includes the use of a canal to solve an ongoing flooding problem. This canal would be designed to become an open space amenity.
- Other sites along Water Street and the marina site on Riverside Avenue are also recommended for redevelopment as opportunities arise.
- A public boating center is recommended to be built in the park to the south of the Waterworks. This could also include a museum, display, or 'living classroom' arrangement to educate visitors about the maritime history of Elizabeth City.
- Water Street is shown as the main pedestrian waterfront pathway. To accomplish this, major improvements are needed along Water Street from Elizabeth Street to Shephard Street.
- In order to improve Water Street, the overhead electrical lines should be consolidated or removed.
- The rights-of-way between Water Street and the waterfront should become pedestrian priority. All vehicles should be discouraged from entering this area except those requiring access for delivery or

- parking near residential buildings.
- Parking on the public and private properties adjacent to the Waterfront needs to be reorganized in a major way. Wherever possible, parking should be designed so that it takes up the minimum footprint possible along the street. For instance, where parking bays are located parallel to the street, they should be moved so they are perpendicular to the street and screened from both the waterfront and the street. In other locations parking should be relocated to a site a little further from the water.
- Gateways should be established at the two 'ends' of Water Street: the intersection with Elizabeth Street and the intersection with Ehringhaus Street.
- Planned improvements to the intersections of Water Street with Ehringhaus, Main, and Elizabeth Streets should be treated similarly to the intersection of Poindexter and Fearing in order to slow down traffic and improve safety for pedestrians.
- Waterside access should be extended as far as possible within the current constraints of private ownership, and as opportunities arise in the future, additional rights-of-way for waterside access should be obtained.
- Any new development should be carefully considered in order to ensure that it adds to the synergy of the waterfront. To accomplish this, it is recommended that development controls be put in place to give the City leverage to negotiate appropriate development..

Activities and strategies that have been implemented since the preparation of the Waterfront Plan include the completion of a beautification project on Main Street. Future downtown waterfront activities include the development of a conference center.

3.3.2 Estimates of Land Area by Land Use Category

Jurisdiction	Sq. Miles	Acres	% Acres
Elizabeth City Planning Jurisdiction*	18.5	11,837	8%
Pasquotank County Planning Jurisdiction	208.29	133,306	92%
Total Pasquotank County	226.79	145,143	100%
Elizabeth City Corporate Limits**	8.86	5,672	4%
Unincorporated Pasquotank County	217.94	139,471	96%
Total Pasquotank County	226.88	145,143	100%

* Includes 57 acres located within the Camden County causeway

** Includes 48 acres located within the Camden County causeway

Table 35
Existing Land Use Calculations

Land Use Category	Elizabeth City Planning Jurisdiction		Pasquotank County Planning Jurisdiction		Totals	
	Acres	%	Acres	%	Acres	%
Residential	2,180	18%	4,460	3%	6,640	5%
Commercial	487	4%	710	1%	1,197	1%
Industrial	216	2%	790	1%	1,006	1%
Public and Institutional	1,164	10%	1,220	1%	2,384	2%
Agriculture	0	0.0%	57,966	43%	57,966	40%
Forestry	0	0.0%	37,730	28%	37,730	26%
Confined Feeding Operations	0	0.0%	210	0%	210	0%
Undeveloped*	7,790	66%	30,220	23%	38,010	25%
Totals**	11,837	100.0%	133,306	100.0%	145,143	100%

Source: The Wooten Company, 2004

* Includes vacant developable land as well as land subject to flood hazard, wetlands, etc.

** Totals include road rights-of-way and water areas

3.3.3 Description of Land Use and Land Use/Water Quality Conflicts

The following have been identified as existing conflicts that exist in some sections of Pasquotank County and Elizabeth City.

- Conversion of agricultural and forested land into residential and other more intensive land uses.
- Small lot development in areas with soils that have major limitations for subsurface septic systems.
- Loss of natural buffers adjacent to streams and waterbodies as land is developed into more intensive land uses.
- Encroachment of incompatible land uses in the vicinity of the Coast Guard Base and airport.
- Intensive land development within 100-year floodplains.
- Loss of potential public water access as land development occurs.
- Blighting influence of dilapidated structures on surrounding land uses.

3.3.4 Description of Development Trends

Between 1996 and 2003, Pasquotank County averaged over 232 residential building permits per year, with the highest number being issued in 2003 and the lowest, in 1997. Manufactured homes accounted for approximately 58% of all new residential permits issued during this time. No multi-family dwellings were constructed within the County's planning jurisdiction between 1996-2003.

During the same time period, the City of Elizabeth City averaged over 91 residential permits per year in addition to seven duplexes, 13 multi-family units, and five transient buildings with a total of 418 rooms. . The highest number was issued in 1996 and the lowest, in 2000. Single-family residences accounted for approximately 71% of all new residential permits issued during this time period.

The subdivision lot approval records from Pasquotank County indicate that the County averaged approximately 174 new residential building lots and 8 nonresidential lots between 1996 and 2003. Elizabeth City averaged approximately 190 new residential lots and 92 nonresidential lots during the same period.

Within Pasquotank County, the townships immediately on the fringe of the City of Elizabeth City have experienced the most recent growth and development. Between 1990 and 2000, the fastest growing townships were the Providence (40.0% increase) and Nixonton (20.5% increase) Townships. The townships with the lowest growth rates from 1990 to 2000 were the Elizabeth City (-4.22%) and Salem (-0.99%) Townships which actually lost population during this time period. The Providence, Nixonton, and Mount Hermon townships encompass over three-fourths of the total 2000 County population. Township boundaries are shown in Figure 1, General Location Map.

The Providence, Nixonton, and Mount Hermon townships are the areas expected to experience the most new development within the next five years. Some of the most intensive new residential development is anticipated within the general area bordered by the US 17 Bypass, North Road Street, Hughes Boulevard, and US 17 Business South. Existing patterns of land development and existing support infrastructure, such as roads and utilities, make these areas more conducive to future growth and development.

New industrial development is anticipated primarily in the Tanglewood Industrial Park which is generally located west of the US Highway 17 Bypass in the vicinity of the Halstead Boulevard Connector interchange. Future commercial development is expected along the Halstead Boulevard Connector, along the US 17 Business South corridor, and in the vicinity of the intersection of US 17 and US 158.

Within the Elizabeth City planning jurisdiction, the northwestern, western, and southwestern fringes of the current corporate area are expected to experience the majority of the new development within the next five years.

The following table provides data concerning the types and numbers of residential building permits issued and the types and numbers of new subdivision lots created during the period 1996 to 2003.

Table 36
Subdivision Lots Created/Building Permits Issued, 1996-2003

Pasquotank County							
Subdivision Lots				Residential Building Permits			
Year	Residential	Nonresidential	Total	Year	SFR	Mfg. Homes	Total
1996	110	0	110	1996	96	134	230
1997	215	4	219	1997	86	106	192
1998	204	2	206	1998	98	117	215
1999	109	1	110	1999	81	153	234
2000	175	34	209	2000	65	163	228
2001	163	12	175	2001	80	143	223
2002	283	4	287	2002	116	125	241
2003	134	5	139	2003	166	132	298
Total	1393	62	1455	Total	788	1073	1861
Average	174.1	7.8	181.9	Average	98.5	134.1	232.6
<i>Source: Pasquotank County</i>							
Elizabeth City							
Subdivision Lots				Residential Building Permits			
Year	Residential	Non-Residential	Total	Year	SFR	Mfg. Homes	Total
1996	191	127	318	1996	82	59	141
1997	204	127	331	1997	63	38	101
1998	218	123	341	1998	62	22	84
1999	172	103	275	1999	46	32	78
2000	161	79	240	2000	49	18	67
2001	192	67	259	2001	54	18	72
2002	193	62	255	2002	80	10	90
2003	185	48	233	2003	80	13	93
Total	1516	736	2252	Total	516	210	726
Average	189.5	92.0	281.5	Average	64.5	26.3	90.8

Source: City of Elizabeth City

3.3.5 Description of Land Use Patterns Within Watersheds

Because land development activities, particularly urban-intensity development, can have an adverse impact on water quality, it is important to assess the intensity of land use patterns within individual watersheds. The Pasquotank County land area is within five 14-digit watersheds as delineated by the Natural Resources Conservation Service of the US Department of Agriculture. A general description of these five watersheds is provided in the table that follows. The general boundaries of these watersheds are depicted on Figures 9A and 9B.

*Table 37
General Characteristics of Watersheds*

Watershed	General Location Within Pasquotank County	Sub-Basin	Total Acres	Percent of Total Acreage	Estimated % of Developed Land Area within Watershed
03010205010020	Northwest	03-01-50	42,430	29.06%	20%
03010205050010	East central, Elizabeth City	03-01-50	47,700	32.67%	45%
03010205060010	South	03-01-52	21,880	14.99%	20%
03010205070010	West central	03-01-52	33,530	22.97%	25%
03010205090010	West	03-01-52	463	0.32%	<1%
Totals			146,003	100.00%	

Source: *The Wooten Company, 2004*

Within the northwest watershed, the most intensive land development (03010205010020) includes a mixture of business and residences along the North Road Street corridor (US 17 Business North) and in the Morgan's Corner area, industrial and commercial uses in the southeastern corner of the intersection of the US 17 Bypass and US 17 Business North at Commerce Park, and widely scattered residences located off of the north and south sides of US 158 corridor. A considerable amount of forested and agricultural land is located within the southern, western, and northwestern portions of this watershed. Also located with this watershed is a portion of the Great Dismal Swamp National Wildlife Refuge and large concentrations of exceptional wetlands. Large portions of this watershed are also within Gates and Camden Counties.

The largest of the five watersheds (03010205050010) is located in east central Pasquotank County and includes the City of Elizabeth City, the urban fringe surrounding the City, and the portion of the southern peninsula draining into the Pasquotank River. By far, this is the most developed of the five watersheds and contains the largest concentrations of intensive land uses. The northern portion of the watershed, with the densely developed Elizabeth City urban area, contrasts with the southern portion which is generally sparsely developed and contains a considerable amount of agricultural land and exceptional wetlands. The Weeksville community is also within the southern section of this watershed. This watershed also extends into southwestern Camden County.

The south watershed (03010205060010), located at the end of the southern peninsula, is also sparsely developed containing many large agriculturally-used tracts and widely scattered residences located primarily along road corridors. The largest concentrations

of developed land uses are located in the Nixonton community and in the Symonds Creek area. This watershed also contains significant wetlands areas. The south watershed is the only one of the five watersheds that is located entirely within Pasquotank County.

The west central watershed (03010205070010) contains a large cluster of existing residential land uses in the Mount Hermon community and some scattered commercial uses along the US 17 corridor. The majority of other developed land uses in this watershed consists of scattered residences located primarily along road corridors. The western portion of this watershed contains large concentrations of exceptional wetlands.

The westernmost watershed (03010205090010), containing only a few hundred acres within Pasquotank County, is the smallest of the five watersheds and is almost completely undeveloped. The majority of this watershed is located within Perquimans County.

The *Pasquotank River Local Watershed Plan*, 2003 inventoried existing watershed conditions in a 454.5 square-mile area that includes portions of Pasquotank County and all of the City of Elizabeth City. This Watershed Plan also identified possible solutions to address watershed issues and delineated implementation strategies for improving water quality and protecting the functional capabilities of watersheds. The overall goal of the Watershed Plan project is to measurably improve and protect the watershed functions within the local watershed planning area. The portion of the Plan's watershed planning area located within the scope of the Land Use Plan includes the Great Dismal Swamp, Newland Drainage Canal, Knobbs Creek, Charles Creek, New Begun Creek, Little Flatty Creek, and the Pasquotank River.

Functional assets are areas that currently provide high levels of watershed function in relation to water quality, hydrology, and habitat. Functional assets also exist in areas that contain unique or rare systems that, if lost, could not be easily replaced. Functional assets identified in the Watershed Plan include:

- Watershed areas that have been identified by North Carolina Coastal Region Evaluation of Wetland Significance, or NC-CREWS as being Exceptional Ecological Significance. NC-CREWS, is a watershed-based wetlands functional assessment model that uses geographic information systems (GIS) software and data to assess the level of water quality, wildlife habitat, and hydrologic functions of individual wetlands. The primary objective of the NC-CREWS wetland functional assessment is to provide users with information about the relative ecological importance of wetlands for use in planning and the overall management of wetlands.
- Watershed areas that have been identified by NC-CREWS as being Substantial Ecological Significance
- Watershed areas that have been identified by NC-CREWS as being Beneficial Ecological Significance
- Federal and State park lands present in the watershed
- North Carolina Conservation Land Trust sites along the main stem of the Pasquotank River
- Fish spawning areas that have been identified in the watershed

- Buffered streams (58 % of the streams located within the Pasquotank River Local Watershed Planning Area are currently buffered)
- Forested areas (Excluding open water, approximately 26% of the watershed contains forested non-wetlands and 29% forested wetlands)
- Low percentage of impervious areas (Currently, only 3% of the watershed is impervious)
- Pristine areas as identified by the Watershed Plan stakeholders
- Rare wetland types and/or unique ecosystems
- Areas containing threatened and/or endangered species
- Natural Heritage Areas within the watershed

The Great Dismal Swamp, Little Flatty Creek, and the Pasquotank River sub catchment have been identified as drainage areas containing the most functional assets with the watershed planning area. Other drainage areas with a high number of functional assets include Knobbs Creek and New Begun Creek.

Watershed and sub catchment functional deficits include areas that have been designated as Low or Moderate function based on NC-CREWS criteria (39 parameters), results from the Revised Pasquotank Local Watershed Characterization Report and from applying the Functional Rehabilitation Model, watershed loading models, Division of Water Quality (DWQ) monitoring and visual assessments of existing conditions.

A number of land uses or practices (including residential and infrastructure development, forest management, percent of impervious surfaces, agricultural practices, and influences from wastewater treatment facilities and septic tanks) have been identified as the potential causes and sources of functional deficits within the Pasquotank River Local Watershed Planning Area. In addition, although many agricultural Best Management Practices (BMPs) and forest BMPs are already utilized in the watershed planning area, the lack of buffers to the receiving water bodies within the watershed and sub catchments allows for increased nutrient and sediment loading. Nonpoint source pollution and surface water runoff are the largest identified contributors to functional deficits in the watershed in both developed (high and low intensity), agricultural and logging areas.

The following outlines the causes and sources of functional deficits identified within various sub catchments in the Pasquotank County and Elizabeth City areas:

- High and low intensity development
 - Charles Creek, Knobbs Creek, Newland drainage canal, and New Begun Creek sub catchments are the primary examples where development has created water quality problems.
 - Development has reduced the storm water storage capacity particularly in the sub catchments incorporating Elizabeth City.
- Agricultural land use is dominant in most of the Pasquotank River Local Watershed Planning Area
 - The central and southern portions of the Pasquotank County sub catchments contain the greatest amount of agriculture.
- Absence of natural buffers
 - 42% of the watershed streams are currently unbuffered

- Of the sub catchments in Pasquotank County, Charles Creek contains the highest percentage of unbuffered streams.
- High levels of agricultural nonpoint loading
 - The sub catchment in Pasquotank County with the highest loading levels of pollutants includes Knobbs Creek.
- Increased logging practices throughout the watershed planning area
 - Visual observations of logging were noted in the Great Dismal Swamp sub catchment.

Potential functional impacts to the watershed from planned NCDOT projects that were identified in the Watershed Plan include:

- TIP Project R-2579. This project includes the widening of NC 158 from Sunbury to Morgan's Corner and runs through the Newland drainage canal and Great Dismal Swamp sub catchments.
- TIP Project U-3420 (Main Street Connector). This project, which includes the extension of Main Street from Hughes Boulevard to the US Highway 17 Bypass, extends through the Knobbs Creek drainage area.

General management strategies delineated in the Watershed Plan that have implications for land use planning include:

- Implement land use practices that will reduce sources of nonpoint source pollution, including Low-Impact Development design strategies.
- Implement projects that will revegetate converted wetlands, restore forested riparian buffers, and stabilize eroding shorelines.
- Implement projects that use detention ponds, bioretention areas, constructed wetlands, and riparian buffers to restore hydrological functions to retain and treat surface water runoff.
- Revegetate converted wetlands and forested riparian buffers within floodplains to reestablish floodwater storage resulting in a gradual release of water from storms and flood events.
- Undertake projects to provide vegetative shoreline stabilization along eroding shorelines.
- Provide incentives to maintain vegetative field corridors for wildlife migration and cover.
- Promote land use planning that prevents segmentation of large tracts, which are used by wide ranging wildlife.
- Support incentives to plan for and implement urban greenways.

Specific recommendations for meeting the objectives and goals of improving water quality and protecting the functional capabilities of watersheds for the sub catchments in the Pasquotank area include:

- Great Dismal Swamp
 - 1,739 linear feet of restoration /enhancement
- Newland Drainage Canal
 - 10,780 linear feet of restoration /enhancement
- Knobbs Creek

- 12,350 linear feet of restoration /enhancement
- 2,000 x 1,000 linear feet of bioretention area
- 1,000 x 1,000 linear feet of bioretention area
- 500 x 600 linear feet of bioretention area
- 550 x 300 linear feet of constructed wetland
- Charles Creek
 - 1,970 linear feet of restoration /enhancement
 - 425 x 25 linear feet of shoreline stabilization
 - 600 x 230 linear feet of constructed wetland/wet detention pond
 - 120 x 180 linear feet of constructed wetland/wet detention pond
 - 100 x 65 linear feet of constructed wetland/wet detention pond
 - 100 x 550 linear feet of constructed wetland/riparian buffer
- New Begun Creek
 - 4,800 linear feet of restoration /enhancement
 - 9,500 linear feet of shoreline stabilization
- Pasquotank River
 - 11,980 linear feet of restoration /enhancement
 - 2,000 linear feet of shoreline stabilization
 - 120 x 120 linear feet of constructed wetland/wet detention pond

3.3.6 Projections of Land Needs

The following table provides short and long-term projections of residential land area needed to accommodate the projected future permanent and seasonal population projections. These land needs projections are based, in part, upon permanent population projections for Pasquotank County prepared by the NC State Data Center (Section 3.1.4 A) and seasonal and peak population projections made by The Wooten Company (Section 3.1.4 B.). The 7B Guidelines allow the projections of land needs to be increased by up to 50% to account for unanticipated growth and to provide market flexibility.

*Table 38
Land Needs Projections*

Residential						
Elizabeth City Planning Jurisdiction	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025	Total 2000-2025
Projected Permanent Population	21,948	23,736	25,235	26,651	27,989	
Permanent Population Increase	2,352	1,788	1,499	1,415	1,338	8,393
Seasonal DU Population Increase	189	204	217	229	241	1,080
Total Permanent and Seasonal Population Increase	2,541	1,992	1,716	1,644	1,579	9,473
Permanent DU Increase*	984	748	627	592	560	3,512
Seasonal DU Increase**	60	64	68	72	76	341
Total Dwelling Unit Increase	1,044	813	696	664	636	3,852
Gross Residential Acres Per Person	0.5	0.5	0.5	0.5	0.5	
Additional Residential Acres Needed	1,270	996	858	822	789	4,736
Total Residential Acres w/50% Adjustment	1,906	1,494	1,287	1,233	1,184	7,105

Table 38
Land Needs Projections

Pasquotank Co. Planning Jurisdiction	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025	Total 2000-2025
Projected Permanent Population	16,946	18,327	19,485	20,577	21,610	
Permanent Population Increase	1,645	1,381	1,158	1,093	1,033	6,309
Seasonal DU Population Increase	35	38	40	42	45	200
Total Permanent and Seasonal Population Increase	1,680	1,419	1,198	1,135	1,078	6,509
Permanent DU Increase*	653	548	459	434	410	2,504
Seasonal DU Increase**	11	12	13	13	14	63
Total Dwelling Unit Increase	664	560	472	447	424	2,567
Gross Residential Acres Per Person	1.0	1.0	1.0	1.0	1.0	
Additional Residential Acres Needed	1,680	1,419	1,198	1,135	1,078	6,509
Total Residential Acres w/50% Adjustment	2,520	2,128	1,796	1,702	1,617	9,764
Nonresidential						
Elizabeth City Planning Jurisdiction	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025	Total 2000-2025
Commercial	283	222	191	183	176	1056
Industrial	126	99	85	81	78	469
Public and Institutional	191	149	129	123	118	710
Pasquotank Co. Planning Jurisdiction	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025	Total 2000-2025
Commercial	756	638	539	511	485	2929
Industrial	630	532	449	426	404	2441
Public and Institutional	378	319	269	255	243	1465

Source: *The Wooten Company, July 2006*

* Assumes 2.39 persons per household for EC; 2.58 persons per household for County

** Assumes 13.8% of the seasonal population in the City jurisdiction and 28.4% in the county jurisdiction will be in seasonal dwelling units.

Nonresidential land needs projections are based upon an estimated proportional relationship of each category of nonresidential land to residential land.

3.3.7 Description of Conflicts with Class II and Class III Lands

The projected growth areas are primarily within Class II lands as defined in Section 3.2.2 and as shown on the Environmental Conditions Composite Map, Figure 3. Many of the potential conflicts with Class II lands can be mitigated through the provision of public water and sewer services and careful site planning. The Class III lands within or in close proximity to the projected growth areas include wetlands and/or flood hazard areas parallel to the Pasquotank River, scattered areas west and southwest of the US 17 Bypass, and along the Knobbs Creek, Halls Creek, New Begun Creek, and Symonds Creek watersheds. Such areas can be conserved as part of any development proposals through such techniques as conservation subdivision design, buffering and open space requirements, etc. The demand for waterfront development is expected to remain high for the immediate future. Such development can have potential conflicts with flood hazard and storm surge areas. Effective site planning techniques, buffering, and

conservation of natural vegetation can possibly ensure compatibility of such development.

3.4 Analysis of Community Facilities

Subchapter 7B .0702(c)(4) requires that the land use plan include a community facilities analysis that evaluates the existing and planned capacity, location, and adequacy of key facilities and services that serve the community's population and economic base; that protect important environmental factors such as water quality; and that guide land development. Section 3.4 provides an analysis of public and private water and wastewater systems, transportation systems, storm water systems, colleges, parks, and hospitals.

3.4.1 Water Supply Systems

Three separate water supply systems operate within Pasquotank County. These systems include the City of Elizabeth City municipal water system, the Pasquotank County water system, and the South Mills Water Association.

A. Elizabeth City Municipal Water System Background.

The water treatment facility was originally constructed in 1926 and has had several modernizations and upgrades. Arcadis, an engineering firm in Raleigh, undertook the last major upgrade in 1997-1999. This upgrade was part of a Capital Improvement Program that has improved treatment capabilities and added more wells to the City's raw water supply.

The City of Elizabeth City draws its water for treatment from a strain identified as the Yorktown Aquifer. The City's wellfield consists of a series of 10 well sites on approximately four hundred acres. This area is located in Pasquotank County and contains ten well sites. One well site is under development and is located on West Main Street Extended. The design capacity for the treatment facility is five million gallons per day but the need of filter media replacement and the addition of more wells would not allow the facility to maintain this production over an extended period. Current use is approximately 2.0 million gallons per day. Thus, this facility has a limited capacity ability to serve projected growth. A SCADA (Supervisory Control and Data Acquisition) system is utilized to control and monitor all functions at the facility and wellfield.

The existing City water system consists of 92 miles of water line. Three water storage tanks are strategically placed in the City to maintain pressure. The water tanks are the Downtown tank (0.5 million gallons) located behind City Hall, the Halstead tank (0.5 million gallons) located beside Fire Station on Halstead Boulevard, and the K. E. White tank (1.0 million gallons) located beside the Kermit E. White Center of Elizabeth City State University (ECSU) on Weeksville Road. Four pumps utilized for delivering the finished water to the elevated storage tanks are located at the water treatment facility on Wilson Street. Additional storage of one three million gallon and a one million gallon ground level storage facilities are located on the facility site.

The distribution system is comprised of 8, 10, 12 and 16-inch transmission lines and the remainder are comprised of 2, 4 and 6 inch distribution lines. In addition most of the small diameter water lines in the system are galvanized iron pipe

which have corroded and require frequent repairs. There are very few shut-off valves in the system, as most of the valves have been paved over during previous street resurfacing projects.

Assets/Opportunities.

- Existing treatment plant design capacity will meet current and future demands.
- The water treatment facility and distribution system is currently compliant with all Federal and State regulations.
- There are interconnections within the City System, Pasquotank County Water System and the South Camden Water and Sewer District. The City does supply water to a portion of Camden County, but only to the portion along US Hwy 158 that has been annexed by the City. In the past, the City supplied all of the water to the South Camden Water and Sewer District, but no longer does so due to the recent construction of Camden's reverse osmosis water plant.

Liabilities/Challenges.

- Raw water supply that will not meet the projected growth in demand for Elizabeth City. Current average daily demand is 2.0 million gallons per day; the wellfield production capability at the present time is 3.9 million gallons per day based on a twenty-four (24) hour pumping time. The NC DENR (Division of Environmental and Natural Resources) recommends that a well should have a twelve (12) hour pumping time followed by a twelve (12) hour rest time.
- Existing wellfield currently has auxiliary power for Wells #1, #2, and #8 which will provide 0.8 MGD (million gallons per day) of water. Another generator is in the process of being installed on Well #9 which will provide an additional 0.3 million gallons per day for a total of 1.1 million gallons per day. By mid 2009 Wells #3 and #4 will have auxiliary power for a safe yield total of 1.3 MGD for the wellfield. In the event of a prolonged emergency situation the City will not be able to provide an adequate supply to its customers.
- The 3 MGD raw water-holding reservoir has an excessive amount of solids build-up which has diminished the total capacity by approximately one-third. In addition to decreased capacity, one of the baffle walls has fallen, thus creating a short-circuiting effect. This issue creates a two-fold problem. The diminished capacity of the reservoir provides less "buffer" in the event raw water is unavailable from the well field or raw water transmission line and the raw water is of a poorer quality due to excessive solids and short-circuiting.
- The raw water transmission main from the well field to the treatment facility consists of a 10" and 12" pipe installed in the 1930's and 1940's. Due to the age of these pipes and the treatment facility, the system routinely experiences line breaks. There is an estimated 100' portion of exposed line leaving it especially vulnerable to failure. In the event of a line failure that would require more than 2 days to repair, the system would be unable to meet consumer demand.
- The five dual media rapid sand filters are in need of rebuilding as evidenced by large cracks, no stratification of media after backwash, and

increased effluent turbidity. Increased turbidity creates a higher disinfectant demand that in turn increases treatment chemical costs.

- There is inadequate fire flow protection in several areas of the downtown sections of the City due in part to undersized piping and unidentified valves.

Objectives.

- Develop a program to assemble all information on waterlines and incorporate into a mapping and GIS (Geographical Information System).
- Investigate and identify opportunities to continue with small diameter water main replacement.
- Development of a plan to replace two-inch water lines with six-inch lines to provide adequate water pressure.
- Develop additional raw water supply for future demands.
- For example, a purchase agreement with the Pasquotank County Water System to purchase additional water from their new reverse osmosis facility which is slated to come on line in late 2010.
- Develop and utilize an active wellhead protection program to insure an acceptable quality and quantity of groundwater resources for current and future requirements. The ultimate objective being the protection of public health, safety and welfare.
- Investigate the feasibility of forming a regional water cooperative with surrounding public water systems.

Additional Water System Information.

- Current use is approximately 2.0 MGD (3.92 MGD in 1997)
- Approximately 86% of the system's total customer base of 7,200 is composed of residential customers.
- 2002 service area population was 15,700; projected 2030 service area population is 18,900.
- The existing treatment plant design capacity will meet current and future demands
- The raw water supply will not meet the projected growth in demand
- The system is just meeting the current demand with the existing wells
- There is inadequate fire flow protection in several areas of the downtown due partially to undersized lines and unidentified valves
- The system has a current available supply of 1.922 MGD and a total water treatment capacity of 5.0 MGD. The available supply is projected to be approximately 2.7 MGD after the wellfield expansion is completed.
- According to the City's 2002 Water Supply Plan, the average annual daily use was 2.151 MGD with a peak daily use of 2.6 MGD. The average annual daily use in 2002 was 0.737 MGD for residential uses, 0.343 MGD for commercial customers, 0.039 MGD for industrial uses, and 0.337 MGD for institutional uses.
- The average daily demand in 2002 of 2.245 MGD was 93% of the total available supply. Projected average daily demand is expected to increase to 2.510 MGD by 2030.

Planned Water System Improvements.

To meet current and future demands, the City is expanding its water supply system towards the southern and western portions of the City. The projected completion time is during Fiscal Year 2009. The City is constantly working on the trunk main improvements and upgrading the undersized water lines throughout the City.

- Water source development/supply expansion
- Small diameter water line replacement/upgrades
- Trunk main improvements
- Water treatment plant improvements (raw water tank and finishing filters)

B. Pasquotank County Water System Background.

- Water source is approximately 30 wells; located mostly in southern Pasquotank County
- County also purchases water from the Elizabeth City Water System on an irregular basis
- County water is sold to the Elizabeth City Water System and to the South Mills W & S District on an irregular basis
- WTP design capacity is 2.7 MGD
- Current use is approximately 1.4 MGD
- Water storage capacity is 2.1 MG (elevated 1.1 MG; ground 1.0 MG)
- 265 miles of water line
- Approximately 6,300 customers
- 2002 service area population was 14,750; projected 2030 service area population is 25,829
- The system has a current available supply of 2.735 MGD and a total water treatment capacity of 2.7 MGD.
- According to the County's 2002 Water Supply Plan, the average annual daily use was 1.088 MGD with a peak daily use of 1.792 MGD. The average annual daily use in 2002 was 0.942 MGD for residential uses, 0.028 MGD for commercial customers, 0.001 MGD for industrial uses, and 0.105 MGD for institutional uses.
- The average daily demand in 2002 of 1.577 MGD was 57% of the total available supply. Projected average daily demand is expected to increase to 3.277 MGD by 2030 or 87% of the total projected available supply.
- Anticipated growth areas will be served by existing facilities and the new reverse osmosis water plant.

Proposed Water System Improvements.

Pasquotank County has submitted a permit application for a Reverse Osmosis Water Plant Discharge. The Reverse Osmosis well site is located on Foreman Bundy Road approximately one-half mile from the Pasquotank/Perquimans County line. The proposed Reverse Osmosis water plant is planned to be located in the vicinity of the intersection of Foreman Bundy Road and Okisko Road. The plant is being designed so that it can be built in stages with a total capacity of five million gallons per day. The initial infrastructure will be capable of producing one million gallons per day.

The estimated completion date for the Reverse Osmosis plant and related improvements is July 2011.

The discharge line must be extended to the Albemarle Sound in able to discharge the high viscosity of salt into waters that have a similar salt content. This discharge line will extend 18.4 miles along existing road rights-of-way and, finally, 500 feet into the Albemarle Sound.

Distribution lines will be installed to supply water to the areas of projected growth. These distribution lines will consist of:

- 24" main from the Reverse Osmosis plant along Foreman Bundy Road to the intersection of US 17 South and Foreman Bundy Road.
- 16" main from the Foreman Bundy Road and US 17 Bypass interchange to the Halstead Boulevard Extension and US 17 Bypass interchange.
- 16" main from the Halstead Boulevard Extension and US 17 Bypass interchange to an existing 16" main located along Thunder Road. This will provide additional capacity for the existing 16" main transmitting water to the northern part of the county.
- 12" main from existing water tower located in the Pasquotank County Commerce Park extending north to the intersection of US 17 North and US Hwy 158/Northside Road.
- 8" main will be located approximately 6,000 feet north of the US 17 Bypass and US 17 North interchange, to connect US 17 North and Northside Road.
- Extensions may also be made to the Tanglewood Park industrial area within 3-4 years or sooner if demand warrants

Proposed Pasquotank County water system improvements are delineated on Figure 5A.

C. South Mills Water Association

- Water sources: Pasquotank County and 15 wells—Yorktown Aquifer
- Provides water service to the northwest corner Pasquotank County; west of US Highway 17 along the US Highway 158 corridor to Lynch's Corner
- Number of customers in Pasquotank County: 700-800; 99% residential
- Approximately 40 miles of lines in Pasquotank County
- One 100,000 gallon elevated storage tank
- Size of lines: 8", 4", 3" and 2"; mostly 6" except on dead-end and short roads
- Plans for extensions or improvements: possible new elevated storage tank within 5 years; additional lines possible; no definitive plans for improvements at this time
- 2002 total service area population was 4,840; projected 2030 service area population is 6,871.
- The system has a current available supply of 0.625 MGD and a total water treatment capacity of 0.864 MGD.

- According to South Mills' 2002 Water Supply Plan, the average annual daily use was 0.264 MGD with a peak daily use of 0.788 MGD. The average annual daily use in 2002 was 0.215 MGD for residential uses.
- The average daily demand in 2002 of 0.264 MGD was 42% of the total available supply. Projected average daily demand is expected to increase to 0.379 MGD by 2030 or 61% of the total projected available supply.

D. Planned Water System Improvements and Future Service Areas

Planned Pasquotank County water system improvements will result in future water service in the following areas: Foreman Bundy Road area, US 17 Bypass interchange area at Halstead Boulevard Extension, and the US 17 North area between Morgan's Corner and Commerce Park. Proposed Pasquotank County water system improvements are delineated on Figure 5A.

E. Service Area Water Demand

Water Supply Plans for the City of Elizabeth City, Pasquotank County, and South Mills Water Association project future service area population, service area demand, available water supply, and average daily demand. Based on these plans, it is anticipated that additional water supply will be needed for the Elizabeth City system to ensure that the 2010 average daily water demand does not exceed 80% of available water supply. The Pasquotank County system anticipates needing additional supply to meet its projected 2030 water demand.

The following table summarizes projected water supply needs for each water system provider:

Elizabeth City			
	2010	2020	2030
Year-Round Service Area Population	16,700	17,800	18,900
Total Service Area Demand, MGD	1.951	2.076	2.207
Total Available Water Supply, MGD	2.710	2.998	3.286
Total Average Daily Demand, MGD	2.254	2.379	2.686
Demand as Percent of Supply	83%	79%	76%
Additional Supply Needed to Ensure Demand Does Not Exceed 80% of Available Supply	0.108	0.000	0.000
Pasquotank County			
	2010	2020	2030
Year-Round Service Area Population	15,522	20,023	25,829
Total Service Area Demand, MGD	1.572	2.154	2.777
Total Available Water Supply, MGD	3.758	3.758	3.758
Total Average Daily Demand, MGD	2.072	2.654	3.277
Demand as Percent of Supply	55%	71%	87%

Additional Supply Needed to Ensure Demand Does Not Exceed 80% of Available Supply	0.000	0.000	0.338
South Mills			
	2010	2020	2030
Year-Round Service Area Population	5,412	6,155	6,871
Total Service Area Demand, MGD	0.298	0.339	0.379
Total Available Water Supply, MGD	0.625	0.625	0.625
Total Average Daily Demand, MGD	0.298	0.339	0.379
Demand as Percent of Supply	48%	54%	61%
Additional Supply Needed to Ensure Demand Does Not Exceed 80% of Available Supply	0.000	0.000	0.000
Total All Water Service Providers			
	2010	2020	2030
Year-Round Service Area Population	37,634	43,978	51,600
Total Service Area Demand, MGD	3.821	4.569	5.363
Total Available Water Supply, MGD	7.093	7.381	7.669
Total Average Daily Demand, MGD	4.624	5.372	6.166
Demand as Percent of Supply	65%	73%	80%
Additional Supply Needed to Ensure Demand Does Not Exceed 80% of Available Supply	0.108	0.000	0.338

Sources: 2002 Water Supply Plans

3.4.2 Wastewater Treatment Systems

Wastewater treatment systems within Pasquotank County include the City of Elizabeth City municipal wastewater system and the Pasquotank County wastewater system.

A. Elizabeth City Wastewater Treatment System

Sewer System Description.

- WWTP is an activated sludge facility upgraded in 1997
- WWTP design capacity is 4.5 MGD with a designed peak hydraulic capacity of 15 MGD; located on Knobbs Creek and discharges into the Pasquotank River
- Average annual discharge is approximately 2.7 MGD with a peak flow recorded during large rain events of 10 MGD.
- The collection system is composed of 110 miles of gravity and force mains and 52 pumping stations
- The average age of the collection system is 60 years
- In 2004 there were 6,374 sewer connections
- The existing wastewater treatment plant design capacity will meet current and but not the projected future demands
- The majority of the existing pumping stations do not meet state compliance standards

Sewer System Needs.

- Development of a master sewer plan to address strategic placement of force mains to reroute flows from the Water Street pumping station

- Rehabilitation and/or replacement of collection facilities to reduce infiltration and inflow
- Construction of an additional treatment facility
- Investigate feasibility of forming a regional sewer authority with Pasquotank County and possibly other adjoining counties to serve high growth areas surrounding Elizabeth City and to provide an economical alternative source of sewer treatment for neighboring counties.

Proposed Sewer System Improvements

Due to the age and condition of the City's wastewater collection system, there are continuous and on-going projects to repair, replace, or upgrade the collection improvements. Planned sewer system improvements for the City of Elizabeth City include:

- Sanitary sewer neighborhood rehabilitation projects including repair or replacement of aging and leaking gravity sewer mains and
- Sanitary sewer system upgrades including repairs and upgrades to the City's core sewer pumping stations.

Water Quality/Public Health Concerns

Inflow and infiltration (I & I) in the gravity sewer mains and sanitary sewer overflows are the primary threat to water quality and public health concerns for the City. Through aggressive sewer capital projects, the City has greatly reduced the amount of I & I flowing into the sewer system. The City should continue to repair and replace aging sewer mains to help further reduce I & I. I & I contribute additional flows in the sewer system, primarily during rain events, creating additional flows at the treatment plant and unnecessary additional flows into the discharge. Sanitary sewer overflows can degrade water quality if allowed to enter surface waters and may create a health concern if the public comes in contact with the overflow. A leading cause of sewer overflows for the City is grease blockages. The City should continue to implement its Fats, Oils, and Grease Program which requires food handling facilities such as restaurants to install and maintain a grease trap. Roots and other blockages in the sewer mains can lead to overflows. The City is required by DENR, Division of Environmental and Natural Resources, to clean 10% of its gravity sewer mains each year to prevent blockages.

B. Pasquotank County Wastewater Treatment System Sewer System Description.

- County currently serves the Commerce Industrial Park, prison, and 2 public schools with an 8-inch line.
- Pasquotank County currently operates a wastewater treatment facility located on Northside Road; land application treatment of effluent.
- Pasquotank County has completed construction of a 12-inch force main extending from the Commerce Park to Knobbs Creek Drive in the City. A new sewer pump station and a sewer force main remains to be constructed along Knobbs Creek Drive to the City's WWTP. The total cost for construction is estimated to be \$2.1 million. The project should

be complete by 2010. The City has agreed to accept all sewage from the Commerce Park.

- The County's wastewater treatment facility may be abandoned if sufficient capacity is obtained from Elizabeth City.

C. Planned Sewer System Improvements and Future Service Areas

The City of Elizabeth City plans to extend sewer service to the southern portion of the City beyond the U.S. Coast Guard Facility to the aviation center: estimated cost \$1.4 million; and to the portion of the County currently being served by the new U.S. 17 Bypass and Halstead Connector; estimated cost \$2.0 million.

Figure 5A: Pasquotank County Water and Wastewater Systems Map

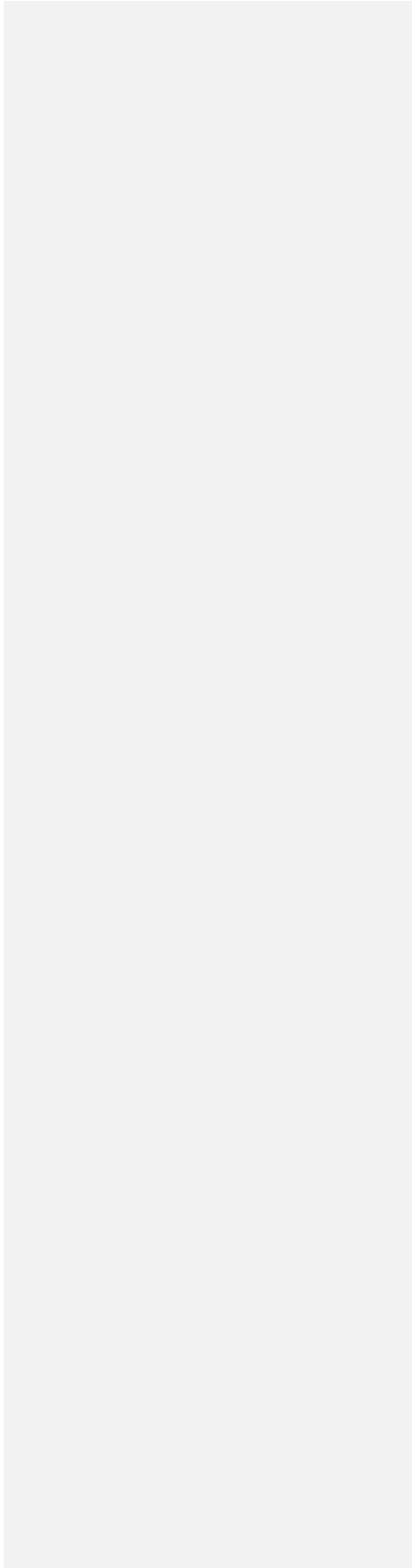
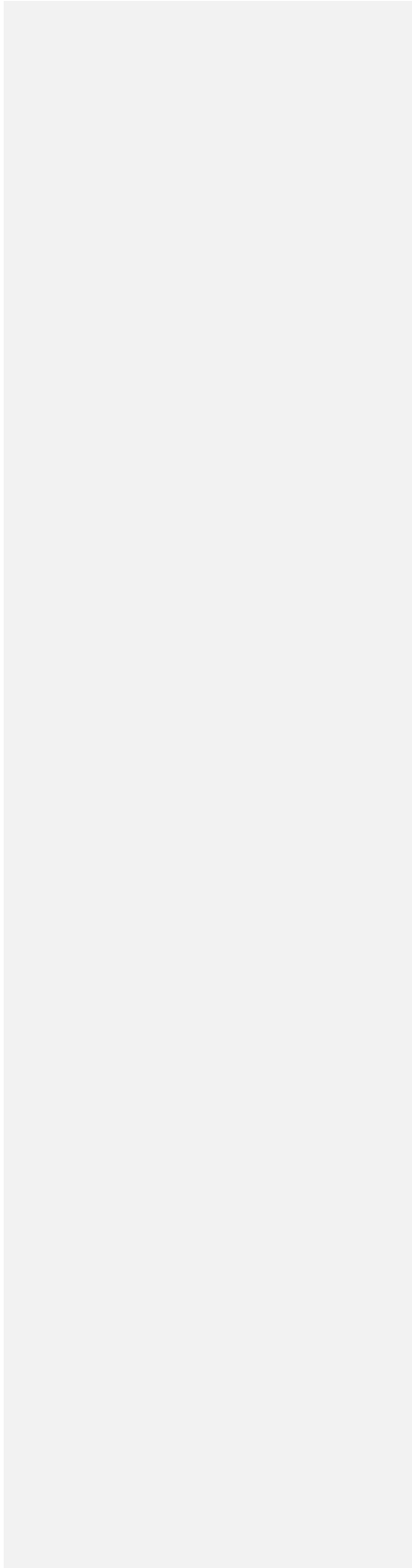


Figure 5B: Elizabeth City Water and Wastewater Systems Map



3.4.3 Transportation Systems

The City of Elizabeth City presently owns and maintains approximately 59 miles of streets. Street maintenance includes proper drainage, surface maintenance, street sweeping and roadway marking and signage. NCDOT also owns and maintains State highways (NC and US numbered highways) within the City. The City is not required to do anything with the State streets. Each year the City receives grant funds through the Powell Bill Program to assist in the maintenance of the City streets.

A thoroughfare plan was adopted by Elizabeth City in 1988 and updated in 1997. In 1997, the NCDOT prepared existing and projected population and employment predictions to aid in traffic forecasting. A thoroughfare plan for the Pasquotank County has not been prepared.

A. Proposed Major Highway Improvements

- Improvements in the current NCDOT Transportation Improvements Plan (TIP) include the following:

Halstead Boulevard Connector (U-3449)

Extension of Halstead Boulevard from Hughes Boulevard to new US 17 Bypass on new location (3.6 miles). This improvement will provide an east-west facility that connects the western and south central portions of Elizabeth City. Completed in the Spring of 2004.

Main Street Connector (U-3420)

Extension of Main Street from Hughes Boulevard to new US 17 Bypass. Upgrade of existing roadway; some new location (4.8 miles). This improvement will provide an east-west facility connecting western Elizabeth City to the downtown area and points east of Elizabeth City. Design scheduled for FY 06; construction projected after FY 09.

US 158 (R-2579)

Widening to multi-lanes from NC 32 in Sunbury to US 17 at Morgan's Corner (16.1 miles). Design scheduled for FY 08; construction projected after FY 10.

US 158/NC 34 (R-2414)

Widening to multi-lanes from east of Pasquotank River in Elizabeth City to east of NC 34 in Belcross (5.6 miles). Design in progress; construction projected in FY 06.

- Proposed improvements outlined in the Elizabeth City Thoroughfare Plan, January 1997 but not listed in the current TIP include the following:

Creek Road Extension

Extension of Creek Road from Halstead Boulevard at Chesapeake and Albemarle Railroad to US 17 Business (N. Road Street) northeast of Ferry Road intersection. Upgrade existing roadway and some new location. This improvement will provide a north-south radial facility in west and northwest Elizabeth City.

Selby Road Extension

Connector road on new location to connect the existing Selby Road (SR 1149) to Oak Stump Road (1.25 miles) and to Peartree Road (1.55 miles). This improvement

will provide an east-west cross-town facility that would connect US 17 Business to Pitts Chapel Road.

- These major highway improvements are delineated on the Transportation System Map.

US Highway 17 in Virginia

The widening of US Highway 17 in Virginia from the North Carolina state line to Route 104 (Dominion Boulevard) in Chesapeake is expected to have a major impact in Pasquotank County. This improvements project involves widening approximately 12 miles of highway from two lanes to four lanes and includes some upgrading of the existing roadway but most of the improvements will be on new location. Completion of the project is projected for the fall of 2005. In 2001, this portion of US Highway 17 carried about 10,000 vehicles per day. 2020 projections indicate approximately 19,400 vehicles per day.

It is anticipated that the enhanced access afforded by the improvements to US Highway 17 will increase commuting between the Chesapeake area and Pasquotank County and thus generate a greater demand for housing. The additional population generated by commuters will increase demands on schools and public infrastructure.

B. Major Streets with Capacity Deficiencies

The following streets had traffic volumes in 1995 that were above their practical capacities:

- US 17 from Church Street to Elizabeth Street
- US 17 from Road Street to south side of bridge over Knobbs Creek
- US 17 from north side of bridge over Knobbs Creek to Whitehurst Lane
- US 17 from Hasting Lane to Culpepper Lane
- Road Street from Ehringhaus Street to US 17
- Water Street from Fearing Street to Elizabeth Street
- US 158/NC 34 from east of Water Street to Country Club Road

With current TIP improvements constructed and completed, the following streets are projected to have traffic volumes in 2020 that exceed their practical capacities:

- US 17 from Halstead Boulevard to Culpepper Lane
- Road Street from Ehringhaus Street to US 17
- Water Street from Fearing Street to Elizabeth Street

The Transportation System Map depicts these roadway segments that are projected to be over-capacity in 2020.

The 1997 Elizabeth City Thoroughfare Plan identified street network deficiencies in the Elizabeth City area as follows:

- Lack of a controlled access bypass
- Lack of north-south radials and crosstown streets

Completion of the US 17 Bypass in 2003 eliminated the first deficiency. The recent completion of the Halstead Boulevard Connector and the other improvements in the current TIP and Thoroughfare Plan (Main Street Connector, Selby Road Extension, and Creek Road Extension) will help to alleviate the second deficiency.

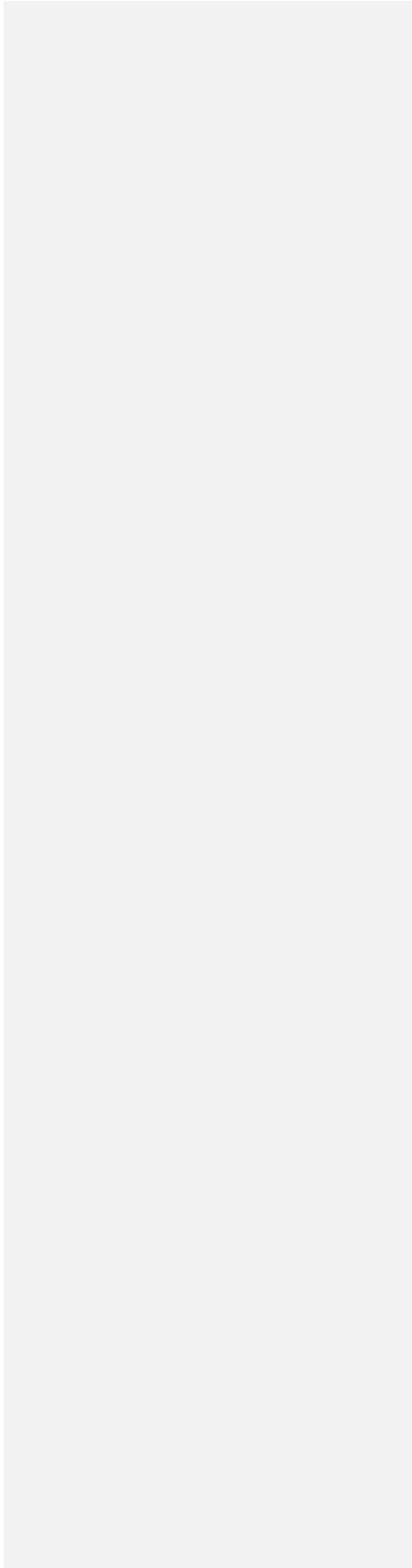
C. Traffic Volumes

As would be expected, the heaviest traffic volumes are on the major US and NC numbered thoroughfares (US 17, US 158, and NC 34) and on major collector streets (Ehringhaus Street and Road Street). The following table summarizes the 2001 traffic volumes on these major streets. The recent completion of the US 17 Bypass and the Halstead Boulevard Extension will significantly alter future traffic patterns and average daily traffic volumes.

<i>Table 40 2001 Average Daily Traffic Major Thoroughfares Pasquotank County/Elizabeth City</i>		
Highway	ADT	Location
US 17	21,000	N. of Simpson Ditch Road
	27,000	S. of W. Church Street
	20,000	W. of Road Street
	36,000	S. of Knobbs Creek
	21,000	E. of Culpepper Lane
W. Ehringhaus St.	13,000	S. of US 158 Intersection
	9,400	S. of Camden County Line
Road Street	19,000	E. of US 17
	21,000	W. of NC 34
	12,000	N. of Ehringhaus Street
	14,000	S. of Elizabeth Street
US 158	15,000	N. of Elizabeth Street
	10,000	S. of Hughes Blvd.
	3,400	E. of Gates County Line
	5,600	W. of US 17
	7,500	E. of Hughes Blvd.
NC 34	11,000	W. of NC 34
	18,000	E. of Pasquotank River
	15,000	S. of Elizabeth Street
	11,000	N. of Roanoke Avenue
	15,000	S. of Halstead Blvd.
	4,500	N. of Consolidated Road
	3,200	S. of USCGAS
	1,700	SE of Weeksville

Source: 2001 Average Daily Traffic, Pasquotank County, NCDOT

Figure 6: Transportation Systems Map



D. US Highway 17 Bypass Corridor Planning

The completion of the US Highway 17 Bypass in 2003 eliminated the long-recognized need for a controlled access around the Elizabeth City urban area and for a major north-south radial highway. The new bypass, in addition to improving traffic flow, also provides an opportunity to enhance access to the west central portion of the county via the interchange at Halstead Boulevard and to serve as an impetus for growth and development at its intersection with Halstead Boulevard and with US Highway 17 at the north and south termini of the bypass.

The opening of the bypass coupled with the completion of the Halstead Boulevard connector had an immediate impact on improving access to Elizabeth City and on opportunities for altering the existing land use pattern between the bypass and the western portion of Elizabeth City. A great deal of time and attention of the CAMA land use plan committee was spent on examining land use and development issues along the Halstead Boulevard corridor. As a result, a joint City-county initiative was undertaken to develop specific regulations for future development along the Halstead Boulevard corridor (see subsection E. below).

The 5,000 acres immediately west of the Halstead Boulevard/Bypass interchange has been zoned by Pasquotank County for industrial use and is the location of a portion of the proposed Tanglewood MegaSite. This industrially-zoned area is expected to meet both the short-term and long-term industrial land needs for all of Pasquotank County as well as the larger northeastern North Carolina region. Critical factors that will determine the development potential of this industrial area include market demand and the provision of the necessary support infrastructure (particularly public water and sewer utilities). Currently, public water service is available to this area but sewer service is not. Pasquotank County recently installed a 16-inch water main in this area. Reflective of the existing zoning patterns, infrastructure improvements, and anticipated long-term land use, Pasquotank County recommended future industrial use for this portion of the bypass corridor.

At the northern terminus of the bypass, the potential for diverse uses was recognized in the southwestern quadrant of its intersection with US Highway 17 Business as well as along the southwest side of US 17 to Morgan's Corner. This location is ideally situated for accommodating anticipated future residential, commercial, and support institutional growth in the northern end of the county, particularly commuter-related development stimulated by improvements to US 17 from the North Carolina state line to the Chesapeake area. Mixed residential (including low density single-family and medium/high density multifamily uses), retail, office, business and personal services, and support institutional uses are anticipated in this area. A 12-inch water main from Commerce Park along US 17 to US 158 near Morgan's Corner is proposed to extend through this projected mixed use area. Public sewer service extensions will be needed to accommodate the more intensive nonresidential uses and the higher residential densities.

In the Mount Hermon area at the southern terminus of the US 17 Bypass, very little change in land use patterns is expected. Some additional commercial development is anticipated to abut the east side of the bypass in the area south of Simpson Ditch Road between US 17 Business and the bypass. Otherwise, this end of the bypass

corridor is expected to retain a low density residential and agricultural land use character.

E. Halstead Boulevard Corridor Planning

The CAMA land use plan committee reviewed existing land use and zoning patterns, proposed vehicular access points, natural constraints, economic opportunities, and infrastructure needs as part of their focus on the Halstead Boulevard corridor. The CAMA land use plan committee also reviewed several potential land use scenarios for the Halstead Boulevard corridor. One scenario projected commercial and industrial land use along the entire corridor. Another scenario included the most intensive commercial development patterns concentrated at the US 17 Bypass and Halstead Boulevard Extension intersection and lower intensity uses (a mixture of office, institutional, and residential uses with a primary focus on residential uses) along the remainder of the corridor. The recommended future land use pattern for the corridor includes commercial, mixed use, and medium/high density residential uses (see the inset map on Figures 9A and 9B). Several corridor property owners attended various committee meetings to provide their input on future land use patterns.

Pasquotank County and the City of Elizabeth City initially contracted with Community Planning Collaborative, Inc. to develop design regulations for the Halstead Boulevard Connector extending from Hughes Boulevard to US 17 Bypass. Design guidelines were drafted for commercial establishments consisting of building designs/facades, roofs, materials and color, entryways, signage, mechanical equipment locations, lighting, shopping center layout, parking and circulation, pedestrian access, community areas, landscaping and buffering, building setbacks, and storm water management.

This work was coordinated with the Planning Staffs from both the County and the City. The original intent was that the overlay design would also include ordinance amendments for mixed use developments, signage, landscaping for all uses allowed in the overlay district. Prior to completing the overlay district design standards a developer approached the City of Elizabeth City to request annexation for a parcel for commercial development at the Halstead Boulevard and US 17 Bypass interchange. The City agreed to the annexation provided development guidelines were completed. The County agreed to allow the City to move forward to complete the overlay district standards.

The City has completed the standards and incorporated them in their Unified Development Ordinance (see Appendix N for the specific regulations applicable to the Halstead Boulevard Extension Overlay District). The Halstead Boulevard Extension Overlay District was established to provide appearance and operational standards for the Halstead Boulevard Extension Corridor in Elizabeth City and in its extra territorial jurisdiction. The highway's broad right-of-way, restricted driveway access and undeveloped land offer a significant opportunity to establish a grand entranceway into the City. This overlay zoning district is generally bound by the US 17 bypass on the west, Well Field Road on the north, the Southern Railroad on the south, and Knobb's Creek (excluding Oxford Heights) on the east.

Five tracts totaling 378 acres previously located outside the City of Elizabeth City Extraterritorial Jurisdiction have been voluntarily annexed into the City of Elizabeth

City since the overlay standards have been completed. This acreage has been classified for commercial and residential uses. The County has not included the new overlay standards within its zoning regulations due to the fact that the current development has required public sewer. The City of Elizabeth City is owner of the only available public sewer system and developers have requested annexation so that sewer service is available.

3.4.4 Stormwater Systems

A. Elizabeth City

The United States Environmental Protection Agency (EPA) has promulgated rules almost 20 years ago to control Municipal Separate Storm Sewer Systems (MS4). At the time Phase I rules were put in place for medium or large MS4's (communities with a population over 100,000). Almost 17 years after the promulgation of the MS4 rules, Stormwater Phase II Final Rules were published to regulate small MS4 communities. Although Elizabeth City meets the population criteria for a small MS4, the City based on a number of other designation criteria has not been designated as a regulated MS4 community.

In preparing for the Phase II regulations, the City should consider consolidating its effort with Pasquotank County and where necessary expand the programs they currently have to complete the following goals or objectives:

1. Review the Storm water Management Ordinance and coordinate its adoption the Preamble to the Phase II rules. Modification to the existing ordinance will be the first step in the development of holistic Phase II Storm water Management Plan when the City is identified as a MS4 regulated community.
2. In conjunction with 1, above modify the pertinent parts of its Unified Development Ordinance (at least Article XI- Development Standards and Article XII- Environmental and Special Purpose Regulations). Subject to the state's guidelines, the minimum of six areas of responsibility would be:
 - a. Public Educations and Outreach
 - b. Public Participation/Involvement
 - c. Illicit Discharge Detection and Elimination
 - d. Construction Site Runoff Control
 - e. Post-Construction Runoff Control
 - f. Pollution Prevention/Good Housekeeping
3. Consider the implementation of the Greenway Plan as part of an overall Phase II Storm water Management Plan development step.
4. Update City aerial photography to help inventory and evaluate the drainage systems within the City's ETJ area.
5. Establish a master drainage plan for the individual drainage basins.
6. The Storm water Management Ordinance relies heavily on the technical reference materials developed by the State of North Carolina for drainage and

storm water design criteria and integrate it into the master drainage planning process of 6. above.

7. Consider expanding the sampling program into the major drainage ways to assist illicit discharge detection and elimination.

Pursuing these objectives in a timely manner will position the City so it can be proactive in being good stewards of our environmental assets and protect the high quality of life the citizens in this area so desire.

The City of Elizabeth City adopted a Storm Water Management Ordinance in 2001. The purpose of this Ordinance is to protect, maintain, and enhance the public health, safety, and general welfare by establishing minimum requirements and procedures to regulate: (i) the adverse affects of increased storm water runoff associated with both future land development and existing developed land within the City and (ii) illegal non-storm water discharges to the storm drainage system to the maximum extent practicable as required by federal and state law.

Background.

The drainage areas within the City were defined in the 2001 Stormwater Management Ordinance. The Major drainage basins are defined as

#1 – Knobbs Creek Basin

#5 – Charles Creek Basin

#4 – Poindexter Creek Basin (now Elizabeth Street) and

#3 – Tiber Creek Basin (now the developed land between Church Street and Ehringhaus Street)

The 2001 work also defined a number of smaller drainage catchment areas in the City the flow directly to the Pasquotank River. On the plan, they are identified as catchment areas 2 and 6 through 12. Catchment area 2 is on the north end of the City, west of Road Street (Route 17 North) and generally includes the area of the College of the Albemarle, Albemarle Hos[ital and the surrounding medical offices. Catchment areas 6 through 12 are located on the east side of the City in very close proximity to the shore of the Pasquotank River. The largest of the easterly catchment areas is #9 and includes Pelican Pointe, Coast Guard Housing, and the Hickory Village Mobile Home Park.

Basin #4, Poindexter Creek, is pumped into the Pasquotank River at the intersection of Poindexter Street and Elizabeth Street. Basin #3, Tiber Creek, is pumped into the Pasquotank River from the intersection of Chirch and Water Streets through Mariner's Wharf Park. Both pump stations are designed to use Poindexter and Water Streets as a dike to keep high water levels (wind tide effects) from backing up into the City streets through the closed drainage system.

A third dike is proposed to protect the Herrington Road and Roanoke Avenue area as part of phase 3 of the so called Roanoke Avenue Area Drainage Project. This project is expected to be completed in 2012.

Assets/Opportunities.

- Implementation of a ditch maintenance program throughout the entire City.
- The City currently has two storm water pumping stations located in the downtown area to address excessive flooding concerns.
- Closed drainage system to be maintained

Liabilities/Challenges.

- Lack of a master drainage plan. The first step is to map the current inventory of assets via GIS. This should begin in about 2008.
- Inadequate operations and maintenance program.
- Inadequate drainage easements throughout the City.
- Lack of a drainage capital improvements program.
- Abundance of undersized drainage infrastructure throughout the City.
- Lack of a storm water management plan for the City.
- Lack of erosion and sediment control policies and enforcement.

Objectives. The City of Elizabeth City does not have a sound conventional storm water management program. Therefore, several goals and objectives have been identified as a result. The major areas of concern appear to be the potential avoidance of new storm water issues by controlling storm water discharge from new development; improving development standards for private drainage facilities; the creation of a water quality program to all areas within and outside the watershed areas in response to federal policy and local concerns; and move attention to existing drainage needs on both public and private property. The potential goals and objectives of the City's Storm water Management Plan are as follows:

- Creation of a master drainage plan. Map the current drainage inventory. Create a document that constitutes the City of Elizabeth City's Master Drainage Plan. It should contain selected information about planned improvements to the City's major drainage systems in accordance with appropriate engineering criteria and City policy. In addition, there should be a considerable volume of supporting technical material consisting of individual reports for each study area, computer printouts documenting hydraulic and hydrologic analyses, estimated costs of planned improvements and detailed drainage maps.
- Develop a system for storm water discharge control which uses both on-site and off-site approaches to assure appropriate levels of control while permitting the flexibility to choose methods which best-fit specific conditions. Adopt discharge control regulations, which establish basic performance standards for new development. Control of storm water discharge from new development should include on-site approaches, off-site (regional) approaches, and combined approaches. The management of existing detention/retention ponds, BMP's (Best Management Practices).
- Extension of floodprone area regulations to smaller streams. Designate floodprone areas with a method based on the size of drainage areas to include drainage area "cut-offs" which assure regulation of significant floodprone areas to the maximum extent practicable.

- Regulation of drainage facilities within private development sites. Amend subdivision and site plan regulations to improve standards for drainage easements, setbacks from watercourses, and drainage facility design.
- Preservation of natural features along drainage ways. Initiate the preparation of a stream water quality plan to meet federal storm water discharge permit requirements and local needs. Initiate the Greenway Plan.
- Development of a storm water quality program to meet the requirements of the federal Clean Water Act and local objectives. Preserve the natural character of drainage ways by greenway acquisition, floodprone area regulation, drainage corridor protection, and public drainage infrastructure design and construction.
- Incorporation of water quality consideration into storm water management practices. Incorporate water quality management practices into discharge control regulations and City design, construction, and maintenance practices.
- Expansion of City programs to correct existing drainage problems and preserve existing storm water control facilities. Initiate studies necessary to identify deficient drainage structures and conditions on City property, evaluate the effect of these conditions both on and off City property, identify appropriate corrective measures, and establish priorities for implementation (Master drainage plan). Initiate studies necessary to identify feasible drainage projects on private property, establish the justification for City assumption of responsibility for these projects, and establish priorities for implementation. Establish annual capital budgeting for drainage improvements. Develop an information program to increase citizen awareness of private drainage responsibilities and potential storm water effects.
- Develop a system for financing the public costs of controlling storm water discharge from new development. Use general City revenues to finance the correction of existing drainage deficiencies until annual costs reach a level which justifies a "drainage/storm water utility fee" approach to financing. Development of financing methods which equitably distribute program costs such as general City revenue, development fees, and storm water utility fees.

The City's storm water system action strategies include:

- Development of a master drainage plan
- Development of a storm water management program
- Development of a storm water capital improvements plan
- Implementation of the capital improvements plan
- Enforce drainage and storm water policies and regulations through design review and construction inspections

B. Pasquotank County

In order to address drainage and flooding concerns, Pasquotank County is currently considering the establishment of storm water management service districts throughout the County. In April 2004, the County requested financial assistance from the State of North Carolina to prepare a countywide drainage study to

determine watershed needs, stream base flows, and needed ordinances and regulations. The County's drainage study may be the basis for a unified City and County approach to stormwater management.

A long range drainage plan is needed to address maintenance of the existing drainage systems to insure current agricultural operations are protected and plan for future development. Insufficient planning will create unmanageable drainage problems due to the lack of maintenance and uncontrolled encroachment into these systems.

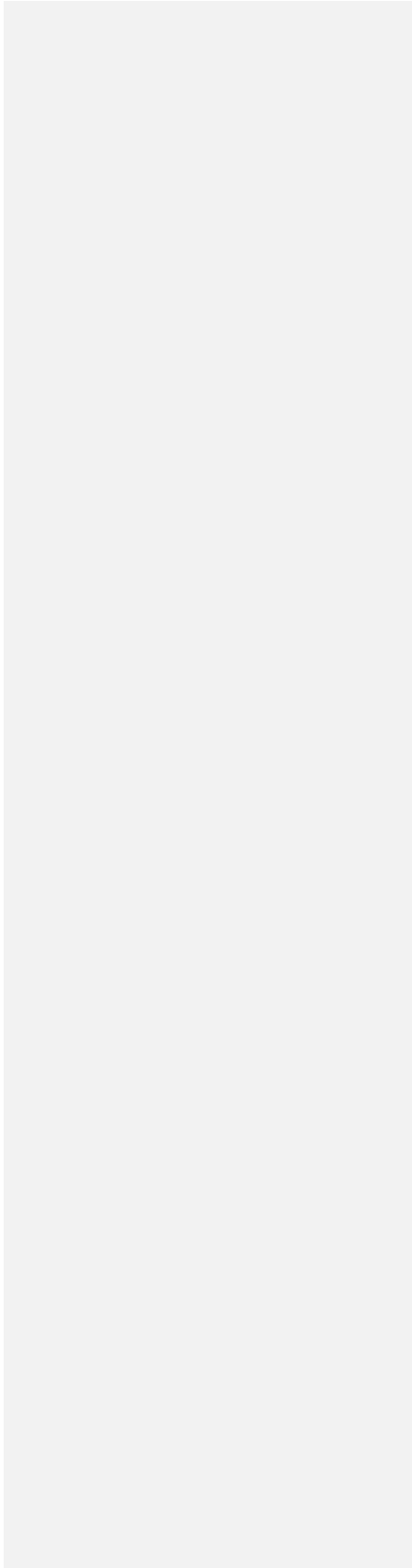
- During preparation of the land use plan, Natural Resources Conservation Service personnel have assisted the County by using existing topography mapping to divide the county into ten drainage basin districts. Areas in two of the established drainage basins (Knobbs Creek and Charles Creek) extend into the City of Elizabeth City's planning jurisdiction prior to draining into the Pasquotank River. The City of Elizabeth City is currently preparing storm water drainage improvement plans. Planned county drainage improvements within the two drainage basins extending into the City must be coordinated with the planned improvements within the City of Elizabeth City. Engineering plans for county improvements must be designed so as to not overburden the City's drainage system.

The County proposes to create and implement planned improvements within Special Use Water Management Districts (SUWMD). These districts will be defined by the drainage basin areas. Other proposed County storm water management activities include:

- Create committees (composed of elected officials and landowners in each SUWMD) to govern the planning and budgeting process.
- Seek technical assistance for drainage design improvements from the Natural Resources Conservation Service personnel and professional engineering services.
- Prepare a maintenance schedule and budget for the management of the natural drainage in each SUWMD. The management program will consist of clearing and snagging the lower end of major drain ways to the field's edge where the artificial ditch drainage systems govern the flow.
- Identify all significant areas of concern (future development, areas that are especially flood prone, etc.) in each SUWMD. These areas will be denoted on plan maps and given a priority for maintenance implementation.
- Seek financial assistance from federal, state and local agencies to implement planned improvements (Soil & Water Conservation Districts NC Clean Water Management Trust Fund, Rural Development, USDA-Resource Conservation Development).
- Drainage tax may be implemented for landowner's within SUWMD's to fund improvements and future maintenance where financial assistance cannot be obtained.

Figure 7A: Pasquotank County Stormwater Systems Map

Figure 7B: Elizabeth City Stormwater Systems Map



C. Existing Drainage Problems

Drainage problems exist throughout the County planning jurisdiction. Streams, creeks, and other low lying areas within the drainage basins have not been maintained over the years. The actual channels of these areas need to be cleared of fallen debris and sediments. Areas with repetitive flooding problems are delineated in Section 3.2.3 D.

Drainage problems within the City of Elizabeth City are caused by City's coastal location and proximity to the Pasquotank River. The following areas experience routine drainage problems:

Major NCDOT Streets

- Road Street
- Ward Street.
- Poindexter Street
- Elizabeth Street
- Water Street
- Ehringhaus Street
- Southern Avenue/Parkview Drive
- Roanoke Avenue
- Herrington Road
- Peartree Road
- Halstead Boulevard/Weeksville Road
- Hughes Boulevard

Typical Drainage Issues

- a. NCDOT Maintained Streets
 - Parkview Drive
 - Oak Grove Subdivision
 - Spaulding Park Subdivision
 - Summerfield, Phase 1
- b. City Maintenance
 - Edgewood Drive / Hopkins Drive
 - Hopkins Drive / Crescent Drive
 - Summerfield, Phase 1
 - Hull Street
 - Drain & Sewer Cross Connections
 - Oxford Heights
- c. Storm Pump Station Areas
 - Grice Street
 - White & Bright / Road Street
 - Glade Street Area
- d. Tidal influence on flooding
 - River Road
 - Pond House
 - Riverside Avenue/Flora Street
 - Roanoke Avenue
 - Water Street/Shepard Street/MOA

D. Water Quality Problems Related to Point Sources

There are no storm water problems within the Pasquotank County planning jurisdiction related to point sources. The City of Elizabeth City conducts routine storm water sampling in accordance with NPDES permitting requirements. The City has not been notified of any point source discharges.

E. Joint Storm water Management Strategy

Pasquotank County contracted with Hobbs, Upchurch & Associates, P.A. in 2005 to begin work on delineating current watersheds for the County. The engineer initially used watershed boundaries approximated by the Natural Resources Conservation Service. The County Board of Commissioners identified individuals that owned large parcels of land in each watershed to serve as a source to help confirm the actual watershed boundary and to identify existing drainage concerns. In addition to meeting with the landowners, the engineer has made field investigations after large storm events to verify drainage flow directions.

The County Commissioners have directed the County Attorney to prepare a storm water ordinance that will be supplemented by a drainage design manual. Patton Harris Rust & Associates, P.C. has been contracted to prepare the drainage design manual. The first draft of the storm water ordinance and the drainage design manual has been completed. Patton Harris Rust & Associates, P.C. has also been contracted to perform drainage reviews for new subdivisions and commercial/industrial site plans. Patton Harris Rust & Associates, P.C. has also been contracted to perform a drainage study for Knobbs Creek to identify the existing conditions of the creek and potential improvements that can be made to improve drainage.

The City of Elizabeth City contracted with McDowell & Associates, P.A. to prepare a storm water ordinance and establish drainage districts.

Representatives of Hobbs, Upchurch & Associates, P.A.; McDowell & Associates, P.A.; City of Elizabeth City Staff and Pasquotank County Staff have coordinated to insure watershed boundaries identified in the County jurisdiction coordinate with those identified in the City's jurisdiction. The representatives for the two local governments will continue to coordinate the preparation of the storm water ordinances to insure compatibility for drainage flowing from the County planning jurisdiction through the City of Elizabeth City to the Pasquotank River.

3.4.5 Joint Infrastructure Facilities Strategy

Current joint programs supported by Pasquotank County and Elizabeth City include:

Central Communications and Emergency Management	Pasquotank County 50% -Elizabeth City 33%
Animal Control	Pasquotank County 41.5% - Elizabeth City 41.5%
Economic Development Commission	Pasquotank County 50% - Elizabeth City 50%
Tax Collections	County collects taxes for City under contract
Fire Protection	City provides fire protection for portions of the county under contract;
Recreation	City provides recreation services for county under contract;
Airport Authority	Pasquotank County 50% - Elizabeth City 50%
Fairgrounds Redevelopment Project	Pasquotank County 50% -Elizabeth City 50%
Senior Center	Pasquotank County 50% - Elizabeth City 50%
Fire Marshall	County contract with City
Sewer Line (under development)	Cost-sharing by both governments

In 2007, a joint City and County Comprehensive Parks & Recreation Master Plan was approved. A primary purpose of the plan was to identify the public's desire for park and recreational facilities and the growing demand for future park and recreational needs. The master plan addresses the deficiencies with neighborhood parks and sports complexes. The recommendations include:

- developing joint use agreements for the public use of school facilities
- establish a greenway master plan and seek opportunities to develop the plan
- provide conveniently located recreation facilities
- assessing existing parks to evaluate the need for expanding and/or updating the facilities to maximize the potential use while planning for additional facilities to meet current and future needs
- alternative funding techniques and methods for acquisition and development of new facilities
- plan for additional employees coinciding with the increase in parks

3.4.6 Public Water Access Areas

Existing public water access sites and private marina facilities are identified in Appendix J. Elizabeth City has five public accesses to the water and five marinas. It is Elizabeth City's policy to maintain the five existing public waterfront locations while promoting revitalization of underutilized private locations. Neither the City or County currently have a formal public water access plan. The provision of additional public water access points is generally limited due to the unavailability of persons willing to sell waterfront property for such purposes.

3.4.7 Other Facilities

Within the next ten years, Roanoke Bible College plans to build 20 to 30 new housing units with the construction of new town houses for married students. There are also plans for a new classroom building, new cafeteria, new gymnasium, and renovation of the old gymnasium to expand the library and the chapel.

Elizabeth City State University will complete a new dormitory to house 274 new students by June 2008. There is also a plan for a new pharmacy school to be completed by 2009.

College of the Albemarle is planning a two-story building expansion and renovation to Building A. The first floor will house all student support functions for admitting, counseling, and providing financial aid to students and the second floor will include two new science labs and a 120-seat lecture hall.

Albemarle Hospital is planning to expand the emergency room area from 16 treatment rooms to 34 and establish an Albemarle Mental Health Crisis Center to serve an 11-county area.

3.5 Land Suitability Analysis

Subchapter 7B .0702(c)(5) requires that the land use plan include a land suitability analysis to determine the community's supply of land suited for development based upon the following considerations:

- Natural system constraints
- Compatibility with existing land uses and development patterns
- Existing land use and development criteria of local, state, and federal agencies
- Availability and capacity of water, sewer, storm water management facilities, and transportation systems

The primary purpose of the land suitability analysis is to provide the local government with information regarding the best areas for development in order to guide the formulation of policies and the preparation of the Future Land Use Map.

The following factors must be considered to assess land suitability:

- Water quality
- Land Classes I, II, and III
- Proximity to existing developed areas and compatibility with existing land uses
- Potential impact of development on areas and sites designated by local historic commissions or the NC Department of Cultural Resources as historic, culturally significant, or scenic
- Land use and development requirements of local development regulations, CAMA Use Standards and other applicable state regulations, and applicable federal regulations
- Availability of community facilities, including water, sewer, storm water and transportation

The development of a Land Suitability Map is required as part of the suitability analysis. The Land Suitability Map is intended to illustrate the degree to which land within the planning area is suitable for development. The Division of Coastal Management and the NC Center for Geographic Information and Analysis have jointly developed a GIS-based land suitability analysis model for analyzing and mapping land suitability. The suitability criteria, ratings, and weight factors used in this model to prepare the Land Suitability Map are delineated in the following table.

Table 41
Land Suitability Model

Layer Name		-----Criteria and Rating-----				Assigned Weight	Percent Weight
		Least Suitable	Low Suitability	Medium Suitability	High Suitability		
		0	-2	1	2		
Coastal Wetlands	Exclusion	Inside	Outside				
Exceptional and Substantial Noncoastal Wetlands	Exclusion	Inside	Outside				
Estuarine Waters	Exclusion	Inside	Outside				
Protected Lands	Exclusion	Inside	Outside				
Beneficial Noncoastal Wetlands	Weighted		Inside		Outside	1	4.348
Storm Surge Areas	Weighted		Inside		Outside	2	8.696
Soils with septic limitations	Weighted		Severe	Moderate	Slight	2	8.696
Flood Zones (<i>Flood maps dated August 1985</i>)	Weighted		Inside		Outside	2	8.696
Water Supply Watersheds	Weighted		Inside		Outside	1	4.348
Significant Natural Heritage Areas	Weighted		< 500'		> 500'	1	4.348
Hazardous Substance Disposal Sites	Weighted		< 500'		> 500'	1	4.348
NPDES Sites	Weighted		< 500'		> 500'	1	4.348
Wastewater Treatment Plants	Weighted		< 500'		> 500'	1	4.348
Municipal Sewer Discharge Points	Weighted		< 500'		> 500'	1	4.348
Airports	Weighted		< 500'		> 500'	1	4.348
Developed Land	Weighted		> 1 mi	.5 - 1 mi	< .5 mi	1	4.348
Primary Roads	Weighted		> 1 mi	.5 - 1 mi	< .5 mi	2	8.696
Water Pipes	Weighted		> .5 mi	.25 - .5 mi	< .25 mi	3	13.043
Sewer Pipes	Weighted		> .5 mi	.25 - .5 mi	< .25 mi	3	13.043
Total Percent							100.000
Mean Percent							6.667
Mean Weight						1.533	

Assigned weight: 1 = Important 2 = Very important 3 = Most important for development

'Inside' = physically located within the layer. 'Outside' = not physically located within the layer.

Sources: William B. Farris; Frederick Steiner, *The Living Landscape*; Carteret County *Land Suitability Analysis*; Kaiser et al, *Urban Land Use Planning*; review by Onslow County Planning Department. Layers Not Used in Pasquotank County: Land Application Sites, HQW/ORW Watersheds, Department of Defense. The DCM model default settings were utilized in this analysis.

The Land Suitability Map produced through this modeling process classifies land as High Suitability, Medium Suitability, Low Suitability, and Least Suitable. The model utilized to produce this map uses one acre of land area to delineate a pixel or cell on the map. Consequently, the information provided by this map is intended to show generalized patterns and is not suitable for site-specific application. Flood zone information for the analysis was based on the National Flood Insurance Maps dated August 1985. Elizabeth City and Pasquotank County adopted updated flood maps in October 2004.

In general, the areas with the higher suitability ratings are located within the Elizabeth City urban area; along the US Highway 17 Business, US Highway 158, and NC Highway 34 corridors; and in areas where public water and/or sewer services are available. Lower suitability ratings are found in areas subject to flooding, wetlands areas, and areas without public utilities. Figure 8, Land Suitability Map graphically illustrates the suitability ratings.

Suitability Rating	Acres	Percent
High Suitability	40,065	27.8%
Medium Suitability	50,745	35.2%
Low Suitability	33,311	23.1%
Least Suitable	20,008	13.9%

A comparison of Figure 4A and 4B, Existing Land Use Maps with the Land Suitability Map reveals that a considerable number of vacant/under-utilized tracts are located within the areas with the higher suitability ratings. Large amounts of acreage currently used for agricultural and/or forestry purposes are also located within the high and medium suitability classified areas.

3.6 Review of Current Land Use Plan

Subchapter 7B .0702(c)(6) requires that the preparation of the land use plan update include an evaluation of the community's success in implementing the policies and programs adopted in the current land use plan as well as the effectiveness of those policies in achieving the goals of the plan. The current Pasquotank County CAMA Land Use Plan was certified in April 1996 and the Elizabeth City Plan in September 1994. An evaluation of each community's current land use plan policies and implementation strategies is contained in Appendix I. A summary of ordinance consistency, implementation actions taken and overall effectiveness of current land use plan policies follows.

A. Consistency of Existing Ordinances with the Current Land Use Plan Policies

Pasquotank County's land use and land development ordinances include a zoning ordinance, subdivision ordinance, flood damage prevention ordinance, public water supply watershed ordinance, multi-family dwellings ordinance, and an airport height restriction ordinance. The County considers their existing ordinances to generally be consistent with the 1996 Land Use Plan Policies. Ordinance revisions/adoptions that have been made to ensure consistency with the 1996 Plan policies include:

- Adoption of the Regional Airport Height Restriction Ordinance in 1999.
- A subdivision ordinance revision requiring a storm water review for a ten-year storm event for proposed subdivisions.
- Adoption of Countywide zoning in 2002.

- A zoning ordinance revision requiring a minimum one acre lot area for parcels utilizing septic systems for wastewater treatment.

Elizabeth City's land use and development ordinances include a Unified Development Ordinance (UDO) and a Storm Water Management Ordinance. The UDO includes zoning, subdivision, flood damage prevention, airport height, and public water supply watershed regulations. The City considers their existing ordinances to generally be consistent with the 1994 Land Use Plan Policies. Ordinance revisions/adoptions and other actions that have been taken to ensure consistency with the 1994 Plan policies include:

- Adoption of the Unified Development Ordinance in 1999.
- Adoption of the storm water management ordinance in 2001.

B. Adoption of the Current Implementation Measures

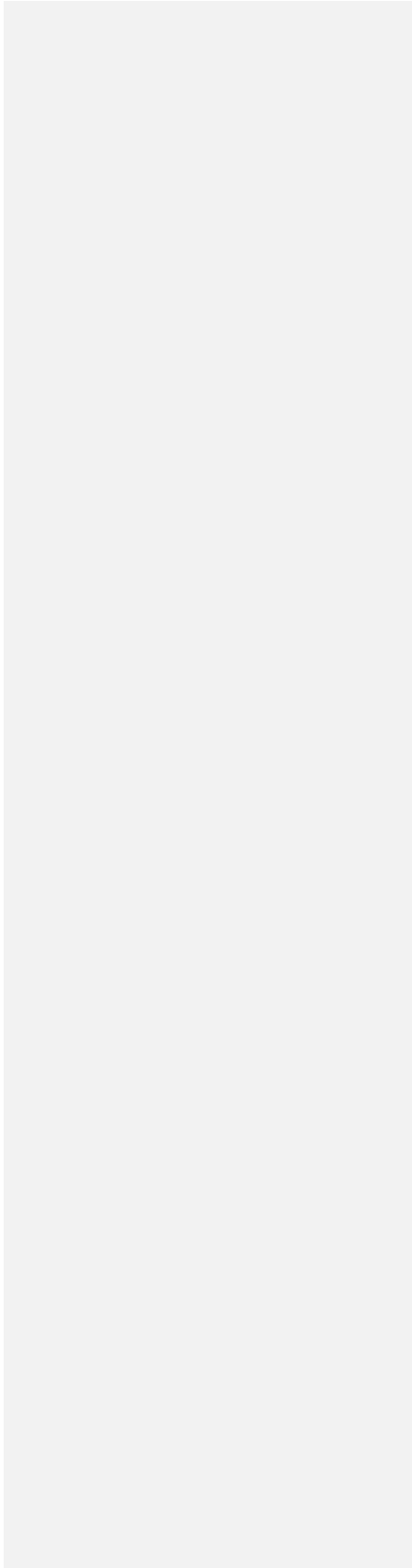
Major implementation activities undertaken by Pasquotank County since the preparation of the 1996 Land Use Plan include:

- Adoption of the Regional Airport Height Restriction Ordinance in 1999.
- Adoption of Countywide zoning in 2002.
- Participation in the NC Ecosystem Enhancement Program.
- Undertaking a study to evaluate the effect of development impact fees.

Major implementation activities undertaken by Elizabeth City since the preparation of the 1994 Land Use Plan include:

- \$20 million investment in upgrading its water and wastewater treatment facilities.
- Obtained a \$1.75 million community development grant to improve the Hugh-Cale neighborhood
- Obtained a \$400,000 CDBG grant to rehabilitate dwellings in Elizabeth City and in the County.
- Administering a \$220,000 Housing Finance Agency grant to rehabilitate dwelling in Elizabeth City.
- Updating the thoroughfare plan in 1996.
- Creation of a Waterfront Master Plan in 2001 and installation of streetscape improvements on Main Street.
- Employment of a code enforcement officer in 2001.
- Adoption of the Unified Development Ordinance in 1999.
- Adoption of the storm water management ordinance in 2001.
- Participation in the NC Wetlands Restoration Program.
- Acquisition of and removal of several structures from flood hazard areas.

Figure 8: Land Suitability Map



C. Effectiveness of the Current Policies

Both Pasquotank County and Elizabeth City consider that their current Land Use Plan policies are generally achieving the desired land use patterns and protecting natural systems. However, additional and/or revised policies are needed to ensure continued effective land use planning and protection of fragile natural environments. General policy areas that will be considered for revision of existing policies or development of new policies include:

- Intergovernmental cooperation and coordination
- Storm water management
- Development principles and techniques to better ensure land use compatibility with land suitability
- Establishment of public utility service areas
- Joint preparation of development standards and guidelines for the Halstead Boulevard Connector
- Municipal extraterritorial planning and zoning jurisdiction
- Public water access planning

SECTION IV PLAN FOR THE FUTURE

This section of the Plan is organized in accordance with the requirements of Subchapter 7B .0702(d). Section IV includes goals, land use and development policies, and a Future Land Use Map. This portion of the Plan is intended to guide the development and use of land within the planning jurisdictions of Pasquotank County and Elizabeth City in a manner that achieves each community's goals and the goals of the Coastal Area Management Act program.

Within this section specific definition of terms used in the goals and policies are as follows:

Continue: Follow past and present procedures to maintain desired goal, usually with elected officials, appointed officials, and staff involved at all levels from planning to implementation.

Encourage: To stimulate or foster a particular condition through direct or indirect action the private sector or through local government regulation, staff recommendation and decisions.

Enhance: Improve existing conditions by increasing the quantity or quality of desired features or current regulations and decisions towards a desired state through the use of policies and elected officials, appointed officials, and staff involved at all levels of planning. This could include financial support.

Implement: Actions to guide the accomplishment of the Plan recommendations.

Promote: Advance the desired state through the use of local government policies and codes and elected officials, appointed officials, and staff involved at all levels of planning. This may include financial support.

Protect: Guard against a deterioration of the desired state through the use of local government policies and regulations, staff, and, if needed, financial assistance.

Prevent: Stop a described event through the use of appropriate local government regulations, staff actions, permit-issuing authority actions, and local government finances, if needed.

Provide: Take the lead role in supplying the needed financial and staff support to achieve the desired goal. The local government is typically involved in all aspects from planning to implementation to maintenance.

Support: Supply the needed staff support, policies, and financial assistance at all levels to achieve the desired goal.

Work: Cooperate and act in a manner through the use of elected and advisory boards, staff, actions, and policies to create the desired goal.

During the course of the preparation of the land use plan update, specific issues have been identified that the County's and City's goals and policies strive to address. The following table summarizes, by Coastal Resource Commission (CRC) land use plan management topic, those issues.

*Table 43
Land Use Issues and Management Topics*

Management Topic Category	Locally Identified Issue
<i>Public Water Access</i>	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.
<i>Land Use Compatibility</i>	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.
	Development of land use and development policies that minimize adverse impacts on Areas of Environmental Concern (AEC) and which support overall CAMA goals.
<i>Infrastructure Carrying Capacity</i>	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 AECS and other fragile areas are protected or restored
<i>Natural Hazard Areas</i>	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.
<i>Water Quality</i>	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, etc.
	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.
<i>Areas of Local Concern</i>	Identify and address local concerns and issues, such as cultural and historic areas, scenic areas, economic development, or general health and human service needs

4.1 Land Use and Development Goals

The formulation of land use and development goals is based upon each community's evaluation of its identified concerns and aspirations (Section II) and the needs and opportunities identified in the analysis of existing and emerging conditions (Section III). These land use plan goals were formulated after a review and analysis of the goals and objectives contained in the 1994 Elizabeth City and the 1996 Pasquotank County CAMA Land Use Plans, the Elizabeth City draft Comprehensive Plan, and the Coastal Resource Commission (CRC) management goals and planning objectives (see Appendix K and Appendix L for summaries of each). Delineation of goals is a foundation upon which policy statements can be built.

4.1.1 Pasquotank County And Elizabeth City Goals

The following table summarizes the land use and development goals, organized by CRC land use plan management topic, that have been formulated by Pasquotank County and Elizabeth City.

<i>Table 44 Land Use and Development Goals</i>	
Management Topic	Goal
Public Water Access	Provide adequate opportunities for public access to coastal waters
Land Use Compatibility	Balance growth and development and conservation/preservation of natural resources
	Encourage land development in accordance with the suitability of the land, compatibility of surrounding land uses and the infrastructure available.
	Promote land use and land development compatible with the functional purposes of Areas of Environmental Concern
Infrastructure Carrying Capacity	Promote land use and public infrastructure development that is compatible with land suitability as well as capabilities to provide requisite public services
Natural Hazard Areas	Conserve and maintain areas that help protect against natural hazard areas
Water Quality	Maintain and enhance the water quality of coastal waters
Areas of Local Concern	Preserve historic and cultural resources
	Provide a variety of housing opportunities
	Promote diversified economic development

4.2 Land Use and Development Policies

The formulation of land use and development policies is based upon a review and analysis of policy statements contained in the 1994 Elizabeth City and the 1996 Pasquotank County CAMA Land Use Plans (see Appendix I for a summary of policies from these plans); an evaluation of identified concerns and aspirations (Section II) and the needs and opportunities identified in the analysis of existing and emerging conditions (Section III); input from the Joint Land Use Plan Committee, local planning boards, and elected officials; and input obtained through citizen participation efforts including public informational meetings, public forums, and Joint Land Use Plan Committee meetings.

4.2.1 Pasquotank County Policy Statements

The following table summarizes the land use and development policies that have been formulated by Pasquotank County.

<i>Table 45 Pasquotank County Land Use and Development Policies</i>	
A. Pasquotank County Public Water Access Policies	
Policy 1:	Ensure a variety of opportunities for access to public trust waters to all segments of the community, including persons with disabilities.
Policy 2:	Coordinate the provision of private access to public trust waters for all properties within new waterfront developments during the subdivision plat approval process.
Policy 3:	Develop, based upon the availability of grant funds, a comprehensive public waterfront access plan to evaluate access needs, opportunities, and implementation strategies.
Policy 4:	Acquire, 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.

B. Pasquotank County Land Use Compatibility Policies
Policy 1: Ensure that land use and development activities provide a balance between economic development needs and protection of natural resources and fragile environments.
Policy 2: Support growth and development at the densities and intensities specified in the Future Land Use Map land classifications as delineated in Section 4.3.1 of this plan.
Policy 3: Require a District Health Department septic tank permit prior to issuing a building permit.
Policy 4: Pasquotank County will work with Elizabeth City to develop coordinated development standards regarding signage, landscaping, and other aesthetic related requirements for the Halstead Boulevard Connector.
Policy 5: Use soil information in determining the allowable density and intensity of development in areas where the soils have severe limitations for septic tank drainfields.
Policy 6: Continue cooperation with Elizabeth City for the protection of the flight approaches at the US Coast Guard Air Station and the Elizabeth City/Pasquotank County Regional Airport.
Policy 7: Inspect and regulate the storage of hazardous wastes at sites in the County. Permits for land uses which will involve storage of petrochemicals proposed adjacent to waterways and wetlands shall not be permitted without minimizing the effects of potential spills.
Policy 8: Direct urban development into areas intrinsically suitable for development via the extension of services and approval of future capital projects.
Policy 9: In order to preserve farmland and rural open space in areas designated as Agricultural on the Future Land Use Map, the County supports the establishment of a voluntary agricultural district program, strongly discourage residential development, and discourages the extension of public water and sewer utilities into these areas.
Policy 10: Safeguard areas suitable for industrial development from encroachment by competing land uses.
Policy 11: Encourage industries to locate in the Pasquotank County Commerce Park and in other industrial/commercial parks.
Policy 12: Ensure consistency of land use and development proposals with the goals, objectives, and policies of the adopted Land Use Plan.
Policy 13: Conduct an ongoing review of the zoning regulations to assure that urban development that is occurring is compatible with the area and is supportable by County services.
Policy 14: Safeguard the County's highways from obstructions to sight and turning movements that constitute safety hazards as well as work closely with the North Carolina Department of Transportation in the programming of road improvements with sufficient rights of way and pavement width.
Policy 15: Prepare an access management regulation with the cooperation of the NC Department of Transportation to regulate the number and location of driveway openings along state roadways.

C. Pasquotank County Infrastructure Carrying Capacity Policies
Policy 1: Development within the County shall only be approved where adequate public or approved private facilities and services are available, including water, sewage disposal, and roads.

C. Pasquotank County Infrastructure Carrying Capacity Policies
Policy 2: Ensure that infrastructure systems are correlated with population projections, future land needs, and the future land use classifications as delineated in Section 4.3.1 of this plan.
Policy 3: Coordinate the establishment of service area boundaries for existing and future water and sewer infrastructure with Elizabeth City and other utility providers.
Policy 4: Provide adequate levels of service for public facilities and services in the most efficient manner.
Policy 5: Program capital projects on a five year basis.
Policy 6: Undertake a review of all development fees to determine if the fees being charged offset the cost to the County in time and materials.
Policy 7: Allow small package treatment systems that accommodate commercial and industrial development in locations removed from the most vulnerable storm inundation areas provided that an acceptable legal entity is established to ensure the adequate long-term maintenance of such systems. Package treatment systems shall not be allowed to accommodate residential development.

D. Pasquotank County Natural Hazard Area Policies
Policy 1: Support the goals and implementation of the recommended mitigation measures of the July 2005 <i>Pasquotank County/Elizabeth City Hazard Mitigation Plan</i> as delineated in Section 3.2.3, D of this plan.
Policy 2: Support land developments that utilize techniques such as retention of vegetative buffers and open space preservation to provide protection from flooding and storm surge.
Policy 3: Ensure that evacuation plans and needs are addressed as new development proposals are reviewed for approval.
Policy 4: Ensure that new development is protected from flood hazard through the administration of the County flood damage prevention ordinance and continued participation in the National Flood Insurance Program.
Policy 5: Support the Emergency Management Agency via funding, equipment and facilities including the preparation of post disaster recover plans and coordination with other County, state and federal agencies in emergency events.
Policy 6: Reconstruct failed water lines within the County service area and aid reconstruction of water lines in other service areas on a critical need basis.

E. Pasquotank County Water Quality Policies
Policy 1: Ensure that water quality in coastal wetlands, rivers, streams, and estuaries is maintained if not impaired and improved if impaired.
Policy 2: Coordinate the approval of local land development projects with applicable state agencies to ensure compliance with regulations to prevent or control nonpoint source discharges.
Policy 3: Establish land use categories that maximize the protection of open shell fishing waters and that assist with the restoration of any closed shell fishing waters.
Policy 4: Pasquotank County supports the development of a joint master drainage plan with Elizabeth City.
Policy 5: Encourage the use of Best Management Practices for agriculture and land development.
Policy 6: Support state and federal efforts to preserve the swamp's unique ecological functions of aquifer recharge and wildlife habitat.

F. Pasquotank County Areas of Environmental Concern Policies
Policy 1: Support state and federal law regarding land use and development in AEC.
Policy 2: Within AEC, permit 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, dredging, bridges and bridge approaches, revetments, culverts, groins, navigational aids, mooring pilings, navigational channels, simple access channels, and drainage ditches.
Policy 3: Restrict, through its 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.
Policy 4: 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.
Policy 5: Comment concerning the overall interests of County residents on CAMA dredge and fill permits for projects which would be detrimental to rivers and wetlands lying within or adjacent to unincorporated portions of the County.
Policy 6: Support CAMA restriction of development on Albemarle Sound Islands as well as dredging of marshlands for bulkhead installation along Albemarle Sound.
Policy 7: Ensure that water dependent development activities such as marinas including upland marinas occur in compliance with state and federal regulations and to discourage non-water dependent uses especially floating home developments in public trust waters.

G. Pasquotank County Areas of Local Concern Policies
Policy 1: Encourage, where practicable and funding is available, the preservation of historically significant structures and sites.
Policy 2: Continue support of the Albemarle Economic Development Commission.
Policy 3: Conserve the natural and cultural resources of value for recreational enjoyment and social systems support of County residents and tourists.
Policy 4: Enforce the North Carolina Building Code and conduct periodic reviews of the regulations and construction practices.
Policy 5: Pursue Community Development Block Grants as well as other economic and community revitalization initiatives to redevelop specific target areas in the County.
Policy 6: Support state and federal programs which lead to improvements of the quality of life of County residents and lessen the burdens of County government such as: highway construction and maintenance, channel maintenance, aviation enhancement, environmental protection, education, health and human services.

4.2.2 Elizabeth City Policy Statements

The following table summarizes the land use and development policies, organized by CRC land use plan management topic, that have been formulated by the City of Elizabeth City.

<i>Table 46</i> <i>Elizabeth City Land Use and Development Policies</i>	
A. Elizabeth City Public Water Access Policies	
Policy 1:	Ensure a variety of opportunities for access to public trust waters to all segments of the community, including persons with disabilities.
Policy 2:	Ensure that the issue of public access to public trust waters is addressed as new waterfront development proposals are reviewed for approval.
Policy 3:	Develop, based upon the availability of grant funds, a comprehensive public waterfront access plan to evaluate access needs, opportunities, and implementation strategies.
Policy 4:	Elizabeth City recognizes its downtown riverfront area as a tremendous, but often underdeveloped, attractive resource. In coordination with its policies for increased tourism and preservation of its unique historic resources, Elizabeth City is committed to seeing its downtown waterfront develop into an active, lively, attraction for both tourists and local residents. The City encourages the orderly development of mixed uses, including retail shops, places of entertainment, restaurants, boating services, and overnight lodging.
Policy 5:	Support the goals, objectives, and recommendations of the <i>2001 Waterfront Master Plan</i> in order to guide waterfront development in the downtown area. To begin implementing the <i>Master Plan</i> , develop design guidelines to create an overlay district for the waterfront. (See Section 3.3.1 E. . for a summary of plan recommendations)
Policy 6:	Continue to encourage the development of public and private marina facilities offering access to area waters for both transient and local boat traffic. However, development of marina facilities must conform to state, local and federal environmental regulations. Marinas that are incompatible with the surrounding land uses or whose designs fail to meet the development and environmental quality standards in addition to CAMA standards shall not be approved.
Policy 7:	Encourage pedestrian access to and utility of the waterfront, in order to enhance its commercial development/tourist attraction potential.
Policy 8:	Encourage major residential developments located adjacent to public trust waters to dedicate public access to the water, preferably to the general public.
Policy 9:	At a minimum, the development standards for boat ramps and/or parking areas associated with public access sites shall address requirements for storm water run-off, protection of water quality, an adequate water depth at low tide and landscaping to address aesthetic concerns.
B. Elizabeth City Land Use Compatibility Policies	
Policy 1:	Ensure that land use and development activities provide a balance between economic development needs and protection of natural resources and fragile environments.
Policy 2:	. Elizabeth City shall encourage development and redevelopment to occur at densities appropriate for a location consistent with the land use classifications delineated in Section 4.3.2. The location and density factors shall include the type and capacity of sewage treatment and water available to the site, the adequacy of transportation facilities to access the site, and whether the development is within an

B. Elizabeth City Land Use Compatibility Policies
environmentally suitable area.
Policy 3: Elizabeth City recognizes the importance and necessity of commercial, multi-family and high density residential projects and the conflicts that may occur with existing land uses. To mitigate the impacts, the City will develop criteria to aid in ensuring land use compatibility. Concepts that will be considered include cluster development, conditional zoning, open space preservation, mixed density development, innovative storm water management techniques, etc. Incompatible or poorly planned commercial developments within or immediately adjacent to existing residential areas shall be constrained. To avoid the proliferation of strip development, and minimize traffic generation, clustered commercial or mixed-use centers shall be encouraged.
Policy 4: The City believes that future land development patterns should be done so as to enhance the City's natural scenic and aesthetic qualities. This policy shall especially apply to any development relating to the Pasquotank River and to commercial activities along the major thoroughfares.
Policy 5: Elizabeth City will work with Pasquotank County to develop coordinated land use and development standards regarding signage, landscaping, and other aesthetic related requirements for the Halstead Boulevard Connector.
Policy 6: Elizabeth City believes that future land development should be completed in a manner so as to be compatible with existing special natural and cultural resources.
Policy 7: Restrain influences which are adverse to the Elizabeth City-Pasquotank County Regional Airport property and safe conduct of aircraft, prevent the creation of conditions hazardous to aircraft operations, prevent conflict with land development which may result in lost of life and property, and encourage development which is compatible with airport use characteristics.
Policy 8: Elizabeth City prefers to see industries developed which are neither excessive consumers of water resources or cause excessive discharge into its streams. In other words, relatively 'dry' low pollution; light manufacturing and/or assembly industries would be preferable.
Policy 9: The preferred location for industrial and manufacturing land uses is in existing industrial parks or other suitable sites in accordance with the adopted land use plan. The City, in conjunction with the County, would like to develop an additional industrial park or parks, according to the following standards: <ol style="list-style-type: none"> 1. Provide an assessment of the impact of the development of industry and require the use of the best available technology to avoid air or water pollution during construction or operation. 2. Be located on land having stable, well-drained soils. The sites should be located in areas adequately protected from flooding and be accessible to existing public utilities and transportation routes.
Policy 10: The City of Elizabeth City will not support the development of any 'heavy' industrial use, including energy facilities, which could cause extensive or irreversible damage to existing fragile or environmentally sensitive areas.
Policy 11: Oppose the development of energy facilities which would substantially increase the amount of man-made hazards within its jurisdiction, including the storage and/or transshipment of crude oil.
Policy 12: It is the policy of Elizabeth City to ensure consistency of land use and development proposals with the goals, objectives, and policies of the adopted Land Use Plan.
Policy 13: Create a joint task force with Pasquotank County to develop coordinated land use and development regulations for the creation of an aviation center proximate to

B. Elizabeth City Land Use Compatibility Policies
the Elizabeth City Regional Airport.

C. Elizabeth City Infrastructure Carrying Capacity Policies

- Policy 1:** Continue to evaluate the existing and planned capacity, location and adequacy of key facilities and services that serve the City. Develop an active wellhead protection program to assure water quality and quantity. Continue with the replacement of eroded waterlines and upgrading of small diameter waterlines to provide adequate pressure. Repair or replace pump stations and aging leaking sanitary sewer lines for the protection of water quality and public health concerns.
- Policy 2:** Ensure that the water and sewer systems will have the capacity for the forecasted future demands. Develop additional raw water supplies. Generate a master sewer plan for the strategic placement of force mains and pump stations. Upgrade and repair the City's core sewer pump stations to meet state compliance standards. Study the feasibility of creating a regional wastewater authority with Pasquotank and/or Camden Counties to serve high growth areas surrounding the City and to provide an economical alternative source of wastewater treatment.
- Policy 3:** To maximize the functional life of existing roadways, a program of improvements and maintenance shall be endorsed as a cost effective and environmental sound means of meeting transportation needs. Develop road design and construction standards for City streets.
- Policy 4:** Coordinate the establishment of service area boundaries for existing and future water and sewer infrastructure with Pasquotank County and other utility providers. Investigate the feasibility of forming regional water cooperative with the surrounding public water systems.
- Policy 5:** In the interest of long-term development management and both consistency and continuity of the extension of utilities i.e., water and sewer services, Elizabeth City will maintain a policy of annexation for appropriate developing areas. 'Appropriate' shall include those areas meeting the state's statutory requirements for annexation and/or those areas receiving or requesting City services, i.e., water and sewer.
- Policy 6:** The City recognizes the connection between economic development and the provision of necessary infrastructure, i.e. water, sewer, proper transportation access, etc. Elizabeth City will seek to provide necessary infrastructure to support development, within the constraints of its economic capacity, and support state and/or federal efforts to do the same.
- Policy 7:** Elizabeth City, along with the County will provide, as much as is locationally and economically feasible, basic support services such as water and sewer to newly locating industries.
- Policy 8:** The City recognizes the vital importance and need of basic services, such as water and sewer, to support growth and development. Therefore, Elizabeth City will continue to assess and plan for necessary water and sewer facility improvements for anticipated future growth and development.
- Policy 9:** Elizabeth City, recognizing the potential limitations on its existing sources of raw water, i.e. the City well fields, and the Pasquotank River, will initiate efforts to identify, alternative sources of raw water. This will likely include engineering and hydrological studies.
- Policy 10:** The extension of City water and sewer services into previously unserved areas will be done in light of and consistent with the City's overall land development policies for the sake of efficiency and economy.
- Policy 11:** As a matter of general policy, and to the extent feasible, the extension of City

C. Elizabeth City Infrastructure Carrying Capacity Policies
water and sewer will be financed by those who benefit directly from the service.
Policy 12: Recognizing the potential constraints to the development of new landfills, due to recent state and federal environmental regulations, Elizabeth City supports the concept of a 'regional' solution for solid waste disposal.
Policy 13: The City is committed to the provision of adequate police and fire services to all of its residents. This will include providing increased personnel as the City's population increases, (both permanent and transient population).
Policy 14: In order to meet projected demands caused by an anticipated increase in the school-age population, additional facilities will likely need to be constructed. Elizabeth City is supportive of such necessary expansion.
Policy 15: Elizabeth City recognizes the important link between adequate transportation facilities and economic development. As such, the City supports the proposed Main Street Connector.
Policy 16: Support the concept of a secondary connecting thoroughfare from the US 17 bypass to NC 34 between the US Coast Guard Station and Weeksville.
Policy 17: The City believes that necessary improvements should be made on a regular basis in order to upgrade the capacity of the roadway network to meet increasing traffic demands.
Policy 18: The City believes that pedestrian and bicycle access improvements should be incorporated into proposed roadway improvements, to include bikeways, and trails, and more sidewalks and pedestrian traffic signals. This is especially needed in heavily commercialized areas.
Policy 19: The City will continue to support the expansion of our local colleges and hospital (see Section 3.4.7).
Policy 20: The City, in conjunction with the County, shall continue to work cooperatively with the Pasquotank County school system to develop a joint use agreement to maximize the use of recreational facilities located at public school sites.
Policy 21: The City shall seek to identify, plan and develop a system of open space greenways, hiking and biking trails. Emphasis will be placed on the use of natural corridors, such as creeks and floodplains, and man-made corridors such as transportation and utility right-of-ways and easements.
Policy 22: The City continues to support the implementation of the recommendations in the Comprehensive Parks & Recreation Master Plan including upgrading and development of new and existing facilities; land acquisition for neighborhood and community parks; plan for additional personnel as facilities and programs increase; and seek alternative funding techniques.
Policy 23: All new residential developments shall be required to provide for adequate parks and recreation space. The amount of space shall be proportional to the number of dwelling units in the development. Fees in lieu of dedication may be approved by the City Council.

D. Elizabeth City Natural Hazard Areas Policies
Policy 1: The City shall work with Pasquotank County to periodically update and enforce the <i>Pasquotank County/Elizabeth City Hazard Mitigation Plan</i> as delineated in Section 3.2.3.D. The plan addresses the full range of natural hazards facing both the City and county. The plan shall meet the standards of the NC Division of Emergency Management and FEMA.
Policy 2: - The City shall continue to require development and redevelopment within special flood hazard areas to meet the standards of the National Flood Insurance

D. Elizabeth City Natural Hazard Areas Policies
Program and the City's Flood Hazard District Overlay. Particular attention should be given to water and wastewater systems located in areas of special flood hazards to insure that the systems are designed to minimize or eliminate floodwater infiltration.
Policy 3: Support land developments that utilize techniques such as retention of vegetative buffers and open space preservation to provide protection from flooding and storm surge.
Policy 4: Ensure that evacuation plans and needs are addressed as new development proposals are reviewed for approval.
Policy 5: Continue to support and enforce the N.C. State Building Code, particularly requirements of construction standards to meet wind-resistive factors such as design wind velocity. The City also supports provisions in the State Building Code requiring tie-downs for mobile homes, which help resist wind damage.
Policy 6: New public facilities and structures, as well as improvements to existing public structures and facilities, shall be located and designed to mitigate natural hazards. When placement in a natural hazard area is unavoidable, compliance with the National Flood Insurance Program and the City's Flood Hazard District Overlay shall be required
Policy 7: Emergency evacuation shall be a priority in the development and approval of transportation plans and improvements included in the NCDOT Transportation Improvement Plan.
Policy 8: It shall not be the policy of Elizabeth City to seek to purchase or annex such lands which may currently be in the most hazardous areas.
Policy 9: Prior to a storm event, the Council will establish a Recovery Task Force to assist in overseeing the reconstruction process and to recommend policy changes.
Policy 10: Support emergency management planning and response activities via funding, equipment and facilities include the preparation of post disaster recover plans and coordination with county, state and federal agencies in emergency events.

E. Elizabeth City Water Quality Policies
Policy 1: Elizabeth City's ground water resources shall be protected, especially the wellfields which are within the Pasquotank County planning jurisdiction. Efforts shall be made to protect the ground water resources from pollution and excessive drawdowns in addition to monitoring the water quality and quantity.
Policy 2: Elizabeth City endorses policies and actions which protect the water quality of the City's estuarine system by preventing soil erosion, sedimentation and controlling the storm water run-off quantity and quality.
Policy 3: Run-off and drainage from development activities shall be of a quantity and quality as near to natural water as possible. Continue to support the use of Best Management Practices (BMP) in developments, and redevelopments in order to reduce sedimentation and pollution run-off.
Policy 4: Support the development and maintenance of a joint comprehensive drainage and flood management plan. The City shall support City, County, NCDOT and property owner cooperation in preventing and resolving storm water problems.
Policy 5:- Regulate the adverse effects of increased storm water runoff associated with proposed and existing land development activities within the City and regulate illegal non-storm water discharges to the storm water drainage system.
Policy 6: Encourage developments to preserve the natural elements of the site including existing topography and significant existing vegetation. Cluster and open

E. Elizabeth City Water Quality Policies
space developments shall be encouraged so as to reduce the impervious areas associated with a new development or redevelopment.
Policy 7: The City encourages the retention of natural, or man-made, vegetative buffers along the edge of streams, wetlands and major drainage ways as an effective means of protecting the water quality
Policy 8: Establish land use categories that maximize the protection of open shellfishing waters and that assist with the restoration of any closed shellfishing waters.

F. Elizabeth City Areas of Environment Concern Policies
Policy 1: Support state and federal law regarding land use and development in Areas of Environmental Concern (AEC).
Policy 2: Within AEC, permit 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, dredging, bridges and bridge approaches, revetments, culverts, groins, navigational aids, mooring pilings, navigational channels, simple access channels, and drainage ditches.
Policy 3: Elizabeth City believes that the statutory AEC which occur within its jurisdiction, i.e., Coastal Wetlands, Estuarine Waters, Estuarine Shorelines and Public Trust Waters should be protected from undue encroachment in order to preserve their natural and important ecological functions.
Policy 4: Only those uses which require water access and cannot function elsewhere will be permitted in coastal wetlands consistent with CAMA 7H Use Standards and the City's UDO.
Policy 5: Restrict development in estuarine waters and public trust waters to those uses that will not cause significant degradation of the natural function nor condition of the estuarine waters and public trust areas.
Policy 6: The City believes that any development permitted must conform to State, Local and Federal environmental regulations and not cause a degradation or irreversible damage to the sensitive estuarine system.
Policy 7: Elizabeth City, with an extensive shoreline along the Pasquotank River, believes that all Public Trust Waters should be open to public navigation.
Policy 8: Elizabeth City believes that wooded swamplands within its jurisdiction are also an important natural resource that should be protected from encroachment by development.
Policy 9: Elizabeth City recognizes the need to protect its existing well fields from potentially adverse development encroachment and to coordinate land development activities on properties adjacent to the well fields which are within Pasquotank County.
Policy 10: Elizabeth City recognizes the importance of protecting its potable water supplies and therefore, in addition to other policies contained in this section, supports the enforcement of these regulations.
Policy 11: Support the development of marinas, in compliance with existing environmental regulations.
Policy 12: Elizabeth City recognizes the need and use of marinas as both an important recreation support resource, and as an economic development resource. At the same time, as discussed above, the City does not wish to see unnecessary degradation of its waters.

F. Elizabeth City Areas of Environment Concern Policies
Policy 13: To improve water quality associated with marinas, encourage the development of upland marinas over marinas located in open waters. An upland location assists in preserving the visual aspect of the shoreline and does not expend available public trust waters. All marinas, regardless of location, must comply with applicable local, state, and federal regulations.
Policy 14: Floating homes, or any long-term occupancy, is not a desirable use of any future marinas in Elizabeth City. Even for temporary occupancy, the City will require strict adherence to Health Department regulations for pump-out facilities and proper trash disposal.
Policy 15: Support the development of drystack facilities, provided they can be located in compliance with existing state, federal, and local regulations.
Policy 16: Encourage the retention, or creation, of vegetated buffer areas along estuarine shorelines as a means of preventing pollutants and sedimentation from entering the estuarine waters. The City supports CAMA standards for all coastal shorelines, whether estuarine or otherwise.
Policy 17: Wetlands play a critical role in absorbing floodwaters, filtering pollutants and sedimentation from storm run-off in addition to recharging the ground water. The City strives to conserve all wetlands, including freshwater forested/shrub wetlands and freshwater ponds.
Policy 18: The City supports continued enforcement of the CAMA and non-coastal or '404' Wetlands development permit processes and the efforts of the Corp of Engineers in protecting wetlands through the Section '404' permit program of the Clean Water Act.

G. Elizabeth City Areas of Local Concern Policies
Policy 1: Continue to work with Pasquotank County to resolve conflicts of land use controls along the City's borders and areas adjacent to the borders and within the ETJ including the Halstead Boulevard Corridor. This will ensure more orderly and uniform land development and facilitate the efficient and economical extension of urban services.
Policy 2: Continue to seek elimination of blighting influences throughout the City, such as outdoor junk, trash, abandoned automobiles, cluttered vacant lots, and abandoned and derelict properties.
Policy 3: Elizabeth City is very concerned about its economic future and the impact of economic development on all of its citizens. As a matter of policy, the City will pursue a balanced approach, seeking to diversify its economic base by seeking to increase opportunities in the areas of industrial/manufacturing; commercial/retail development; and tourism. In the recruitment of industrial/manufacturing activities, the City will work jointly with Pasquotank County.
Policy 4: The City wants to both enhance and capitalize on its potential as a regional commercial/retail center.
Policy 5: The City's economic development efforts will continue to include a balanced emphasis on downtown revitalization (including rehabilitation/reuse of vacant, usable buildings), waterfront development, and development in areas away from the downtown. To implement the Waterfront Master Plan the City will consider an overlay zone with design guidelines for the downtown waterfront; review the UDO for any necessary zoning changes to facilitate the plan; or implement conditional zoning regulations (see Section 3.3.1, E. for a summary of the Waterfront Master Plan recommendations).
Policy 6: Continue to support the airport and related improvements (consistent with its airport-land use compatibility regulations) in recognition of the airport's potential importance to the City's economic future.

G. Elizabeth City Areas of Local Concern Policies
Policy 7: The City recognizes the importance of workforce development, i.e., job training, to Economic Development. The City believes that a cooperative relationship should be established between the Industrial Development Commission, the College of the Albemarle and Elizabeth City State University, in helping to develop a trained workforce.
Policy 8: Continue to work cooperatively with the Albemarle Economic Development Commission and the City's Chamber of Commerce to attract new industries to the area.
Policy 9: The City continues to support the implementation of the recommendations in the Comprehensive Parks & Recreation Master Plan including upgrading and development of new and existing facilities; land acquisition for neighborhood and community parks; plan for additional personnel as facilities and programs increase; and seek alternative funding techniques.
Policy 10: Continue discussions with Pasquotank, Camden, and Currituck counties, in order to explore the feasibility of developing a Regional Park facility.
Policy 11: The City remains committed to the development of an open space-greenway system which connects Knobbs Creek, Charles Creek, and the Pasquotank River and scenic canoe trails, as have been proposed in several previous studies.
Policy 12: The City of Elizabeth City is committed to helping ensure a variety of housing types affordable to a broad range of income levels, but especially to low- and moderate-income persons.
Policy 13: Support enhanced opportunities for home-ownership for lower-income residents.
Policy 14: Continue to support activities and programs, which focus on 'recycling' or otherwise maintaining the existing usable housing stock, especially historically significant structures.
Policy 15: Elizabeth City is committed to the preservation of its many invaluable historic and cultural resources. The City will continue to support preservation programs and activities of the Historic District Commission.
Policy 16: The City will generally coordinate all new major land disturbing construction with the State Division of Archives and History, in order to help protect potential archaeological resources.
Policy 17: Continue to use the local news media to inform the citizens of the various opportunities for input into land use planning and related policy matters.
Policy 18: The City Planning Staff will continue to be available for public meetings, presentations, civic groups, etc., to discuss and/or help explain the City's urban planning programs.
Policy 19: Continue to appoint special citizens' advisory committees for issues of special concern.
Policy 20: Elizabeth City is committed to supporting on-going community revitalization efforts to redevelop areas suitable for redevelopment, consistent with existing land use controls and other current development regulations, such as zoning, subdivision regulations, and flood damage protection.
Policy 21: Continue to support federal and state programs which provide benefits and services to the City and its citizens.
Policy 22: Support the development and expansion of travel and tourism facilities as part of its move toward economic diversification. However, all such facilities must be consistent with policies on protecting and managing its resources.

4.2.3 Analysis of the Impact of Policies on Management Topics

The following table summarizes the general impact of the Pasquotank County and Elizabeth City land use and development policies on the Coastal Resource Commission (CRC) land use plan management topics.

<i>CRC Land Use Plan Management Topics</i>						
Policies	Public Water Access	Land Use Compatibility	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality	Local Areas of Concern
<i>Public Water Access</i>	Positive					Positive
<i>Land Use Compatibility</i>		Positive	Positive	Positive	Positive	Positive
<i>Infrastructure Carrying Capacity</i>		Positive	Positive	Positive	Positive	Positive
<i>Natural Hazard Areas</i>		Positive	Positive	Positive	Positive	Positive
<i>Water Quality</i>		Positive		Positive	Positive	
<i>Areas of Environmental Concern</i>	Positive	Positive	Positive	Positive	Positive	
<i>Areas of Local Concern</i>		Positive		Positive		Positive

Note: Blank space in table indicates neutral impact. All local policies have been determined to have either a positive or neutral impact on CRC management topics. No specific actions or programs are required to mitigate negative impacts.

A more detailed analysis of the impact of the City and County policies on the CRC land use plan management topics is provided below and in Appendix L.

A. Public Water Access Policies

Elizabeth City and Pasquotank County support the provision of access to public trust waters to all segments of the community. A variety of public water access points currently exist within both the Elizabeth City and Pasquotank County planning jurisdictions (see Appendix J). A *Waterfront Master Plan*, developed for Elizabeth City in June 2001, encourages pedestrian access to and utility of the downtown waterfront. The City’s policies support the implementation of the *Waterfront Master Plan*.

City and County policies support coordinating public water access within waterfront developments as they are reviewed for approval. Policies encourage the development of a comprehensive waterfront access plan to evaluate needs, opportunities, and implementation strategies in both jurisdictions.

The local policies encourage the provision of public water access and the continued assessment of its water access needs and opportunities for improving public water access. The local policies have a positive impact on the CRC public water access goals and objectives.

B. Land Use Compatibility Policies

Overall, the City and County 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 with AEC. Development is encouraged in those portions of the planning jurisdictions that possess the support infrastructure necessary to sustain that growth. County 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.

The local policies have a positive impact on the CRC land use compatibility goals and objectives.

C. Infrastructure Carrying Capacity Policies

Elizabeth City and Pasquotank County 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.

The City and County policies have a positive impact on the CRC infrastructure carrying capacity goals and objectives.

D. Natural Hazard Areas Policies

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. City and County policies ensure that evacuation plans and needs are addressed as new land development proposals are reviewed for approval.

The local policies have a positive impact on the CRC natural hazard areas goals and objectives.

E. Water Quality Policies

The local policies support the maintenance, protection, and enhancement of water quality. The City and County policies support land development that has minimal adverse impacts on water quality. Best Management Practices (BMP) are encouraged to minimize storm water impacts. Preservation of remaining portions of the Dismal Swamp is encouraged by County policies to protect aquifer recharge and wildlife habitat.

Local policies support the implementation of water and wastewater system improvements which will vastly enhance each jurisdiction's ability to provide effective and reliable water and wastewater treatment systems. The Elizabeth City and Pasquotank County policies also support the development of a joint Master Drainage Plan. City policies support the implementation and enforcement of its Storm water Management Ordinance.

The City and County policies have a positive impact on the CRC water quality goals and objectives.

F. Local Areas of Concern Policies

Elizabeth City and Pasquotank County policies regarding local areas of concern support and have a positive impact on the CRC public water access, land use compatibility, infrastructure carrying capacity, and natural hazard areas goals and objectives. The local policies encourage increased recreational opportunities, development compatible with natural resources, and preservation of historic structures and sites. Local policies also promote tourism-related economic development.

4.2.4 Statement of Local Support Regarding Areas of Environmental Concern (AEC)

Pasquotank County and Elizabeth City 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 (see Section 4.2). No policy statements have been developed which exceed the requirements of state and federal regarding land use and development within AECS.

4.2.5 Conflicts/Commonality of City and County Policies

There are no direct conflicts between the County and City policies. Policies of both communities address many common land use and development issues. Several policies strive to promote joint coordination and cooperation including policies:

- To develop coordinated development standards for properties along the Halstead Boulevard Connector.
- To coordinate the establishment of water and sewer utility service area boundaries.
- To develop a joint Master Drainage Plan.

4.3 Future Land Use Map

The purpose of the Future Land Use Map is to graphically depict the County's and City's policies for growth and land development and the projected patterns of future land use. The Future Land Use Map has 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 major elements of the Pasquotank County – Elizabeth City future land use maps include the following:

- Guides the most intensive development to areas with supporting infrastructure
- Anticipates growth along the fringe of Elizabeth City
- Accommodates a variety of residential densities
- Promotes the majority of the commercial development along the business route of US Hwy 17 and the Halstead Boulevard Extension
- Promotes industrial growth in the County along the US Hwy 17 Bypass
- Discourages growth in areas with natural constraints and low suitability ratings
- Conserves fragile environments

Tables 48 and 49, the Future Land Use Plan Compatibility Matrixes, summarize the general relationship between Future Land Use classifications and existing Zoning Ordinance and Unified Development Ordinance requirements.

4.3.1 Pasquotank County Future Land Use Map

The Future Land Use Map for the County's planning jurisdiction encompasses all of Pasquotank County outside of the Elizabeth City corporate limits and extraterritorial planning jurisdiction. The Pasquotank County Future Land Use Map (see Figure 9A) classifications include the following categories and subcategories:

- Agricultural
- Conservation/Open Space
- Residential
 - Rural Agricultural
 - Low Density Residential
 - Medium/High Density Residential
 - Mixed Residential
- Commercial
- Mixed Use
- Industrial
- Public and Institutional

Generally, growth and development is expected to occur in the areas classified as Residential, Public and Institutional, Commercial, Mixed Use, and Industrial. Areas classified as Agriculture and Conservation/Open Space are not projected to accommodate significant growth and development. The type and intensity of projected development varies within each Future Land Use Map classification. The Future Land Use Map classifications are considered part of the Land Use Plan's policy.

A. Agricultural Classification

Areas classified as Agricultural are primarily located in the northwestern and western portions of Pasquotank County, largely within the southern and western sections of the Newland Township. Agricultural classified land is estimated to encompass approximately 41 square miles (26,250 acres) or about 20% of the total County land area.

The Agriculture classification is intended to delineate lands primarily devoted to active agricultural and forestry land uses. However, this classification may also include some low intensity public and institutional land uses that support rural land uses. Manufacturing and high intensity commercial uses are generally incompatible in the Agriculture classification. Long-term, the Agricultural classified areas are not projected to develop into residential uses. The intensity of support nonresidential uses, such as agribusinesses, in the Agricultural classified areas is projected to average approximately one establishment per 257 acres.

Land uses within Agricultural-designated areas are generally compatible with the A-2 Agricultural zoning classification. Minimum lot sizes are ten acres. Lot coverage is restricted to 30% of the gross lot area and building heights are limited to 35 feet. Public water or sewer service is not needed to support the low intensity type of land development that is expected in these areas. Extensions of public water and sewer utilities into these areas is neither planned nor encouraged.

The County's goals and policies support the continued use of land in Agricultural classified areas for active agricultural and forestry purposes and discourage traditional urban growth and development in such areas. Over time, Agricultural areas are not expected to evolve into more intensively used areas.

B. Conservation/Open Space Classification

The majority of the areas classified as Conservation/Open Space are located in the northern portion of Pasquotank County along the Pasquotank River and in the northwestern corner at the Dismal Swamp National Wildlife Refuge. Conservation/Open Space classified land is estimated to encompass approximately 12 square miles (7,564 acres) or about 6% of the total County land area.

The Conservation/Open Space classification is intended to delineate areas where traditional land uses are not desirable or expected to develop. Extensions of water and sewer utilities into these areas are not expected or encouraged.

The County's goals and policies support the continued use of land in Conservation/Open Space classified areas for appropriate uses that are compatible with the fragile nature of the Conservation/Open Space areas. Traditional urban growth and development in such areas is discouraged. Conservation/Open Space areas are expected to retain their existing character over time. Residential units are not projected to develop within the Conservation/Open Space Classification. Public and Institutional Uses such as golf courses and passive recreation would be appropriate in this classification as long as environmentally sensitive areas are not negatively impacted.

C. Residential Classifications

The residential classification is subdivided into four subcategories: Rural Agriculture, Low Density Residential, Medium/High Density Residential, and Mixed Residential.

Rural Agricultural Classification. The Rural Agricultural classification constitutes the majority of land area within the County's planning jurisdiction. Approximately 110 square miles (70,230 acres) or about 54% of the total County land area is classified as Rural Agricultural. The majority of the southern and southwestern portions of the County, including the Salem and Nixonton Townships, and the north central section of the Newland Township are classified as Rural Agricultural.

The Rural Agricultural classification is intended to delineate lands where the predominant land use is scattered, very low density residences dispersed among farm land and open spaces. Small scale commercial uses that primarily provide goods and services to residents of the surrounding area and agricultural related industrial uses may be permitted at an intensity of no more than 1 unit per acre. The residential density within this classification is generally 1 dwelling unit or less per acre. Long-term, the Rural Agricultural-classified areas are projected to develop at average densities of approximately one dwelling unit per ten acres based on current development trends and density patterns. The intensity of support nonresidential uses, such as agribusinesses, in the Rural Agricultural classified areas is projected to average approximately one establishment per 257 acres.

Land uses within Rural Agricultural-designated areas are generally compatible with the A-1 Agricultural zoning classifications. Minimum lot sizes are 43,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems. Lot coverage is restricted to 30% of the gross lot area and building heights are limited to 35 feet. Scattered single-family detached residences and manufactured homes on individual lots are the predominant types of dwellings within these areas. Some small, existing residential subdivisions and mobile home parks may also be located within the areas classified as Rural Agricultural. Public water service is available in the majority of the Rural Agricultural classified areas and is needed to support new residential subdivisions.

The County's goals and policies support the continued use of land in Rural Agricultural classified areas for scattered, very low density residential development and agricultural and forestry purposes. Manufacturing and high intensity commercial uses are generally incompatible in the Agriculture classification. Land conservation is encouraged in these areas. In the long-term, as the County's population increases and the demand for housing rises, it is anticipated that the character of some Rural Agricultural classified areas may evolve into low density residential areas. In the short-term, waterfront properties where public water service is available are considered prime areas for low density residential development.

Low Density Residential Classification. The Low Density Residential classification encompasses approximately 9 square miles (5,575 acres) or about 4% of the total County land area. The majority of the lands classified as Low Density Residential are located on the fringe of the Elizabeth City urbanized area, particularly northwest and southwest of the City's planning jurisdiction. Scattered clusters of Low Density Residential classified lands are located in the Providence Township in the area generally bounded by the US 17 Bypass, North Road Street (US 17

Business North), the Elizabeth City ETJ, and the Halstead Boulevard Connector. Concentrations of Low Density Residential properties are also located on the north side of North Road Street.

The Low Density Residential classification is intended to delineate lands where the predominant land use is low density residences, particularly properties with waterfront access and areas where public water service is readily available. Long-term, the Low Density Residential-classified areas are projected to develop at average densities of approximately one dwelling unit acre.

Land uses within Low Density Residential designated areas are generally compatible with the A-1 Agricultural; R-35A and RMH-35, Residential; and R-25A and RMH-25, Residential zoning classifications. Minimum lot sizes are 43,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems. Lot coverage is restricted to 30% of the gross lot area and building heights are limited to 35 feet. Single-family detached residences and manufactured homes on individual lots are the predominant types of dwellings within these areas. Public water service is widely available throughout the Low Density Residential classified areas and is generally required to support the residential densities in this classification.

The County's goals and policies support the continued use of land in Low Density classified areas for low density dwellings and for public and institutional land uses that support and that are compatible with this type of residential development. Manufacturing and high intensity commercial uses are generally incompatible with this classification. Future development is projected to be no more than one unit per acre. Low Density Residential areas are anticipated to retain their low density character over time and not evolve into higher density areas.

Medium/High Density Residential Classification. The Medium/High Density Residential classification encompasses approximately 0.15 square miles (94 acres) or about 0.08% of the total County land area. The majority of the properties classified as Medium/High Density Residential are located on the periphery of the Elizabeth City urban area. The only areas designated as this classification are located north of Knobbs Creek on the west side of Road Street.

The Medium/High Density Residential classification is intended to delineate lands where the predominant land use is higher density single-family residential developments and/or multifamily developments. Long-term, the Medium/High Density Residential classified areas are projected to develop at average densities of approximately four dwelling units per acre. The projected density for this area reflects a mix of single-family and multifamily residential land uses.

Land uses within Medium/High Density Residential designated areas are generally compatible with the R-15, R-15A, and R-25A, Residential zoning classifications and the M-F, Multi-family zoning classification. Minimum lot sizes are 43,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems and 15,000 for single-family uses using a central sewer system. Lot coverage is restricted to 40% of the gross lot area and building heights are limited to 40 feet. Multifamily densities are consistent with the current requirements of the County's multifamily dwellings ordinance which allows a density

range of 8-12 dwellings per acre. Manufacturing and high intensity commercial uses are generally incompatible with this classification. Public water and sewer service is required to support the densities in this classification. Roads with the capacity to accommodate higher traffic volumes are also necessary to support Medium/High Density Residential development.

The County's goals and policies support the use of land in Medium/High Density classified areas for single-family and multifamily dwellings where adequate public utilities and roads are available or can be upgraded to support the higher residential densities encouraged in this classification. The higher residential densities are encouraged within the Medium/High Density classified areas. Manufacturing and high intensity commercial uses are generally incompatible with this classification.

Mixed Residential Classification. The Mixed Residential classification encompasses approximately 13 square miles (8,333 acres) or about 6% of the total County land area. The properties classified as Mixed Residential are situated northwest of the Elizabeth City urban area between the Halstead Boulevard Connector, US 17 Bypass, Elizabeth City ETJ, US 17 North and the conservation area along the Pasquotank River.

The Mixed Residential classification is intended to delineate lands where there is a variety of residential densities and building types within the same development. Traditional residential development with consistent densities and similar building types are encouraged in this classification as well. Long-term, the Mixed Residential-classified areas are projected to develop at average densities of approximately two units per acre. This projection is based upon the assumption that the area will develop primarily as single-family residential with some limited multi-family residential developments scattered within the area.

Land uses within Mixed Residential designated areas are generally compatible with the R-15, R-15A, R-25A, and R-35A, Residential and the MF, Multi-family zoning classification. Minimum lot sizes are 43,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems and 15,000 for single-family uses using a central sewer system. Lot coverage is restricted to 40% of the gross lot area and building heights are limited to 40 feet. Building types encouraged within this classification include single-family detached and attached dwellings, and duplexes. Public water and sewer service is required to support the higher densities in this classification. Roads with the capacity to accommodate higher traffic volumes are also necessary to support Mixed Residential development. Design features to ensure the compatibility of mixed density developments with neighboring traditional residential developments may be necessary.

Residential growth is encouraged in the Mixed Residential classified areas. These areas are expected to accommodate the majority of the future residential growth projected for the planning period. Due to the large amount of acreage within the Mixed Residential areas, these areas are also anticipated to meet longer-term residential growth needs as well.

Figure 9A: Pasquotank County Future Land Use Map

Table 48 Pasquotank County Future Land Use Plan Compatibility Matrix
 Consistency Review of Future Land Use Map Designations and Existing Zoning Districts

Zoning District		A-1	A-2	R-35 R-35A	R-25 R-25A	R-15 R-15A	RMH- 35	RMH- 25	MF	C-1	O&I	I-1	I-2	P-1
	Minimum Lot Size (Sq. Ft)	43,000	10 acres	35,000	25,000	15,000	35,000	25,000	25,000	15,000	15,000	25,000	25,000	25,000
	Minimum Lot Width	140'	140'	125'	125'	125'	125'	125'	125'	100'	100'	125'	125'	125'
	Maximum Lot Coverage	30%	30%	30%	30%	40%	30%	30%	40%	50%	40%	40%	40%	40%
	Maximum Building Height (Ft/Stories)	35'	35'	35'	35'	40'	35'	35'	40'	40'	40'	56'	56'	56'
Land Use Designation	Intensity (U/Acre)													
Agricultural	1/20	▼	☑	--	--	--	--	--	--	--	--	--	--	--
Conservation Open Space		☑	☑	--	--	--	--	--	--	--	▼	--	--	--
Rural Agricultural	1 or less/1	☑	--	--	--	--	--	--	--	--	--	--	--	--
Low Density Residential	1/1	☑	--	☑	☑	▼	☑	☑	--	--	--	--	--	✘
Medium/High Density Residential	4/1	✘	✘	--	☑	☑	--	--	☑	--	--	--	--	✘
Mixed Residential	2/1	✘	✘	☑	☑	☑	--	--	☑	--	--	--	--	✘
Commercial	1/2	--	--	--	--	--	--	--	--	☑	☑	☑	☑	▼
Mixed Use	1/1 – 12/1	--	--	☑	☑	☑	--	--	☑	☑	☑	✘	✘	--
Public & Institutional	1/10	--	--	▼	--	--	--	--	--	--	☑	--	--	☑
Industrial	1/20	--	--	--	--	--	--	--	--	--	--	☑	☑	--
☑ Generally Consistent ▼ Conditionally Consistent ✘ Inconsistent -- Not Applicable														

Note: Zoning requirements and standards delineated in this table are current as of January 1, 2006 and are subject to amendment by the Pasquotank County Board of County Commissioners. This matrix illustrates general compatibility between Future Land Use Map classifications and current zoning regulations and is not intended for regulatory or permitting purposes. A use consistent with any future amendment to the cited zoning regulations delineated in this table will not, pursuant to North Carolina General Statute §153A-341, be necessarily considered by the Pasquotank County Board of Commissioners as being inconsistent with this Land Use Plan as adopted. Consistency of a proposed use or proposed development plan with zoning regulations and this Land Use Plan can only be determined after a thorough evaluation of the specifics of the proposal, including submission of any required permit application and site or plot plan, and a complete review of all applicable zoning regulations.

This chart shows which zoning classification(s) are compatible with each Future Land Use Map classification. Zoning classifications are 'Generally Consistent' with the FLUM categories when the range of uses or intensity of development allowed within the zoning classification are similar to those generally anticipated in the FLUM category. Zoning classifications are 'Conditionally Consistent' with the FLUM categories when the use or intensity of development permitted in the zoning classification would, under prescribed conditions and safeguards, be compatible with the uses anticipated in the FLUM category. Zoning classifications are 'Inconsistent' with the FLUM categories when the use or intensity of development permitted in the zoning classification would not be compatible with the uses or intensity of development anticipated in the FLUM category. Overall, the existing zoning district regulations are compatible with the FLUM categories. No zoning text or map amendments are anticipated to further ensure compatibility.

The County's goals and policies support the use of land in Mixed Residential classified areas for a diversity of residential building types and densities where adequate public utilities and roads are available or can be upgraded to support the higher residential densities encouraged in this classification. Public and institutional land uses that support and that are compatible with this type of residential development are also encouraged. Manufacturing and industrial uses are not considered compatible with the Mixed Residential Classification.

D. Commercial Classification

The Commercial classification encompasses approximately 4 square miles (2,608 acres) or about 2% of the total County land area. The properties classified as Commercial are located primarily along major road corridors including US 17 Business and US 158. The US 17 Business South corridor from the intersection of the US 17 Bypass northward to the Elizabeth City ETJ, the intersection area of the Halstead Boulevard Connector at the US 17 Bypass, and the intersection area of US 158 at US 17 North are the three largest concentrations of Commercial classified properties. Additional Commercial areas are located along North Road Street from the Elizabeth City ETJ to Northside Road and along US 17 North in the vicinity of Commerce Park.

The Commercial classification is intended to delineate lands that can accommodate a wide range of retail, wholesale, office, business services, and personal services. Areas classified as Commercial may also include some heavy commercial uses, light manufacturing and warehousing uses as well as intensive public and institutional land uses. Generally, the density of commercial development is projected to average one commercial establishment per two acres.

Land uses within Commercial-designated areas are generally compatible with the C-1, Commercial and the O & I, Office and Institutional zoning districts. Minimum lot sizes typically range from 15,000 square feet for uses on central sewer systems to 43,000 square feet for uses on septic systems unless a larger minimum lot area is required by the health department. Lot coverage is restricted to 50% of the gross lot area and building heights are limited to 40 feet. The allowable development intensity of permissible uses will be in accordance with the zoning requirements of the zoning district in which located. Public water service is needed to support the land uses characteristic of this classification. Public sewer service or an approved private wastewater treatment system is needed to support the most intensive commercial uses. Roads with the capacity to accommodate higher traffic volumes are necessary to support commercial development.

Commercial classified areas are anticipated to accommodate some of the most intensive land uses found in the County's planning jurisdiction. The County's goals and policies support the use of land in Commercial classified areas for a wide variety of retail and commercial services uses where adequate public utilities and roads are available or can be upgraded to support the intensity of development encouraged in this classification. Public and institutional land uses that support and that are compatible with this type of commercial development are also encouraged. Heavy manufacturing uses are not compatible with the Commercial Classification.

E. Mixed Use Classification

The Mixed Use classification encompasses approximately .5 square mile (1,349 acres) or about 1% of the total County land area. The properties classified as Mixed Use are located parallel to the southwest side of US 17 North generally from the US 17 Bypass to US 158.

The Mixed Use classification is intended to delineate lands, in areas where there is no established urban land use pattern, that can accommodate traditional residential, general commercial, and support institutional land uses or a mixture of these land uses in a single development. The residential density within this classification ranges from low (1 dwelling per acre) to high density. Multifamily densities are consistent with the current requirements of the County's multifamily dwellings ordinance which allows a density range of 8-12 dwellings per acre. Overall, the density of residential development is projected to average four dwelling units per acre based on current development trends and density patterns. Residential building types encouraged within this classification include single-family detached and attached dwellings, duplexes, and multifamily dwellings. Commercial uses include a variety of retail, wholesale, office, business services, and personal services. Generally, the density of commercial development is projected to average one commercial establishment per acre. Manufacturing and industrial uses are not considered compatible with the Mixed Use Classification.

Land uses within the Mixed Use-designated areas are generally compatible with the C-1, Commercial; O & I, Office and Institutional; R-15, R-15A, R-25A, R-35A, Residential; and the M-F, Multi-family zoning classifications. Minimum lot sizes are generally dependent upon the specific nature and characteristics of the land use but typically range from 15,000 to 43,000 square feet. Lot coverage is restricted to 40% of the gross lot area and building heights are limited to 40 feet. The allowable development intensity of permissible uses will be in accordance with the zoning requirements of the zoning district in which located. Public water and sewer service (or an approved private wastewater treatment system for commercial and industrial components) is needed to support the land uses characteristic of this classification. Roads with the capacity to accommodate higher traffic volume are necessary to support the intensity of development expected within the Mixed Use Classification.

Mixed Use classified areas designate properties that are suitable for multiple land uses. The areas identified as Mixed Use are potential growth areas that may develop primarily as one use type or may evolve into multi-use areas. The County's goals and policies support the use of land in Mixed Use classified areas for a range of uses where adequate public utilities and roads are available or can be upgraded to support the intensity of development encouraged in this classification. Public and institutional land uses that support and that are compatible with this type of mixed development are also encouraged.

When parcels in the Mixed Use classified area of Halstead Boulevard are annexed into the City of Elizabeth City, development of these areas should be primarily a mix of single-family and multi-family uses intermixed with limited office and commercial development. Development of sites for commercial use only is discouraged.

While the Mixed Use areas are expected to accommodate future growth and development, they may or may not actually be developed during the planning period.

Critical factors that will determine the development potential of these areas include market demand and the provision of the necessary support infrastructure (particularly public water and sewer utilities). Consequently, the development potential of the majority of the lands within the Mixed Use areas may be more long-term than short-term.

In order to permit the type of mixed use development envisioned in this classification, Pasquotank County will also have to prepare amendments to its existing zoning ordinance and subdivision ordinance to establish specific conditions and standards for such development.

F. Industrial Classification

The Industrial classification encompasses approximately 10.1 square miles (6,508 acres) or about 5% of the total County land area. The properties classified as Industrial are concentrated along the west side of the US 17 Bypass (including approximately 5,200 acres in the Tanglewood Mega Site) and in the Commerce Park area in the southeast quadrant of the US 17 Bypass and US 17 North intersection. Additional scattered Industrial areas are located along the north side of the US 17 North corridor and at Landfill Road, Pitts Chapel Road, and the north side of New Begun Creek.

The Industrial classification is intended to delineate lands that can accommodate industrial and manufacturing establishments. Some heavy commercial uses as well as services and businesses which support industrial land uses are also appropriate land uses within the Industrial classification. Generally, the intensity of industrial development is projected to average one industrial establishment per twenty acres. Residential development is considered incompatible with the Industrial Classification.

Land uses within the Industrial-designated areas are generally compatible with the I-1 and I-2, Industrial zoning districts. The minimum lot size typically is 43,000 square feet unless a larger minimum lot area is required by the health department for land uses utilizing septic systems and 25,000 square feet for uses using central sewer systems. Lot coverage is restricted to 40% of the gross lot area and building heights are limited to 56 feet. The allowable development intensity of permissible uses will be in accordance with the zoning requirements of the zoning district in which located. Public water and public sewer service or an approved private wastewater treatment system is needed to support the land uses characteristic of this classification. Roads with the capacity to accommodate higher traffic volumes are necessary to support the intensity of development expected within the Industrial Classification.

The Industrial areas are expected to accommodate the majority of the future industrial growth projected for the planning period. Due to the large amount of acreage within the Industrial areas, these areas are also anticipated to meet longer-term industrial growth needs as well. Critical factors that will determine the development potential of these Industrial areas include market demand and the provision of the necessary support infrastructure (particularly public water and sewer utilities). Consequently, the development potential of the majority of the lands within the Industrial areas may be more long-term than short-term.

The County's goals and policies support the use of land in Industrial classified areas for a wide variety of manufacturing and heavy commercial services uses where adequate public utilities and roads are available or can be upgraded to support the intensity of development encouraged in this classification. Public and institutional land uses as well as commercial uses that support and that are compatible with this type of industrial development are also encouraged. Industrial classified areas may include certain land uses which, due to their nature and characteristics, have potential adverse impacts on surrounding land use types. Consequently, the County's policy is to ensure the compatible location of industrial land uses and to require the necessary measures to mitigate any adverse impacts.

G. Public and Institutional Classification

The Public and Institutional classification encompasses approximately 1.5 square miles (1,041 acres) or about 1% of the total County land area. The properties classified as Public and Institutional are located in two areas: at the US Coast Guard Base and the Elizabeth City-Pasquotank County Regional Airport property located southeast of Elizabeth City adjacent to NC Highway 34 and at the Pasquotank County Board of Education property in the northeastern portion of the County on Northside Road.

The Public and Institutional classification is intended to delineate large land areas that are used for intensive public purposes. Land uses within this classification include primarily government buildings and facilities, public recreational facilities, schools, and large private institutional uses. Generally, the intensity of development is expected to average one public or institutional use per ten acres. Manufacturing and industrial uses are not considered compatible with the Public and Institutional Classification.

Land uses within the Public and Institutional-designated areas are generally compatible with the O & I, Office and Institutional zoning district. Minimum lot sizes are generally dependent upon the specific nature and characteristics of the land use but typically range from 15,000 to 43,000 square feet for low intensity uses to multiple acres for more intensive land uses. Lot coverage is restricted to 40% of the gross lot area and building heights are limited to 40 feet. Generally, public water service is needed to support the land uses characteristic of this classification. Public sewer or an approved private wastewater treatment system is needed to support the most intensive public and institutional uses. Roads with the capacity to accommodate higher traffic volumes are necessary to support the intensity of development expected within the Public and Institutional Classification.

4.3.2 Elizabeth City Future Land Use Map

The Future Land Use Map for the Elizabeth City planning jurisdiction encompasses the Elizabeth City corporate limits and the City's extraterritorial planning and zoning jurisdiction. With the approval of the County Board of Commissioners, Elizabeth City may exercise its planning and jurisdictional powers in an area which does not exceed two miles past the City limits. At the present time, the ETJ extends approximately one mile past the City Limits. The City's Future Land Use Map classifications (see Figure 9B) include the following categories and subcategories:

- Residential
 - Low Density Residential

- Medium/High Density Residential
- Commercial
 - General Commercial
 - Downtown Mixed Use
 - Mixed Use
- Public and Institutional
- Industrial
- Conservation/Open Space

Generally, growth and land development is anticipated to occur in all future land use categories except for the Conservation/Open Space classification. The type and intensity of projected development varies within each Future Land Use Map classification (see Table 49 Future Land Use Compatibility Matrix) . The Future Land Use Map classifications are considered part of the Land Use Plan's policy.

A. Residential Classification

The Residential classification is subdivided into two subcategories: Low Density and Medium/High Density.

Low Density Residential Classification. The Low Density Residential classification encompasses approximately 4.8 square miles (3,058 acres) or about 27% of the total City planning jurisdiction. The majority of the lands classified as Low Density Residential are located on the fringe of the core Elizabeth City area, particularly northwest, south, and southeast of the City's center.

The Low Density Residential classification is intended to delineate lands where the predominant land use is low density detached residences. The residential density within this classification is generally two to four dwelling units per acre. The maximum building height will be approximately three to four stories with a maximum lot coverage ranging from approximately 50% to 80%. The lots sizes would typically range from approximately 10,000 sf to 15,000 sf. Single-family detached residences and manufactured homes on individual lots are the predominant types of dwellings within these areas. Public water service is generally available throughout the Low Density Residential classified areas. Land uses within the Low Density Residential are compatible with the Residential zoning designation. Commercial and industrial land uses are considered incompatible with this land use classification.

The City's goals and policies support the continued use of land in Low Density classified areas for low density dwellings and for public and institutional land uses that support and that are compatible with this type of residential development. Generally, the non-residential density is anticipated to average one public or institutional use per five acres. Limited light commercial use is not considered acceptable for this classification. Future development is projected to be no more than five dwelling units per acre As the City core expands and public utilities become accessible, some areas adjacent to more intense land uses may transition into a medium/high density residential land use and density over time. If public sanitary sewer is available, cluster development is encouraged in this designation.

Medium/High Density Residential Classification. The Medium/High Density Residential classification encompasses approximately 3.3 square miles (2,115 acres) or about 19% of the total City planning jurisdiction. The majority of the properties classified as Medium/High Density Residential are located immediately surrounding the Elizabeth City downtown area and the Elizabeth City State University area. There is an additional area for the Medium High Residential classification located in the north central portion of the Halstead Boulevard Extension, west of Thunder Road.

The Medium/High Density Residential classification is intended to delineate lands where the predominant land use is higher density single-family residential developments and/or multifamily developments. Some manufactured home parks are also located with this classification. The residential density in this classification should generally range from approximately four to seven single family homes per acre with the multi-family density ranging from 12 units per acres in the general residential district up to 25 units in the apartment district. The maximum building height would be approximately four stories. If there are adequate setbacks, the building height could be increased. The lot sizes would range from approximately 4,000 sf to one acre for apartment developments with an allowable lot coverage of approximately 80%. Long-term, the Medium/High Density Residential-classified areas are projected to develop at an average density of approximately six dwelling units per acre. Limited neighborhood commercial use is considered acceptable for this classification with an intensity of approximately one business per 30 acres.

Land uses within the Medium/High Density Residential designated areas are generally compatible with the Residential and Apartment zoning districts. Cluster development is encouraged for this land use. Incompatible land uses would include industrial and commercial uses, with the exception of neighborhood commercial uses. Public water and sewer service are required to support the residential densities in this classification. Streets with the capacity to accommodate higher traffic volumes are also necessary to support Medium/High Density Residential development.

The City's goals and policies support the use of land in Medium/High Density classified areas for single-family and multifamily dwellings where adequate public utilities and streets are available or can be upgraded to support the higher residential densities encouraged in this classification. The higher density residential developments anticipated to occur during the planning period are encouraged within the Medium/High Density classified areas.

B. Commercial Classification

The Commercial classification is subdivided into three subcategories: General Commercial, Downtown Mixed Use, and Mixed Use.

General Commercial. The General Commercial classification encompasses approximately 2.4 square miles (1,603 acres) or about 14% of the total City planning jurisdiction. The properties classified as General Commercial are located primarily along major road corridors including US Highway 17 Business, Hughes Boulevard, Ehringhaus Street, and Halstead Boulevard. A cluster of General Commercial properties is also located along the Camden Causeway (US Highway 158) on the east side of the Pasquotank River.

The General Commercial classification is intended to delineate lands that can accommodate a wide range of retail, wholesale, office, business services, and personal services. Areas classified as General Commercial may also include some multi-family uses, heavy commercial uses, light manufacturing and warehousing uses as well as intensive public and institutional land uses. Generally, the density of commercial development is projected to average one commercial establishment per acre with a multi-family density of approximately 12 to 30 units per acre. The anticipated density of the more intensive land uses is expected to be three or more uses per acre. The maximum building height would be unlimited approximately five stories. If there are adequate setbacks, the building height could be increased. The lot sizes would range from approximately 14,000 sf to one acre for with an allowable lot coverage of approximately 70 % to 90%.

Land uses within the Commercial designated areas are generally compatible with the Business and Office and Institutional zoning districts. Incompatible land uses would be mobile home developments, low to mid density single family, and heavy industrial uses. Public water service is needed to support the land uses characteristic of this classification. Public sewer service is needed to support the most intensive commercial uses. Streets with the capacity to accommodate higher traffic volumes are necessary to support commercial development.

General Commercial classified areas are anticipated to accommodate some of the most intensive land uses found in the City's planning jurisdiction. The City's goals and policies support the use of land in General Commercial classified areas for a wide variety of retail and commercial services uses where adequate public utilities and streets are available or can be upgraded to support the intensity of development encouraged in this classification. Public and institutional land uses that support and that are compatible with this type of commercial development are also encouraged.

Figure 9B: Elizabeth City Future Land Use Map

Table 4978 Elizabeth City Future Land Use Plan Compatibility Matrix

Consistency Review of Future Land Use Map Designations and Existing Zoning Districts

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Zoning District	R-6	R-8	R-10	R-15	AD	RMH	O&I	CB	NB	GB	HB	CMU	I-1	I-2	PUD PDR	PUD PDM		
Unified Development Ordinance Requirements																		
Minimum Lot Size (SF)	6,000	8,000	10,000	15,000	6,000	6,000	None	None	None	None	None	None	None	None	None	None		
Minimum Lot Width	50'	65'	65'	90'	50'	50'	60'	0'	60'	75'	100'	100'	150'	75'	None	None		
Maximum Lot Coverage	50%	None	None	None	None	None	*	*	*	*	*	50%	*	*	None	None		
Maximum Building Height (Ft/Stories)	40**	40**	40**	40**	40**	40**	8 Story	Determined by City Council	None	None	None	3 Story	50'	None	Determined by City Council			
Land Use Designation	Residential	Non-Residential	Future Land Use Map Classifications (See Section 4.3.2)															
	(Unit/Ac)	(Unit/Ac)																
Conservation Open Space	1/5		--	--	--	☑	--	--	--	--	--	--	--	--	--	--		
Low Density Residential	2/1 to 4/1	1/5	✗	✗	▼	☑	✗	▼	▼	--	--	--	--	✗	✗	☑	--	
Medium/High Density Residential	4/1 to 25/1	1/30+	☑	☑	☑	▼	☑	☑	▼	--	▼	--	--	✗	✗	☑	☑	
General Commercial	Up to 30/1	1/1	--	--	--	--	▼	--	☑	☑	☑	☑	☑	☑	▼	✗	☑	☑
Downtown Mixed Use	50/1	10/1	▼	--	--	--	▼	--	☑	☑	☑	☑	✗	☑	✗	✗	☑	☑
Mixed Use	Up to 30/1	1 to 3/1	☑	☑	▼	--	☑	✗	☑	--	--	☑	▼		✗	✗	☑	☑
Public & Institutional		1/5	--	--	--	▼	--	--	☑	--	--	--	--	--	--	--	--	--
Industrial	1/2++	1/1-1/5	--	--	--	--	--	--	--	--	--	--	--	☑	☑	--	--	
* 100% If outside of a watershed protection overlay and if public water and sewer service is available + Intensity ++ Non-Industrial Uses ☑ Generally Consistent ▼ Conditionally Consistent ✗ Inconsistent ** Bldg. setbacks increase one foot for every foot in height in excess of 40' -- Not Applicable																		

Note: Zoning requirements and standards delineated in this table are current as of November 13, 2008 and are subject to amendment by the Elizabeth City Council. This matrix illustrates general compatibility between Future Land Use Map classifications and current zoning regulations and is not intended for regulatory or permitting purposes. A use consistent with any future amendment to the cited zoning regulations delineated in this table will not, pursuant to North Carolina General Statute §160A-383, be necessarily considered by the Elizabeth City Council as being inconsistent with this Land Use Plan as adopted. Consistency of a proposed use or proposed development plan with zoning regulations and this Land Use Plan can only be determined after a thorough evaluation of the specifics of the proposal, including submission of any required permit application and site or plot plan, and a complete review of all applicable zoning regulations.

This chart shows which zoning classification(s) are compatible with the Future Land Use Map classifications. Zoning classifications are 'Generally Consistent' with the FLUM categories when the range of uses or intensity of development allowed within the zoning classification are similar to those generally anticipated in the FLUM category. Zoning classifications are 'Conditionally Consistent' with the FLUM categories when the use or intensity of development permitted in the zoning classification would, under prescribed conditions and safeguards, be compatible with the uses anticipated in the FLUM category. Zoning classifications are 'Inconsistent' with the FLUM categories when the use or intensity of development permitted in the zoning classification would not be compatible with the uses or intensity of development anticipated in the FLUM category. Overall, the existing zoning district regulations are compatible with the FLUM categories. No zoning text or map amendments are anticipated to further ensure compatibility.

Downtown Mixed Use. The Downtown Mixed Use classification encompasses approximately 0.1 square miles (73 acres) or about 1% of the total City planning jurisdiction. The properties classified as Downtown Mixed Use are located in, and immediately surrounding, the Elizabeth City Central Business District and the downtown waterfront area. The core of the Downtown Mixed Use area is generally bounded by the Pasquotank River on the east, Elizabeth Street on the north, Dyer Street on the west, and Shepard Street on the south. Generally, the density of development in the Downtown Mixed Use designated areas is projected to average ten commercial establishments per acre and up to 50 dwelling units per acre.

The Downtown Mixed Use classification is intended to delineate properties that can accommodate a variety of retail, office, business services, and personal services. Areas classified as Downtown Mixed Use may also include medium and high density residential and public and institutional land uses, particularly government buildings and facilities. The Downtown Mixed Use classification also specifically includes waterfront tourist-oriented land uses. This land use designation is generally compatible with the Business and High Density Residential zoning designations. Industrial, mobile home developments, and low to medium density single family would be considered incompatible land uses with this designation. The maximum building height would be approximately twenty stories. If there are adequate setbacks, the building height could be increased. The lot sizes would range from approximately 4,000 sf to one acre for apartment developments with an allowable lot coverage of 100%.

Public water and sewer service is needed to support the land uses characteristic of this classification. Streets with the capacity to accommodate higher traffic volumes are also necessary to support the intensive land uses within this classification.

The City's goals and policies support the use of land in Downtown Mixed Use classified areas for a wide variety of retail and commercial uses intermixed with multi-family units where adequate public utilities and streets are available or can be upgraded to support the intensity of development encouraged in this classification. Redevelopment of the downtown waterfront area for tourist-oriented mixed uses consisting of retail shops, places of entertainment, restaurants, boating services, and overnight lodging is promoted by the City's goals and policies.

Mixed Use Classification. The Mixed Use classification encompasses approximately 1.4 square miles (880 acres) or about 8% of the total City planning jurisdiction. The properties classified as Mixed Use are located along the major Halstead Boulevard Extension corridor extending southward towards the business route of US Highway 17 South.

The Mixed Use classification is intended to delineate lands, in areas where there is no established urban land use pattern, that can accommodate a variety of residential, general commercial, and support institutional land uses or a mixture of these land uses within a single development. Generally, the density of development in the Mixed Use designated areas is projected to average one to three commercial establishments with approximately ten dwelling units per acre. Residential building types encouraged within this classification include single-family detached and

attached dwellings, duplexes, and multifamily dwellings. Commercial uses include a variety of retail, wholesale, office, business services, and personal services.

Land uses within the Mixed Use designated areas are generally compatible with the medium/high residential and business zoning designations. Industrial land use and mobile home developments would be considered incompatible with this designation. Public water service is needed to support the land uses characteristic of this classification. Public sewer service is needed to support the most intensive commercial uses. Streets with the capacity to accommodate higher traffic volumes are necessary to support commercial and multi-family development. The maximum building height would be approximately six stories. If there are adequate setbacks, the building height could be increased. The lot sizes would range from approximately 4,000 sf to one acre with an allowable lot coverage of 80%.

Mixed Use classified areas designate properties that are suitable for multiple land uses. The areas identified as Mixed Use are potential growth areas that may develop primarily as one use type or may evolve into multi-use areas. The City's goals and policies support the use of land in Mixed Use classified areas for a range of uses where adequate public utilities and roads are available or can be upgraded to support the intensity of development encouraged in this classification. Public and institutional land uses that support and that are compatible with this type of mixed development are also encouraged. Along the Halstead Boulevard Extension, it is envisioned that these properties will be a mix of single and multi-family uses intermixed with limited office and commercial development. Development of sites for commercial use only is discouraged.

While the Mixed Use areas are expected to accommodate future growth and development, they may or may not actually be developed during the planning period. Critical factors that will determine the development potential of these areas include market demand and the provision of the necessary support infrastructure (particularly public water and sewer utilities). Consequently, the development potential of the majority of the lands within the Mixed Use areas may be more long-term than short-term.

In order to permit the type of mixed use development envisioned in this classification, Elizabeth City may have to prepare amendments to its existing zoning ordinance and subdivision ordinance to establish specific conditions and standards for such development.

C. Public and Institutional

The Public and Institutional classification encompasses approximately 1.5 square miles (1,021 acres) or about 9% of the total City planning jurisdictional area. The properties classified as Public and Institutional are scattered throughout the City's planning jurisdiction. The largest individual properties within the Public and Institutional classification include the City's well fields on the south side of Well Field Road; Elizabeth City State University along Weeksville Road (NC Highway 34); the Albemarle Hospital; and the College of the Albemarle.

The Public and Institutional classification is intended to delineate large land areas that are used for intensive public and educational purposes. Land uses within this classification include primarily government buildings and service facilities,

cemeteries, public and private educational facilities, large medical facilities, and large private institutional uses. Generally, the density of development is expected to average one public or institutional use per five acres, with a lot coverage of approximately 80% and a building height of eight stories.

Land uses within the Public and Institutional designated area are generally compatible with Office and Institutional zoning. Generally, public water service is needed to support the land uses characteristic of this classification. Public sewer is needed to support the most intensive public and institutional uses. Streets with the capacity to accommodate higher traffic volumes are necessary to support the intensity of development expected within the Public and Institutional Classification.

D. Industrial

The Industrial classification encompasses approximately 0.7 square miles (435 acres) or about 4% of the total City planning jurisdiction. The properties classified as Industrial are primarily concentrated north of Ward Street and along Knobbs Creek Drive, adjacent to Weeksville Road (NC Highway 34) and the CSX Railroad in southeast Elizabeth City, and along the US Highway 17 South corridor in the vicinity of the US 17 Industrial Park.

The Industrial classification is intended to delineate lands that can accommodate industrial and manufacturing establishments. Some heavy commercial uses as well as services and businesses that support industrial land uses are also appropriate land uses within the Industrial classification. Generally, the density of industrial development is projected to average one industrial establishment per three acres. The density of non-industrial support development is expected to be about one establishment per two acres. The allowable lot coverage will approximately 90% with a maximum building height of sixty feet. If there are adequate setbacks, the building height could be increased.

Land uses within the Industrial-designated areas are generally compatible with the Industrial zoning districts. Incompatible land uses would include hospitals, schools and nursing homes. Public water and sewer service is needed to support the land uses characteristic of this classification. Streets with the capacity to accommodate higher traffic volumes are necessary to support the intensity of development expected within the Industrial Classification.

The Industrial areas are expected to accommodate the majority of the future industrial growth projected for the planning period. Critical factors that will determine the development potential of these Industrial classified areas include market demand and the provision of the necessary support infrastructure (particularly public water and sewer utilities). Consequently, the development potential of the majority of the lands within the Industrial areas may be more long-term than short-term.

The City's goals and policies support the use of land in Industrial classified areas for a wide variety of manufacturing and heavy commercial services uses where adequate public utilities and streets are available or can be upgraded to support the intensity of development encouraged in this classification. Public and institutional land uses as well as commercial services that support and that are compatible with this type of industrial development are also encouraged. Industrial classified areas

may include certain land uses which, due to their nature and characteristics, have potential adverse impacts on surrounding land use types. Consequently, the City's policy is to ensure the compatible location of industrial land uses and to require the necessary measures to mitigate any adverse impacts.

E. Conservation/Open Space

The Conservation/Open Space classification encompasses approximately 3.2 square miles (2,029 acres) or about 18% of the total City planning jurisdictional area. The largest individual areas within the Conservation/Open Space classification include the undeveloped land north and west of Knobbs Creek Drive.

Conservation/Open Space areas are scattered throughout the Elizabeth City jurisdiction and include parks, coastal wetlands, estuarine waters, estuarine shoreline, public trust waters, and non-coastal '404' wetlands. The scattered widespread locations and often small sizes of the conservation/open space areas (e.g. Section '404' wetlands, neighborhood parks) precludes mapping each individual area except at a much generalized level of detail. The standards of the Conservation/Open Space shall be applied in accordance with the site-specific information determined through special studies and/or the land development process. Much of the land in this classification is environmentally sensitive and would be protected through existing federal, state, and local regulations. (Refer to Figure 2, Natural Features Map)

The Conservation/Open Space classification is intended to provide long-term management and protection of significant, limited, or irreplaceable areas and open space. To conserve the natural, cultural, recreational, scenic or biologically productive values of these areas, proper land management is required. Land development, except extremely low-density residential development, open space, and park facilities, is not desirable, nor expected to develop. Land development may include public building and facilities necessary to support existing land uses within the areas classified as Conservation/Open Space. Due to the environmental constraints, it anticipated that residential development will be at a density of approximately one home per five acres unless a larger lot is required to meet health department septic and/or well regulations. The anticipated lot coverage will be 35% with a building height of three stories. Public water or sewer utilities are not needed to support the types and intensities of land uses in these areas. Extensions of water and sewer utilities into these areas are not expected or encouraged.

The City's goals and policies support the continued use and protection of land in Conservation/Open Space classified areas for appropriate uses that are compatible with the fragile nature of the Conservation/Open Space areas. Traditional urban growth and development in such areas is discouraged. Conservation/Open Space areas are expected to retain their existing character over time.

4.3.3 Consistency With Natural Systems and Land Suitability Analyses

The land use patterns depicted on the Future Land Use Map are generally consistent with the analysis of natural systems and the analysis of land suitability. The Future Land Use Map depicts very generalized patterns of projected land use. The intent of the map is to illustrate a typical pattern of use for a general area and not the specific use of an individual parcel. The Future Land Use Map is not intended for site-specific land planning or for regulatory purposes.

The northern, northwestern, central, and southwestern portions of the Elizabeth City jurisdiction contain some type of natural constraint, primarily floodplains and wetlands. The majority of such areas are designated on the Future Land Use Map for low density residential use or as Conservation/Open Space. Major areas with significant natural constraints and low suitability ratings within the Pasquotank County jurisdiction are designated as Conservation/Open Space on the Future Land Use Map. Examples of such areas include the Dismal Swamp National Refuge in the northwestern corner of the County and the area along the Pasquotank River in the northern section of the County.

Other Conservation/Open Space areas are scattered throughout the City and County and include coastal 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 Map. 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 Agricultural, Rural Agricultural, and Low Density Residential classifications.

The table below illustrates the amount of land area within each planning jurisdiction by land suitability rating.

*Table 50
Acreage by Land Suitability Rating*

Suitability	Elizabeth City Jurisdiction		Pasquotank County Jurisdiction	
	Total Acres	%	Total Acres	%
High	7,070	65%	12,620	10%
Medium	1,180	11%	31,420	24%
Low	210	2%	49,780	38%
Least	2,390	22%	37,630	29%
Totals	10,850	100.0%	131,450	100.0%

Source: The Wooten Company

Some portions of the projected use classifications shown on the Future Land Use Map may include land which is designated as having moderate or serious natural limitations or land which is rated as having low suitability for development. 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 future 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. 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 Pasquotank Environmental Health Department 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 on 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 AECS. CAMA standards for estuarine shoreline development generally require that (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% 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 are also well suited to urban uses. The loss of prime farmland to other land uses is anticipated to continue particularly on the immediate periphery of the Elizabeth City urban area where more intensive growth is also well 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 Pasquotank County jurisdiction. Mechanisms such as the establishment of voluntary agricultural districts can also 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 subdivision 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 Map 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.

4.3.4 Comparison of Future Land Use Allocations and Projected Land Needs

The following table provides estimates of the acreages within each Future Land Use Map classification. In addition to providing total acreage within each classification, the table also shows estimated acreage with natural constraints (flood hazard areas and wetlands), and projected developable acreage (total acreage less acreage with natural constraints). It should be noted, however, that existing development currently exists in some areas identified as flood hazard areas and wetlands, particularly within the Elizabeth City urban area. Also, some developmental limitations created by natural constraints, such as location within a 100-year floodplain, can be mitigated (for example, by elevating a structure). Consequently, 'acreage with natural constraints' does not equate with 'undeveloped' or 'undevelopable' land.

As shown in the table below, approximately 49% of the total Pasquotank County jurisdiction and 61% of the Elizabeth City jurisdiction are impacted by natural constraints that present limitations but do not prevent the use of the land for future development. If this acreage is deducted from the total land acreage within each jurisdiction, the resultant developable acreage as projected is land that is, generally, most readily available to accommodate future land development. As previously stated however, some developmental limitations created by natural constraints can be mitigated. Consequently, a larger amount of acreage is available for development purposes than is portrayed here as 'developable acres'.

*Table 51
Future Land Use Map Calculations*

Pasquotank County Classifications	Total Acres*	% of Total Acres	Developable Acres** as Projected	Developable Acres** as a % of Total Acres
Rural Agricultural	70,230	54%	29,925	43%
Low Density Residential	5,575	4%	3,460	62%
Medium/High Density Residential	94	0%	14	15%
Mixed Residential	8,333	6%	4,413	53%
Commercial	2,608	2%	2,298	88%
Mixed Use	1,349	1%	1,040	77%
Public and Institutional	1,041	1%	736	71%
Industrial	6,508	5%	5,138	79%
Agriculture	26,250	20%	17,760	68%

Conservation and Open Space	7,564	6%	604	8%
Totals*	129,552	100.0%	65,388	50%
Elizabeth City Classifications	Total Acres*	% of Total Acres	Developable Acres** as Projected	Developable Acres** as a % of Total Acres
Low Density Residential	3,058	27%	1,095	36%
Medium/High Density Residential	2,115	19%	749	35%
General Commercial	1,603	14%	1,172	73%
Mixed Use	880	8%	880	100%
Downtown Mixed Use	73	1%	1	1%
Public and Institutional	1,021	9%	483	47%
Industrial	435	4%	261	60%
Conservation and Open Space	2,029	18%	255	13%
Totals*	11,213	100.0%	5,396	44%

Source: The Wooten Company

* totals do not include road rights-of-way or water areas

** developable acreage accounts for the loss of usable land area due to the natural constraints of wetlands and flood hazard areas

The following table provides a comparison of the amount of projected future land area as delineated on the Future Land Use Map (Figures 9A and 9B)

Table 52				
<i>Comparison of Future Land Allocation with Projected Needs</i>				
Land Use Category	Gross Acres Allocated on the Future Land Use Map	Existing Developed Acres from the Existing Land Use Map	Gross Undeveloped Acres	Total Additional Acres Needed Through 2025
Pasquotank County Planning Jurisdiction				
Residential*	15,122	5,908	9,214	9,764
Commercial**	2,837	714	2,123	2,929
Industrial	6,982***	789	6,193***	2,441
Public & Institutional	1,041	1,223	-182	1,465
Elizabeth City Planning Jurisdiction				
Residential	5,903	2,180	3,723	7,105
Commercial**	2,730	487	2,243	1,056
Industrial	435	216	219	469
Public & Institutional	2,029	1,164	9,214	710
Totals for Both Planning Jurisdictions				
Residential	21,024	8,088	12,936	15,684
Commercial**	5,567	1,201	4,366	3,985
Industrial	6,943	1,005	5,938	2,910

Public & Institutional	3,070	2,387	683	2,175
* FLU Map acres includes 83% of mixed use area; ELU Map acres includes 1,450 acres residential that is within agricultural areas				
** FLU Map acres includes 17% of mixed use area				
*** Includes 5,200 acres in the Tanglewood Mega Site				
<i>Note: Gross Undeveloped Acres is Gross Future Land Use Map Acres less Existing Land Use Map Acres. See Section 3.3.6, Projections of Land Needs regarding projected additional acres needed through 2025.</i>				

Source: The Wooten Company, July 2006

Based upon the estimates delineated in the above tables, sufficient developable acreage exists within the Pasquotank County planning jurisdiction to accommodate projected land needs. The amount of industrial land shown on the County's Future Land Use Map exceeds projected industrial land needs due to the inclusion of the Tanglewood Mega Site which is anticipated to accommodate the regional industrial market and not solely the industrial land needs of the Pasquotank County-Elizabeth City area. While this approximate 5,200-acre tract is currently used for agricultural purposes, it is zoned by the County for industrial use and is marketed by the NC Department of Commerce for industrial use as a mega site. Also, it is expected that industrial-designated land located with the County's jurisdiction will absorb some of the demand for industrial land that can not be accommodated in the City's planning jurisdiction due to the unavailability of large undeveloped tracts that are suitable for industrial use.

The County's Future Land Use Map indicates a reduction in the amount of land designated as public and institutional since only large acreage uses are delineated in this category. Additional public and institutional land uses are anticipated in the future but the overwhelming majority of such uses will be located within other future land use categories, particularly the residential and rural agricultural designated areas.

Within the current Elizabeth City jurisdiction, the projected residential land needs can not be met with the estimated amount of available developable acreage. However, some land within the City's jurisdiction containing developmental constraints can be utilized by employing mitigative measures. Even with the employment of higher residential densities and the redevelopment of some existing low density areas to medium and high densities, it would appear that a portion of the projected Elizabeth City future residential land needs will have to be met outside of the City's current planning and zoning jurisdictional area. To accommodate this projected residential growth, it will be imperative that the City and County closely coordinate infrastructure development as well as zoning administration on the periphery of the Elizabeth City urban area.

Any projected commercial and industrial land needs that can not physically be met within the City's planning jurisdiction can readily be absorbed in the County's planning jurisdiction.

Like the County, Elizabeth City anticipates that most of the additional future public and institutional land needs will be located within other land use categories, particularly the residential and general commercial designated areas.

The following tables summarize hypothetical maximum build out scenarios and utility demand by Future Land Use Map classifications using assumed density and intensity levels as identified in the tables:

Table 53
Estimated Utility Demand at Buildout
Pasquotank County Planning Jurisdiction

Future Land Use Map Classification	Estimated Undeveloped Acreage	Average DU/AC	Maximum Projected DU	Average Nonresidential Lot Size (Acres)	Maximum Projected Nonresidential Users	Projected Water Demand MGD*	Projected Sewer Demand MGD*
Agricultural	17,760	1 per 20 ac	888	150	15	0.178	0.000
Rural Agricultural	29,925	1 per 10 ac	2,993	na	0	.599	0.000
Low Density Residential	3,460	1	3,460	na	0	0.692	0.000
Medium/High Density Residential	14	4	56	na	0	0.011	0.011
Mixed Residential	4,413	2	8,826	na	0	1.765	1.765
Commercial	2,298	na	0	2	1,618	0.485	0.485
Mixed Use	1,040	4	6,500	1	333	1.300	1.300
Industrial	5,138	na	0	20	257	1.285	1.285
Public & Institutional	736	na	0	10	28	0.140	0.140
Totals	65,369		22,723		2,251	6.454	4.986
<p>*Based upon an average consumption of 200 gpd for residential users, 300 gpd for commercial users, 300 gpd for mixed uses, 5,000 gpd for public and institutional users, and 5,000 gpd for industrial users</p> <p>Source: <i>The Wooten Company, March 2008; average consumption rates by Pasquotank County.</i></p>							

<p style="text-align: center;"><i>Table 54</i> <i>Estimated Utility Demand at Buildout</i> <i>Elizabeth City Planning Jurisdiction</i></p>							
Future Land Use Map Classification	Estimated Undeveloped Acreage	Average DU/AC	Maximum Projected DU	Average Nonresidential Lot Size (Acres)	Maximum Projected Nonresidential Users	Projected Water Demand MGD*	Projected Sewer Demand MGD*
Low Density Residential	1,095	3	3,285	na	na	.657	.657
Medium/High Density Residential	749	6	4,494	na	na	.899	.899
Mixed Use	880	5	4,400	1	1,760	.880	.880
General Commercial	1,172	5	5,860	1	640	1.172	1.172
Downtown Mixed Use	1	10	10	0	4	0.002	0.002
Public & Institutional	483	na	na	5	45	0.135	0.135
Industrial	261	na	na	3	123	0.123	0.123
Totals	4,641		18,049		2,572	3.868	3.868
<p>* Based upon an average consumption of 200 GPD for residential users, 500 GPD for commercial users, 3,000 GPD for public and institutional users, and 1,000 GPD for industrial users. Where more than one land use is permitted, the use with the greater demand is reflected. Source: <i>The Wooten Company, December 2007; average consumption rates by Elizabeth City</i></p>							

These hypothetical projections help to illustrate the areas of Pasquotank County and Elizabeth City that have the greatest potential for intensive growth as well as the highest demand for water and sewer services. Cost estimates for planned/proposed water and sewer system improvements are provided in Section 5.3.2.

4.3.5 Use of the Future Land Use Plan to Guide Development

In preparing the Future Land Use Map, consideration was given to land development objectives and policies, land suitability, and the ability to provide the infrastructure to support growth and development. The Future Land Use Map depicts the general location of projected patterns of future land uses. The Future Land Use Map is 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 City to regulate land use and development (such as flood hazard regulations, the County's zoning ordinance, subdivision regulations, the City's Unified Development Ordinance), the absence of specific natural constraints to development, and the availability of the necessary infrastructure (water, sewer, roads, etc.) to support development. Consequently, even though the Future Land Use Map 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, formal amendments to the zoning ordinance and subdivision ordinance will be required to specifically authorize the type of mixed use development envisioned in this Land Use Plan.

In the way of an example, the Pasquotank County Future Land Use Map indicates Commercial use in the vicinity of the intersection of the US 17 Bypass and the Halstead Boulevard Connector. 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 this generally-identified area will depend upon the following:

- Is the property owner willing to use or sell the parcel for the proposed commercial use? Change of use or change of development intensity is, in most cases, initiated by the desires of the property owner.
- Is the parcel properly zoned for commercial use? If not, a rezoning must be requested and approved by the County Board of Commissioners. In reviewing the rezoning request, the Board of Commissioners 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. The proposed use and layout of the proposed building will be reviewed to determine conformance with the County's land use and development regulations and standards. Water supply and sewage disposal systems must be approved by the County.
- 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? Do poor soils, poor drainage, wetlands, flood hazards, etc. limit the use of all or a portion of the parcel for commercial development? Can adverse site conditions be overcome or mitigated in accordance with County, 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, State, and utility provider standards and regulations. Are improvements and extensions 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 Map will be greatly impacted by timing. Much of the projected land use indicated on the Future Land Use Map 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 widely 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.

SECTION V TOOLS FOR MANAGING DEVELOPMENT

This section of the Plan is organized in accordance with the requirements of Subchapter 7B .0702(e). Section V includes a description of the Elizabeth City and Pasquotank County land management tools and programs as well as the actions and strategies that each local government will use to implement the Joint Land Use Plan.

5.1 Guide for Land Use Decision-making

The Joint Land Use Plan, as adopted by the elected officials of Elizabeth City and Pasquotank County and as may be amended from time to time, will serve as the primary guide upon which to make land use policy decisions. Every land use policy decision, such as a rezoning request or approval of a conditional or special use permit, will be measured for consistency with the goals, policies, and recommendations of the Plan. The elected officials, Planning Boards, Boards of Zoning Adjustment, and local government staffs should utilize the Land Use Plan as the basic policy guide in the administration of the zoning ordinance, subdivision regulations, and other land development regulatory tools. Persons involved in the land development business as well as the general public can also utilize the Land Use Plan to guide private decisions regarding land use and land development.

The policy statements and recommendations of the Land Use Plan can also be of assistance to the elected officials in making long-range decisions regarding such matters as the provision of water and sewer services; thoroughfare planning; storm water planning and management; implementation of economic development strategies; recreational facility planning; preparation of capital and operating budgets; and implementation of housing and community development programs.

It should be noted, however, that the Land Use Plan is one of a variety of guides in making a public policy decision. The Plan should be viewed as a tool to aid in decision making and not as the final decision.

Additional information regarding utilizing the Plan to guide development is provided in Section 4.3.5.

5.2 Existing Land Use and Development Management Programs

5.2.1 Pasquotank County

Pasquotank County's existing land development management program includes the following land regulatory ordinances and related plans:

- CAMA Land Use Plan Update, Certified in April 1996
- Zoning Ordinance
- Subdivision Ordinance
- Water Supply Watershed Ordinance
- Airport Height Restrictions Ordinance
- Flood Damage Prevention Ordinance
- Multi-family Dwellings Ordinance
- Water System Policies, Rules, and Regulations
- Pasquotank County/Elizabeth City Hazard Mitigation Plan, July 2005

The County's land development management program is administered primarily by the Planning Department which is responsible for administering land development regulations. The County's land development regulations are applicable to all land areas located outside of the planning and zoning jurisdiction of the City of Elizabeth City.

The Planning Department serves as staff support for the Pasquotank County Planning Board and the Pasquotank County Board of Adjustment. The Planning Board serves primarily in an advisory capacity, making recommendations to the Board of Commissioners on zoning and subdivision matters. The Board of Adjustment is responsible for hearing requests for special use permits as well as requests for appeals and variances from the zoning ordinance. The Board of Commissioners responsibilities in the zoning process include adopting and amending the zoning ordinance text and map. The Board of Commissioners is also responsible for making approval decisions on all preliminary and final subdivisions.

Building inspections throughout the Pasquotank County jurisdiction are administered by the County Building Inspections Department.

5.2.2 Elizabeth City

Elizabeth City's existing land development management program includes the following land regulatory ordinances and related plans:

- CAMA Land Use Plan Update, Certified in September 1994
- Elizabeth City Thoroughfare Plan, January 1997
- 2002-2010 Capital Improvements Plan, Public Works Department, March 2002
- Storm water Management Ordinance, November 2001
- Unified Development Ordinance, September 1999
 - Watershed Protection Overlay District Regulations
 - Flood Hazard Overlay District Regulations
 - Airport Overlay District Regulations
- City and County Comprehensive Parks and Recreation Master Plan, 2007
- Pasquotank County/Elizabeth City Hazard Mitigation Plan, July 2005

The City of Elizabeth City land development management program is administered primarily by the Planning Department which is responsible for administering land development regulations. The City's land development regulations are applicable to all land areas located inside the corporate limits of the City of Elizabeth City and the City's extraterritorial planning and zoning jurisdiction.

The Planning Department serves as staff support for the Elizabeth City Planning Commission and the Elizabeth City Board of Adjustment. The Planning Commission serves primarily in an advisory capacity, making recommendations to the City Council on zoning matters and preliminary subdivision plat approvals. The Board of Adjustment hears all requests for appeals and variances from the Unified Development Ordinance and requests for Special Use Permits. The City Council is responsible for hearing requests for conditional use permits and makes all approval decisions on preliminary subdivision plats. The Elizabeth City Planning Director is authorized to approve minor subdivision plats and final plats for major subdivisions.

Building inspections throughout the City's jurisdiction are administered by the Elizabeth City Building Inspections Department. The Building Inspections Department also administers the City's Minimum Housing Code.

5.3 Additional Implementation Tools

5.3.1 Amendments or Adjustments to Existing Land Development Ordinances

Amendments to land development ordinances necessary to ensure consistency with the Land Use Plan include the following:

- Amendments to the Pasquotank County Zoning Ordinance and Subdivision Ordinance to authorize the variety of residential densities and building types and the mixtures of land uses envisioned in the 'Mixed Residential' and 'Mixed Use' classifications as delineated in Section 4.3.1 (C) and (E).
- Amendments to the Pasquotank County Zoning Ordinance and Subdivision Ordinance to develop alternative land development techniques such as clustering, conservation subdivisions, planned development, etc; buffering; and alternative storm water management techniques in order to better ensure land use compatibility.
- Amendments to the Pasquotank County Zoning Ordinance and Subdivision Ordinance and the Elizabeth City Unified Development Ordinance (UDO) to formulate highway corridor standards regarding driveway access, landscaping, signage, and other aesthetic-related requirements.
- To implement the Waterfront Master Plan (2001), Elizabeth City will consider establishing an overlay zone with design guidelines for the downtown waterfront; review the UDO for any necessary zoning changes to facilitate the plan; or implement conditional zoning regulations.
- Amendments to the Elizabeth City UDO to develop alternative land development techniques to mitigate the impacts of high intensity commercial and residential developments on surrounding land uses.
- To advance in preserving water quality, consider amendments to the Elizabeth City UDO to reduce impervious areas within developments; establish vegetative buffers along wetlands, streams, estuarine shorelines and major drainage ditches; to encourage alternative storm water management techniques; and develop standards for open space subdivisions.
- To assist in promoting orderly growth and compatible land uses, Elizabeth City will be developing conditional zoning. The conditional zoning will regulate the use and development of a particular property by imposing standards, regulations, or other conditions during the creation of the district. Conditional zoning typically allows an applicant to propose use limitations or development conditions that ensure compatibility between the subject property and surrounding properties.
- Consider establishing a new downtown mixed-use overlay district. The overlay district would include standards for parking, signage, buffers, and landscaping and other factors to help preserve the downtown area and encourage mixed use developments.
- To acquire public access to public trust waters, amend the UDO to require major residential developments fronting public trust waters to dedicate public access to the water.

5.3.2 Capital Improvements

Planned County water system capital improvements include the following:

- Construction of a reverse osmosis water treatment facility and related improvements (see Section 3.4.1).

Distribution lines will be installed to supply water to the areas of projected growth. These distribution lines will consist of:

- 24" main from the Reverse Osmosis plant along Foreman Bundy Road to the intersection of US 17 South and Foreman Bundy Road.
- 16" main from the Foreman Bundy Road and US 17 Bypass interchange to the Halstead Boulevard Extension and US 17 Bypass interchange.
- 16" main from the Halstead Boulevard Extension and US 17 Bypass interchange to an existing 16" main located along Thunder Road. This will provide additional capacity for the existing 16" main transmitting water to the northern part of the county.
- 12" main from existing water tower located in the Pasquotank County Commerce Park extending north to the intersection of US 17 North and US Hwy 158/Northside Road.
- 8" main will be located approximately 6,000 feet north of the US 17 Bypass and US 17 North interchange, to connect US 17 North and Northside Road.

Estimated total cost for all proposed RO plant and related improvements is \$10.5 million.

Planned water system improvements for the City of Elizabeth City include:

- Water source development/supply expansion: \$2.0 million.
- Small diameter water line replacement/upgrades: \$4.0 million.
- Trunk main improvements: \$0.5 million.
- Water treatment plant expansion: \$1.0 million.

Planned County sewer system capital improvements include a 12-inch sewer line extending from Elizabeth City's Knobbs Creek wastewater treatment facility along US 17 Business to Pasquotank County's Commerce Park. The estimated cost of this improvements project is \$2.1 million.

Planned sewer system improvements for the City of Elizabeth City include:

- Sanitary Sewer Neighborhood Rehabilitation projects: \$34.0 million.
- Sanitary Sewer System Upgrades: \$1.9 million.

5.4 Implementation Plan and Schedule

5.4.1 Pasquotank County

Pasquotank County has developed the following action plan and schedule to implement the Land Use Plan:

A. Public Water Access Implementation Actions

1. **FY 08:** Seek funding from DCM for a grant to prepare a waterfront access plan.
2. **FY 09:** Finalize waterfront access plan.

3. **Post FY 09:** Initiate implementation of the recommendations of the waterfront access plan; seeking funding approval for recommended acquisitions/improvements; develop specific criteria and standards for the provision of public waterfront access.
4. **Ongoing:** Review, through the subdivision plat and site plan review and approval process, proposed waterfront land development projects to ensure consistency with the County's public access goals and policies.

B. Land Use Compatibility Implementation Actions

1. **FY05:** Establish a joint task force with the City of Elizabeth City to develop coordinated land use and development regulations for the Halstead Boulevard Connector.
2. **FY05:** Review the zoning ordinance, subdivision regulations, and other County land use and development regulations to ensure that residential densities and building intensities are consistent with the County's land suitability goals and policies. Prepare revisions and updates as determined appropriate. Coordinate the review with the District Health Department.
3. **FY06:** Develop site plan standards for multifamily and nonresidential development; establish site plan review and approval procedures in the zoning ordinance.
4. **FY07:** Review, and revise as determined appropriate, the County land use and development regulations to include development principles and techniques that promote land use compatibility as open space subdivision design, clustering, innovative storm water management design, etc.
5. **FY08:** Develop zoning ordinance standards for mixed use development and mixed residential development.
6. **FY08:** Develop, in cooperation with the NCDOT, requirements for regulating vehicular access to state roadways; amend the County zoning ordinance and subdivision regulations accordingly.
7. **FY08:** Establish a joint task force with the City of Elizabeth City to develop coordinated land use and development regulations for areas of common interest such as extraterritorial planning area, municipal utility service areas, airport zoning area, etc.

C. Infrastructure Carrying Capacity Implementation Actions

1. **FY06:** Extend a 16" watermain down Halstead Boulevard Extension from the US 17 Bypass to Thunder Road
2. **FY07:** Establish a joint task force with the City of Elizabeth City and other utility providers within Pasquotank County to establish utility service area boundaries and to develop coordinated land use and development regulations within such areas.
3. **FY07:** Review the County's water system extension and service policies for consistency with the goals and objectives of the Land Use Plan.
4. **FY09:** Construct a watermain from the reverse osmosis plant to the intersection of US 17 South and Foreman Bundy Road.
5. **FY10:** Construct new pump station and force main from Knobbs Creek Drive to City WWTP
6. **FY12:** Extend water service northward from the Pasquotank County Commerce Park to Northside Road.

7. **Ongoing:** Utilize the Land Use Plan, zoning ordinance, subdivision regulations, and water extension policies to guide public infrastructure and services to areas where growth and development are desired.

D. Natural Hazard Areas Implementation Actions

1. **Ongoing:** The County will review its zoning ordinance, subdivision regulations, and flood damage prevention ordinance to determine if more specific locational 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 height above base flood elevation, etc.
2. **Ongoing:** The County will avoid zoning areas susceptible to storm surge for high density residential or intensive nonresidential use.
3. **Ongoing:** Based upon the availability of federal and state grant funds, land acquisition programs will be utilized in the most hazardous areas to minimize future damage and loss of life.
4. **Ongoing:** If any portion of the County's public infrastructure is significantly damaged by a major storm, consideration will be given to the feasibility of relocating or modifying the affected facilities to prevent the reoccurrence of storm damage.
5. **Ongoing:** Coordinate the review and approval of development plans for major subdivisions, multifamily developments, and large public and institutional uses located within identified natural hazard areas with the County Emergency Management Agency. Continue the active enforcement of the State Building Code provisions regarding wind-resistance requirements and participation in the National Flood Insurance Program.

E. Water Quality Implementation Actions

1. **FY07:** The County will investigate the feasibility of developing and implementing a countywide storm water management plan and coordinating such management plan with the City of Elizabeth City.
2. **FY07:** The County will review its zoning ordinance and subdivision regulations to determine if revisions are needed to include additional measures, such as riparian buffers and impervious surface limitations, to control storm water discharges.
3. **FY08:** The County will consider adoption of a countywide drainage manual which will include requirements for a thirty foot wide undisturbed vegetated buffer strip adjacent to natural banks of all watercourses, water bodies, or wetlands.
4. **Ongoing:** The County will continue to require, through its subdivision regulations, adequate storm water drainage systems for new developments. The County will continue to promote the use of Best Management Practices to minimize the degradation of water quality resulting from storm water runoff. The County will continue to coordinate the approval of land development projects with the applicable State agencies.

F. Areas of Environmental Concern Implementation Actions:

1. **FY08:** The County will review its zoning ordinance and subdivision regulations to determine if revisions are needed to include additional protective measures for AECS.
2. **Ongoing:** Continue participation in the North Carolina Ecosystem Enhancement Program.

G. Areas of Local Concern Implementation Actions:

1. **FY08:** The County will review its zoning ordinance and subdivision regulations to determine if revisions are needed to eliminate requirements that are not conducive to encouraging a variety of housing opportunities or to promoting diversified economic development.

5.4.2 Elizabeth City

The City of Elizabeth City has developed the following action plan and schedule to implement the Land Use Plan:

A. Public Water Access Implementation Actions

1. **FY 09:** Amend the UDO to require that major residential subdivisions that abut public trust waters be required to dedicate public access to public trust waters. Access for the general public is preferred.
2. **FY 10:** Finalize the Waterfront Master Plan for adoption by the City Council.
3. **FY 11:** Develop a waterfront overlay zoning district to facilitate implementation of the Waterfront Master Plan.
4. **Post FY 11/12:** Initiate additional implementation strategies recommended in the Waterfront Master Plan; seek funding approval for recommended improvements, particularly additional public water access.

B. Land Use Compatibility Implementation Actions

1. **FY08:** Develop conditional zoning to facilitate versatile development standards in keeping with the Land Use Plan.
2. **FY09:** Establish a joint task force with Pasquotank County to develop coordinated land use and development regulations for the Halstead Boulevard Connector.
3. **FY 09:** Create alternative development techniques to mitigate the impact for high intensity commercial and residential developments on surrounding land uses.
4. **FY10:** Establish a joint task force with the County to develop coordinated land use and development regulations for the development of an aviation center proximate to the Elizabeth City Regional Airport.
5. **FY10:** Establishment of land use development policies that balance protection for natural resources and areas with economic development.
6. **FY12:** Develop an overlay district for the downtown mixed use. Evaluate the UDO for any necessary zoning changes to facilitate downtown mixed use.

C. Infrastructure Carrying Capacity Implementation Actions

1. **FY 05/07:** Extend sewer services westward on the Halstead Boulevard Extension to the US 17 By-Pass.

2. **FY07/09:** Implement the recommendation of the joint City/County Comprehensive Parks and Recreation Master Plan to develop two sports complexes.
 - a. **FY 07/08** – Soccer Complex
 - b. **FY 08/09** – Baseball/Softball Complex
3. **FY08/09:** Implement the recommendation of the joint City/County Comprehensive Parks and Recreation Master Plan, adopted in January 2007, to assess existing parks to see how the facilities can be expanded and/or updated for maximum use.
4. **FY 09:** Upgrade, and repair the Knobbs Creek and Rum Quarter pump stations; and construct a new pump stations to service the new aviation center and another pump station for the River Road area.
5. **FY 09:** Expand the water source supply by the addition of four well sites to the water system for an increased capacity of approximately 1 MGD.
6. **FY 09/10:** Replace the Charles Creek Bridge.
7. **FY09/10:** Implement the recommendation of the joint City/County Comprehensive Parks and Recreation Master Plan to develop three additional neighborhood parks.
8. **FY 10:** Extend sewer services southward pass the US Coast Guard facility to service the aviation center.
9. **FY 10:** Develop road design and construction standards for City streets.
10. **FY10:** Develop service territories for the City's sewer and water facilities. Evaluate the City's sewer and water extension and service policies for consistency with the goals of the Land Use Plan.
11. **FY10:** Coordinate with the County and other utility providers to delineate service areas as the City grows.
12. **FY10/11:** Develop a greenway master plan
13. **FY12:** Develop a joint facilities study with the county to review the adequacy of health services, emergency services, fire services, schools, sewer, and water.
14. **FY12:** Coordinate with the NCDOT for the preparation of an updated Thoroughfare Plan and seek the possible transfers of Water Street and Elizabeth Street to City control for redevelopment.
15. **FY 12:** Replacement of the filter media at the water treatment facility to increase the water production.
16. **FY12:** Establish a regional water cooperative with the surrounding public providers.
17. **Ongoing:** Develop City/County joint use agreements with the school system to allow recreational use of the schools located throughout the area.
18. **Ongoing:** Replace or upgrade small diameter water lines.
19. **Ongoing:** Improvements to the trunk water main.
20. **Ongoing:** Improvements and resurfacing of City streets.
21. **Ongoing:** Neighborhood rehabilitation including the repair and replacement of leaking gravity sewer mains
22. **Ongoing:** Repair and upgrades to the City's Core pump stations

D. Water Quality Implementation Actions

1. **FY08:** Develop a joint City/County task force to implement a regional storm water management plan.

2. **FY 09:** Amend the Flood Hazard District Overlay Requirements to increase the lowest floor elevation of structures located within flood hazard areas to a minimum of one foot above the base flood elevation.
3. **FY 09:** Produce policies to reduce impervious surfaces in developments, especially within floodplains, encourage alternative storm water management techniques, open space preservation, and cluster developments.
4. **FY 09:** Establish design standards for open space subdivisions and vegetative buffer areas along streams, wetlands and estuarine shorelines.
5. **FY09:** Development of polices to prevent or control non-point source discharges.
6. **Ongoing:** The City will continue to require, through its Storm water Management ordinance and Unified Development Ordinance, adequate storm water drainage systems for new developments. The City will continue to promote the use of Best Management Practices to minimize the degradation of water quality resulting from storm water runoff. The City will continue to coordinate the approval of land development projects with the applicable State agencies.
7. **Ongoing:** Continue to support CAMA requirements concerning the preservation of open space buffers along estuarial shorelines. Promote alternative storm water management techniques, buffering, etc.

E. Areas of Local Concern Implementation Actions:

1. **FY08:** Continue the joint City/County efforts on developing a Conference Center in the downtown area. The City and County are pursuing land acquisition for the project through the use of options to purchase.
2. **FY 08/09:** Support the adoption of stronger minimum housing standards and a demolition by neglect ordinance.
3. **FY 09:** Strengthen sign regulations and increase enforcement activities
4. **FY09:** Continue the work of the City and County Joint Redevelopment Committee in the redevelopment of the blighted residential fairgrounds neighborhood into a viable light industrial development.
5. **FY 09:** Continue to support the implementation and recommendations in the joint Comprehensive Parks & Recreation Master Plan.
6. **FY 10:** Seek funding and land acquisition for the development of an open space/greenway system.
7. **FY12:** Amend the UDO to provide incentives for constructing non-wetland, upland marinas as opposed to open water marinas.
8. **FY12:** To facilitate the implementation of the Waterfront Master Plan, initiate development of design guidelines for the creation of an overlay district.
9. **On Going:** Continue relationships with organizations that promote historic preservation in the community including the Elizabeth City Historic Neighborhood Association, Elizabeth City Downtown, Inc., Museum of the Albemarle, and Preservation NC.
10. **On Going:** Continue to develop an educational outreach program utilizing the City's public access channel and educational materials on preservation techniques.
11. **On Going:** Enhance historic neighborhood with streetscape and infrastructure improvements.

5.5 Description of Public Participation Activities to Assist in Monitoring Plan Implementation

Pasquotank County and the City of Elizabeth City have developed the following action plan to assist in monitoring implementation of the Land Use Plan.

Annual Performance Review

The County and the City, through their respective Planning Departments and Planning Boards, will undertake an annual review of the proposed implementation activities delineated in Section 5.4 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 Section 5.4, the County and the City will also undertake an assessment of the general effectiveness of the policies outlined in Section 4.2 and make recommendations on any follow-up action deemed necessary to improve the effectiveness of the policies.

The County and City Planning Directors will forward their evaluation and recommendations to their respective elected officials. The County Board of Commissioners and the City Council, following a review of the Planning Director's recommendations, will make a determination of what action, if any, should be taken to ensure implementation of the Land Use Plan. All Planning Board and elected officials meetings are open to the public and citizen comments are welcomed.

If a formal amendment to the Land Use Plan is deemed necessary, such amendment shall be processed in accordance with the requirements of NCAC 7B.0900.

Pasquotank County and Elizabeth City will utilize their respective official WebPages to distribute information regarding their overall planning programs, annual reports and evaluations, and specific implementation activities.

APPENDICES

Appendix A Index of Data Sources

- 2000 Census of Population and Housing, United States Bureau of Census
- Census of Agriculture, 2002, United States Bureau of Census
- North Carolina State Data Center, Office of State Budget and Management
- Division of Coastal Management, Subchapter 7B, Land Use Planning Guidelines
- Division of Coastal Management, Subchapter 7H, State Guidelines for AEC
- *Technical Manual for Coastal Land Use Planning*, Version 2.0, July 2002, North Carolina Division of Coastal Management.
- *Pasquotank River Basinwide Water Quality Plan*, North Carolina Department of Environment and Natural Resources, Division of Water Quality, May 2002.
- *Soil Survey of Camden County*, North Carolina, US Department of Agriculture Soil Conservation Service (now renamed the Natural Resources Conservation Service)
- United States Bureau of Economic Analysis
- North Carolina Division of Marine Fisheries
- North Carolina Natural Heritage Program
- North Carolina Division of Archives and History
- North Carolina State Historic Preservation Office
- North Carolina Department of Revenue, Tax Research Division
- North Carolina Department of Commerce
- North Carolina Department of Transportation
- Federal Emergency Management Administration, National Flood Insurance Program
- Pasquotank-Camden-Elizabeth City Emergency Management Office.
- National Climatic Data Center
- *Draft North Carolina Natural Hazards Mitigation (Section 322) Plan*, August 2001
- *Basinwide Assessment Report*, Chowan River and Pasquotank River Basins, North Carolina Department of Environment and Natural Resources, Division of Water Quality, January 2002.
- *A Guide to North Carolina's Tidal Saltwater Classifications*, Cape Fear Council of Governments, 1994
- *Watershed Restoration Plan for the Pasquotank River Basin*, NC Wetlands Restoration Program, 2002.
- *Pasquotank River Local Watershed Plan*, NC Ecosystem Enhancement Program, December 2003.
- North Carolina 2004 Impaired Waters List, April 26, 2004, DWQ
- *Pasquotank County Zoning Ordinance*, December 1992
- *Pasquotank County Subdivision Ordinance*, March 1989
- *Pasquotank County Flood Damage Prevention Ordinance*, August 1994.
- *Pasquotank County Land Use Plan Update*, April 1996, SYNAPSE Planning Inc.
- *Ordinance Regulating Multi-family Dwellings in Pasquotank Count*, December 1985.
- *Elizabeth City-Pasquotank County Height Restriction Ordinance*, February 1999.
- *Pasquotank County Water Supply Watershed Ordinance*, May 16, 1994.
- *Water System Policies, Rules and Regulations, Pasquotank County, NC*, January 1979.
- South Mills Water Association

- *Blueprint to Protect Coastal Water Quality*, The Center for Watershed Protection and Land Ethics, Inc.
- *Elizabeth City 2002: Everybody's Future, CAMA Land Use Plan Update 1992* (certified by the Coastal Resource Commission (CRC) on September 23, 1994), Ken Weeden and Associates.
- *Elizabeth City Unified Development Ordinance*, September 13, 1999.
- *Drainage Basin Data for the Elizabeth City Storm water Management Plan*, McDowell and Associates, PA.
- *Capital Improvements Plan 2002-2010*, City of Elizabeth City Public Works Department, March 21, 2002.
- *Draft City of Elizabeth 2002 Comprehensive Plan*, Elizabeth City Planning Department.
- *Elizabeth City Thoroughfare Plan*, NCDOT, January 1997.
- *Pasquotank County/Elizabeth City Hazard Mitigation Plan*, July 2005.

Appendix B
Housing Units by Type
Pasquotank County Townships
2000

Type of Unit as a Percentage of All Housing Units in Pasquotank County

<i>Township</i>	<i>Total Units</i>	<i>1 Unit</i>	<i>Percent Of Total</i>	<i>2 Units</i>	<i>Percent Of Total</i>	<i>3-9 Units</i>	<i>Percent Of Total</i>	<i>10+ Units</i>	<i>Percent Of Total</i>	<i>Mfg. Units</i>	<i>Percent Of Total</i>	<i>Boat, RV, etc. Units</i>	<i>Percent Of Total</i>
Elizabeth City	5,756	3,556	24.9%	657	4.6%	898	6.3%	283	2.0%	351	2.5%	11	0.1%
Mount Hermon	2,021	1,553	10.9%	5	0.0%	41	0.3%	0	0.0%	416	2.9%	6	<0.1%
Newland	913	531	3.7%	0	0.0%	9	0.1%	0	0.0%	373	2.6%	0	0.0%
Nixonton	2,420	1,856	13.0%	27	0.2%	130	0.9%	32	0.2%	375	2.6%	0	0.0%
Providence	2,498	1,772	12.4%	24	0.2%	65	0.5%	112	0.8%	525	3.7%	0	0.0%
Salem	681	472	3.3%	0	0.0%	0	0.0%	0	0.0%	209	1.5%	0	0.0%
Totals	14,289	9,740	68.2%	713	5.0%	1,143	8.0%	427	3.0%	2,249	15.7%	17	0.1%

	<i>Total Units</i>	<i>1 Unit</i>	<i>Percent Of Total</i>	<i>2 Units</i>	<i>Percent Of Total</i>	<i>3-9 Units</i>	<i>Percent Of Total</i>	<i>10+ Units</i>	<i>Percent Of Total</i>	<i>Mfg. Units</i>	<i>Percent Of Total</i>	<i>Boat, RV, etc. Units</i>	<i>Percent of Total</i>
City of Elizabeth City	7,438	4,758	64.0%	673	9.0%	1,066	14.3%	414	5.6%	516	7.0%	11	0.1%

Appendix C

Summary of Land Use and Development Issues from the 1994 Elizabeth City and 1996 Pasquotank County CAMA Land Use Plans

Land Use

- Annexation/expansion of area within City's jurisdiction.
- Land Use regulations to effect Land Use Patterns
- Others

Economic Development

- Further diversify employment base by recruiting higher-paying employers, industry, etc.
- Emphasize, seek to enhance City's role as a regional center.
- Promote tourism, with special events, activities, etc.
- Location and types of industries.
- Provision of infrastructure for economic development.
- Others.

Types and Location of Desired Industries

- Additional industrial development offers one solution to the area's economic diversification needs.

Public Facilities

- In the long term, should the City seek alternative sources of raw water other than the well fields and the Pasquotank River?
- Although the existing water plant has the capacity to treat sufficient amounts of water to serve the projected 10-year population increase, the City may wish to begin planning for long-term improvements.
- Sewer services appear to be adequate presently. However, the historical problems of inflow/infiltration and difficulties in meeting discharge limitations signal a need to continue sewer improvement plans.
- Providing recreational facilities accessible to all of the population.
- Development of a trails and greenways system.
- Continuation of the provision of recreation service to residents of both Pasquotank and Camden Counties.
- The City's support of and participation in a regional solid waste disposal program, including regional landfill.
- Providing increased levels of fire and police personnel, commensurate with population growth.
- The City supporting expansion of school capacity to meet anticipated growth in school-age population.

Housing

- Continued and specific efforts to facilitate both housing affordability and home ownership.
- Review of local Land Use controls, relative to restrictions on housing development.

Transportation

- Support of the proposed new U.S. 17 Bypass and other local thoroughfare improvements.

- Support on inclusion of pedestrian and bicycle access improvements in any planned road improvements.
- Accelerate the updating the City's Thoroughfare Plan.
- Support of an additional major North-South cross-town connector.

Waterfront Development

- Firm commitment to the re-development of the downtown waterfront as a tourist/historic resource attraction. This would necessitate the development and adoption of regulatory ordinances supporting the redevelopment.
- Specific policies on the development of marina facilities.
- Balanced development, so that scenic views and vistas are enhanced and maintained.

Cultural Resources

- Continued support of the historic preservation activities and expansions of the Historic Districts.
- Support for expansion, and/or relocation of the Museum of the Albemarle to a downtown waterfront location.
- Coordination of new, land-disturbing construction with the State Division of Archives and History, for protection of potential archaeological resources.

Natural Resources

- Continued protection of the identified Areas of Environmental Concern, with special concern about development encroaching on the City's well fields.
- Limit development from undue encroachment on wooded swamplands.
- Regulate waterfront development so as to better protect surface water quality from negative effects of urban runoff.

Use of Package Treatment Plants

- The centralized sewer service in Elizabeth City's planning jurisdiction serves primarily those areas within the immediate City limits. It may become necessary to develop small package treatment systems in order to accommodate certain types of development in outlying areas of the extraterritorial jurisdiction. This development may be residential, commercial, or industrial.

Storm water Runoff

- Although none of the waters in Elizabeth City's Jurisdiction are classified as Primary Nursery Areas, storm water runoff mainly from urban development as opposed to agricultural activities, could adversely affect the quality of these waters.

Marina and Floating Home Development

- The development of marinas may have significant commercial and recreational potential in Elizabeth City. There are lands along portions of the Pasquotank River which may be redeveloped.

Drystack Facilities

- Drystack facilities, like marinas, are viewed by Elizabeth City as potential important support resources for recreational boating and possible urban economic development.

Agriculture

- The City of Elizabeth City recognizes that there may be significant lands considered valuable for farming located within its jurisdictional boundaries. However, the City does not deem it necessary to propose any special management policies for these lands at this time. In many cases they already contain urban development and/or are being used for non-farm purposes.

Redevelopment of Developed Areas

- The two principle focuses under this issue are existing residential and commercial development. There are several older residential neighborhoods within the City's jurisdiction which are subject to blighting influences. The other principal focus of concern is older commercial development--especially in the downtown area and along the Pasquotank River. A private non-profit downtown redevelopment agency, i.e. Elizabeth City Downtown Inc., has become very active in promoting downtown redevelopment. Redevelopment will be a key area of concern for this agency, consistent with the commitment of the City of Elizabeth City.

Commitment to State and Federal Programs

- There are a number of state and federal programs which are important to Elizabeth City. Many, such as erosion control programs of the USDA Natural Resources Conservation Service, NCDOT road and bridge maintenance, repair and replacement programs; estuarine beach and waterfront access development programs, etc., provide valuable direct benefits to the City.

Tourism

- In recent years, travel and tourism expenditures have been as significant in Elizabeth City/Pasquotank County as in other coastal areas. However, the City recognizes the potential, especially with attractive waterfront development.

Summary of General Issues *(Source: p. 24, 1996 LUP)*

- Safeguarding industrial park sites from encroachment by incompatible land uses
- Making farmland productivity a consideration in land use and zoning decisions
- Adopting a five-year capital improvements program
- Controlling runoff (quality and quantity) from new development
- Continuing support for CDBG (Community Development Block Grant) projects
- Safeguarding public waterfront access from encroachment by non-water dependent land uses
- Discouraging urban sprawl by zoning to protect highway capacity
- Adopting access controls in cooperation with the NCDOT
- More effective storm hazard mitigation and post disaster planning
- Safeguarding historical and archaeological treasures
- Determining the threat posed by hazardous wastes being transported through the County on its roadways and waterways
- Designating environmentally fragile areas as conservation zones
- Formalizing the cooperation with Elizabeth City in regulating land uses within the flight approaches to the Coast Guard Air Station
- Supporting state and federal programs that protect the environment or enhance the quality of life

Appendix D
Soil Characteristics

This Appendix contains the following soils data prepared by the Natural Resources Conservation Service, US Department of Agriculture:

- D1 Map Unit Legend. A description of soil name by soil map symbol.
- D2 Sewage Disposal. Rating classes and limiting features for septic tank absorption fields and sewage lagoons.
- D3 Dwellings and Small Commercial Buildings. Rating classes and limiting features for dwellings without basements, dwellings with basements, and small commercial buildings.
- D4 Prime Farmland. Delineates soils that are classified as prime farmland.
- D5 Hydric Soils. Delineates soils that are classified as hydric soils.

Soils maps and information are available at the offices of the Natural Resources Conservation Service located at:

Beechtree Plaza
1023-5 US Highway 17 South
Elizabeth City, NC
252-338-6353

Appendix E

Maps and Data Available at the Pasquotank County and Elizabeth City Planning Departments

Maps

1. General Location Map
2. Township Map
3. Natural Features Map
4. Environmental Conditions Composite Map
5. Existing Land Use Map
6. Water and Wastewater Systems Map
7. Transportation Systems Map
8. Storm water Management Systems Map
9. Land Suitability Map
10. Future Land Use Map
11. Prime Farmland based upon USDA soil classifications
12. Storm Surge Areas
13. Flood Hazard Areas
14. Wetlands Areas
15. Developed Lands

Data

1. CD of Land Use Plan Document
2. Electronic map data

Appendix F
Water Quality Classifications in Pasquotank County

Name of Stream	Current Classification	Date	Basin	Stream Index #
Albemarle Sound	SB	07/01/73	Pasquotank	30
Pasquotank River	WS-IV;Sw	08/01/98	Pasquotank	30-3-(1)
Newland Drainage Canal	C;Sw	09/01/74	Pasquotank	30-3-1.5
Pasquotank River	WS-IV;Sw	08/01/98	Pasquotank	30-3-(3)
Pasquotank River	WS-IV;Sw;C	08/03/92	Pasquotank	30-3-(5)
Pasquotank River	C;Sw	04/06/61	Pasquotank	30-3-(5.5)
Pasquotank River	SC	04/06/61	Pasquotank	30-3-(7)
Knobbs Creek	C;Sw	09/01/74	Pasquotank	30-3-8
Poindexter Creek	C;Sw	01/01/85	Pasquotank	30-3-9
Unnamed tributary at mMorin Street	C;Sw	01/01/85	Pasquotank	30-3-10
Charles Creek	C;Sw	03/01/77	Pasquotank	30-3-11
Pasquotank River	SB	04/06/61	Pasquotank	30-3-(12)
Pasquotank River	SC	04/06/61	Pasquotank	30-3-(15)
New Begun Creek	C;Sw	03/01/77	Pasquotank	30-3-16-(1)
New Begun Creek	SC	04/06/61	Pasquotank	30-3-16-(2)
Wilson Creek	C;Sw	04/06/61	Pasquotank	30-3-16-3
Little Flatty Creek	SC	04/06/61	Pasquotank	30-3-18
Big Flatty Creek	SC	04/06/61	Pasquotank	30-4
Chapel Creek	C;Sw	09/01/74	Pasquotank	30-4-1-(1)
Chapel Creek	SC	04/06/61	Pasquotank	30-4-1-(2)
Dam Creek	SC	04/06/61	Pasquotank	30-4-2
Little River	C;Sw	04/06/61	Pasquotank	30-5-(1)
Little River	SC	04/06/61	Pasquotank	30-5-(2)
Halls Creek	C;Sw	04/06/61	Pasquotank	30-5-3
Symonds Creek (Swamp Creek)	C;Sw	09/01/74	Pasquotank	30-5-5-(1)
Symonds Creek (Swamp Creek)	SC	04/06/61	Pasquotank	30-5-5-(2)
Matthews Creek	C;Sw	09/01/74	Pasquotank	30-5-5-3

Source: NC Division of Water Quality

* <http://www.co.pasquotank.nc.us/cama/Waterqualityclassification.pdf>

Appendix G
Natural Area and Rare Species Inventory
Pasquotank County

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County Status
Mammal	Synaptomys cooperi helaletes	Dismal Swamp Southern Bog Lemming	SR	-	S2	G5T3	Current - Pasquotank
Bird	Haliaeetus leucocephalus	Bald Eagle	T	T (PD)	S3B,S3N	G4	Current - Pasquotank
Reptile	Crotalus horridus	Timber Rattlesnake	SC	-	S3	G4	Obscure - Pasquotank
Fish	Acipenser brevirostrum	Shortnose Sturgeon	E	E	S1	G3	Historic - Pasquotank
Vascular Plant	Heteranthera multiflora	Multiflowered Mud-plantain	SR-P	-	S1	G4	Historic - Pasquotank
Vascular Plant	Lilaeopsis carolinensis	Carolina Grasswort	T	-	S3	G3G5	Current - Pasquotank
Vascular Plant	Ludwigia alata	Winged Seedbox	SR-P	-	S2	G4	Current - Pasquotank
Natural Community	Estuarine Fringe Loblolly Pine Forest	-	-	-	S3	G3?	Current - Pasquotank
Natural Community	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	-	-	-	S4	G5T5	Current - Pasquotank
Natural Community	Nonriverine Swamp Forest	-	-	-	S2S3	G2G3	Current - Pasquotank
Natural Community	Nonriverine Wet Hardwood Forest	-	-	-	S1	G1	Current - Pasquotank
Natural Community	Peatland Atlantic White Cedar Forest	-	-	-	S2	G2	Historic - Pasquotank
Natural Community	Tidal Cypress--Gum Swamp	-	-	-	S3	G4	Current - Pasquotank
Natural Community	Tidal Freshwater Marsh	-	-	-	S2S3	G4	Current - Pasquotank

Source: North Carolina Natural Heritage Program. NCNHP database updated: January, 2004. Search performed on Friday, July 9, 2004 at 15:15:25 Eastern Standard Time.

Explanation of Codes for County and Quad Status Lists

The county and quadrangle status lists provided by the NC Natural Heritage Program tally 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 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. As a result, a list cannot be considered a definitive record of the elements of natural diversity present in a given county or quad and should not be

used as a substitute for field surveys. When this information is used in any document, we request that the date this list was compiled be given and that the NC Natural Heritage Program be credited.

STATE STATUS

CODE	STATUS	CODE	STATUS
E	Endangered	SR	Significantly Rare
T	Threatened	EX	Extirpated
SC	Special Concern	P_	Proposed (used only as a qualifier of the ranks above)
C	Candidate		

NOTE: the definitions of state statuses of plants and animals differ. Below are summaries of the statuses for each group.

Plant statuses are determined by the Plant Conservation Program (NC Department of Agriculture) and the Natural Heritage Program (NC Department of Environment and Natural Resources). Endangered, Threatened, and Special Concern species are protected by state law (Plant Protection and Conservation Act, 1979). Candidate and Significantly Rare designations indicate rarity and the need for population monitoring and conservation action. Note that plants can have a double status, e.g., E-SC, indicates that while the plant is endangered, it is collected or sold under regulation.

CODE	STATUS	DEFINITION
E	Endangered	"Any species or higher taxon of plant whose continued existence as a viable component of the State's flora is determined to be in jeopardy" (GS 19B 106: 202.12). (Endangered species may not be removed from the wild except when a permit is obtained for research, propagation, or rescue which will enhance the survival of the species.)
T	Threatened	"Any resident species of plant which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (GS 19B 106:202.12). (Regulations are the same as for Endangered species.)
SC	Special Concern	"Any species of plant in North Carolina which requires monitoring but which may be collected and sold under regulations adopted under the provisions of [the Plant Protection and Conservation Act]" (GS 19B 106:202.12). (Special Concern species which are not also listed as Endangered or Threatened may be collected from the wild and sold under specific regulations. Propagated material only of Special Concern species which are also listed as Endangered or Threatened may be traded or sold under specific regulations.)
C	Candidate	Species which are very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction (and sometimes also by direct exploitation or disease). These species are also either rare throughout their ranges (fewer than 100 population's total) or disjunct in North Carolina from a main range in a different part of the country or world. Also included are species which may have 20-50 populations in North Carolina, but fewer than 50 population's range wide. These are species which have the preponderance of their distribution in North Carolina and whose fate depends largely on their conservation here. Also included are many species known to have once occurred in North Carolina but with no known extant occurrences in the state (historical or extirpated species); if these species are relocated in the state, they are likely to be listed as Endangered or Threatened. If present land use trends continue, candidate species are likely to merit listing as Endangered or Threatened.
SR	Significantly Rare	Species which are very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction (and sometimes also by direct exploitation or disease). These species are generally more common somewhere else in their ranges, occurring in North Carolina peripherally to their main ranges, mostly in habitats which are unusual in North Carolina. Also included are some species with 20-100 populations in North Carolina, if they also have only 50-100 populations range wide and are declining.
-L	Limited	The range of the species is limited to North Carolina and adjacent states (endemic or near endemic). These are species which may have 20-50 populations in North Carolina, but fewer than 50 populations

CODE	STATUS	DEFINITION
		range wide. The preponderance of their distribution is in North Carolina and their fate depends largely on conservation here. Also included are some species with 20-100 populations in North Carolina, if they also have only 50-100 populations range wide and declining.
-T	Throughout	These species are rare throughout their ranges (fewer than 100 populations total)
-D	Disjunct	The species is disjunct to NC from a main range in a different part of the country or world.
-P	Peripheral	The species is at the periphery of its range in NC. These species are generally more common somewhere else in their ranges, occurring in North Carolina peripherally to their main ranges, mostly in habitats which are unusual in North Carolina.
-O	Other	The range of the species is sporadic or cannot be described by the other Significantly Rare categories
P_	Proposed	A species which has been formally proposed for listing as Endangered, Threatened, or Special Concern, but has not yet completed the legally mandated listing process.

Animal statuses are determined by the Wildlife Resources Commission and the Natural Heritage Program. Endangered, Threatened, and Special Concern species of mammals, birds, reptiles, amphibians, freshwater fishes, and freshwater and terrestrial mollusks have legal protection status in North Carolina (Wildlife Resources Commission). The Significantly Rare designation indicates rarity and the need for population monitoring and conservation action.

CODE	STATUS	DEFINITION
E	Endangered	"Any native or once-native species of wild animal whose continued existence as a viable component of the State's fauna is determined by the Wildlife Resources Commission to be in jeopardy or any species of wild animal determined to be an 'endangered species' pursuant to the Endangered Species Act." (Article 25 of Chapter 113 of the General Statutes; 1987).
T	Threatened	"Any native or once-native species of wild animal which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, or one that is designated as a threatened species pursuant to the Endangered Species Act." (Article 25 of Chapter 113 of the General Statutes; 1987).
SC	Special Concern	"Any species of wild animal native or once-native to North Carolina which is determined by the Wildlife Resources Commission to require monitoring but which may be taken under regulations adopted under the provisions of this Article." (Article 25 of Chapter 113 of the General Statutes; 1987).
SR	Significantly Rare	Any species which has not been listed by the N.C. Wildlife Resources Commission as an Endangered, Threatened, or Special Concern species, but which exists in the state in small numbers and has been determined by the N.C. Natural Heritage Program to need monitoring. (This is a N.C. Natural Heritage Program designation.) Significantly Rare species include "peripheral" species, whereby North Carolina lies at the periphery of the species' range (such as Hermit Thrush). The designation also includes marine and estuarine fishes identified as "Vulnerable" by the N.C. State Museum of Biological Sciences (Ross et al., 1988, Endangered, Threatened, and Rare Fauna of North Carolina. Part II. A Reevaluation of the Marine and Estuarine Fishes).
EX	Extirpated	A species which is no longer believed to occur in the state.
P_	Proposed	Species has been proposed by a Scientific Council as a status (Endangered, Threatened, Special Concern, Watch List, or for De-listing) that is different from the current status, but the status has not yet been adopted by the Wildlife Resources Commission and by the General Assembly as law. In the lists of rare species in this book, these proposed statuses are listed in parentheses below the current status. Only those proposed statuses that are different from the current statuses are listed.

FEDERAL STATUS

These statuses are designated by the US Fish and Wildlife Service. Federally listed Endangered and Threatened species are protected under the provisions of the Endangered Species Act of 1973, as amended through the 100th Congress. Unless otherwise noted, definitions are taken from the *Federal Register*, Vol. 56, No. 225, November 21, 1991 (50 CFR Part 17).

CODE	STATUS	DEFINITION
E	Endangered	A taxon "in danger of extinction throughout all or a significant portion of its range."
T	Threatened	A taxon "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."
EXN	Endangered, nonessential experimental population.	The Endangered Species Act permits the reintroduction of endangered animals as "nonessential experimental" populations. Such populations, considered nonessential to the survival of the species, are managed with fewer restrictions than populations listed as endangered.
T(S/A)	Threatened due to Similarity of Appearance.	The Endangered Species Act authorizes the treatment of a species (subspecies or population segment) as threatened even though it is not otherwise listed as threatened if: (a) The species so closely resembles in appearance a threatened species that enforcement personnel would have substantial difficulty in differentiating between the listed and unlisted species; (b) the effect of this substantial difficulty is an additional threat to a threatened species; and (c) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of the Act. The American Alligator has this designation due to similarity of appearance to other rare crocodilians. The Bog Turtle (southern population) has this designation due to similarity of appearance to Bog Turtles in the threatened northern population.
C	Candidate.	A taxon under consideration for which there is sufficient information to support listing. This category was formerly designated as a Candidate 1 (C1) species.
FSC	Federal "Species of Concern"	(Also called "Species at Risk"). Formerly defined as a taxon under consideration for which there is insufficient information to support listing; formerly designated as a Candidate 2 (C2) species.
PE	Proposed Endangered	Species has been proposed for listing as endangered.
PD	Proposed De-listed	Species has been proposed for de-listing.

GLOBAL AND STATE RANKS

These ranks are determined by The Nature Conservancy's system of measuring rarity and threat status. "Global" refers to worldwide ranks and "State" to statewide ranks.

STATE RANK	DEFINITIONS
S1	Critically imperiled in North Carolina because of extreme rarity or otherwise very vulnerable to extirpation in the state.
S2	Imperiled in North Carolina because of rarity or otherwise vulnerable to extirpation in the state.
S3	Rare or uncommon in North Carolina.
S4	Apparently secure in North Carolina, with many occurrences.
S5	Demonstrably secure in North Carolina and essentially ineradicable under present conditions.
SA	Accidental or casual; one to several records for North Carolina, but the state is outside the normal range of the species.
SH	Of historical occurrence in North Carolina, perhaps not having been verified in the past 25 years, and suspected to be still extant in the state.
SR	Reported from North Carolina, but without persuasive documentation for either accepting or rejecting the report.
SX	Believed to be extirpated from North Carolina.
SU	Possibly in peril in North Carolina, but status uncertain; more information is needed.
S?	Unranked, or rank uncertain.
S_B	Rank of breeding population in the state. Used for migratory species only.
S_N	Rank of non-breeding population in the state. Used for migratory species only.
SZ_	Population is not of significant conservation concern; applies to transitory, migratory species.
GLOBAL RANK	DEFINITIONS
G1	Critically imperiled globally because of extreme rarity or otherwise very vulnerable to extinction throughout its range.
G2	Imperiled globally because of rarity or otherwise vulnerable to extinction throughout its range.
G3	Either very rare and local throughout its range, or found locally in a restricted area.
G4	Apparently secure globally, although it may be quite rare in parts of its range (especially at the periphery).
G5	Demonstrably secure globally, although it may be quite rare in parts of its range (especially at the periphery).
GH	Of historical occurrence throughout its range.
GX	Believed to be extinct throughout its range.
GU	Possibly in peril, but status uncertain; more information is needed.
G?	Unranked, or rank uncertain.
G_Q	Of questionable taxonomic status.
G_T_	Status of subspecies or variety; the G-rank refers to the species as a whole, the T-rank to the subspecies.

ADDITIONAL DEFINITIONS

Elements within a county or quad are subdivided into "Current", "Historic", "Obscure" or "Potential" records.

Current record: the element was last observed in the county or quad at most 20 years ago.

Historic record: the element was last observed in the county or quad more than 20 years ago.

Obscure record: the date the element was last observed in the county or quad is uncertain.

Potential record: the element has the potential to be found in the county or quad.

NOTE: Scientific and common names listed in parentheses are synonyms listed in US Fish and Wildlife Service, 1992, Endangered and Threatened Species of the Southeastern United States (The Red Book).

Appendix H
Outcommuting Patterns
2000

Destination of Workers Leaving Pasquotank County for Work	Number	% of All Workers
Bertie Co. NC	30	0.2%
Camden Co. NC	191	1.3%
Chowan Co. NC	227	1.6%
Cleveland Co. NC	6	0.0%
Currituck Co. NC	340	2.3%
Dare Co. NC	453	3.1%
Durham Co. NC	4	0.0%
Edgecombe Co. NC	7	0.0%
Gates Co. NC	98	0.7%
Hertford Co. NC	19	0.1%
Hyde Co. NC	11	0.1%
Martin Co. NC	9	0.1%
Mecklenburg Co. NC	14	0.1%
Pasquotank Co. NC	11,224	77.1%
Perquimans Co. NC	360	2.5%
Pitt Co. NC	40	0.3%
Swain Co. NC	8	0.1%
Wake Co. NC	5	0.0%
Washington Co. NC	74	0.5%
Chesterfield Co. VA	8	0.1%
Fairfax Co. VA	8	0.1%
Henrico Co. VA	14	0.1%
Isle of Wight Co. VA	7	0.0%
James City Co. VA	7	0.0%
Loudoun Co. VA	7	0.0%
Southampton Co. VA	4	0.0%
Chesapeake VA	326	2.2%
Hampton VA	6	0.0%
Newport News VA	147	1.0%
Norfolk VA	293	2.0%
Portsmouth VA	214	1.5%
Suffolk VA	21	0.1%
Virginia Beach VA	231	1.6%
Elsewhere	139	1.0%
Total Workers	14,552	100.0%
within Pasquotank Co.	11,224	77.1%
outside Pasquotank Co.	3,328	29.7%
to VA	1,293	38.9%
to other than VA	2,035	61.1%

Source: US Census Bureau

Incommuting Patterns
2000

Residence of Workers Coming Into Pasquotank County for Work	Number	% of All Workers
Beaufort Co. NC	14	0.3%
Bertie Co. NC	38	0.8%
Camden Co. NC	1,289	27.9%
Chowan Co. NC	413	9.0%
Columbus Co. NC	8	0.2%
Cumberland Co. NC	18	0.4%
Currituck Co. NC	428	9.3%
Dare Co. NC	138	3.0%
Davidson Co. NC	8	0.2%
Gates Co. NC	190	4.1%
Guilford Co. NC	21	0.5%
Halifax Co. NC	12	0.3%
Hertford Co. NC	17	0.4%
Hyde Co. NC	6	0.1%
Johnston Co. NC	9	0.2%
Lenoir Co. NC	8	0.2%
Mecklenburg Co. NC	11	0.2%
Moore Co. NC	8	0.2%
New Hanover Co. NC	14	0.3%
Northampton Co. NC	11	0.2%
Perquimans Co. NC	1,418	30.7%
Pitt Co. NC	10	0.2%
Randolph Co. NC	6	0.1%
Tyrrell Co. NC	26	0.6%
Wake Co. NC	7	0.2%
Washington Co. NC	35	0.8%
Chesapeake VA	289	6.3%
Norfolk VA	57	1.2%
Suffolk VA	20	0.4%
Virginia Beach VA	85	1.8%
Total	4,614	100.0%
From other NC County	4,163	90.2%
From Virginia	451	9.8%

Source: US Census Bureau

Historical Commuting Patterns
1970-2000

Camden, NC	75	193	187	191
Chowan, NC	48	137	113	227
Currituck, NC	68	112	168	340
Dare, NC	54	85	324	453
Edgecombe, NC	0	0	23	7
Gates, NC	7	63	29	98
Hertford, NC	11	0	0	19
Martin, NC	7	0	52	9
Mecklenburg, NC	0	0	188	14
Pasquotank, NC	7,205	8,626	10,041	11,224
Perquimans, NC	88	209	227	360
Washington, NC	8	0	25	74
Chesapeake (Independent City), VA	46	213	404	326
Hampton (Independent City), VA	0	21	14	6
Newport News (Independent City), VA	0	109	66	147
Norfolk (Independent City), VA	387	286	438	293
Portsmouth (Independent City), VA	229	259	308	214
Suffolk (Independent City), VA	13	19	20	21
Virginia Beach (Independent City), VA	50	13	139	231
Elsewhere	217	836	309	298
Not Available	1,363	0	0	0
Totals	9,876	11,181	13,075	14,552
within Pasquotank County	7,205	8,626	10,041	11,224
outside Pasquotank County	2,671	2,555	3,034	3,328
to VA	725	920	1,389	1,238
to other than VA	1,946	1,635	1,645	2,090

Sources: US Census Bureau and the US Bureau of Economic Analysis

Appendix I

Evaluation of 1994 Elizabeth City and 1996 Pasquotank County CAMA Land Use Plan Policies and Implementation Strategies

1994 Issue: Land Use

- a. Annexation/expansion of area within City's jurisdiction.
- b. Land Use regulations to affect Land Use Patterns
- c. Others

1994 Policies:

- *In the interest of long-term development management and both consistency and continuity of the extension of utilities i.e., water and sewer services, Elizabeth City will maintain a policy of annexation for appropriate developing areas. 'Appropriate' shall include those areas meeting the state's statutory requirements for annexation and/or those areas receiving or requesting City services, i.e., water and sewer.*
- *The City believes that consistent and uniform land use controls, through Zoning, Subdivision Regulations, Building Inspections, etc., should eventually be applied throughout the Elizabeth City 'Sphere of Influence.' This area is the extra-urban boundary over which the City would eventually like to exercise jurisdictional authority and was adopted by the City Council in 1992. This will help ensure more uniform and orderly land development and facilitate the efficient and economical extension of urban services.*
- *The City believes that future land development patterns should be done so as to enhance the City's natural scenic and aesthetic qualities. This policy shall especially apply to any development relating to the Pasquotank River and to commercial activities along the major thoroughfares.*
- *Elizabeth City will continue to seek elimination of blighting influences throughout the City, such as outdoor junk, trash, abandoned automobiles, cluttered vacant lots.*
- *Elizabeth City believes that future land development should be completed in a manner so as to be compatible with existing special natural and cultural resources. (See policies on 'Resource Protection').*
- *In adopting the 1990 Airport Area Zoning Ordinance, the City recognized the importance of airport land use compatibility. The City will continue to enforce its Airport Area Zoning Ordinance.*

Evaluation:

The majority of the City's infrastructure (water and sewer) is 50-70 years old and is in dire need of replacement. The City has recently experienced numerous sewer spills due to the age and condition of outdated infrastructure. The Public Works Director prepared a Capital Improvement Plan in 2002 that identified 44.5 million dollars of improvements to the City's infrastructure. The City borrowed 8.1 million dollars to provide sewer to the citizens located in areas that were annexed in 1998. This money could have been spent to improve the infrastructure in the existing City limits. The City Council should consider

upgrading the infrastructure within the City limits prior to annexing any residential properties into the City limits.

The City Council should request that the Pasquotank County Board of Commissioners extend the Extraterritorial Jurisdiction (ETJ) to two (2) miles beyond the City Limits. The last annexation in 1998 incorporated the majority of the ETJ along U. S. Highway 17 North and South. The City's development regulations should be controlling in these areas to eliminate a proliferation of nonconforming uses when these areas are annexed into the City.

The City hired a Code Enforcement Officer in 2001 to concentrate on the abatement of junk and abandoned vehicles. However, the Junk Ordinance cannot be enforced in the ETJ because it is a City Ordinance that applies only to properties located in the City limits. The County is still the responsible agency for the enforcement of junk and abandoned vehicles in the ETJ.

The City continues to support the policies concerning the Airport Area Zoning. To this end, the City and County jointly approved a "Height Restriction Ordinance" in 1999 to ensure unobstructed approaches to the U. S. Coast Guard Base and the Regional Airport.

1994 Issue: Economic Development

- a. Further diversify employment base by recruiting higher-paying employers, industry, etc.
- b. Emphasize, seek to enhance City's role as a regional center.
- c. Promote tourism, with special events, activities, etc.
- d. Location and types of industries.
- e. Provision of infrastructure for economic development.
- f. Others.

1994 Policies:

- *Elizabeth City is very concerned about its economic future and the impact of economic development on all of its citizens. As a matter of policy, the City will pursue a balanced approach, seeking to diversify its economic base by seeking to increase opportunities in the areas of industrial/manufacturing; commercial/retail development; and tourism. In the recruitment of industrial/manufacturing activities, the City will work jointly with Pasquotank County.*
- *The City wants to both enhance and capitalize on its potential as a regional commercial/retail center.*
- *The City recognizes the connection between economic development and the provision of necessary infrastructure, i.e. water, sewer, proper transportation access, etc. Elizabeth City will seek to provide necessary infrastructure to support development, within the constraints of its economic capacity, and support state and/or federal efforts to do the same. (See policies on 'Public Facilities and Transportation').*
- *The City's economic development efforts will continue to include a balanced emphasis on downtown revitalization (including rehabilitation/reuse of vacant, usable buildings), and development in areas away from the downtown.*

- *The preferred industrial/manufacturing sites will be the City's industrial parks.*
- *Elizabeth City will continue to support the airport and related improvements (consistent with its airport-land use compatibility regulations) in recognition of the airport's potential importance to the City's economic future.*
- *The City recognizes the importance of proper workforce development, i.e., job training, to Economic Development. The City believes that a cooperative relationship should be established between the Industrial Development Commission, the College of the Albemarle and Elizabeth City State University, in helping to develop a trained workforce.*

Evaluation:

The City, Pasquotank and Camden Counties are members of the Albemarle Economic Development Commission (AEDC). The AEDC is governed by a board that is comprised of representatives from each of the three governments. The Board establishes economic policies for Elizabeth City and Pasquotank and Camden Counties. The AEDC decided that the preferred industrial/manufacturing sites are no longer located in Elizabeth City. A 4,000 acre tract west of the City has been identified as the "Mega Site" for future industrial development.

In an effort to promote and support growth in Elizabeth City, the City invested 20 million dollars to improve its water and wastewater facility plants. Also, the availability of natural gas, the improvement of U.S. Highway 17 South, construction of the bypass, and future improvement of U. S. Highway 17 North in Virginia will significantly affect growth in Elizabeth City.

The City of Elizabeth City continues to provide funding annually to the Regional Airport to improve the infrastructure at this facility to enable it to handle the increase demand associated with the region's growth.

1994 Issue: Types and Location of Desired Industries

The single major employer in Elizabeth City's economy is the US Coast Guard Station, a fact which the City and County both appreciate. However, both the City and County recognize the need to develop a more diversified economic base. Additional industrial development offers one solution to the area's economic diversification needs.

1994 Policies:

- *It is the policy of the City of Elizabeth City to continue to work cooperatively with the Industrial Development Commission and the City's Chamber of Commerce to attract new industries to the area.*
- *Elizabeth City would prefer to see industries developed which would be neither excessive consumers of water resources or cause excessive discharge into its streams. In other words, relatively 'dry' low pollution, light manufacturing and/or assembly industries would be preferable.*
- *The preferred location would be in existing industrial parks or other suitable sites in accordance with the City's Zoning Ordinance. The City, in conjunction with the County,*

would like to develop an additional industrial park or parks, according to the following standards:

1. *Provide an assessment of the impact of the development of industry and require the use of the best available technology to avoid air or water pollution during construction or operation.*
 2. *Be located on land having stable, well-drained soils. The sites should be located in areas adequately protected from flooding and be accessible to existing public utilities and transportation routes.*
- *Elizabeth City, along with the County will provide, as much as is locationally and economically feasible, basic support services such as water and sewer to newly locating industries.*

Evaluation:

The City, Pasquotank and Camden Counties are members of the Albemarle Economic Development Commission (AEDC). The AEDC is governed by a board that is comprised of representatives from each of the three governments. The Board establishes economic policies for Elizabeth City and Pasquotank and Camden Counties.

1994 Issue: Public Facilities

- a. In the long term, should the City seek alternative sources of raw water other than the well fields and the Pasquotank River?
- b. Although the existing water plant has the capacity to treat sufficient amounts of water to serve the projected 10-year population increase, the City may wish to begin planning for long-term improvements.
- c. Sewer services appear to be adequate presently. However, the historical problems of inflow/infiltration and difficulties in meeting discharge limitations signal a need to continue sewer improvement plans.
- d. Providing recreational facilities accessible to all of the population.
- e. Development of a trails and greenways system.
- f. Continuation of the provision of recreation service to residents of both Pasquotank and Camden Counties.
- g. The City's support of and participation in a regional solid waste disposal program, including regional landfill.
- h. Providing increased levels of fire and police personnel, commensurate with population growth.

- i. The City supporting expansion of school capacity to meet anticipated growth in school-age population.

1994 Water/Sewer Policies:

- *The City recognizes the vital importance and need of basic services, such as water and sewer, to support growth and development. Therefore, Elizabeth City will continue to assess and plan for necessary water and sewer facility improvements for anticipated future growth and development.*
- *Elizabeth City, recognizing the potential limitations on its existing sources of raw water, i.e. the City well fields, and the Pasquotank River, will initiate efforts to identify, alternative sources of raw water. This will likely include engineering and hydrogeological studies.*
- *Although a number of improvements have been made to the Elizabeth City sewer treatment facility in order to meet regulated treatment and discharge criteria there are still concerns about the system's longtime viability. As a current and pressing policy concern, the City has already initiated the process to upgrade the existing system, and to eventually construct a new facility.*
- *The extension of City water and sewer services into previously unserved areas will be done in light of and consistent with the City's overall land development policies for the sake of efficiency and economy.*
- *As a matter of general policy, and to the extent feasible, the extension of City water and sewer will be financed by those who benefit directly from the service.*

Evaluation:

The City of Elizabeth City recognizes the need to seek an alternative source of raw water other than wells. Therefore, the Public Works Director recommends that the City construct deep wells to allow for the implementation of a reverse osmoses system within a 10-year period. The Public Works Director has also recommended that preliminary engineering reports be produced regarding the inflow/infiltration repairs for Grice, Dawson, and Grace Streets sub-basins within a 5-year period. In an effort to promote and support growth in Elizabeth City, the City invested 20 million dollars to improve its water and wastewater facility plants.

The City of Elizabeth City continues to support action items d-i.

1994 Recreation Policies:

- *The City will support and seek to implement the goals and objectives of the new Recreation Master Plan, expected to be complete in FY '93-94.*
- *Elizabeth City will seek to improve the accessibility of open space and recreational facilities for more of the City's residents, by recommending that the Recreation Master Plan include goals for additional neighborhood/community parks, totlots, and swimming pools.*

- *Elizabeth City will initiate discussions with Pasquotank, Camden, and Currituck counties, in order to explore the feasibility of developing a Regional Park facility.*
- *The City remains committed to the development of an open space-greenway system which connects Knobbs Creek, Charles Creek, and the Pasquotank River and scenic canoe trails, as have been proposed in several previous studies.*

1994 Solid Waste Policies

- *Recognizing the potential constraints to the development of new landfills, due to the recent state and federal environmental regulations, Elizabeth City supports the concept of a 'regional' solution for solid waste disposal.*

Evaluation:

The City of Elizabeth City continues to support the policies outlined above.

1994 Police and Fire Protection Policies

- *The City is committed to the provision of adequate police and fire services to all of its residents. This will include providing increased personnel as the City's population increases, (both permanent and transient/ population) including regional shoppers.*

Evaluation:

The City of Elizabeth City continues to support the policy outlined above.

1994 School Policies

- *In order to meet projected demands caused by an anticipated increase in the school-age population, additional facilities will likely need to be constructed. Elizabeth City is supportive of such necessary expansion.*

Evaluation:

The City of Elizabeth City continues to support the policy outlined above.

1994 Issue: Housing

- Continued and specific efforts to facilitate both housing affordability and home ownership.
- Review of local Land Use controls, relative to restrictions on housing development.

1994 Policies:

- *The City of Elizabeth City is committed to helping ensure a variety of housing types affordable to a broad range of income levels, but especially to low- and moderate-income persons.*
- *The City also wants to see enhanced opportunities for home-ownership made available to lower-income residents.*

- *Elizabeth City will continue to support activities and programs, which focus on 'recycling' or otherwise maintaining the existing usable housing stock, especially historically significant structures.*
- *The City will continue to explore the feasibility of reducing overall residential development costs, both owner and renter units, through modification of land use regulations and controls.*

Evaluation:

In 2002, the City of Elizabeth City received a 1.75 million-dollar grant from the Department of Community Assistance. The grant will be administered over a five (5) year period. The money will be used in the Hugh-Cale area to build new single-family dwellings, rehabilitate single-family dwellings, expand the homeless shelter located on South Road Street, and construct a new incubator and community building. The grant will be implemented by the Elizabeth City Neighborhood Corporation and Elizabeth City OIC.

The Community Development Division continues to partner with the local nonprofit organizations and Elizabeth City State University Community Development Department to provide down payment and closing costs assistance to low-moderate income families. The City of Elizabeth City and Pasquotank County are currently partnering in a \$400,000 grant to rehabilitate single-family dwellings in the City and County jurisdictions. The City of Elizabeth City is also administering a \$220,000 grant from the North Carolina Housing Finance Agency to rehabilitate single-family dwellings in Elizabeth City.

The City of Elizabeth City Unified Development Ordinance, adopted in 1999, includes several provisions that allow the front and rear yard setback requirements to be reduced in older neighborhoods to accommodate the development of inner City lots. The UDO also includes the "Neighborhood Conservation Overlay District" that permits a developer to construct structures in conformity with existing development in the overlay district.

1994 Issue: Transportation

- Support of the proposed new U.S. 17 Bypass and other local thoroughfare improvements.
- Support on inclusion of pedestrian and bicycle access improvements in any planned road improvements.
- Accelerate the updating the City's Thoroughfare Plan.
- Support of an additional major North-South cross-town connector.

1994 Policies:

- *Elizabeth City recognizes the important link between adequate transportation facilities and economic development. As such, the City supports the proposed NCDOT U.S. 17-Elizabeth City Bypass. However, Elizabeth City believes that the new facility be located as close to the City as practicable, with appropriate 'connectors' linking the Bypass to commercial and business areas.*

- *The City also supports the concept of a secondary connecting thoroughfare from the new bypass around to connect N.C. 34 between the U.S. Coast Guard Station and Weeksville.*
- *The City believes that necessary improvements should be made on a regular basis in order to upgrade the capacity of the roadway network to meet increasing traffic demands.*
- *Elizabeth City believes that the NCDOT should accelerate the update of the City's Thoroughfare Plan.*
- *The City believes that pedestrian and bicycle access improvements should be incorporated into proposed roadway improvements, to include bikeways, and trails, and more sidewalks and pedestrian traffic signals. This is especially needful in heavily commercialized areas.*

Evaluation:

The U. S. 17 Bypass was completed recently. The Halstead Boulevard connector is currently under construction. The City of Elizabeth City Thoroughfare Plan was prepared by the North Carolina Department of Transportation in 1996.

The City of Elizabeth City continues to support action items b and d.

1994 Issue: Waterfront Development

- a. Firm commitment to the re-development of the downtown waterfront as a tourist/historic resource attraction. This would necessitate the development and adoption of regulatory ordinances supporting the redevelopment.
- b. Specific policies on the development of marina facilities.
- c. Balanced development, so that scenic views and vistas are enhanced and maintained.

1994 Policies:

- *Elizabeth City, as with several other coastal cities, is beginning to recognize its downtown riverfront area as a tremendous, but often underdeveloped, attractive resource. In coordination with its policies for increased tourism and preservation of its unique historic resources, Elizabeth City is committed to seeing its downtown waterfront develop into an active, lively, attraction for both tourists and local residents. The City wants to encourage the orderly development of mixed uses, including retail shops, places of entertainment, restaurants, boating services, and overnight lodging.*
- *The City believes that planned waterfront development, consistent with provisions of the 1980 Waterfront Development Study, should be done so that open space and scenic waterfront views and vistas are preserved and enhanced.*

- *The City will continue to support the development of marina facilities for both transient and local boat traffic. However, development of marina facilities must conform to state, local and federal environmental regulations.*
- *The City further wants to encourage pedestrian access to and utility of the waterfront, in order to enhance its commercial development/tourist attraction potential.*

Evaluation:

In 2001, the City Council of Elizabeth City had a Waterfront Master Plan prepared by Allison Platt & Associates. This plan includes policies for the development and redevelopment of properties along the waterfront and Water Street. The City of Elizabeth City is also in the process of beginning to start construction on the streetscape improvements along Main Street.

1994 Issue: Cultural Resources

- Continued support of the historic preservation activities and expansions of the Historic Districts.
- Support for expansion, and/or relocation of the Museum of the Albemarle to a downtown waterfront location.
- Coordination of new, land-disturbing construction with the State Division of Archives and History, for protection of potential archaeological resources.

1994 Policies:

- *Elizabeth City is committed to preservation of its many invaluable historic and cultural resources. The City will continue to support preservation programs and activities of the Historic District Commission.*
- *The City will actively assist in the relocation of the Albemarle Museum to the downtown area, preferably near the waterfront area.*
- *The City will, in general, coordinate all new major land disturbing construction with the State Division of Archives and History, in order to help protect potential archaeological resources.*

Evaluation:

A proposal to expand the local historic district north of Elizabeth Street was denied by City Council in 1999. However, the City of Elizabeth City continues to support historic preservation activities. The City Council, at its March 4, 2003 meeting, voted to purchase a lot on Southern Avenue to relocate a historic structure on Speed Street that was in danger of being demolished.

The construction of the new Museum of the Albemarle on Water Street began in 2001. However, due to the State's budget crisis, the construction of the museum is not completed.

1994 Issue: Natural Resources

- a. Continued protection of the identified Areas of Environmental Concern, with special concern about development encroaching on the City's well fields.
- b. Limit development from undue encroachment on wooded swamplands.
- c. Regulate waterfront development so as to better protect surface water quality from negative effects of urban runoff.

1994 Policies:

- *Elizabeth City believes, that the statutory Areas of Environmental Concern (AEC) which occur within its jurisdiction, i.e., Coastal Wetlands, Estuarine Waters, Estuarine Shorelines and Public Trust Waters should be protected from undue encroachment in order to preserve their natural and important ecological functions.*
- *The City believes that any development permitted must conform to State, Local and Federal environmental regulations and not cause a degradation or irreversible damage to the sensitive estuarine system.*
- *Elizabeth City, with an extensive shoreline along the Pasquotank River, believes that all Public Trust Waters should be open to public navigation. (See policies on 'Resource Protection').*
- *Elizabeth City believes that wooded swamplands within its jurisdiction are also an important natural resource which should be protected from encroachment by undue development.*
- *Although the City intends to explore alternative sources of raw water, Elizabeth City continually recognizes the need to protect its existing well fields from potentially adverse development encroachment.*

Evaluation:

All new development and expansion of existing development that exceed 10% of the gross floor area of the building must receive site plan approval from Elizabeth City Technical Review Committee. The TRC is comprised of Department Heads from the City of Elizabeth City, representatives from several regional agencies and a representative from the State's Water Quality Division. The TRC members review each site plan to ensure that all City, State, and Federal regulations are adhered to. The City of Elizabeth City continues to support the protection of its environmentally sensitive areas. The U. S. Army Corp of Engineers will be advised of any proposed development that may encroach upon established wetlands.

1994 Issue: Continuing Public Participation

1994 Policies:

- *It shall be the policy of the City of Elizabeth City to continue to use the local news media to inform the citizens of the various opportunities for input into land use planning and related policy matters.*

- *The City Planning Staff will continue to be available for public meetings, presentations, civic groups, etc., to discuss and/or help explain the City's urban planning programs.*
- *The City will continue to appoint special citizens' advisory committees for issues of special concern.*

Evaluation:

The City Continues to support the participation of the public in the planning processes. All planning meetings are advertised on the City's local access channel as well as the local newspaper. All planning meetings are opened to the public and provide for public response to issues to be addressed by the respective board/commission.

The City Council of Elizabeth City, at its March 4, 2003 meeting, approved a "Citizen Participation Plan" for the Joint Advanced Core CAMA Land Use Plan for Elizabeth City and Pasquotank County.

1994 Issue: Storm Hazard Mitigation
--

1994 Policies:

- *Elizabeth City 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 City also supports provisions in the State Building Code requiring tie-downs for mobile homes, which help resist wind damage.*
- *Elizabeth City is supportive of the hazard mitigation elements of the National Flood Insurance Program as contained in the City's Flood Damage Prevention Ordinance. Elizabeth City has participated in the regular phase of the insurance program since 1984. The City also supports continued enforcement of the CAMA and '404' Wetlands development permit processes in areas potentially susceptible to flooding.*
- *Elizabeth City supports the CAMA development permit process for estuarine shoreline areas and the requisite development standards which encourage both shoreline stabilization and facilitation of proper drainage.*
- *It shall not be the policy of Elizabeth City to seek to acquire such lands which may currently be in the most hazardous areas.*

Evaluation:

The City of Elizabeth City continues to support the policies outlined above. FEMA has purchased several lots within the City limits that are located in flood hazard areas.

1994 Issue: Post Disaster Reconstruction

1994 Policies:

- *Immediately following a natural disaster, during which substantial physical damage was incurred, the Elizabeth City Council will enact a post disaster reconstruction moratorium. This moratorium will remain in place until heavily damaged areas can*

be cleared and mapped for Council review. At that time Council will address each of the following questions and consider creating new policy:

- a should there be changes in land use?*
- b should there be changes in the building codes?*
- c should there be a concerted effort to make the community more effective and more attractive?*
- d should there be compensation or special financial assistance for private property losses?*
- e how should increased local public expenditures be financed?*
- f should normal or extraordinary decision-making mechanisms be used to guide post-disaster recovery?*

- *Prior to a storm event, the Council will establish a Recovery Task Force to assist in overseeing the reconstruction process and to recommend policy changes.*

Evaluation:

The City of Elizabeth City continues to support the policies outlined above.

1994 Issue: Protection of Potable Water Supplies

Elizabeth City's water distribution system is based primarily on groundwater, specifically, the City's well fields which are also designated AEC. In addition to the protection afforded the area as an AEC, land uses near groundwater sources are regulated by the North Carolina Division of Environmental Management through NCAC Subchapter 2L and Subchapter 2C. Also, some of the City's raw water comes from the Pasquotank River. This process is also subject to State Environmental regulations.

1994 Policies:

- *Elizabeth City recognizes the importance of protecting its potable water supplies and therefore, in addition to other policies contained in this section, supports the enforcement of these regulations.*

Evaluation:

The City of Elizabeth City continues to support the policy outlined above.

1994 Issue: Use of Package Treatment Plants
--

The centralized sewer service in Elizabeth City's planning jurisdiction serves primarily those areas within the immediate City limits. It may become necessary to develop small package treatment systems in order to accommodate certain types of development in outlying areas of the extraterritorial jurisdiction. This development may be residential, commercial, or industrial.

1994 Policies:

- *It shall be the policy of Elizabeth City to allow such package plants if they can be constructed within the overall intent of this plan and meet other federal and state environmental regulations.*

Evaluation:

The City of Elizabeth City continues to support the policy outlined above.

1994 Issue: Storm water Runoff

Although none of the waters in Elizabeth City's Jurisdiction are classified as Primary Nursery Areas, storm water runoff mainly from urban development as opposed to agricultural activities, could adversely affect the quality of these waters.

1994 Policies:

- *The City of Elizabeth City will continue to support strict enforcement of existing sedimentation and pollution control measures.*

Evaluation:

The City Council adopted a Storm Water Management Ordinance in 2002.

1994 Issue: Off-Road Vehicles

The use or regulation of off-road vehicles is not an issue of relevant concern to the City of Elizabeth City at this time.

1994 Issue: Marina and Floating Home Development

The development of marinas may have significant commercial and recreational potential in Elizabeth City. There are lands along portions of the Pasquotank River which may be redeveloped.

1994 Policies:

- *Therefore, the City supports the development of marinas, in compliance with existing environmental regulations.*
- *Elizabeth City recognizes the need and use of marinas as both an important recreation support resource, and as an economic development resource. At the same time, as discussed above, the City does not wish to see unnecessary degradation of its waters.*
- *Therefore, the City will encourage the development of upland marinas where feasible, but not to the total exclusion of waterfront marinas. All marinas, regardless of location, must comply with applicable local, state, and federal regulations.*

- *Floating homes, or any long-term occupancy, is not visualized as being a desirable use of any future marinas in Elizabeth City. Even for temporary occupancy, the City will require strict adherence to Health Department regulations for pump-out facilities and proper trash disposal.*

Evaluation:

The City of Elizabeth City continues to support the policies outlined above.

1994 Issue: Drystack Facilities

Drystacking facilities, like marinas, are viewed by Elizabeth City as potential important support resources for recreational boating and possible urban economic development.

1994 Policies:

- *The City supports the development of such facilities, provided they can be located in compliance with existing state, federal, and local siting regulations.*

Evaluation:

The City of Elizabeth City supports the policy outlined above.

1994 Issue: Agriculture

The City of Elizabeth City recognizes that there may be significant lands considered valuable for farming located within its jurisdictional boundaries. However, the City does not deem it necessary to propose any special management policies for these lands at this time. In many cases they already contain urban development and/or are being used for non-farm purposes.

1994 Issue: Redevelopment of Developed Areas

The two principle focuses under this issue are existing residential and commercial development. There are several older residential neighborhoods within the City's jurisdiction which are subject to blighting influences. Elizabeth City has steadily taken steps to aid several of the areas with community revitalization efforts, primarily through the US Department of Housing and Urban Development (HUD) Small Cities Community Development Block Grant Program. For a number of years the City has sought and received funds for housing improvements and neighborhood revitalization projects. Elizabeth City is committed to revitalizing as many needful neighborhoods as possible. The other principal focus of concern is older commercial development--especially in the downtown area and along the Pasquotank River. Steps have been taken to redevelop the downtown area consistent with policy recommendations contained in the 1987 Land Use Plan Update. A private non-profit downtown redevelopment agency, i.e. Elizabeth City Downtown Inc., has become very active in promoting downtown redevelopment. Redevelopment will be a key area of concern for this agency, consistent with the commitment of the City of Elizabeth City.

1994 Policies:

- *Elizabeth City is committed to supporting on-going community revitalization efforts to redevelop areas suitable for redevelopment, consistent with existing land use controls*

and other current development regulations, such as zoning, subdivision regulations, and flood damage protection.

Evaluation:

In 2002, the City of Elizabeth City received a 1.75 million-dollar grant from the Department of Community Assistance. The grant will be administered over a five (5) year period. The money will be used in the Hugh-Cale area to build new single-family dwellings, rehabilitate single-family dwellings, expand the homeless shelter located on South Road Street, and construct a new incubator and community building. The grant will be implemented by the Elizabeth City Neighborhood Corporation and Elizabeth City OIC.

The Community Development Division continues to partner with the local nonprofit organizations and Elizabeth City State University Community Development Department to provide down payment and closing costs assistance to low-moderate income families. The City of Elizabeth City and Pasquotank County are currently partnering in a 400,000 grant to rehabilitate single-family dwellings in the City and County jurisdictions. The City of Elizabeth City is also administering a \$220,000 grant from the North Carolina Housing Finance Agency to rehabilitate single-family dwellings in Elizabeth City.

In 2001, the City Council of Elizabeth City had a Waterfront Master Plan prepared by Allison Platt & Associates. This plan includes policies for the development and redevelopment of properties along the waterfront and Water Street. The City of Elizabeth City is also in the process of beginning to start construction on the streetscape improvements along Main Street.

1994 Issue: Commitment to State and Federal Programs

There are a number of state and federal programs which are important to Elizabeth City. Many, such as erosion control programs of the USDA Soil Conservation Service, NCDOT road and bridge maintenance, repair and replacement programs; estuarine beach and waterfront access development programs, etc., provide valuable direct benefits to the City.

1994 Policies:

- *The City of Elizabeth City will continue to support federal and state programs which provide benefits and services to the City and its citizens.*

Evaluation:

The City of Elizabeth City continues to support the policy outlined above.

1994 Issue: Energy Facilities Siting

Currently, the City of Elizabeth City does not have any electric generating plants, oil refineries, or inshore exploration facilities for gas or oil. Neither does the City anticipate the development of any of these facilities within this planning period. However, should any proposals for such energy facilities be presented, they will be reviewed on a case by case basis.

1994 Policies:

- *The City of Elizabeth City will not support the development of any 'heavy' industrial use, including energy facilities, which could cause extensive or irreversible damage to existing fragile or environmentally sensitive areas.*
- *The City also opposes the development of energy facilities which would substantially increase the amount of man-made hazards within its jurisdiction, including the storage and/or transshipment of crude oil.*

Evaluation:

The City of Elizabeth City continues to support the policies outlined above.

1994 Issue: Tourism

In recent years, travel and tourism expenditures have been as significant in Elizabeth City/Pasquotank County as in other coastal areas. However, the City recognizes the potential, especially with attractive waterfront development.

1994 Policies:

- *The City will support the development and expansion of travel and tourism facilities as part of its move toward economic diversification. However, all such facilities must be consistent with policies on protecting and managing its resources.*

Evaluation:

The City of Elizabeth City continues to support the policy outlined above.

**ELIZABETH CITY IMPLEMENTATION STRATEGIES CONTAINED IN THE SEPTEMBER
1994 LAND USE PLAN**

A. Land Use Strategy

1. In FY '93-94, the City's Planning Department staff will begin a detailed review of existing land use control ordinances, i.e., Zoning and Subdivision, with the intent of revising and updating them. Both of these ordinances, developed several years ago, need to reflect the City's current growth and development objectives. The staff may opt to seek the services of an outside consultant.
2. In FY '94, the Planning staff will prepare or obtain outside assistance in preparing a draft zoning map for those areas within the City's 'Sphere of Influence,' but outside of Pasquotank County's zoning controls.
3. Throughout the planning period the City will continue to enforce ordinances designed to remove blighting influences, i.e., trash, junked cars, etc.

Evaluation:

Action steps 1 and 3 have been implemented. The City of Elizabeth City adopted a new Unified Development Ordinance in 1999 and a Code Enforcement Officer was hired in 2001.

Action step 2 has not been implemented. As noted earlier, the Pasquotank County Commissioners have not been receptive to extending the ETJ beyond the existing City limits boundary. Also, the County has implemented zoning adjacent to the City's jurisdiction. The preparation of a draft zoning map for the areas within the City's Sphere of Influence would only result in an exercise of futility.

B. Economic Development Strategy

1. In FY '93-94, the City Council will direct the City Manager to initiate joint discussions with appropriate representations of Pasquotank County concerning industrial recruitment strategies. As stated in the policy discussion, while the City is appreciative of recent retail and service sector employment growth, jobs in these sectors tend to be lower-paying than industrial/manufacturing employment. The City will seek to develop a joint industrial recruitment strategy designed to bring higher paying jobs to the area.
2. In FY '94, the City Council, through the City manager's office will develop a 'theme' for marketing Elizabeth City as a whole. Several other eastern North Carolina cities, including Rocky Mount and Greenville, have done this in recent years. Using promotional themes such as 'The Bold New City,' or 'The Rising Star of the East,' municipalities have developed billboard ads and/or slick, color brochures to promote the City as a whole. Such an overall theme could help Elizabeth City's overall economic development 'image.' This activity will be closely coordinated with the

Chamber of Commerce, Elizabeth City Downtown Inc., and Pasquotank County.

3. In the FY '93-94 budget, to be adopted by the City Council, the City will include beginning allocations to help implement recommended improvements to its water and sewer systems. These recommendations were developed by the Department of Public Works, and presented in a report, Water and Wastewater Facilities Development Report, November, 1992. As discussed under the policy statements, Elizabeth City recognizes the vital link between economic development and the appropriate, adequate, and 'ready' infrastructure, to support that development.
4. In FY '94-95, the Council will direct the City Manager and/or Planning Director to prepare, or cause to be prepared a 'Downtown Revitalization Strategy,' focusing on Elizabeth City's commercial and tourism potential downtown. The staff may seek the assistance of nationally recognized downtown redevelopment consultants. Such a study will consider rehabilitation and reuse of existing, usable buildings and on developing specific a downtown focus.

Evaluation:

The Albemarle Economic Development Commission is responsible for implementing industrial/business recruitment strategies for Elizabeth City and Pasquotank and Camden Counties.

Action item number 2 has not been implemented.

The City of Elizabeth City Wastewater and Water Plants received a 20 million dollar facelift in 1998. However, the majority of the water and sewer collection system is outdated and in need of replacement.

The draft 2002 Elizabeth City Comprehensive Plan includes a chapter on Downtown Revitalization. This chapter includes policies and recommendations for revitalizing downtown Elizabeth City.

C. Public Facilities Strategy

1. The City will accept, fully, the suggested and feasible improvements to its Water and Wastewater Facilities, as contained in the November, 1992 report prepared by the Department of Public Works. The City's interest and intent will be reflected in its FY '93-94 budget
2. In FY '94-95, the City Council will, on the recommendations of the City Manager and Recreation Director, begin to make budgetary plans to implement some of the proposals contained in the City's Recreation Master Plan, to be completed in FY '93-94. Council may also direct the Recreation Director to explore all feasible outside grants assistance to help finance recommended proposals. Previous studies have shown a need for additional neighborhood/community parks, totlots, and a swimming pool.

3. In 1994, the City Manager will contact the County Managers of Pasquotank, Camden and Currituck, to begin discussing the concept of a large regional park. Appropriate representatives of the State's Department of Environment, Health and Natural Resources will also be contacted.

Evaluation:

The City of Elizabeth City Wastewater and Water Plants received a 20 million dollar facelift in 1998. However, the majority of the water and sewer collection system is outdated and in need of replacement.

The City of Elizabeth City and the Pasquotank County/Elizabeth City School System received a grant in 2000 to develop a mini-park and to provide lights to several soccer fields located at Northeast High School. The Parks and Recreation Department fall and spring soccer programs utilize the fields for league play.

Action item number 3 has not been implemented.

D. Housing Strategy

1. In FY '93-94, Elizabeth City will again seek assistance in developing an application for Small Cities Community Block Grant Funds, with the focus of rehabilitating existing 'reusable' housing.
2. The City Council will also in FY '93-94 direct a Planning and Community Department to explore the feasibility of applying for other housing delivery programs, which provide affordable housing opportunities low and moderate income persons. These programs, operated by the Division of Community Assistance North Carolina Housing Finance Agency, and/or HUD, may include the HOME and (Housing Partnership), HOPE-3, and others.
3. Recognizing that lands costs are significant elements in new construction, the City will retain a higher density single family zoning district, i.e., R-6, or 6000, S.F. minimum.

Evaluation:

All action steps have been implemented.

E. Transportation Strategy

1. While Elizabeth City desires to seek connecting roads from the proposed new bypass to existing commercial areas of the City, the City recognizes that in order to protect existing residential neighborhoods and the historic district such connecting roads need to be well planned. The City, therefore, will request that the NCDOT planners not propose 'connectors' through existing residential neighborhoods and/or the historic district.

2. In FY '93-94, the City will request that the NCDOT accelerate the update of the Elizabeth City Thoroughfare Plan.
3. The City will also request that NCDOT Planners incorporate into any thoroughfare planning or roadway improvements, consideration for pedestrian and bicycle access. The City recognizes this as a need, especially in heavily commercialized areas.

Evaluation:

All action steps have been implemented.

F. Waterfront Development Strategy

Elizabeth City is committed to seeing its downtown waterfront develop into an active, lively attraction for both tourists and local residents. The City wants to encourage the orderly development of mixed uses, including retails, places of entertainment, restaurants, boating services and overnight lodging. Therefore, in FY '93-94, the Planning Department will prepare an appropriate zoning mechanism to facilitate the development of these commercial and retail uses.

Evaluation:

Allison Platt & Associates' Waterfront Master Plan developed for the City Council in 2001 includes policies and recommendations for development along the waterfront.

G. Resource Protection Strategy

1. Consistent with its desire to protect cultural resources and expand tourism, the City will continue to support the Historic District Commission's efforts to expand the existing National Historic District and to increase the City's properties on the National Register of Historic Properties. In FY '93-94, the City Planning Staff and the downtown organization, i.e. Elizabeth City Downtown Inc., will identify and contact the appropriate agencies concerning the possible relocation of the Museum of the Albemarle to a downtown waterfront location.
2. The City recognizes that all of its Public Trust Waters are valuable natural and recreational resources that should be kept open to public navigation. At the same time, however, the development of docks and piers, which could interfere with public navigation, could enhance the City's waterfront strategy. Therefore, piers and docks will be permitted provided they do not result in undue restrictions to public navigation.

Evaluation:

A request to expand the local historic district north of Elizabeth Street was denied by City Council in 1999. Construction of the Museum of the Albemarle on Water Street began in 2001; however, it is not finished due to the State's budget crisis.

The City of Elizabeth City UDO and CAMA regulations permit water dependent structures to encroach into the rear yard setback area and into public trust waters.

H. Storm Hazards Mitigation Strategy

The City will continue to coordinate planning hazard mitigation and post-disaster recovery strategies with Pasquotank County and the appropriate state agencies.

Evaluation:

This action step has been implemented.

I. Continue Public Participation Strategy

The City will continue the practice of using citizen advisory groups to help formulate policies on land use issues facing the City. The City will attempt to see to it that appointments to boards, commissions, and advisory groups are bipartisan and are representative of all elements of the City's makeup.

Evaluation:

This action step has been implemented.

Pasquotank County Land Use Plan Update April 1996

Issue Identification and Policy Statements

1996 Issue: Land Suitability and Natural Constraints on Development

The scope and importance of this issue is summarized as follows. Most property in Pasquotank County has significant soil limitations for septic tank drainfields due to the high clay content of the soil and the high water table. Also, approximately 40 percent of the land area in the County lies within some sort of flood plain designation based on maps prepared by FEMA.

1996 Conservation Policies:

- *It is the policy of Pasquotank County government to require District Health Department septic tank permit prior to issuing a building permit.*
- *It is the policy of Pasquotank County government to ensure that new development is protected from flood hazard through the administration of the county flood plain ordinance and continued participation in the National Flood Insurance Program.*
- *It is the policy of Pasquotank County government to use soil information in determining the allowable density and intensity of development in areas where the soils have severe limitations for septic tank drainfields.*

Evaluation:

Albemarle Environmental Health does site evaluations for potential development. Based upon soil test it is determined if septic systems are permitted and the density for development is determined.

1996 Issue: Storm water Runoff and Potable Water Supply

Potable water supplies need to be conserved in order to assure the availability for future populations. At present, potable water is obtained from the groundwater aquifer. Also, water is withdrawn from the Pasquotank River in case of emergencies. While Elizabeth City, which is the largest supplier, has not used their emergency intake located on the Pasquotank River in the past three years, state law required the passage of a watershed/water supply management plan and ordinance for portions of Providence and Newland Townships which are within the Pasquotank River watershed. This ordinance enacted by the county also controls storm water runoff associated with agriculture as well as dense residential and commercial development.

1996 Conservation Policy:

- *It is the policy of Pasquotank County government to enforce the provisions of the Watershed/Water Supply Ordinance within the Pasquotank River watershed and to encourage the use of Best Management Practices for agriculture and land development.*

Evaluation:

Pasquotank County continues to enforce the Watershed/Water Supply Ordinance and supports Best Management Practices for all development is necessary to

protect the Pasquotank River. Although Pasquotank County supports Best Management Practices we do not support the Water Supply Watershed Ordinance due to the fact that the intake is not used and there are no plans for future use.

1996 Issue: Fragile Lands and Localized Resource Protection

Wetlands cover a significant portion of Pasquotank County's land area and are habitat for important marine and wildlife species. Many of the recreational and commercially important fish and shellfish species spend a portion of their life cycle in the tributaries of the Little and Pasquotank Rivers with the headwaters being the Dismal Swamp. The harvesting of these fish and shellfish add to the local economies of the Albemarle region. Activities associated with the development of land affect adjacent rivers and wetlands directly and indirectly often polluting the water. It is important to minimize the direct destruction of the remaining area of the Dismal Swamp and indirect pollution of all the County's wetlands found to be vital to the natural ecosystem.

1996 Conservation Policies:

- *It is the policy of Pasquotank County government to conserve the remaining portion of the Dismal Swamp lying within the County by supporting state and federal efforts to preserve the swamp's unique ecological functions of aquifer recharge and wildlife habitat.*
- *It is the policy of Pasquotank County government to comment concerning the overall interests of county residents on CAMA dredge and fill permits for projects which would be detrimental to rivers and wetlands lying within or adjacent to unincorporated portions of the County.*
- *It is the policy of Pasquotank County government to support CAMA restriction of development on Albemarle Sound Islands as well as dredging of marshlands for bulkhead installation along Albemarle Sound.*

Evaluation:

Pasquotank County continues to support the existing policies. We are currently participating as a member of a Watershed Planning Team lead by the North Carolina Wetlands Restoration Program to develop watershed improvement and protection recommendations for the Pasquotank River watershed.

1996 Issue: Manmade Hazards and Hazardous Waste Management

There are significant manmade hazards to the cultural and natural environment. The most alarming are the threats to life and property posed by hazardous waste spills. Hazardous waste spills are associated with the transportation and storage of petrochemicals. As the county grows there will be more storage facilities and their location needs to be regulated. The approach zones for flight operations at the US Coast Guard Air Station are in the path of sprawling development located in the County. Elizabeth City has a measure of extraterritorial control via an ACUZ-type zoning ordinance provision for permitting the location of compatible land uses.

1996 Hazard Mitigation Policies:

- *It is the policy of Pasquotank County government to continue cooperation with Elizabeth City for the protection of the flight approaches to the US Coast Guard Air Station. An interlocal agreement will be sought with the City to formalize this process by January 1997.*
- *It is the policy of Pasquotank County government to inspect and regulate the storage of hazardous wastes at sites in the county. Permits for land uses which will involve storage of petrochemicals proposed adjacent to waterways and wetlands shall not be permitted without minimizing the effects of potential spills.*

Evaluation:

Pasquotank County and the City of Elizabeth City adopted a “Regional Airport Height Restriction Ordinance” and Map February 15, 1999 to protect flight approaches to the US Coast Guard Base and the Municipal Airport. Hazardous wastes sites are inspected regularly by the Elizabeth City Fire Marshall.

1996 Issue: Storm Hazard Mitigation and Evacuation

Pasquotank County is a low-lying area with the potential for significant storm damage. Hazard mitigation is actions which would reduce the impact of any disaster including evacuation and cleanup. Pasquotank County has prepared mitigation plans through their office of the Emergency Management Coordination on a very modest budget with an ever increasing workload.

1996 Storm Hazard Mitigation Policies:

- *It is the policy of Pasquotank County government to support the Emergency Management Agency via funding, equipment and facilities including the preparation of post disaster recover plans and coordination with other county, state and federal agencies in emergency events.*
- *It is the policy of Pasquotank County government to reconstruct failed water lines within the County service area and aid reconstruction of water lines in other service areas on a critical need basis.*
- *It is the policy of Pasquotank County government to allow small package treatment systems that accommodate residential, commercial and industrial development in locations removed from the most vulnerable storm inundation areas.*
 - *It is the policy of Pasquotank County government to continue participation in the National Flood Insurance Program and to guide land development away from high hazard areas.*

Evaluation:

Pasquotank County continues to support the policies outlined above.

1996 Issue: Urban Development Impacts

Unplanned and indiscriminate development can threaten the basic fabric of a community. This type of development undermines the ability of the natural environment to support man's

activities. Urban sprawl indiscriminately gobbles up productive farm land and results in overloading of public facilities. Pasquotank County is not currently extending water lines into undeveloped areas and has no immediate plans to do so. Within the county water system service area, new subdivisions must be connected at the expense of the developer including any costs for upgrading the service to meet standards.

1996 Resource Protection Policy:

- *It is the policy of Pasquotank County government to direct urban development into areas intrinsically suitable for development via the extension of services and approval of future capital projects.*
- *It is the policy of Pasquotank County to advertise the agendas of the Planning Board meetings.*

Evaluation:

Pasquotank County continues to support the policies outlined above.

1996 Issue: Cultural and Historical Resource Protection

The scope and importance of the colonial period in the county is significant. The North Carolina Division of Archives inventoried sites and structures statewide. They have identified several of the sites which are located in unincorporated Pasquotank County. These treasures need safeguarding from being destroyed by ill-planned development. Knowledge concerning the importance of these features or structures will help mitigate such future destruction if this knowledge is readily available.

1996 Resource Protection Policy:

- *It is the policy of Pasquotank County government to encourage the preservation of the historically significant structures and sites by serving as a clearinghouse for information. The county planning department will maintain a listing and locational index of these sites.*
- *It is the policy of Pasquotank County government to continue to levy an occupancy tax for the purpose of generating funds to sponsor tourist oriented events and activities.*

Evaluation:

Pasquotank County continues to support the policies outlined above. The County continues to levy an occupancy tax. To date, a listing and locational index of historically significant structures and sites has not prepared.

1996 Issue: Accessibility while Protecting Public Trust Waters

There are very few non-water dependent uses in public trust waters of Pasquotank County and no floating home developments at present along Albemarle Sound. Dry storage of boats has been occurring mostly in Elizabeth City. Within unincorporated areas of the County there are small isolated marinas that pose only minimal threats to surface waters.

1996 Resource Protection Policy:

- *It is the policy of Pasquotank County government to ensure water dependent development activities such as marinas including upland marinas occur in compliance with state and federal regulations and to discourage non-water dependent uses especially floating home developments in public trust waters.*

Evaluation:

Pasquotank County continues to support the policy outlined above.

1996 Issue: Productive Agricultural and Silviculture Lands

The scope and importance of this issue is that future development, unless directed away from productive agricultural and silviculture lands could threaten the continuation of family farms which are the basis for the agricultural economy of the County. The basic need is to conserve Pasquotank County's productive lands thereby promoting agriculture and silviculture as renewable resources.

1996 Resource Protection Policy:

- *It is the policy of Pasquotank County government to discourage the conversion of active, productive farm land and forest land to urban development.*

Evaluation:

The current policy to discourage the conversion of active, productive farm land and forest land to urban development has not been strictly adhered to. (This has been due to the difficulty that landowner/farmers have in recent years to continue farming financially.)

1996 Issue: Industrial and Economic Development

The County is constructing an industrial park in Providence Township. Other land within the unincorporated limits of the County may be suitable for industrial development where sufficient potable water and adequate sewage treatment can be provided or extended to commercial and industrial developments. These sites need safeguarding from being converted to other uses by either zoning or project/subdivision review procedures. An inventory of these site is also needed to be circulated.

1996 Economic Development Policies:

- *It is the policy of Pasquotank County government to safeguard areas suitable for industrial development from encroachment by competing land uses.*
- *It is the policy of Pasquotank County government to encourage industries to locate in the Pasquotank County Commerce Park where centralized facilities are located.*
- *It is the policy of Pasquotank County government to continue support of the Elizabeth City/Pasquotank County Industrial Development Authority.*

Evaluation:

Phases of the Pasquotank County Commerce Park in Providence Township have been developed with water and sewer provided. Natural Gas is adjacent to the site and will be extended into the Park in the near future.

Tanglewood Mega Site is a planned development for industrial clients located on the west side of the Elizabeth City Bypass in Providence and Mount Hermon Townships. The Elizabeth City Bypass was officially opened December 3, 2002. The North Carolina Department of Transportation is currently constructing a connector road that will extend from the City of Elizabeth to the Bypass with an interchange to be constructed at the intersection of the bypass. Tanglewood Mega Site will be access via the new interchange.

Two additional commercial parks are being developed in Mount Hermon Township off of US 17 South.

1996 Issue: Adequate Levels of Service

The county provides potable water, solid waste disposal, funds the construction of schools and other capital improvements that service existing and new development. County residents are also blessed with a quality of life that includes a number of outdoor recreational opportunities. These same opportunities attract tourist and weekend visitors from other parts of North Carolina and Virginia. Growth demands can overtax county government's ability to provide services if allowed to occur without consideration for the cost-effectiveness of providing services.

1996 Community Development Policies:

- *It is the policy of Pasquotank County government to provide adequate levels of service for public facilities and services in the most efficient manner.*
- *It is the policy of Pasquotank County government to conserve the natural and cultural resources of value for recreational enjoyment and social systems support of County residents and tourists.*

Evaluation:

Pasquotank County continues to support the policies outlined above.

1996 Issue: Land Development and Public Participation

The Board of County Commissioners adopted zoning for urbanizing portions of the county. The potential development of other areas in the County may warrant overseeing the density and intensity of land development with more flexible regulations. Other alternatives need to be instituted which allow for the involvement of area residents in the review and approval of development proposals through a preliminary project review procedure which encourages the mitigation of offsite impacts.

1996 Community Development Policies:

- *It is the policy of Pasquotank County government to adopt this land use plan update including the future land classification map and follow the adopted plan.*

- *It is the policy of Pasquotank County government to establish a preliminary project review procedure which requires that development proposed in the unincorporated area of the county be consistent with this land use plan.*
- *It is the policy of Pasquotank County government to conduct an annual review of the areas presently zoned and the zoning regulations to assure that urban development that is occurring is compatible with the area and is supportable by county services.*

Evaluation:

Temporary zoning was adopted for all areas of the county not currently zoned June 5, 2000. Permanent zoning classifications were established January 1, 2002. Pasquotank County considers the current land use plan classification during review of each rezoning request.

1996 Issue: Redevelopment

A number of low-income County residents live in areas which have substandard housing and community services. While these pockets of poverty are eligible for federal and state programs, the County is pursuing grants to pave roads and improve drainage that will spur redevelopment. There are also actions which the county can take besides these programs that cleanup very distressed areas. The most effective actions are requiring safe and secure construction which will better withstand natural hazards. A review of building codes and construction practices is a first step.

1996 Community Development Policies:

- *It is the policy of Pasquotank County government to enforce the North Carolina Building Codes and conduct periodic reviews of the regulations and construction practices.*
- *It is the policy of Pasquotank County government to pursue Community Development Block Grants as well as other economic and community revitalization initiatives to redevelop specific target areas in the County.*

Evaluation:

Pasquotank County continues to support the policies outlined above.

1996 Issue: Support of State and Federal Programs

The County is supported by a number of federal and state programs, which contribute financial and technical assistance for a variety of county initiatives. Some of the programs are mandatory while participation in other programs has been initiated voluntarily. The more visible programs are the maintenance and improvement of state and federal highways and agricultural extension services.

1996 Community Development Policy:

- *It is the policy of Pasquotank County government to support state and federal programs which lead to improvements of the quality of life of County residents and lessen the burdens of county government such as: highway construction and maintenance, channel*

maintenance, aviation enhancement, environmental protection, education, health and human services.

Evaluation:

Pasquotank County continues to support the policy outlined above.

1996 Issue: Energy Facility Siting

The siting of energy development of support facilities is very remote according to past studies. Hazardous chemical wastes are of concern and there are no records of the amount and nature of nuclear and chemical hazardous wastes transported along the County's highways and waterways. The Emergency Management office is seeking funding necessary to conduct a transportation study to determine the potential threat from hazardous wastes being transmitted through the county.

1996 Community Development Policy:

- *It is the policy of Pasquotank County government to support the Emergency Management Agency via funding, equipment and facilities.*

Evaluation:

Pasquotank County continues to support the policy outlined above.

1996 Issue: Fiscal/Capital Improvements Programming

Pasquotank County is facing new and greater demands which warrant sound fiscal management and capital improvements programming. Economic development will be halted if the County is unable to fund police, fire and emergency services, construct new schools, extend water lines, and provide for solid waste disposal.

1996 Community Development Policies:

- *It is the policy of Pasquotank County government to program capital projects on a five year basis.*
- *It is the policy of Pasquotank County government to undertake a review of all development fees to determine if the fees being charged offset the cost to the county in time and materials.*

Evaluation:

Five year capital projects are updated during each budget year. Development cost/fees have been reviewed. Development review fees and water fees have been upgraded. But the County lacks the ability to implement fees that help offset the costs of public schools and emergency services.

1996 Issue: Waterfront and Estuarine Access

There are certain privately owned properties which could be developed for recreation and water access which the County may obtain using CAMA Coastal and Estuarine Beach Access Program funds. Future populations will demand more publicly owned water access.

1996 Community Development Policy:

- It is the policy of Pasquotank County government to acquire rights of way, fee simple title and/or easements to allow public access along the navigable waterways.

Evaluation:

Pasquotank County continues to support the policy outlined above.

1996 Issue: Safeguarding Highways by Controlling Access
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Widening roadways does not solve the root problem of roadway capacity deterioration. As highway frontage is developed the proliferation of driveways reduces the level of service. US 17 is a vital economic artery and the evacuation route in the event of a disaster which needs to have strict access management guidelines.

1996 Community Development Policies:

- *It is the policy of Pasquotank County government to safeguard the County's highways from obstructions to sight and turning movements that constitute safety hazards as well as work closely with the North Carolina Department of Transportation in the programming of road improvements with sufficient rights of way and pavement width.*
- *It is the policy of Pasquotank County government to prepare an access management regulation with the cooperation of the N. C. Department of Transportation to regulate the number and location of driveway openings along major county roadways designated as evacuation routes.*

Evaluation:

Although the County has not prepared access management regulations, the Board has denied sketch approval for an 80 lot subdivision with lots fronting a secondary state road.

**PASQUOTANK COUNTY IMPLEMENTATION STRATEGIES CONTAINED IN THE APRIL
1996 LAND USE PLAN**

1996 Action Program

This discussion of the action steps for implementing the policies called for in this plan is grouped by goals. The steps called for under the relevant goal are a set of related actions which will lead to a preferred outcome. Collectively, these action steps constitute a land use planning program for growth and development in Pasquotank County over the next ten years. The four main goals are:

- *Conserving natural and cultural resources.*
- *Improving the quality of urban development.*
- *Coordinating land use decisions and public expenditures.*
- *Storm hazard mitigation.*

Conserving Natural and Cultural Resources

The strategy to reach this goal is to coordinate the County's regulatory functions with state and federal environmental and historical oversight responsibilities thereby avoiding duplication of regulations at the local level. A concerted effort to foster conservation of vital natural and cultural resources will be the result.

- A. *Continue cooperation with the Division of Environmental Management and Division of Land Resources permitting efforts by coordinating drainage improvement, sedimentation and control structures reviews during the subdivision approval process.*
- B. *Beginning in April, 1996; the Planning Director will begin reviewing all public information notices issued by the US Army Corps of Engineers and CAMA to assure consistency with the Future Land Use Plan.*
- C. *Beginning in July, 1996; the Planning Director will maintain a listing and locational index of historical sites and industrial parks.*

Evaluation:

The County continues requiring review by the Division of Environmental Management and Division of Land Resources during subdivision review process. In addition, the County now requires a storm water review for a ten-year storm event by the Pasquotank County Soil and Water District Conservationist for both on-site and off-site drainage.

The Planning Director now receives and reviews public information notices issued by the US Army Corp of Engineers.

The Planning Director maintains a listing of commercial/industrial parks.

Improving the Quality of Urban Development

This goal can be obtained by more knowledgeable actions by county government. At present Pasquotank County controls density and intensity of development in the zoned areas. While zoning the entire County is one alternative solution, it is premature. Instituting a process of review and approval that builds on the existing regulatory agencies technical input and public's practical input is the recommended strategy for most of the county.

1996 Action Steps:

- A. Continue to require District Health Department permit approvals for minimum lot sizes, drainage improvements and septic tanks as a part of the subdivision review process.
- B. Administer the amended flood plain ordinance which requires homes in flood hazard areas be constructed to withstand some of the damaging aspects of storms and floods.
- C. Continue to identify distressed areas for consideration as target areas for CDBG grants.
- D. By June, 1996; the county will publish Pasquotank County Planning Board agendas.
- E. By 1997, the county will undertake an analysis of the fees and charges associated with the permitting of developments to determine if the costs incurred are being offset by the fees collected.
- F. During 1998, the Planning Director and Emergency Management Coordinator will complete an analysis of the land use regulations identifying conflicts with the mitigation and recovery objectives of the Emergency Operations Plan.

Evaluation:

Action steps A–D: The activities continue or have been implemented.

Action step E: The County has many times discussed costs of development but an accurate figure has not been determined. The County is currently undertaking a study to evaluate the effect of development impact fees.

Action step F: Not completed.

Coordinating Land Use Decision and Public Expenditures

Often decisions by elected bodies are made in reaction to constituency demands to a perceived crisis. Such decisions take care of the short term symptoms but to often the underlying problems remain. Urban development places demands on government to extend services. If the decision to extend services is not made with a consideration to the long term effects of widening a road, all too often the improvement generates more growth which in turn leads to additional overloads to the school or the water lines. Coordinating land use decisions with the expenditure of public funds is a cost effective strategy that is the underlying theme of the following action steps.

1996 Action Steps:

- A. By April, 1996 the Pasquotank County Commission will adopt the Land Use Plan Update and follow its policies.
- B. For fiscal year 1997, Pasquotank County government shall begin to program capital projects on a five year basis by adopting a capital improvement program to be updated on an annual basis.

- C. During 1997, Pasquotank County Government shall investigate the application of impact fees as a means of cost effectively funding capital expenditures for public facilities.
- D. During 1997, Pasquotank County government will adopt access management regulations along the major evacuation routes through the County.

Evaluation:

Action step A: Completed.

Action step B: Capital projects are reviewed annually during preparation of the budget.

Action step C: It is our understanding that Pasquotank County does not have authority to implement impact fees.

Action step D: Not implemented.

Hazard Mitigation

Pasquotank County is a low lying area with the potential for significant storm damage as well as hazardous waste spills. Facing the threat of hurricanes and other major storm events means preparing for the effects of such catastrophes. Other hazardous situations occur if development is allowed in close proximity to the flight paths of the Coast Guard base. Future development must be constructed to withstand such storm damage in areas which are less exposed to the destructive forces of wind and water. Actions taken to reduce the impact of any disaster including evacuation and cleanup is the essence of hazard mitigation. The key strategy is the recognition of the risk and taking actions ahead of time to lessen the destruction.

1996 Action Steps:

- A. Beginning in April, 1996, the Pasquotank County Fire Marshall shall review all permits for land uses which will involve storage of petrochemicals to ensure that extensive precautions be taken to minimize the effects of potential spills.
- B. Zoning and building permits requests in the area surrounding the air station will continue to be transmitted to the City for comments prior to any decision by the County.
- C. Pasquotank County government will continue to support the Emergency Management Coordination office via funding, equipment and facilities including the preparation of post disaster recovery plans.
- D. Beginning in 1996, the County will commence a study to determine the threat posed by hazardous wastes being transported through the county on its roadways and waterways

Evaluation:

All action steps have been implemented.

Evaluating Implementation of the Plan
--

There are at least two significant milestones which lay ahead for the County over the next ten years:

First, the assimilation of the employees at the state prison located in the Pasquotank County Commerce Park.

Second, the construction and opening of the US 17 by-pass.

1996 Action Steps:

Evaluating the progress of this plan will allow for mid-course corrections. A definition of planning is the process of applying forethought to solving problems and creating opportunities. Because planning is a process, it is reiterative. The future will evolve by the combined actions of public and private organizations including businesses and individuals. An annual review of development activity is a worthwhile undertaking that gives an indication of the progress towards the goals and objectives set forth in this plan. In January of each year the Planning Director shall prepare an annual report including recommended changes in the plan to be presented to the Planning Board and County Commission. The report shall contain:

- An analysis of building permit activity (number, type and location) by land use category: i.e., residential, commercial, and industrial.
- A listing of the significant developments.
- The changes in land regulations during the previous year.
- Status of completion of the various action steps, especially the particular steps recommended for completion in the reporting year.

Evaluation:

Reports have not been prepared as one submittal each January. Planning Director serves as Assistant County Manager and is in attendance at each County Commissioner meeting. Therefore, the items mentioned are discussed throughout the year. A report is prepared monthly to provide an analysis of building permit activity.

Appendix J
Existing Public Water Access Sites and Private Marinas

Site 672 Moth Boat Park

- Urban waterfront park
- End of Main Street in downtown EC
- 12 parking spaces
- Handicap access

Site 671 Waterfront Park Downtown

- Neighborhood park
- Off Water Street in downtown EC; at end of Ehringhaus Street
- 70 parking spaces
- Pier
- Picnic tables
- Handicap access

Site 670 Water Street

- Urban waterfront park (Charles Creek Park)
- Off Shepard Street in downtown EC
- 40 parking spaces
- Picnic tables
- Handicap access

Causeway Park Camden Causeway (US Highway 158)

- Boardwalk along the Pasquotank River
- Several landings and piers are suitable for fishing, picnicking and enjoying nature.
- 8 parking spaces
-

George Wood Park Camden Causeway (US Highway 158)

- Boardwalk out to the Pasquotank River
- Piers along the Pasquotank River with gazebos are suitable for nature walks, fishing and picnics
- 10 parking spaces

Sawmill Park Intersection of Weeksville Road and Sawmill Road

- County park on New Begun Creek
- Boat ramp
- Boardwalk for fishing
- Picnic area
- 13 parking spaces
- Handicap access

Boat Ramps

- Off Hall's Creek Road

- Old US Highway 17 at Perquimans County line
- End of Shadneck Road
- Parking available at all

Camden County just east of Elizabeth City Corporate Limits

Site 690 George M. Wood Memorial Park

- Neighborhood park
- On Camden Causeway (US 158/NC34)
- 8 parking spaces
- Pier

Marinas

Riverside Boat Works/Elizabeth City Shipyard

722 Riverside Avenue
 30 wet slips
 Transient slips

Causeway Marina

Highway 158 East, Camden Causeway
 Wet slips
 Boat ramp
 Fuel sales

Mariner's Wharf City Dock

200 W. Water Street
 14 wet slips

The Pelican

43 Camden Causeway
 50 wet slips
 Boat ramp
 Fuel sales
 Pump out facilities
 Transient slips

DBC City Marina

340 Camden Causeway
 10 wet slips
 Boat ramp

Source: 2002 NC Coastal Boating Guide, NCDOT

Appendix K

Goals and Objectives from the 1996 Pasquotank County CAMA Land Use Plan and the 1994 Elizabeth City CAMA Land Use Plan

Primary goals (page 39):

- Conserving natural and cultural resources.
- Improving the quality of urban development.
- Coordinating land use decisions and public expenditures.
- Mitigating storm hazards.

Specific Objectives:

- Encouraging development patterns that utilize land wisely by conserving natural resources and preserving the heritage of the County (page 1).
- Preserving potable water supplies (page 27).
- Conserving the Dismal Swamp (page 28).
- Ensuring land use compatibility with airport operations (page 29).
- Directing urban development into areas most suitable for development (page 30).
- Discourage the conversion of active, productive farm land and forestland to urban development (page 31).
- Safeguarding identified industrial areas from incompatible development (page 31).
- Supporting economic and community revitalization efforts to redevelop targeted developed areas (page 33).
- Supporting the acquisition of land for public waterfront and estuarine access (page 35).
- Safeguarding highways through access management (page 35).

Goals:

- Ensuring compatible land use and land development.
- Promoting balanced economic development.
- Ensuring the provision of adequate public services and facilities.
- Promoting diversified housing.
- Preserving historic and cultural resources.
- Ensuring land use that is compatible with natural resources.
- Mitigating storm hazards.

Specific Objectives:

- Annexation of appropriate developing areas (page 61).
- Providing consistent and uniform land use controls throughout the Elizabeth City 'Sphere of Influence' (page 61).
- Permitting land development that enhances the City's natural scenic and aesthetic qualities (page 61).
- Elimination of blighting influences (page 61).
- Permitting land development that is compatible with existing special natural and cultural resources (page 61).

- Ensuring land use compatibility with airport operations (page 62).
- Seeking a balanced approach to economic development by diversifying the economic base (page 63).
- Providing the necessary infrastructure to support economic development (page 63).
- Encouraging low-pollution, light manufacturing and/or assembly industries (page 63).
- Accommodating a variety of affordable housing types to meet a broad range of income needs (page 69).
- Encouraging the orderly development of mixed uses in the downtown riverfront area (page 72).
- Preserve and enhance open space and scenic waterfront views and vistas (page 72).
- Encourage pedestrian access to and utility of the waterfront (page 72).
- Preserving historic and cultural resources (page 74).
- Preserving the natural and ecological functions of Areas of Environmental Concern—Coastal Wetlands, Estuarine Waters, Estuarine Shoreline, and Public Trust Waters (page 75).
- Protecting well fields from potentially adverse development encroachment (page 75).
- Mitigating storm hazards (page 39).
- Supporting the development of marinas and drystacking facilities as an important recreation and economic development support resources (page 85).
- Supporting community revitalization efforts to redevelop developed areas (page 86).

Overall Objective:

- Provide a comprehensive development policy guide for short- and long-range planning, scheduling, ordinance preparation, and budgeting.

Community Appearance/Historic Preservation

- **Goal:** Preserve Elizabeth City’s small town character and historic image through a variety of methods including neighborhood and community revitalization, promotion of the preservation and rehabilitation of historic properties, and encouraging civic pride. Utilize architecture and landscape design to provide an attractive community appearance.
- **Objectives:**
 - Encourage revitalization of the downtown business district
 - Foster neighborhood redevelopment and community pride
 - Increase City-owned waterfront property
 - Expand and improve downtown public parking facilities
 - Ensure the continued presence of public services, i.e., post office, library, courthouse

Utility Services

- **Public Water System Objectives:**
 - Develop a program to assemble all information on waterlines and incorporate into a mapping and Geographical Information System (GIS)
 - Investigate and identify methods to continue with small diameter water main replacement
 - Develop a plan to replace two-inch water lines with six-inch lines to provide adequate water pressure

- Develop additional raw water supply for future demands
 - Research and develop deep wells to be used for reverse osmosis
 - Develop and utilize an active wellhead protection program to ensure an acceptable quality and quantity of groundwater resources for current and future requirements
 - Investigate the feasibility of forming a regional water cooperative with surrounding public water systems
- **Public Sanitary Sewer System Objectives:**
 - Develop a capital improvements program for a sewer line, manhole, and private service rehabilitation that will allow the City to address problems based upon their order of severity
 - Develop a pump station capital improvements plan that will allow the City to address upgrades and replacement of aging pump stations as well as assist in the creation of a master sewer plan for the City
- **Sanitation/Solid Waste Services Objectives:**
 - Provide solid waste collection services to every qualified residential dwelling of less than five units with the City limits in compliance with City policy and regulations
 - Promote public education on waste reduction, reuse, and recycling City-wide and regionally
 - Follow the Camden County, City of Elizabeth City, and Pasquotank County ten-year solid waste management plan which meets local solid waste needs and fulfills waste reduction goals at an equitable cost to the residents
 - Explore cost effective alternatives for present and future operations
 - Initiate a long-range solid waste system rate study, a complete energy market analysis, as well as a transportation/transfer station analysis
- **Sanitation/Solid Waste Services Objectives:**
 - Provide solid waste collection services to every qualified residential dwelling of less than five units with the City limits in compliance with City policy and regulations
- **Storm water Management Objectives:**
 - Create a master drainage plan
 - Develop a system for storm water discharge control which uses both on-site and off-site approaches to assure appropriate levels of control while permitting the flexibility to choose methods which best fit specific conditions
 - Adopt discharge control regulations which establish basic performance standards for new development
 - Extend floodprone area regulations to smaller streams
 - Regulate drainage facilities within private development sites
 - Preserve natural features along drainage ways
 - Develop a storm water quality program to meet the requirements of the federal Clean Water Act and local objectives
 - Incorporate water quality management practices into discharge control regulations and City design, construction, and maintenance practices

- Establish a City program to correct existing drainage problems and preserve existing storm water control facilities
- Develop a system for financing the public costs of controlling storm water discharge from new development
- **Natural Gas Service Objectives:**
 - Support the development and expansion of natural gas service to the City's residential customers
 - Support natural gas service that is reliable and cost effective
 - Provide assurance that gas service will remain safe and consistent
 - Provide support to ensure that service levels are responsive to the City's customer needs
- **Streets and Thoroughfares Objectives:**
 - Guide the development of the urban street system in a manner consistent with the changing traffic patterns
 - Provide for the orderly development of an adequate major street system as land development occurs
 - Reduce travel and transportation costs
 - Reduce the cost of major street improvements to the public through the coordination of the street system with private action
 - Enable private interest to plan their actions, improvements, and development with full knowledge of public intent
 - Minimize disruption and displacement of people and businesses through long range advance planning for major street improvements
 - Reduce environmental impacts, such as air pollution, resulting from transportation
 - Increase traffic safety
- **Electric Service Objectives:**
 - Provide high quality of service to every residential dwelling and commercial establishment
 - Continue to provide fast response time to trouble calls
 - Ensure the continued upgrade of the electrical system
 - Continue to work jointly with other City departments to provide good service relations

Parks and Recreation

- **Goal:** Provide a variety of recreational opportunities for all residents of Elizabeth City, Pasquotank County, and Camden County; construct and maintain a network of parks that provide outdoor experiences for the public; and construct both indoor and outdoor recreational facilities that will meet the physical, mental, and social needs of all citizens
- **Objectives:**
 - Obtain state and federal funds for park and recreational facility development whenever possible
 - Ensure that all athletic facilities and parks are well maintained and safe
 - Where possible, locate City parks and recreational facilities adjacent or contiguous to school grounds to encourage the maximum use of both properties
 - Purchase land for future projects while it is still available
 - Support the construction of a fine arts center in the community

- Work jointly with county agencies to provide facilities without duplication
- Update comprehensive parks and recreation plan to guide future facility improvements and new programs
- Develop and administer periodically a citizen preference/needs assessment survey and a recreational facility user survey to help determine recreational facility and program deficiencies and future community needs
- Purchase additional park land in the area between existing City limits and the new Highway 17 Bypass.
- Study the need for additional outdoor athletic fields and indoor recreational facilities
- Construct skate park in area near the downtown
- Continue to update the Capital Improvement Program that focuses on facility and infrastructure improvements for parks and recreation
- Bulkhead and develop waterfront property in downtown.
- Study Capital Equipment needs along with additional maintenance personnel
- Develop a municipal golf course to serve the Albemarle area
- Develop plans and begin construction of Greenway in areas that the City owns property or has right-of-ways
- Develop parks in areas outside of City limits
- Construct a waterfront welcome center in the Fearing Street area
- Study the need and construction of Elizabeth City Fine Arts Center
- Study the need to expand senior facilities and programs to other locations
- Seek ways of increased availability of indoor aquatic facility

Police

- **Goal:** Work in partnership with the citizens of Elizabeth City to protect life and property, solve neighborhood problems and enhance the quality of life in Elizabeth City through the delivery of professional police services
- **Objectives:**
 - Provide the citizens with the highest level of professional police services available
 - Construct a new Public Safety complex that will house the Police and Fire Departments
 - To purchase new computer hardware and software as new technology develops
 - Seek and achieve National Accreditation
 - Have MDTs (Mobile Data Terminals) in all police vehicles
 - Update communications system to 800 mhz
 - Increase personnel throughout the divisions of the department as the population of the City grows and the City's needs expand
 - Maintain and exceed levels of training required by the department and the state
 - Ensure and expand communications between the police department, citizens and citizen groups.
 - Seek funding for special projects from Governor's Highway Safety Commission, Governor's Crime Commission and other sources
 - Ensure the safety of all police personnel at all times
 - Eliminate high crime and problems areas through strict enforcement, education programs and community involvement

Fire Protection

- **Goal:** Provide the highest professional level of life and property safety through the extension of fire prevention, life safety operations, and public education programs

- **Objectives:**

- Have Department of Insurance rating evaluation (5 to 3)
- Station 3 (North of the railroad tracks)
- Additional firefighters
- Replace all small fleet vehicles
- Replace Command Vehicle
- Traffic and intersection control system
- Continuation of ECFD's Training Facility
- Expand smoke detector program
- Develop a Arson Task Force
- Public Safety Complex
- First Responder Mutual Aid
- Replace communication system with 900 MHz. System
- Upgrade training aids for certification program
- Building for Engine 4, physical fitness equipment, and storage
- Two additional thermal imagers
- Personnel devoted to maintenance of fire equipment
- Station 4
- Replacement of two 1250 gpm Class A pumpers
- Purchase of portable air cylinder filling station
- Network computer system for Fire Stations and administrative offices
- Laptop computers on all frontline apparatus
- Implementation of firefighter rookie school
- Replacement of 102 ft. aerial ladder
- Fire station five
- Purchase of a quint (fire truck with a snorkel) fire apparatus
- Replacement of Station I and II

Economic Development

- **Goal:** Foster and support economic growth that is planned, controlled, and diversified. Increase the tax base and encourage business and industry into the area which will provide more and higher paying jobs

- **Objectives:**

- Insure Elizabeth City's economic development plans and activities are meshed with the county, state and the Northeast Partnership
- Develop specific marketing strategies for soliciting industry/business relocation to our area
- Develop measurement tools to determine the effectiveness of our economic development efforts
- Take actions to support existing business/industry in our community. Any business/industry relocating from our area should be considered a defeat. An analysis of this action is essential to reduce/eliminate the problem in the future
- Determine the causes for potential businesses/industries choice of other cities and locations
- Develop an objective appraisal of the Elizabeth City economic environment focusing on our strengths, weaknesses, opportunities, and threats
- Taking each element of the AEDC's 'three legged stool' analogy, develop specific objectives to insure the elements are achieved

Housing/Neighborhood Development

- **Goal:** Facilitate the renewal and rehabilitation of existing neighborhoods while promoting the development of well designed new neighborhoods that preserve a high quality of life. Provide home ownership opportunities for low to moderate income residents
- **Objectives:**
 - Increase the availability of affordable single-family houses
 - Preserve and enhance the integrity and quality of existing residential neighborhoods
 - Eliminate substandard housing
 - Encourage features which contribute to a high quality of life within new development
 - Promote compliance with current housing regulations and the UDO within established neighborhoods

Appendix L

Coastal Resource Commission (CRC) Land Use Plan Management Topic Goals and Planning Objectives

Goal	Maximize public access to the beaches and the public trust waters of the coastal region
Objective	Develop comprehensive policies that provide access opportunities for the public along the shoreline within the planning jurisdiction
Goal	Ensure the 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
Objective	Adopt and apply local development policies that balance protection of natural resources and fragile areas with economic development
	Policies should provide clear direction to assist local decision making and consistency findings for zoning, divisions of land, and public and private projects
Goal	Ensure 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
Objective	Establish level of service policies and criteria for infrastructure consistent with future land needs projections
Goal	Conserve and maintain barrier dunes, beaches, floodplains, and other coastal features for their natural storm protection functions and their natural resources giving recognition to public health, safety, and welfare issues
Objective	Develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas such as those subject to erosion, high winds, storm surge, flooding, or sea level rise
Goal	Maintain, protect and, where possible, enhance water quality in all coastal wetlands, rivers, streams, and estuaries
Objective	Adopt policies for coastal waters within the planning jurisdiction to help ensure that water quality is maintained if not impaired and improved if impaired
Goal	Integrate local concerns with the overall goals of CAMA in the context of land use planning
Objective	Identify and address local concerns and issues, such as cultural and historic areas, scenic areas, economic development, downtown revitalization or general health and human service needs

Source: CAMA Land Use Planning Guidelines, Subchapter 7B .0702(d)(3)

Appendix L, Continued

Impact of Policies on CRC Land Use Plan Management Topics

Pasquotank County

Impact of Pasquotank County Policies on CRC Land Use Plan Management Topics and Benchmarks

Land Use and Development Policies	Public Water Access	Land Use Compatibility	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality	Local Areas of Concern
(see Table 44 for the details of each policy)	<ul style="list-style-type: none"> Improvements to existing access locations Development of new access areas 	<ul style="list-style-type: none"> Reduce the placement of incompatible land uses Preservation of existing character 	<ul style="list-style-type: none"> Water, sewer, and other services being available in required locations at adequate capacities to support development 	<ul style="list-style-type: none"> Land uses and development patterns that reduce the vulnerability to natural hazards Planning for adequate evacuation infrastructure. 	<ul style="list-style-type: none"> Land use and development measures that abate impacts that degrade water quality 	<ul style="list-style-type: none"> Encourage historic preservation Conserve natural & cultural resources Improve quality of life Support economic development
4.2.1 A. Public Water Access Policies:						
• Policy 1	Beneficial					Beneficial
• Policy 2	Beneficial	Beneficial				
• Policy 3	Beneficial		Beneficial			
• Policy 4	Beneficial		Beneficial			
4.2.1 B. Land Use Compatibility Policies:						
• Policy 1		Beneficial				Beneficial
• Policy 2		Beneficial				
• Policy 3		Beneficial			Beneficial	
• Policy 4		Beneficial				Beneficial
• Policy 5		Beneficial			Beneficial	
• Policy 6		Beneficial				
• Policy 7		Beneficial			Beneficial	

Land Use and Development Policies	Public Water Access	Land Use Compatibility	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality	Local Areas of Concern
• Policy 8		Beneficial	Beneficial		Beneficial	
• Policy 9		Beneficial				Beneficial
• Policy 10		Beneficial	Beneficial			Beneficial
• Policy 11		Beneficial	Beneficial			Beneficial
• Policy 12		Beneficial				
• Policy 13		Beneficial				
• Policy 14		Beneficial	Beneficial			
• Policy 15		Beneficial	Beneficial			
4.2.1 C. Infrastructure Carrying Capacity Policies						
• Policy 1		Beneficial	Beneficial		Beneficial	Beneficial
• Policy 2			Beneficial			Beneficial
• Policy 3			Beneficial			Beneficial
• Policy 4			Beneficial			
• Policy 5			Beneficial			
• Policy 6			Beneficial			
• Policy 7		Beneficial	Beneficial			
4.2.1 D. Natural Hazard Areas Policies:						
• Policy 1				Beneficial		Beneficial
• Policy 2		Beneficial		Beneficial	Beneficial	
• Policy 3				Beneficial		
• Policy 4				Beneficial		
• Policy 5				Beneficial		
• Policy 6			Beneficial	Beneficial		
4.2.1 E. Water Quality Policies:						
• Policy 1		Beneficial			Beneficial	
• Policy 2		Beneficial			Beneficial	
• Policy 3					Beneficial	Beneficial
• Policy 4		Beneficial	Beneficial		Beneficial	
• Policy 5		Beneficial			Beneficial	
• Policy 6		Beneficial			Beneficial	Beneficial

Land Use and Development Policies	Public Water Access	Land Use Compatibility	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality	Local Areas of Concern
• Policy 7		Beneficial			Beneficial	
4.2.1 F. Areas of Environmental Concern Policies:						
• Policy 1		Beneficial			Beneficial	
• Policy 2		Beneficial				
• Policy 3		Beneficial			Beneficial	
• Policy 4		Beneficial			Beneficial	
• Policy 5		Beneficial			Beneficial	
• Policy 6		Beneficial				
• Policy 7	Beneficial	Beneficial				
4.2.1 G. Areas of Local Concern Policies:						
• Policy 1		Beneficial				Beneficial
• Policy 2						Beneficial
• Policy 3		Beneficial				Beneficial
• Policy 4		Beneficial				Beneficial
• Policy 5		Beneficial				Beneficial
• Policy 6			Beneficial			Beneficial

Elizabeth City
Impact of Elizabeth City Policies on CRC Land Use Plan Management Topics and Benchmarks

Land Use and Development Policies	Public Water Access	Land Use Compatibility	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality	Local Areas of Concern
(see Table 45 for the details of each policy)	<ul style="list-style-type: none"> Improvements to existing access locations Development of new access areas 	<ul style="list-style-type: none"> Reduce the placement of incompatible land uses Preservation of existing character 	<ul style="list-style-type: none"> Water, sewer, and other services being available in required locations at adequate capacities to support development 	<ul style="list-style-type: none"> Land uses and development patterns that reduce the vulnerability to natural hazards Planning for adequate evacuation infrastructure. 	<ul style="list-style-type: none"> Land use and development measures that abate impacts that degrade water quality 	<ul style="list-style-type: none"> Expansion of ETJ Eliminate blight Balance growth Enhance recreational opportunities Promote historic preservation Support redevelopment Promote tourism
4.2.2 A. Public Water Access Policies:						
• Policy 1	Beneficial					Beneficial
• Policy 2	Beneficial	Beneficial				
• Policy 3	Beneficial		Beneficial			
• Policy 4	Beneficial	Beneficial				Beneficial
• Policy 5	Beneficial	Beneficial				Beneficial
• Policy 6	Beneficial	Beneficial				
• Policy 7	Beneficial	Beneficial				Beneficial
• Policy 8	Beneficial					Beneficial
• Policy 9	Beneficial	Beneficial			Beneficial	
4.2.2 B. Land Use Compatibility Policies:						
• Policy 1		Beneficial				Beneficial
• Policy 2		Beneficial			Beneficial	
• Policy 3		Beneficial			Beneficial	

Land Use and Development Policies	Public Water Access	Land Use Compatibility	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality	Local Areas of Concern
• Policy 4		Beneficial				
• Policy 5		Beneficial				Beneficial
• Policy 6		Beneficial				Beneficial
• Policy 7		Beneficial				
• Policy 8		Beneficial	Beneficial			
• Policy 9		Beneficial		Beneficial	Beneficial	
• Policy 10		Beneficial			Beneficial	Beneficial
• Policy 11		Beneficial				
• Policy 12		Beneficial				Beneficial
• Policy 13		Beneficial				Beneficial
4.2.2 C. Infrastructure Carrying Capacity Policies						
• Policy 1		Beneficial	Beneficial		Beneficial	
• Policy 2		Beneficial	Beneficial			
• Policy 3		Beneficial	Beneficial			
• Policy 4			Beneficial			
• Policy 5		Beneficial	Beneficial			
• Policy 6			Beneficial			Beneficial
• Policy 7			Beneficial			Beneficial
• Policy 8		Beneficial	Beneficial			Beneficial
• Policy 9		Beneficial	Beneficial			
• Policy 10		Beneficial	Beneficial			
• Policy 11			Beneficial			
• Policy 12			Beneficial			
• Policy 13			Beneficial			Beneficial
• Policy 14			Beneficial			
• Policy 15			Beneficial			
• Policy 16			Beneficial			
• Policy 17			Beneficial			
• Policy 18			Beneficial			Beneficial
• Policy 19			Beneficial			Beneficial

Land Use and Development Policies	Public Water Access	Land Use Compatibility	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality	Local Areas of Concern
• Policy 20			Beneficial			Beneficial
• Policy 21			Beneficial	Beneficial		
• Policy 22		Beneficial	Beneficial			Beneficial
• Policy 23						Beneficial
4.2.2 D. Natural Hazard Areas Policies:						
• Policy 1		Beneficial		Beneficial	Beneficial	
• Policy 2				Beneficial		
• Policy 3		Beneficial	Beneficial	Beneficial		
• Policy 4		Beneficial		Beneficial		
• Policy 5		Beneficial		Beneficial		
• Policy 6				Beneficial		
• Policy 7		Beneficial		Beneficial		
• Policy 8				Beneficial		
• Policy 9				Beneficial		
• Policy 10			Beneficial	Beneficial		
4.2.2 E. Water Quality Policies:						
• Policy 1		Beneficial			Beneficial	
• Policy 2		Beneficial		Beneficial	Beneficial	
• Policy 3		Beneficial			Beneficial	
• Policy 4			Beneficial		Beneficial	
• Policy 5					Beneficial	
• Policy 6		Beneficial			Beneficial	
• Policy 7		Beneficial			Beneficial	
4.2.2 F. Areas of Environmental Concern Policies:						
• Policy 1		Beneficial				
• Policy 2		Beneficial			Beneficial	
• Policy 3		Beneficial			Beneficial	
• Policy 4		Beneficial			Beneficial	
• Policy 5		Beneficial			Beneficial	
• Policy 6		Beneficial			Beneficial	

Land Use and Development Policies	Public Water Access	Land Use Compatibility	Infrastructure Carrying Capacity	Natural Hazard Areas	Water Quality	Local Areas of Concern
• Policy 7	Beneficial					
• Policy 8		Beneficial			Beneficial	
• Policy 9		Beneficial			Beneficial	
• Policy 10		Beneficial	Beneficial		Beneficial	
• Policy 11	Beneficial	Beneficial				Beneficial
• Policy 12	Beneficial	Beneficial			Beneficial	Beneficial
• Policy 13	Beneficial				Beneficial	
• Policy 14		Beneficial			Beneficial	
• Policy 15		Beneficial				
• Policy 16					Beneficial	
• Policy 17		Beneficial			Beneficial	
• Policy 18		Beneficial				
4.2.2 G. Areas of Local Concern Policies:						
• Policy 1		Beneficial	Beneficial			Beneficial
• Policy 2		Beneficial				Beneficial
• Policy 3						Beneficial
• Policy 4						Beneficial
• Policy 5		Beneficial				Beneficial
• Policy 6		Beneficial				Beneficial
• Policy 7						Beneficial
• Policy 8						Beneficial
• Policy 9						Beneficial
• Policy 10			Beneficial			Beneficial
• Policy 11				Beneficial		Beneficial
• Policy 12						Beneficial
• Policy 13						Beneficial
• Policy 14		Beneficial				Beneficial
• Policy 15		Beneficial				Beneficial
• Policy 16		Beneficial				Beneficial
• Policy 17						Beneficial

<i>Land Use and Development Policies</i>	<i>Public Water Access</i>	<i>Land Use Compatibility</i>	<i>Infrastructure Carrying Capacity</i>	<i>Natural Hazard Areas</i>	<i>Water Quality</i>	<i>Local Areas of Concern</i>
• Policy 18						Beneficial
• Policy 19						Beneficial
• Policy 20		Beneficial				Beneficial
• Policy 21						Beneficial
• Policy 22						Beneficial
• Policy 23		Beneficial				Beneficial

Note: Blank space in table indicates neutral impact. All local policies have been determined to have either a positive or neutral impact on CRC management topics. No specific actions or programs are required to mitigate negative impacts.

Appendix M

Citizen Participation Plan

Subchapter 7B of the North Carolina Administrative Code, Land Use Planning Guidelines, requires that the Land Use Plan update process include a variety of educational efforts and participation techniques to assure that all segments of the community have a full and adequate opportunity to participate in all stages of the preparation of the land use plan. It is therefore the responsibility of the Pasquotank County and the City of Elizabeth City to involve, inform and educate a broad cross-section of the community's populace. It is the intent of Pasquotank County and the City of Elizabeth City to have a continuous citizen participation and education process that achieves these purposes.

The following steps will be taken to provide information to the public and to encourage citizen involvement:

1. Establishment of Joint Land Use Plan Planning Committee

A Planning Committee representing a cross-section of the community will be organized to serve as the body responsible for guiding the Joint Land Use Plan formulation effort. The Planning Committee will serve in a review and advisory capacity to the elected officials of Pasquotank County and Elizabeth City and to the project Planning Consultant, The Wooten Company. The Planning Committee will meet on a periodic basis with the Planning Consultant and local planning department staffs to assist the Planning Consultant in defining land use and development issues and concerns, reviewing draft land use plan components prepared by the Planning Consultant, providing recommendations regarding land use plan content, and provide general input. The Planning Committee members will keep their respective elected governing/appointed board apprised of their activities and progress through regular oral and/or written reports. The composition of the membership of the Planning Committee is described in Attachment A.

The local staffing of the Planning Committee will be handled through the staffs of the Pasquotank County Planning Department and the Elizabeth City Planning Department. The Pasquotank County Planning Director staff will serve as the local coordinator of the CAMA Joint Land Use Plan project.

2. Joint Land Use Plan Planning Committee Orientation

An orientation meeting of the Joint Land Use Plan Planning Committee will be held in February 2003. The meeting will focus on the purposes of the CAMA Joint Land Use Plan, the process and schedule for preparing the plan, an overview of the 7B Land Use Planning Guidelines, the recent changes to the guidelines, and a review of the draft Citizen Participation Plan. This meeting will be open to the public and its time and location will be advertised in the local media. It is anticipated that this meeting may be held prior to the initial public informational meeting.

3. Initial Public Informational Meeting

A meeting of the Joint Land Use Plan Planning Committee will be held in March 2003 to serve as an educational opportunity to inform the general public of the purpose of the CAMA Joint Land Use Plan and the process for preparing the Plan and an opportunity to solicit citizen comments. In addition, the following specific topics will be discussed:

- The local policy statements contained in the current CAMA land use plans.
- The effect of those policies on the community.
- Ways the current CAMA land use plans have been used to guide development during the past planning period.
- The methods to be utilized to inform the general public of the plan preparation process and to solicit the views of citizens in the development of updated policy statements.
- Key planning concerns and issues regarding public access to public trust waters, land use compatibility, infrastructure carrying capacity, natural hazard areas, water quality, and other growth and land development issues of local concern.
- Community aspirations and visions for the future.

Notification of the meeting will be achieved through local newspaper notices, preparation and distribution of PSA's to local radio and television stations, and posting on the County and City Web pages. Written notice of the public informational meeting will be published in a local newspaper twice prior to the meeting date. The first notice will be published not less than 30 days prior to the public informational meeting and the second notice, not less than 10 days prior to the meeting. Notice of the meeting will also be provided to the Coastal Resources Advisory Council member and the Division of Coastal Management District Planner.

4. Periodic Joint Land Use Plan Planning Committee Meetings

It is anticipated that the Joint Land Use Plan Planning Committee will meet at strategic points throughout the land use planning process to provide general input into the plan development and to review materials prepared by the Planning Consultant. Meetings will be held to identify project goals and objectives; identify key planning and land use issues and concerns; review an analysis of existing and emerging conditions; review draft policy statements, land use suitability analyses, and Future Land Use Maps; review land use management implementation plans and schedules; and review a draft of the entire land use plan document. Planning Committee meetings will be held from February 2003 to December 2003. Newspaper notices and PSA's to radio and television stations will be prepared and distributed prior to each meeting. An opportunity for public comment and input will be invited and encouraged at each meeting.

It is anticipated that at least six Planning Committee meetings will be held. The location for Planning Committee meetings will be the Pasquotank County Courthouse, 206 East Main Street, Elizabeth City. The regularly scheduled Planning Committee meetings will be held during the 2nd week of each month. A tentative meeting schedule of the Planning Committee is attached as Attachment B.

At all regular meetings of the Planning Committee, time will be provided on the meeting agenda for public comment. A list of the names of the speakers providing public comment and a copy of any written comments provided will be kept on file by Pasquotank County. A copy of the written comments will also be provided to the Division of Coastal Management District Planner for use in the CAMA land use plan review process.

5. Public Forums in Special Focus Areas

The purpose of these meetings (three within the County jurisdiction and two within the City jurisdiction) will be to review the draft Plan, particularly the land use and development policies, Future Land Use Map, and implementation plan and schedule. The meetings will afford another opportunity for public involvement prior to a formal public hearing on the adoption of the Joint Land Use Plan. Notification of the meetings will be achieved through local newspaper notices, preparation and distribution of PSA's to local radio and television stations, posting on the County and City Web pages, and distribution of notices within the focus areas.

6. Joint Planning Board/Commission and Elected Officials Review Meetings

The purpose of these meetings (anticipate one joint meeting with the County Planning Board and Board of Commissioners and one joint meeting with the City Planning Commission and the City Council) is to review the draft land use plan and to provide another opportunity for general public comments.

7. Joint Public Hearing

A formal public hearing will be held jointly by the elected officials of Pasquotank County and the City of Elizabeth City to review the final draft Joint Plan and to solicit citizen comments. Following the public hearing each elected board will consider action on adoption of the Plan. The public hearing will be advertised by newspaper notice at least 30 days prior to the date of the public hearings which is anticipated to be held in May 2004. Notice of the public hearings will also be posted at county and municipal facilities. Additional means of public notification will include notices on Web pages and radio and television PSA's. Copies of the final draft Joint Land Use Plan and executive summaries will be available for review at county and municipal facilities in each community and at the local public library.

8. Additional Means of Soliciting Public Involvement

In addition to the meetings outlined above, Pasquotank County and Elizabeth City will utilize the following means to increase public involvement and to disseminate public information:

- Monthly project progress reports will be made available to the local media and posted on the County and City Web pages.
- Presentations by representatives of Pasquotank County and Elizabeth City staffs and/or Planning Committee members to civic, business, church, and similar groups, as requested.
- Use of local CATV and County and City Web pages for meeting schedules, meeting notices, project progress reports, plan drafts, and other public educational materials.
- The City of Elizabeth City may also utilize its utilities billings as a means to provide meeting notice.

9. Additional Meetings

In addition to the meetings outlined above and in Appendix B, Pasquotank County and Elizabeth City may elect to hold additional meetings if it is determined that more meetings are needed to provide project information and/or provide additional opportunities for soliciting citizen comments and public participation in the Land Use Plan preparation process.

10. Stakeholder Groups

During the Land Use Plan preparation process, specific stakeholder or interest groups may be identified. Such groups or individuals will, if requested, receive mailed meeting notices and will be specifically encouraged to participate at all stages of the Land Use Plan preparation process.

11. Amendment to the Citizen Participation Plan

Any amendment to the Plan will be approved by Pasquotank County and Elizabeth City in the same manner as adoption of the original Plan.

Planning Committee Membership

Bill Trueblood	1105 Lula Meads Rd. Elizabeth City 27909	Chairman, Pasquotank County Board of County Commissioners	252-330-2662
David Harris	1101 Park Drive Elizabeth City 27909	Chairman, Pasquotank County Planning Board	252-338-1909
Rodney Bunch	PO Box 39 Elizabeth City 27909	Planning Director/Ass't County Manager, Pasquotank County	252-335-5177
Kirk Rivers	512 Magnolia Street Elizabeth City 27909	Elizabeth City City Council	252-338-2243
Steve Atkinson	1016 Rivershore Rd. Elizabeth City 27909	Chairman, Elizabeth City Planning Board	252-338-8674
June Brooks	PO Box 347 Elizabeth City 27907	Planning Director, City of Elizabeth City	252-337-6673
Shelley Cox	PO Box 39 Elizabeth City 27909	Planning Director, Pasquotank County	252-335-1891

Tentative Planning Committee Meeting Schedule
Joint Pasquotank County/Elizabeth City Advanced Core Land Use Plan

February 20, 2003	Planning Committee Orientation Meeting
March 13, 2003	Initial Public Informational Meeting
March 13, 2003	Planning Committee #2 re: Community Concerns and Aspirations; evaluation of existing policies; vision statement
April 10, 2003	Planning Committee #3 re: Analysis of Existing And Emerging Conditions; existing land use maps, environmental composite map, land suitability map, transportation systems map, storm surge map, soils map, existing water and sewer systems maps, and natural features map; population and housing analysis
May 8, 2003	Planning Committee #4 re: Plan for the Future; future land use categories; land use issues; land use goals and objectives; focus areas
June 24, 2003	Planning Committee #5 re: Plan for the Future; Future Land Use Maps, developed lands map; Halstead Boulevard Connector future and use pattern
August 14, 2003	Planning Committee #6 re: Plan for the Future; Future Land Use Maps, land use policies; Halstead Boulevard Connector
September 11, 2003	Planning Committee #7 re: Plan for the Future; Future Land Use Maps, land use goals and policies; Halstead Boulevard Connector; vision statements
January 8, 2004	Planning Committee #8 re: Plan for the Future; Future Land Use Maps; land use policies
April 26, 2004	Elizabeth City - City Council work session on status of Land Use Plan
June 23, 28, and 29, 2004	County Public Forums regarding the draft Land Use Plan
September 27, 2004	Elizabeth City - City Council work session review of the draft Land Use Plan
October 4 and 14, 2004	Elizabeth City Public Forums regarding the draft Land Use Plan
October 14, 2004	Joint Pasquotank County Board of Commissioners/Planning Board review of draft document
TBA	Joint Elizabeth City - City Council/Planning Commission review of draft document
TBA	Joint Public Hearing
July 2007	Pasquotank County Board of Commissioners meeting re: adoption of plan
July 2007	Elizabeth City - City Council meeting re: adoption of plan

Regularly scheduled Planning Committee meetings will be held in the Pasquotank County Courthouse, 206 East Main Street, Elizabeth City. The location of all other meetings will be determined at a later date. Meeting dates are tentative and are subject to change. Notification of the meetings will be achieved through local newspaper notices, preparation and distribution of PSA's to local radio and television stations, and/or posting on the County and City Web pages. Notice of the meetings will also be provided to the Coastal Resources Advisory Council member and the Division of Coastal Management District Planner.

Local Media Resources

1. *The Daily Advance*
2. Local Public Access CATV station: Channel 14
3. Pasquotank County Web: www.co.pasquotank.nc.us
4. Elizabeth City Web: www.ci.elizabeth-city.nc.us
5. Local radio stations: WCNC-AM
WFMZ-FM
WGAJ-AM
WKJX-FM
WRVS-FM

Appendix N
Halstead Boulevard Extension Overlay District Regulations
Elizabeth City Unified Development Ordinance
Article XII, Environmental and Special Purpose Regulations

12.10 Halstead Boulevard Extension Overlay District Regulations

12.10.1 General

The Halstead Boulevard Extension Overlay District is hereby established to provide a set of comprehensive land use regulations for the Halstead Boulevard Extension corridor. The overlay district allows industrial, commercial and residential opportunities in a compatible relationship while maintaining an integrated and pleasing visual travel corridor. All permitted uses in this overlay district shall be subject to the procedures, standards and guidelines specified in the following sections, in addition to other applicable rules, regulations and permit requirements. In cases of conflicts with the regulations in the underlying zoning district, the more restrictive requirements shall apply.

The provisions shall apply to all areas designated as the HBEOD and defined on the official zoning map of the City of Elizabeth City. The provisions of this section shall also include areas within the City's extra territorial jurisdiction as shown on the official zoning map of the City.

12-10.2 Standards

- (A) The use and development of any land or structure within the HBEOD shall comply at a minimum with the use regulations and intensity regulations applicable to the underlying zoning district
- (B) All commercial and industrial zoned properties shall be developed according to the following design and development standards:
 - 1. **Building and Façade Design**
 - a. Facades shall be designed to reduce the massive scale and the one dimensional appearance of large retail buildings and to provide visual interest.
 - b. Facades greater than 50 feet in length measured horizontally, visible from a public street, shall incorporate wall plane projections or recesses having a depth of at least 3 feet (for each 50 feet in façade length) to break up the expansiveness of the exterior. All recesses shall be well lit to encourage a safe environment.
 - c. Fronts and sides of buildings oriented toward a public area or street shall incorporate arcades, display windows, entry areas, awnings or other such features. Any side of a building oriented toward a public area or street or an internal street used by the public shall incorporate display windows, false windows, awnings or other features to add visual interest.
 - d. Facades that do not face public areas or streets shall incorporate

- a repeating pattern that includes color change, texture change and material change, each of which shall be integral parts of the building - not superficially applied trim, graphics, or paint. At least one of these elements shall repeat horizontally.
- e. The structural or architectural bay pattern of the building shall be expressed on the exterior through the use of reveals, projecting ribs, or offsets to a minimum depth of at least 12 inches.
 - f. Any façade that is not visible from a public area or street or from a private internal street used by the public shall be painted a coordinating color to complement the front and side facades.
 - g. Building materials shall include brick, wood, fiber-cement siding, stone, textured split face block, tinted and textured concrete masonry or synthetic stucco. Metal style buildings are prohibited.

2. Landscaping and Buffering

- a. Any loading operations within view of residential, office, or multifamily developments or public rights-of-way shall be screened by a landscaped berm or a solid wall with landscaping on the outside at least 4' high.
- b. Parking areas shall be enhanced with additional landscaping. Creative site design, to include preservation of existing stands of trees and clustered landscaped areas, is encouraged over symmetrical rows of small landscaped islands.
- c. Sites with existing trees and vegetation along the street frontage shall retain those landscape features and integrate them into the landscape plan for the shopping center. Existing features shall be shown on the site plan.
- d. To the greatest extent possible, 25% of the landscaping shall be evergreen species.
- e. Landscape islands shall be designed so that plant material is not located on the first two (2) feet of the edge of the island, where it is most likely to be trampled by individuals exiting and entering parked vehicles. Such edge shall be mulched or paved with porous paving material.
- f. Landscaping shall be provided for islands within parking areas and islands separating out parcels and main parking areas.
- g. A landscaping plan for the shopping center complex shall be developed by the applicant/developer and submitted for review and approval with the site plan.

3. Parking and Circulation

- a. Vehicular parking areas shall be distributed around at least three (3) sides of retail buildings in order to reduce the overall scale of the paved parking surface. The Technical Review may reduce this requirement to two (2) sides during site plan review.
- b. The vehicular circulation system, which provides access to the parking area, shall be designed to reduce the number of vehicular conflicts to a minimum. Adequate stacking for vehicles shall be

- provided at the access points from the parking area.
- c. Parking spaces for the shopping center and out parcels shall be provided as specified and prescribed in the Elizabeth City Ordinance Standards for parking.
- d. Parking spaces shall be at least 9' x 19'.
- e. Internal streets and ways shall be constructed to meet or exceed construction standards for state and City maintained streets or roads.

4. Pedestrian Access

- a. Out parcels shall be connected to each other and to the main shopping center by pedestrian walkways and/or bikeway access.
- b. Continuous internal pedestrian walkways, no less than five feet in width, shall be provided to the principal customer entrance of all principal buildings on the site.
- c. Walkways shall connect focal points of pedestrian activity such as, transit stops, street crossings, building and store entry points, and parking areas.
- d. Walkways shall feature adjoining landscape areas that include trees, shrubs, flower beds, ground covers, or such other materials to enhance the appearance of the walkway areas and shall have adequate lighting.
- e. Building entrances shall include weather protection features such as awnings or arcades having a width at least double that of the doorway over which they are located.

5. Signs

- a. No advertising signs (billboards) shall be located within the overlay district.
- b. Style, size, color, and building material of all signs on the site shall be coordinated, including signs for any out parcel development, on-site directional signs, and signs to be located on the face of any structure.
- c. Colors for sign bases (foundations, supports, and/or frames) shall be primarily neutral or earth tone (no primary colors). A limited amount of brighter accents (primary colors), such as those found in corporate logos, are acceptable in sign messages but not in sign bases.
- d. Free standing signs associated with a retail use shall be monument style with a maximum height of 8 feet and a maximum length of 8 feet and have a message area of not more than 32 square feet. A minimum of 75 square feet of landscaping, consisting of at least 50% evergreens, shall be included at the base of the sign. Sign materials shall be durable, attractive, and coordinated with materials used on the primary structure(s). Sign bases shall be constructed of masonry or similar materials.
- e. Signs of individual businesses attached to their respective building front shall be limited to 1 .5 square feet of sign area for each linear

- foot of store frontage.
- f. Free standing monument style signs at the main entranceway(s) to the shopping center shall have a maximum height of 8 feet above the elevation of the state or City maintained street or road closest to it and a maximum length of 12 feet and have a message area of not more than 50 square feet. A minimum of 75 square feet of landscaping, consisting of at least 50% evergreens, shall be included at the base of the sign. Sign materials shall be durable, attractive, and coordinated with materials used on the primary structure(s). Such signs may be internally lighted. Sign bases shall be constructed of masonry or similar materials.
 - g. Free standing monument style signs at auxiliary entranceway(s) to the shopping center shall have a maximum height of 7 feet and a maximum length of 12 feet and have a message area of not more than 24 square feet. A minimum of 75 square feet of landscaping, consisting of at least 50% evergreens, shall be included at the base of the sign. Sign materials shall be durable, attractive, and coordinated with materials used on the primary structure(s). Sign bases shall be constructed of masonry or similar materials.
 - h. Tower or beacon signs for the purpose of marking the location of the shopping center complex shall have a maximum height of 25 feet above the road and a maximum length of 12 feet and have a message area of not more than 50 square feet per side; shall not include the names of individual businesses within the complex as a part of its message area; and, shall be limited to the name of the shopping center complex. Sign bases shall be constructed of masonry or similar materials. A minimum of 100 square feet of landscaping, consisting of at least 50% evergreens, shall be included at the base of the sign.
 - i. All electrical or mechanical devices associated with free standing signs shall be designed to be housed inside the base of the sign.

6. Outdoor Display Areas, Machines and Ground Level Mechanical Equipment

- a. All outdoor display areas, including garden centers and any seasonal sales, shall be enclosed on all sides with high-quality fencing such as fencing resembling wrought iron, (chain link fencing is prohibited).
- b. All outdoor display areas shall be designated on the site plan and must not extend into parking areas.
- c. Vending machines shall not be visible from public pedestrian areas outside the business structure, including garden areas.
- d. Mechanical or HVAC equipment shall not be installed at ground level along any portion of a building facing a state or City maintained street or road or internal street or way unless such location is necessitated by the nature and design of the building it serves. Roof top installation may be allowed provided that such equipment is concealed behind a parapet wall.
- e. A solid fence or wall and native plants shall screen any ground level equipment. Block or brick enclosures, if used, may include

- decorative openings within the block or brick pattern.
- f. Shrubs shall be at least ten (10) gallons in size, and trees must be at least two (2) inches in caliper at planting.

7. Storm Water Management

- a. On-site storm water management facility ponds shall be attractively landscaped with amenities. All ponds shall be aerated with a fountain or waterfall type feature. Wetlands benching, fountains, and the incorporation of walking trails and pedestrian benches around the perimeter of the ponds are all encouraged. Lighting of these areas is required for safety.
- b. Should a storm water management pond be enclosed, chain link fencing is prohibited
- c. To the greatest degree possible, storm water management shall utilize existing regional storm water management facilities.
- d. A storm water management plan for the shopping center complex shall be prepared by the applicant/developer and submitted for review and approval with the site plan.

- (C) All residentially zoned property shall be developed in accordance with the standards set forth in the applicable zoning districts in addition to the following.

1. Setbacks

- a. Building setbacks along the Halstead Boulevard Extension corridor from Thunder Road and the Halstead Boulevard Extension intersection east to the overlay district boundary shall be 25 feet from the right of way of Halstead Boulevard Extension.
- b. Building setbacks along Halstead Boulevard Extension from Thunder Road/ Halstead Boulevard Extension intersection west to the overlay district boundary shall be 50 feet from the edge of the right-of-way of 'Halstead Boulevard Extension.
- c. Building setbacks along Thunder Road within the overlay boundary shall be 50 feet from the edge of the right-of-way of Thunder Road.
- d. Building setbacks along Forest Park Road with the overlay district shall be 25 feet from the edge of the right-of-way from Forest Park Road.
- e. Building setbacks along Wellfield Road within the overlay boundary shall be 50 feet from the edge of the right-of-way from Wellfield Road.

2. Outdoor lighting

- a. All outdoor lighting shall be shielded in such a manner that no direct glare from the light source can be seen from Halstead Boulevard. All lighting shall be in accord with the North Carolina Department of Transportation Standards as per AASHTO publication "Roadway Lighting Design Guide, 2005."
- b. All utility lighting poles shall be black in color.
- c. All utility lighting poles in residential subdivisions shall be

decorative in material and subject to the approval of the City of Elizabeth City Public Utilities Director to ensure consistency of design and construction.

- d. All utility supplies shall be underground.

3. Streetscapes

- a. Residential subdivisions shall be designed to encourage pedestrian traffic. Street design and elements such as sidewalks, bikeways and walking trails should be incorporated for visual appeal.
 - b. Subdivisions with 40 lots or more shall have entry statements that create a distinctive image of a particular residential development. Any entry statement or feature should be designed to assist passing motorists to easily identify the development, and should complement the overall appearance of the greater community of which it is a part. Water features and or other architecturally designed features shall be incorporated as part of an entry statement feature.
 - c. Subdivisions shall be designed to connect with a street network in any adjacent development or neighborhood creating an interconnected street network.
 - d. Each subdivision shall provide for street trees between the street right-of-way and the sidewalk. Each single family lot shall have at least one street tree
 - e. Parks, open space or community gathering areas shall be provided in all residential districts. These areas should be located adjacent to residential streets or in areas that have community wide use. Open areas encircled by residential lots are discouraged.
- (D) All properties within the Halstead Boulevard Extension Overlay District shall access Halstead Boulevard at a “designated access” as illustrated on the official overlay zoning map. Those properties that do not have direct access to Halstead Boulevard shall be granted access through those properties that do have a “designated access.”
- (E) All-properties abutting Halstead Boulevard shall pay a development fee equal to the costs to install a four (4) foot wide concrete sidewalk. The costs of such improvements shall be determined by the Director of Public Utilities of the City of Elizabeth City.
- (F) Appeals from the requirements of the Halstead Boulevard Overlay District may be taken to the Planning Commission by any person aggrieved. The Planning Commission shall follow the requirements of the appeals and variances in Article 7 of the Elizabeth City Unified Development Ordinance.

Appendix O

Distribution of Acreage for Existing and Future Land Use Map Classifications

Distribution of Acreage for Existing and Future Land Use Map Classifications Pasquotank County Jurisdiction									
EXISTING LAND USE CLASSIFICATIONS AND ACREAGE*									
	Agricultural 57,966	Residential 4,460	Undeveloped 30,220	Forestry 37,730	Institutional/ Public 1,220	Confined Animal Operations 210	Industrial 790	Commercial 710	Total Acreage 133,306
Future Land Use Classifications & Acreage									
Rural Agricultural 70,230	30,704	0	2,415	36,901	0	210	0	0	70,230
Low Density Residential 5,575	665	1,996	2,864	50	0	0	0	0	5,575
Medium/High Density Residential 94	0	21	70	3	0	0	0	0	94
Mixed Residential 8,333	2,186	2,443	3,504	200	0	0	0	0	8,333
Commercial 2,608	885	0	957	89	0	0	0	710	2,608
Mixed Use 1,349	155	0	856	159	179	0	0	0	1,349
Public/Institutional 1,041	0	0	0	0	1,041	0	0	0	1,041
Industrial 6,508	5,631	0	0	87	0	0	790	0	6,508
Agricultural 26,250	20,261	0	5,748	241	0	0	0	0	26,250
Conservation 7,564	2,300	0	0	5,264	0	0	0	0	7,564
Total Acreage 129,552	62,787	4,460	16,414	42,994	1,220	210	790	710	129,552

*Rounding may result in totaling errors

**Distribution of Acreage for Existing and Future Land Use Classifications
City of Elizabeth City Jurisdiction**

EXISTING LAND USE CLASSIFICATIONS AND ACREAGE

Future Land Use Classification & Acreage	Residential		Commercial	Industrial	Public and Institutional	Undeveloped*	Total Acreage**
	Low 1,078	Med/High 1,102					
Low Density Residential 3,058	868	53	490	220	1,160	7,844	11,894
Medium/High Density Residential 2,115	62	1,006	36	0	17	2,076	3,050
General Commercial 1,603	73	21	382	20	22	1,079	1,597
Mixed Use 880	0	0	0	0	0	880	880
Downtown Mixed Use 73	1	10	27	10	20	5	73
Public and Institutional 1,021	1	0	0	0	628	391	1,020
Industrial 435	9	0	9	172	5	238	433
Conservation and Open Space 2,029	64	12	13	11	379	2,251	2,730
Totals* 11,213	1,078	1,102	490	220	1,160	7,844	11,894

*Includes vacant developable land as well as land subject to flood hazards, wetlands, etc.

** Includes road right-of-ways and water areas