

Chowan County & Town of Edenton Joint Land Use Plan

Adopted by the Chowan County Board of Commissioners: August 6, 2018

Adopted by the Edenton Town Council: August 14, 2018

Certified by the Coastal Resources Commission: <insert certification date here>



Acknowledgements

CHOWAN COUNTY



Elected Officials

Board Chairman Jeff Smith
Vice Chairman Greg Bonner
Commissioner Ellis Lawrence
Commissioner John Mitchener
Commissioner Patti Kersey
Commissioner Don Faircloth
Commissioner Ron Cummings

Staff

Brandon Shoaf, Planner
Karen Castelleo, Planning Technician

TOWN OF EDENTON



Elected Officials

Mayor Roland Vaughan
Mayor Pro Tem Steve Biggs
Councilman Jimmy Stallings
Councilman Samuel Dixon
Councilman Roscoe Poole, Jr.
Councilman Elton Bond
Councilman Craig Miller

Staff

Anne-Marie Knighton, Town Manager
Elizabeth Bryant, Planner

Consultant

CodeWright Planners, LLC



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Aerial photo on cover, bottom left © Karl Bowden and Frogsvie, 2013

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Section 1. Introduction

This section introduces the Land Use Plan, explains the existing land use policy framework for Chowan County and the Town of Edenton that this plan supplements, and describes the process that Chowan County and the Town of Edenton undertook to create this Plan.

- 1.1 About this Plan
- 1.2 How to Use this Plan
- 1.3 The Land Use Plan Update Process

1.1. About this Plan

This Plan replaces the 2008 Chowan County and Town of Edenton Joint Land Use Plan. It was prepared, in part, to meet the requirement of the Coastal Area Management Act of 1974 (CAMA) that requires coastal counties and municipalities in North Carolina to prepare land use plans outlining current conditions and planned future actions in sensitive coastal areas. This Joint Land Use Plan, when certified by the North Carolina Coastal Resources Commission (CRC), will become part of the North Carolina Coastal Management Plan for the protection, preservation, orderly development, and management of the coastal areas of the State.

Chowan County is one of the twenty counties included in the Coastal Area Management Act of 1974 (CAMA). The Act establishes a cooperative program of coastal area management between local governments and the State. Municipalities within each CAMA county may choose to develop their own land use plans or may work jointly with their counties to prepare joint land use plans. This Joint Land Use Plan update is an example of cooperation between a county and a municipality to prepare a CAMA land use plan update.

Land use planning lies at the center of local government's involvement in CAMA. Subchapter 7B - Land Use Planning Guidelines of the North Carolina Administrative Code (the "CAMA guidelines"), was established to guide localities through the process of preparing land use plans and submitting them for state review. In 2016, the Coastal Resources Commission revised the CAMA guidelines to provide more local flexibility in the land use planning process. These revisions reduced the number of components that are required and added more flexibility to customize the structure and sequence of required plan components. In preparing this Joint Land Use Plan update, Chowan County and the Town of Edenton sought to use this flexibility to update the current land use plan to be more implementation-oriented, user-friendly, and strategic. For these reasons, this Plan's structure places the Policy Guidance section (Section 2) before the Background Data section (Section 3). In addition, there are separate sections of policy guidance for the County and the Town. In preparing this Plan, the County and Town have been judicious in including only those goals, policies, and actions which are realistically implementable over the five-year life of this Plan.

It is the desire of the County and Town that this Plan serve as an easy-to-reference guide for staff, elected officials, and members of the public when considering future zoning, land use, infrastructure, resiliency, capital improvement, and hazard mitigation decisions.



1.2. How to Use This Plan

A. Plan Structure

This Joint Land Use Plan is made up of four sections:

Section 1, Introduction

This section contains general information about the Plan itself, including the guide for land use decision-making and details on how this Plan was prepared.

Section 2, Policy Guidance

This section includes the vision, goals, policies, and implementation steps guiding land use in Chowan County and the Town of Edenton. Because this is a joint plan between the two jurisdictions, Section 2 identifies plan goals, policies, and actions specific to either jurisdiction as well as goals, policies, and actions that are shared in common. County-specific policy guidance is located in Subsection 2.2, Town-specific policy guidance is in Subsection 2.3, and shared policy guidance related to the five Coastal Resources Commission management topics for both jurisdictions is in Subsection 2.4. In making land use decisions for either jurisdiction, elected officials, staff, or members of the public should reference either the jurisdiction-specific subsection as well as the shared policy guidance.

Section 3, Background Data

Section 3 includes the data, analyses, and information that informs the policy guidance found in Section 2 of this Plan. This section is intended for use as a reference and resource for decision-making on technical issues not covered explicitly in the Section 2, Policy Guidance.

Section 4, Appendices

This section is a collection of supplemental information that is referenced in the text of the Plan. Section 4 also contains the Matrix of Required Elements of a CAMA Land Use Plan.

B. Guide for Land Use Decision-making

This Joint Land Use Plan, as adopted and amended by the elected officials of Edenton and Chowan County, serves as the primary guide upon which to make land use policy decisions. Every land use policy decision, such as consideration of a rezoning request or a conditional or special use permit, will be measured for consistency with the goals, policies, and recommendations of this Plan. The elected and appointed officials and local government staffs should utilize this Plan as the basic policy guide in the administration of their respective zoning ordinances, subdivision regulations, and other land development regulatory tools. The Future Land Use Map for each jurisdiction are a part of the policy intended to guide land use decisions.

The goal and policy statements, implementation strategies, and Future Land Use Maps in this Plan are developed to assist the elected officials in making long-range decisions regarding such matters as promoting population growth, the provision of water and sewer services, thoroughfare planning, stormwater 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.

Landowners and persons involved in the land development process should utilize this Land Use Plan and its Future Land Use Maps to guide private decisions regarding land use and land development.

It should also be noted that this Plan is but one guide to making public policy decisions that exists within a larger scheme of the land development management programs governing land use in Chowan County and the Town of Edenton. Readers should be aware that there are other elements of policy guidance that should also be consulted. These items are listed in subsection C below.

C. Land Use and Development Management Programs

1. Chowan County

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

- Chowan County Zoning Ordinance;
- Chowan County Subdivision Ordinance;
- Chowan County Nuisance Ordinance;
- 2003 Chowan County & Edenton Joint Greenways and Open Space Plan;
- 2015 Chowan County Comprehensive Transportation Plan; and
- Albemarle Regional Hazard Mitigation Plan.

The County's land development management program is administered primarily by the Chowan Planning Office, a division of the Chowan County Planning and Inspections Department. The County's land development regulations are applicable to all land areas located outside of the planning and zoning jurisdiction of the Town of Edenton.

The Chowan Planning Office serves as staff support for the Chowan County Planning Board and the Chowan 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 Chowan County jurisdiction are administered by the joint Edenton-Chowan Building Inspections Office.

2. Town of Edenton

The Town of Edenton's existing land development management program includes the following regulatory ordinances and related plans:

- Town of Edenton Unified Development Ordinance;
- North Oakum Street Redevelopment Plan;
- Moseley Street Redevelopment Plan;
- 2003 Chowan County & Edenton Joint Greenways and Open Space Plan;
- 2015 Chowan County Comprehensive Transportation Plan; and
- Albemarle Regional Hazard Mitigation Plan.

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

The Planning Department serves as staff support for the Edenton Planning Board and the Edenton Board of Adjustment. The Planning Board serves primarily in an advisory capacity, making recommendations to the Town 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. The Town Council is responsible for hearing requests for conditional use permits and makes all approval decisions on preliminary subdivision plats.

Building inspections throughout the Town's jurisdiction and the Town's Minimum Housing Code are administered by the joint Edenton-Chowan Building Inspections Office.



1.3. The Joint Land Use Plan Update Process

A. Project Goals

In July 2016, the Chowan County Board of Commissioners and Edenton Town Council issued a Request for Proposals (RFP) for assistance with an update to the 2008 Chowan-Edenton Core Land Use Plan. The RFP listed several goals for the land use plan update process:

- Update the existing and future land use maps for both the County and the Town;
- Integrate updated land use planning policies adopted by the Town of Edenton (and Chowan County, as appropriate) related to land use decision-making and residential densities;
- Revise the planning assumptions in accordance with current economic conditions;
- Involve the public in the project through formal and informal meetings and public hearings; and
- Periodically meet with the County and Town Planning Boards, Town Council, and Board of County Commissioners to discuss the project's findings and receive guidance.

Using grant funding from the North Carolina Department of Environmental Quality, Division of Coastal Management, the County and Town hired CodeWright Planners, LLC in September 2016 to assist with the project.

B. Public Engagement

Throughout the land use plan update project, the project team offered opportunities for members of the public to learn about the project and give input on what should be included and prioritized in the plan.

1. Public Forum

The first major public engagement event was the public forum held on February 9, 2017 at the Chowan County Public Safety Center. Participants were invited to a “drop-in” open house style event to learn about the project and the basics of land use planning and to engage in four exercises at stations set up around the room. The room was roughly divided down the middle so that each planning jurisdiction (Chowan County and the Town of Edenton) had a parallel set of



Participants gathered for the introductory presentation

stations and exercises. Participants were invited to choose which jurisdiction to participate in, or to give input in both jurisdictions.

The exercises included:

- A discussion of the existing conditions in the County and Town;
- A series of large boards containing visioning and goal-related questions for participants to respond to using “sticky” notes and markers;
- A large-format print of the draft existing land use map for participants to examine and provide feedback on; and
- A survey table where participants could complete a written version of the visioning survey for one or both jurisdictions.



The forum stations with parallel exercises for the County (left side of the room) and Town (right side of the room)

A total of 16 people attended the public forum.

2. Visioning Survey

Immediately following the public forum, the project team launched an online version of the visioning survey to gather public input on what aspects of the County and Town should be preserved in the future, and what residents would like to see changed. In order to gauge any differences in the vision for the Town and the County, the project team prepared two parallel surveys, one for each jurisdiction.

Chowan County Land Use Visioning Survey				
Think about the different ways that land is used. How would you describe the amount of each land use in CHOWAN COUNTY today?	Not enough	About the right amount	Too much	Don't know
Housing for young families	☐	☐	☐	☐
Places to start new businesses (land or buildings)	☐	☐	☐	☐
Housing for young people or couples without children	☐	☐	☐	☐
Places to shop for specialty goods	☐	☐	☐	☐
Housing for older adults	☐	☐	☐	☐
Places to shop for basic needs	☐	☐	☐	☐
	Not enough	About the right amount	Too much	Don't know
Access to the water	☐	☐	☐	☐

A screenshot of one of the questions from the online survey



The Public Engagement Summary Report

The survey was open for two weeks, February 10-24, 2017. County and Town staff publicized the survey via the County and Town webpage, Twitter accounts, and Facebook pages. A total of 310 visioning surveys were collected. 194 Chowan County visioning surveys were submitted (nine at the public forum and 185 online). 116 Town of Edenton surveys were submitted (three at the public forum and 113 online). Based on the findings in the survey, the project team prepared a Public Engagement Report, which is reproduced in Appendix 4.2 of this Plan.

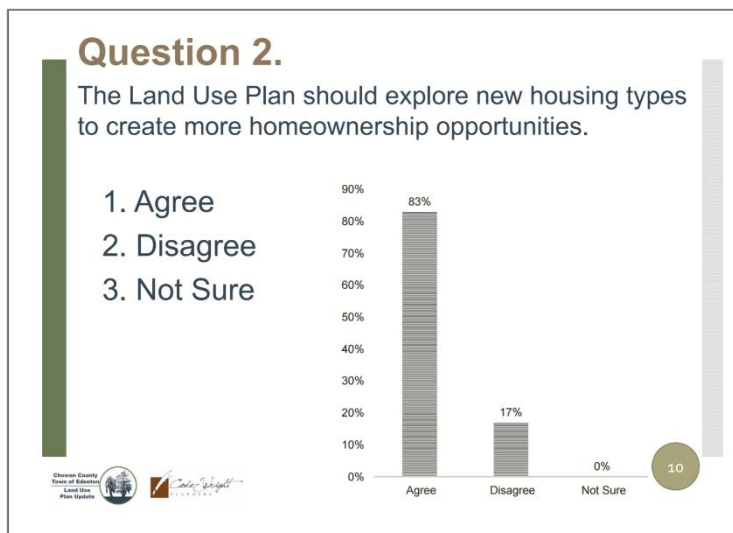
The public forum and survey informed the updates to the vision statements and goals found in this Plan. In order to refine this information into prioritized policies and implementation actions, the project team identified several questions for further exploration with the elected officials.

3. Joint Worksession

On April 19, 2017, the project team held a joint work session of the Chowan County Board of Commissioners and the Town of Edenton Town Council to pose a set of questions that emerged from the public engagement efforts and receive guidance from the elected officials on whether and how each should be addressed in the plan.



The work session was structured so that each question was first asked using anonymous keypad polling, followed by a facilitated discussion of the question's results and policy-related details. The session also included time for elected officials to bring up topics of interest not covered in the meeting material.



A screenshot of results from the questions posed during the Joint Worksession

4. Adoption Process

Following review of the initial draft of the Joint Land Use Plan by the NC Division of Coastal Management staff, the Town and the County advertised a public open house and joint public hearing with the elected officials from the Town and the County on March 26, 2018 to consider the draft version of the Plan.

The open house was conducted in the Edenton Town Council building on South Broad Street. Approximately 10 people attended the open house (in addition to staff and Town or County officials). The draft Plan was overviewed with an emphasis on the key changes between the draft version of the updated Joint Land Use Plan and the prior Plan. A facilitated discussion of questions and answers followed the presentation. Most of the discussion centered around the proposed population projections and whether or not this data may create a negative impression of the community for potential visitors, residents, business owners, or investors. Open house attendees expressed a desire for the Plan to present a balanced view of the community's population projections as well as a desire for the Plan to include a deeper discussion of the efforts already underway to attract new residents and visitors. Other questions and comments focused on the planning process and the desire to ensure sufficient opportunities for the community to comment on the draft Plan.

Following the open house, the Chowan County Board of Commissioners and Edenton Town Council held a joint public hearing to consider the draft Plan. Approximately 20 community members attended the public hearing, and three chose to present public comments. Commenters raised similar concerns as in the open house, particularly the population projections and the need for more opportunity to review the Plan prior to adoption. Other speakers identified specific errors in the text and maps of the Plan, which were marked for revision. The Town Council and County Commissioners decided to continue the public hearing until July 23, 2018 in order to give the public more time to review and submit comments. A revised draft version of the Plan was prepared (with changes tracked) based on the comments received during the open house and initial public hearing. The revised draft version of the Plan was made available to the community on April 9, 2018, along with an opportunity to provide written comments for consideration until May 11, 2018.

The staff and consulting team continued discussions with citizens concerned about the population projections through the months of May and June and agreed that it was in the best interest of the Town and the County to provide a range of population projections (which is included in Section 3, Background Data).

The public hearing was continued to July 23, 2018, where the consulting team provided an update on the Plan text that had changed since the version presented on March 26, 2018. The presentation summarized comments on the draft text provided by elected officials and citizens, including continued concern about the permanent population projects, seasonal population figures, lingering questions about infrastructure-related language in the plan, and the perception that Section 3 of the Plan had a negative tone about the prospects for future growth and development. Approximately 15 people attended the hearing, and three spoke about their continued concerns. The consulting team indicated that another round of revisions to the Plan text was underway which would address concerns regarding document tone, population projections, updated statistics regarding the unemployment rate in the community, and other

aspects of concern expressed in written comments on the plan received during April and May, 2018.

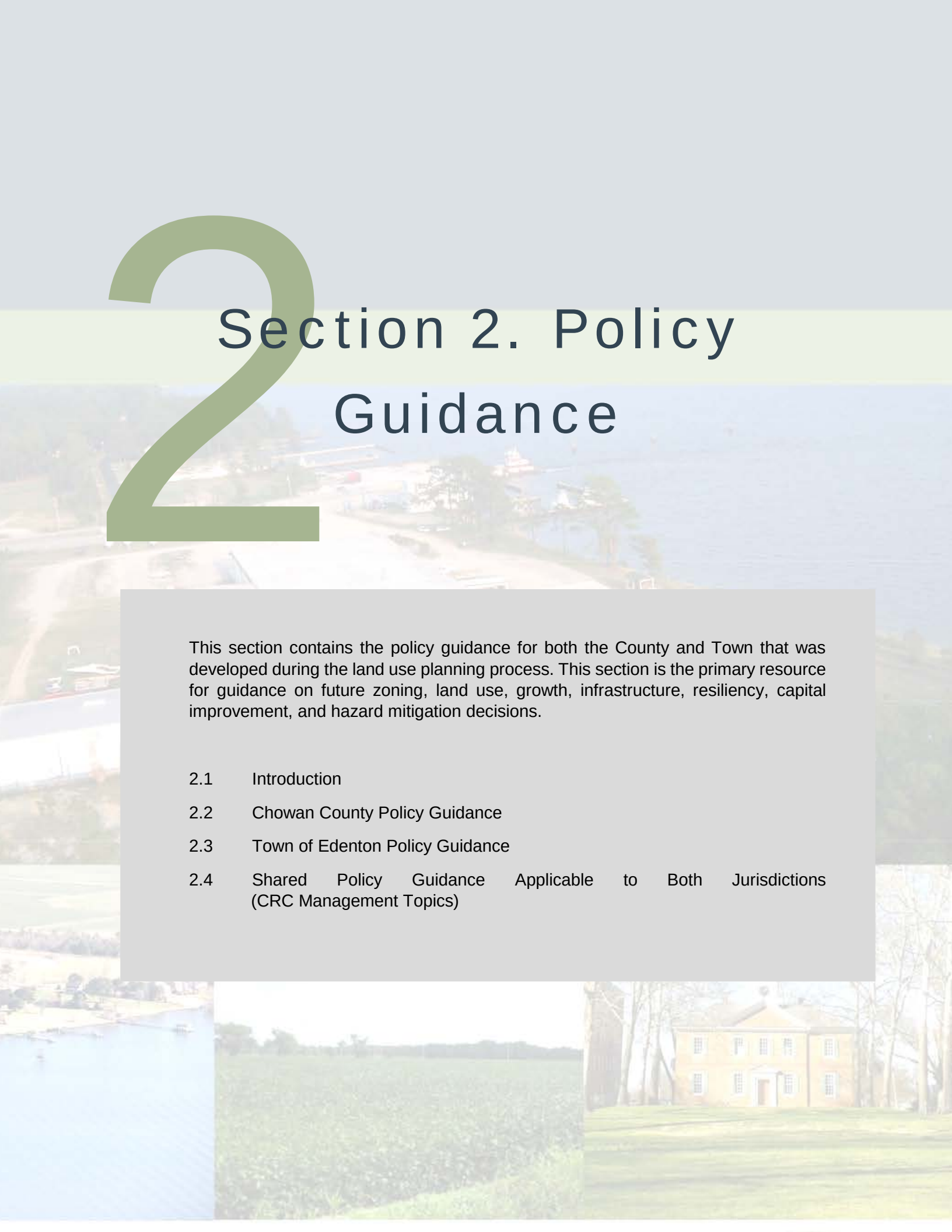
The Town Council and the Board of County Commissioners closed the continued public hearing and both bodies indicated they would consider adoption following review of the revised text prepared subsequent to the public hearing.

The Town Council adopted this Joint Land Use Plan on August 14, 2018.

The Board of County Commissioners adopted this Joint Land Use Plan on August 6, 2018.

Following adoption, the adopted Joint Land Use Plan was forwarded to NC Division of Coastal Management Staff for review on _____.

Following certification by Coastal Resource Commission representatives, this Joint Land Use Plan replaces the prior Core Land Use Plan and becomes the basis for review and consideration of CAMA permit decisions.



2

Section 2. Policy Guidance

This section contains the policy guidance for both the County and Town that was developed during the land use planning process. This section is the primary resource for guidance on future zoning, land use, growth, infrastructure, resiliency, capital improvement, and hazard mitigation decisions.

- 2.1 Introduction
- 2.2 Chowan County Policy Guidance
- 2.3 Town of Edenton Policy Guidance
- 2.4 Shared Policy Guidance Applicable to Both Jurisdictions (CRC Management Topics)

2.1. Introduction

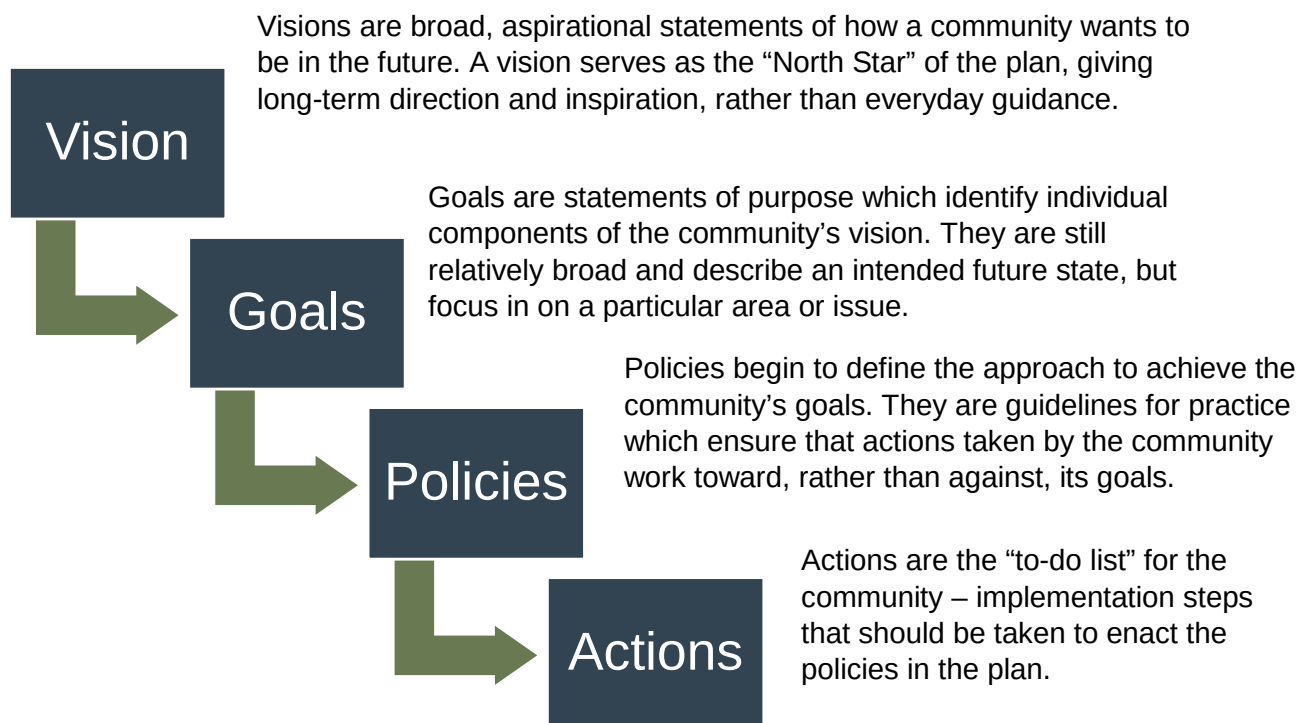
A. Planning Jurisdictions

This section is structured to reflect the nature of this Joint Land Use Plan as a document shared by Chowan County and the Town of Edenton. While much of the land use policy guidance is similar across both jurisdictions, each is unique, and there are some policies and actions that are specific to either jurisdiction.

Policy guidance that is specific to Chowan County can be found in Section 2.2, Chowan County Policy Guidance. Town-specific policy guidance is in Section 2.3, Town of Edenton Policy Guidance. Policy guidance that is common to both jurisdictions is in Section 2.4, Shared Policy Guidance. This section includes the information on the five management topics mandated for inclusion in a CAMA land use plan by the Coastal Resource Commission (CRC).

B. Policy Guidance Structure

The policy guidance contained in this section starts with a broad vision that informs goals and policies which are addressed through specific implementation actions. The graphic below describes the relationships between the vision, goals, policies, and actions.



The subsequent pages in this section identify the vision, goals, policies, and actions for the County and the Town.

2.2. Chowan County Policy Guidance

A. Chowan County Land Use Vision Statement

The following statement is the land use vision statement for Chowan County, as derived through this land use planning process.

Chowan County, its citizens, property owners, and business owners will continue to strive to preserve the rural character, natural beauty, and scenic qualities of this remarkable place by guiding growth and development so that our natural and historic resources are protected for future generations.

Chowan County seeks to promote “three generations of population growth,” attracting and retaining new residents. Three generations means millennials to mid-career professionals to retirees. Through pursuit of this balanced pattern of growth, the County hopes to attract high-quality development that includes a variety of housing types and a range of commercial establishments in appropriate locations.

The rural landscape and agricultural way of life in the County will be preserved using development standards that encourage clustered residential uses in locations best suited for development and the preservation of open space. The commercial and social needs of rural residents will be met in “rural centers,” or areas of concentrated residential supplemented with some locally-serving nonresidential uses.

The County recognizes the need to diversify and deepen its economic portfolio by expanding on the existing food processing, healthcare, and tourism industries and by adapting to changing workforce trends such as cottage industry entrepreneurship and telecommuting. In addition, farming and forestry will remain an important segment of our economy in the future.

Chowan County will expand recreation resources for both residents and visitors by increasing public access to and along its extensive shoreline and by investing in improvements to its existing parkland and recreation infrastructure.

The County will navigate these changes while maintaining the quality of the Chowan County waters, lands, and natural beauty which makes our region an attractive place to live and grow.

B. Chowan County Land Use Goals

Goals are statements of purpose which identify individual components of the community's vision. They are still relatively broad and describe an intended future state, but focus in on a particular area or issue. Based on the results from the Citizen Visioning Survey and the follow-up joint work session with the Chowan County Board of Commissioners and the Edenton Town Council on April 19, 2017 (See Section 1.3.B, Public Engagement, for additional detail), four key concerns were identified:

1. Encourage Population Growth;
2. Promote Economic Development;
3. Provide Recreation and Open Space; and
4. Foster Housing Choice.

Though the key concerns were generally shared between the County and the Town, each jurisdiction has a unique role to play in addressing them, and so each has its own set of policies and implementation actions. The goals, policies, future land use map, and actions specific to Chowan County are contained within this section. Users of this Plan should also reference Section 2.4, Shared Policy Guidance.

1. Encourage Population Growth

The County and the Town both recognize that population growth is a necessary component of attracting increased commercial uses such as a second grocery store and additional restaurants. Increasing population is also important to balancing tax revenues and allowing the County to provide the increased recreational facilities desired by residents, as well as to meet ongoing capital costs.

The type of population growth, and the development that flows from it is an important consideration. The goal for both jurisdictions is “three generations of growth” – attracting a blend of younger families, working-aged people, and retirees to encourage a balanced pattern of high-quality development.

Meeting this goal requires that the County continue pursuing the efforts at attracting more residents and visitors that are already underway (see Section 3.2 of this Plan) as well as additional research and planning for increased visitation and population growth. Part of that effort should ensure that the generational preferences and needs of each group are explicitly addressed. For retirees, locational decisions may be based on availability of healthcare, cost of land or housing, and ability to find and afford housing suited to the physical needs of aging populations (single-story units, accessibility, location close to healthcare and amenities). Working-age adults tend to make locational decisions based on availability of jobs or the ability to telecommute, broad range of amenities, school quality, and quality and value of the housing available for purchase. Millennials or younger families often make locational decisions based on many of these same factors, particularly housing availability in walkable neighborhoods, and the ability to live in interesting places with unique identities that offer all-around high quality of life.

The combination of these groups' needs and locational decision-making factors is broad and complex, and attracting new residents from all three generations will require a coordinated effort

based on combined strategy beyond the scope of this Land Use Plan. For these reasons, this Plan suggests, as a next step, the further exploration of this issue and development of a comprehensive strategy to achieve this goal.

The following statement summarizes the County's goals with respect to population growth.

GOAL C-1: Develop and implement strategies to promote “three generations of population growth” in the County that build on existing resources and efforts to attract a retiree population and expands these efforts to include attracting new millennial and mid-career professional residents.

2. Promote Economic Development

The second land use goal for Chowan County is promoting economic development. This goal encompasses expanding access to commercial goods and services as well as increasing employment opportunities for County residents.

A majority of Citizen Survey respondents indicated that the top priority for land use in the future should be increased commercial uses – places to shop for basic goods and services, including a second grocery store, a wider range of restaurants, and specialty stores were all mentioned as desirable uses that should be encouraged. The vast majority of these kinds of development will likely take place within the Town. However, there is some potential for commercial growth in the Rural Centers designated on the Future Land Use Map and described in Section 2.2.D.2.f of this Plan. Commercial uses that locate in Rural Center areas will likely be smaller, locally-owned stores and restaurants primarily geared toward serving the needs of residents versus the needs of visitors.

A second economic development concern is a need to create more employment opportunities in both the County and the Town. The Edenton-Chowan Partnership is currently having success in its focus on retention of existing businesses and recruitment of related uses to the major industries already located in the area. For example, the value-added agriculture centered around the peanut growing and processing operations currently operating in the County and Town. In addition to this industrial-focused strategy, there is a need to expand the scope of job-creation activities.

Healthcare is a growing industry sector both nationally and in Chowan County, and already makes up the second largest industry by employment countywide. As the Town continues to market itself as a retirement destination, healthcare uses will become more and more important to the functioning of that economic development strategy. An integral part of the County's job creation strategy is to build on surrounding healthcare sector resources – most notably the Vidant Chowan Hospital and the Edenton Office and Medical Park– to nurture and grow this critically important industry.

There is also an opportunity to expand the tourism industry based on the County's natural beauty and water access. Eco-tourism or adventure tourism, such as kayaking, stand up paddleboarding, or other water activities, as well as agri-tourism are growth areas for tourism on the North Carolina coast generally, and would be well-suited to Chowan County.

Another potential growth area is technical or vocational training. Long-term national trends have seen declines in workforce training for occupations involved in architecture and construction, repair and transportation, engineering technology, and related fields. According to the US Bureau

of Labor Statistics, 70 percent of all persons employed in personal and household goods and maintenance fields are older than 45 years of age. Provision of technical training will take on ever-increasing importance in coming years, and could be a growth sector for the County.

Finally, the County's economic development strategy should account for and accommodate the current trends in employment and population, including the growing number of Americans who work from home either by telecommuting or as cottage industry entrepreneurs who run a wide range of businesses out of their homes. Success with this sector requires robust internet and telecommuting facilities.

The following two goal statements summarize the County's goals with respect to economic development.

- GOAL C-2:** Develop a strategy for expanding job opportunities in general and in the healthcare, agriculture value-added, technical training, and tourism sectors in particular.
- GOAL C-3:** Ensure that the County's development ordinance is conducive to emerging economic trends, such as telecommuting and cottage industry entrepreneurship.

3. Provide Recreation and Open Space

One of the frequent responses in the Citizen Visioning Survey was that the County needs more and better recreation opportunities. The most commonly mentioned types of recreational facilities were walking and biking trails, updated playing fields, swimming pools, and a multi-sport complex. At this time, the County does not have funding available for construction of a new multi-sport complex or any major new facilities. Rather, the County intends to focus its efforts in this area on improving or repurposing the recreation resources that already exist, including existing playgrounds and ball fields. There is also an interest in exploring how to creatively meet some of residents' desires, such as using easements and other County-owned lands to provide bicycle and walking paths.

The following two goal statements summarize the County's goals with respect to recreation and open space.

- GOAL C-4:** Increase the mileage of bicycle and walking trails in the County, particularly in waterfront areas.
- GOAL C-5:** Improve existing recreational facilities to offer a broader range of high quality recreation amenities in the County in a cost-effective manner that takes advantage of existing facilities, where possible.

4. Foster Housing Choice

Increasing the range of housing choices for current and prospective residents is a goal for both the County and the Town. In the County's planning jurisdiction, this concern is focused on increasing homeownership opportunities in order to serve a wider range of homebuyers than those who can both afford and choose to buy large-lot single-family suburban style homes. At the time of the 2015 American Community Survey of Housing, there were no single-family attached

dwelling units, and only 161 units of two-family or multi-family housing in the unincorporated portions of the County. In order to increase homeownership opportunities for young professionals and retirees, the County would like to explore a wider range of housing products beyond large-lot, single-family homes, including single-family attached units, pocket neighborhoods, conservation subdivisions, and live-work units. This broader range of housing choices not only provides home buying opportunities at a broader range of price points, but also offers opportunities for the more walkable neighborhoods that many millennials and retirees prefer in today's market. The ability to offer these modern neighborhood configurations in Chowan County's beautiful rural setting would provide the County a major selling point for potential future residents.

The following statement summarizes the County's goals with respect to fostering housing choice.

GOAL C-6: Establish local development policies in the County that allow creation of a broader range of housing products in appropriate areas with the goal of increasing homeownership affordability for retirees and young professionals.



Innovative housing forms like pocket neighborhoods, conservation subdivisions, and live-work units.

C. Chowan County Land Use Policies

Where goals are broad statements of purpose and describe an intended future state, policies are more specific statements of intent that describe how a goal can be achieved. Policies add specificity and begin to define the approach to achieve the community's goals. This section contains policies that Chowan County adopts to address the six goals outlined in the previous section.

1. Encourage Population Growth

- POLICY C-1:** The County will partner with the Town to research and implement strategies for promoting “three generations of population growth.”
- POLICY C-2:** The County encourages the location and expansion of businesses, residential development, and service providers that serve retirees while also creating jobs for younger residents (including medical offices, health care specialists, upscale dining, and leisure activities).

2. Promote Economic Development

- POLICY C-3:** The County encourages entrepreneurship and the opening of new locally-owned businesses.
- POLICY C-4:** The County promotes the expansion of the healthcare, agriculture value-added, and tourism sectors in appropriate locations determined by land suitability, compatibility with neighboring uses, and infrastructure requirements.
- POLICY C-5:** The County is supportive of cottage industry entrepreneurship, and will put into place standards that require cottage industries that may have adverse effects, such as noise or traffic, on neighboring properties to mitigate these effects.
- POLICY C-6:** The County encourages telecommuters to locate in Chowan County.
- POLICY C-7:** The County is supportive of the location of broadband internet and telecommunication service providers in Chowan County.

3. Provide Recreation and Open Space

- POLICY C-8:** The County promotes construction of bicycle and walking trails, with an emphasis on trails that are along waterfronts, connect to waterfront areas, or connect pedestrians and cyclists to commercial areas.
- POLICY C-9:** The County will encourage residential subdivision developers to provide bicycle and walking trails, fees-in-lieu, dedication of land, or a combination of these to fulfill open space and recreation requirements.
- POLICY C-10:** As funding and land resources allow, the County will explore opportunities to install bicycle and walking trails within County-owned easements, on County-owned properties, and in existing parks.
- POLICY C-11:** It is the policy of the County to improve and update existing recreation amenities, including parks, playing fields, trails, and playgrounds, as funding and other

resources become available, rather than investing in the creation of new recreation amenities.

4. Foster Housing Choice

- POLICY C-12:** The County encourages the development of housing products that accommodate retirees, mid-career professionals, and millennials. This includes attached single-family, duplex, triplex, and quadraplex dwellings, conversion of larger homes into multi-unit dwellings for sale, live-work units, and innovative subdivision structures such as pocket neighborhoods and conservation subdivisions.
- POLICY C-13:** The County seeks to offer additional homeownership opportunities that accommodate current-day market and social trends to attract a variety of new residents: more attainable homeownership in a post-recession market for young professionals and retirees; opportunities for closer neighborhood relationships; and increased walkability to commercial and recreation areas.
- POLICY C-14:** The County supports the development of higher-intensity housing types, particularly within the Rural Center areas as designated on the Future Land Use Map. Higher-intensity housing should not be developed in environmentally sensitive areas.
- POLICY C-15:** The County supports the use of conservation subdivisions as a means to protect rural character.

Actions are the steps taken by a community to implement its policies. Section E, Chowan County Implementation Plan, describes the actions proposed to implement the policies in this section.

D. Chowan County Future Land Use

1. Future Land Use Map Guiding Principles

The Future Land Use Map depicts generalized patterns of projected land use that support the goals and policies of a community. It is the graphical depiction of the desired future land use arrangement. 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 Chowan County and Town of Edenton Future Land Use Maps work in tandem to:

- Guide the most intensive development to areas with supporting infrastructure;
- Accommodate a variety of residential densities;
- Promote commercial development in Edenton and selected areas of the County;
- Promote industrial growth in the airport area;
- Discourage growth in areas with natural constraints and low development suitability; and
- Conserve prime agricultural and fragile environments.

2. Future Land Use Categories

The Chowan County Future Land Use Map assigns lands within the County's planning jurisdiction to one of seven land use categories (also referred to as "classifications"):

- a. Conservation;
- b. Agricultural Residential;
- c. Low Density Residential;
- d. Medium/High Density Residential;
- e. New Urban Waterfront;
- f. Rural Center; and
- g. Industrial.

This section provides a brief description of each land use category, including typical use types, compatible zoning districts, density and intensity of development, restrictions on development, and infrastructure and impact considerations.

Updates or revisions to the Future Land Use Map require local adoption and State certification of a Land Use Plan Amendment.

A copy of the County's most recently updated Future Land Use Map is included in this document, but readers are encouraged to visit the County's offices to see a larger scale version of the map.

a. Conservation

The Conservation classification is intended to delineate areas where traditional land uses are not desirable or expected to develop. Land development may however, include public building and facilities necessary to support existing land uses. Commercial and industrial uses that are water dependent and which cannot function elsewhere or are supportive of commercial fishing are also permissible uses in Conservation-designated areas. Public and institutional uses such as golf courses and passive recreation would be appropriate in this classification, provided environmentally sensitive areas are not negatively impacted. 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 encouraged for the purpose of development. Water and sewer lines may be appropriate in Conservation areas for supportive uses such as bathrooms in a recreation facility or within easements for the purposes of serving other areas outside the Conservation classification.

The Future Land Use Map on Page 2-16 identifies two primary Conservation areas: Chowan Swamp, in the north of the County along the Chowan River, and Reedy Point Swamp in the southwest corner of the County along the Chowan River. There are also other areas in the County with the Conservation classification, including: coastal wetlands, estuarine waters, estuarine shoreline, public trust areas, and federally-designated “404” wetlands. These areas are too small to see on the Future Land Use Map included in this document and the precise locations of these areas may only be determined through field investigation. Also included in the Conservation classification are the future greenway corridors that are located throughout the County along creeks and rivers, as depicted in the 2003 Edenton/Chowan Greenway and Open Space Plan and reproduced in Appendix 10 of this Plan. Generally speaking, Conservation areas are expected to retain their current natural character over time.

b. Agricultural Residential

The vast majority of land area in the County (around 91 percent) is classified as Agricultural Residential. Areas classified as Agricultural Residential are predominantly farmland, forestry land, and open space along with scattered, residential uses with densities of less than one unit per acre. Those portions of the Residential Agricultural classification that are primarily residential in nature are typically found along major roadway corridors and in areas proximate to designated Rural Centers, and these areas are expected to maintain densities of around one unit per every five acres of land area. The balance of the Residential Agricultural classification is expected to maintain residential densities at or below one unit per every 20 acres of land area.

The Agricultural Residential classification corresponds to the A-1 Agriculture District in the County’s Zoning Ordinance, and despite its generally low density character (40,000 square foot minimum lot areas), the area can accommodate higher residential densities of up to four units per acre when developed as a Traditional Neighborhood Development (TND). Development configured as a TND is approved on a case-by-case basis, and could be expected around the periphery of the Edenton corporate limits, waterfront areas served by public sewer, and possibly in designated Rural Centers, upon extension of public sewer.

Scattered single-family detached residences and manufactured homes on individual lots are the predominant types of dwellings within Agricultural Residential classification, though some small, existing residential subdivisions and mobile home parks are also present.

Cluster development is encouraged in the Agricultural Residential Classification in areas proximate to the Town of Edenton, designated Rural Centers, in waterfront areas, and on lands served by public sewer. Public water service is available in the majority of the Agricultural Residential classified areas and is needed to support new residential subdivisions. Public sewer or an approved private wastewater treatment system will generally be required to support the higher end (two or more dwelling units per acre) of residential densities allowed within this classification.

Minimum lot sizes for land uses utilizing individual subsurface septic systems and/or individual water systems are determined by the local health department based upon soil types present at the site and generally range from 20,000 square feet to 30,000 square feet per lot. The Agricultural Residential classification, consistent with the underlying A-1 (Agriculture) zoning district, allows low intensity commercial uses typically associated with rural areas. Some low-intensity commercial uses can be accommodated in the Agricultural Residential classification. Public and Institutional uses such as churches, county parks, schools, golf courses and utilities are also appropriate for the Agricultural Residential classification. Agricultural Residential areas are expected to continue to accommodate a blend of agricultural and low-density residential uses into the future.

As the County's efforts at population growth and increasing housing diversity bear fruit in the coming years, the County may ultimately decide to split the current Agriculture Residential classification into a series of focused classifications with greater distinctions between allowable use types and development characters.

c. Low Density Residential

The Low Density Residential classification occupies about two percent of the County's land area, and is intended for low density residential uses, particularly properties with waterfront access and areas where public water service is readily available. The overall residential density within this classification is generally one to two dwelling units per acre. Single-family detached residences and manufactured homes on individual lots are the predominant types of dwellings within these areas. Supporting public and institutional land uses are also located within this land use classification, typically on lots of 25,000 square feet to 40,000 square feet in size.

The Low Density Residential classification corresponds to the R-40, R-25, and RMH (Residential Mobile Home) districts in the County's Zoning Ordinance. Lot sizes in these districts range from 25,000 to 40,000 square feet, though the area can accommodate higher residential densities of up to four units per acre when developed as a Traditional Neighborhood Development (TND). Development configured as a TND is approved on a case-by-case basis, and could be expected around the periphery of the Edenton corporate limits, waterfront areas served by public sewer, and possibly in designated Rural Centers, upon extension of public sewer. Clustered residential development is also encouraged in these same locations.

Public water service is widely available throughout the Low Density Residential classified areas and is required to support the higher end of the range of residential densities in this classification. Public sewer or an approved private wastewater treatment system will generally be required to support the higher (two or more dwelling units per acre) residential densities allowed within this classification. Minimum lot sizes for land uses utilizing

individual subsurface septic systems and/or individual water systems are determined by the local health department based upon soil types present at the site and generally range from 20,000 square feet to 30,000 square feet per lot. Low Density Residential areas are expected to retain their existing low density residential character, and future development is projected to remain at around one dwelling unit per acre.

d. Medium/High Density Residential

Around three percent of the County's land area is classified as Medium/High Density Residential, primarily in areas around Edenton, the airport, and Arrowhead Beach in the northwest portion of the County. The Medium/High Density Residential classification is intended to delineate lands where the predominant land use is higher density single-family residential and multifamily development. Supporting public and institutional land uses may also be located within this land use classification on lots of between 25,000 and 40,000 square feet in size. The single family detached residential density within this classification is generally greater than two dwelling units per acre. Medium density areas generally range from approximately three to seven dwelling units per acre; and high density generally ranges from approximately eight to 15 dwelling units per acre.

The Medium/High Density Residential classification is compatible with two Chowan County residential zoning districts: the R-15 Residential District and the R-5 Residential District, as well as all commercial zoning districts.

In addition to standard development configurations, the Medium/High Density Residential classification also accommodates Planned Unit Developments in areas designated with R-5 zoning. Planned Unit Developments allow for a mixture of residential and nonresidential land uses on the same lot or in close proximity to one another, promote a variety of residential building types, and require greater amounts of recreational and open space than typical development. Traditional Neighborhood Developments (TNDs) are another form of allowable development configuration in both the R-5 and R-15 zoning districts. Higher residential densities may be permitted on a case-by-case basis in TNDs—up to 15 dwelling units per acre in R-5 and nonresidential zoning districts; up to six units per acre in R-15 districts. Public water and sewer service or an approved private wastewater treated system is required to support the densities in this classification. In addition to water and sewer infrastructure, roadways with the capacity to accommodate higher traffic volumes are also necessary to support Medium/High Density Residential development.

County policy is to support the establishment of higher density single-family and multi-family development in areas where adequate public facilities exist or can be upgraded to support the higher development densities envisioned by the classification.

e. New Urban Waterfront

The New Urban Waterfront classification is applied to the approximate 465-acre area delineated in the amended 1999 Joint Land Use Plan (amendment dated August 9, 2004) as "New Urban Waterfront Area" and as authorized by Senate Bill 732 "Pilot New Urban Waterfront Area," effective July 17, 2004 (and shown on the Future Land Use Map). The classification is intended to accommodate future development adjacent to the shorelines of public trust waters on Albemarle Sound comprised of a mixture of residential, commercial, and recreational uses in a publicly accessible, pedestrian-friendly traditional neighborhood community with densities ranging anywhere from three to 15 units per acre.

Both the Planned Unit Development and Traditional Neighborhood Development configurations are appropriate in this classification. The major characteristics of development in New Urban Waterfront classification include the preservation of natural shorelines and other critical areas; public access to shorelines and public trust waters; interconnected streets; civic spaces, squares, and recreational space, and centrally operated water, sewer, and stormwater management systems. While development has yet to take place within the areas designated for New Urban Waterfront-style development, the County remains committed to the establishment of this kind of development in locations identified on the Future Land Use Map.

f. Rural Center

The Rural Center classification is intended to delineate lands that are the preferred location for new residential and mixed-use as well as locally-serving low-intensity nonresidential development in the County. There are four distinct areas identified as potential Rural Centers on the Future Land Use Map, located at the intersections of primary rural roadways. These areas already serve as commercial and institutional focal points for the communities surrounding them, and are home to a variety of rural commercial uses such as hardware stores, general stores, convenience stores, as well as institutional uses including places of worship, post offices, and child day care centers. Residential densities in the Rural Center classified areas not currently served by public sewer or an approved private wastewater system are limited to one to two dwelling units per acre. Minimum lot sizes for land uses utilizing individual subsurface septic systems and/or individual water systems are determined by the local health department based upon soil types present at the site and generally range from 20,000 square feet to 30,000 square feet per lot. However, recognizing that areas delineated as Rural Center are the preferred locations for higher-intensity development as the County grows, these guidelines will likely be adjusted as sewer and wastewater service are extended: residential densities in these areas could rise to match those in the Medium/High Density Residential designated areas, and nonresidential development could be established on lots at an average intensity of one to two establishments per acre. Both the Planned Unit Development and Traditional Neighborhood Development configurations are appropriate in the Rural Center classification, particularly if public sewer is extended to these areas.

The maximum height of any use in the Rural Center designated areas is 35 feet. There is no maximum lot coverage for residential or nonresidential uses in the Rural Center areas. Public water service is available in all of the Rural Center classified areas and is needed to support new residential subdivisions. Public sewer or an approved private wastewater treatment system will generally be required to support increased densities as these areas develop over time.

g. Industrial

The Industrial classification occupies less than one percent of the land area in the County, and is located primarily in areas east of the airport. The Industrial classification delineates lands that accommodate industrial and manufacturing establishments. In addition, more intense commercial and other industrial-supportive land uses are also appropriate in the Industrial classification. Public water and sewer service is needed to support the land uses characteristic of this classification. Without the availability of sewer in Chowan County, there will likely be little industrial development. On-site package treatment systems will be

the most likely option to offset this need. Roads with the capacity to accommodate higher traffic volumes are necessary to support the intensity of development expected within the Industrial Classification. Land uses with the Industrial Classification are generally compatible with the I-1, Light Industrial and I-2, Heavy Industrial classification. Generally, the intensity of industrial development is expected to average one industrial establishment per twenty acres. Lot coverage is not restricted and building heights are not limited.

The Industrial areas are expected to accommodate the majority of the future industrial growth in the County during the lifespan of this Plan and into the foreseeable future. Critical factors that will determine the development potential of land in the Industrial classification 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.

Table 2.2.D.1, Classification Summary, summarizes the Future Land Use Map classifications, their associated zoning district designations, and minimum lot area sizes from the Chowan County Zoning Ordinance.

Table 2.2.D.1: Chowan County Classification Summary		
Future Land Use Map Classification	Corresponding Zoning District(s) in Chowan County Zoning Code	Minimum Lot Area [1]
Conservation	Variable	N/A
Agricultural Residential	A-1 (Agriculture)	40,000 sf [2]
Low Density Residential	R-40 (Residential) R-25 (Residential) RMH-25 (Residential Mobile Home)	40,000 sf in R-40 25,000 sf in RM-25 & RMH-25 [2]
Medium/High Density Residential	R-15 (Residential) R-5 (Residential) [4]	15,000 sf in R-15 5,000 sf in R-5 [3]
New Urban Waterfront	R-15 (Residential) R-5 (Residential) [4] B-1 (General Commercial) B-2 (Highway Commercial)	15,000 sf in R-15 5,000 sf in R-5, B-1, & B-2 [3]
Rural Center	R-15 (Residential) R-5 (Residential) [4] B-3 (Neighborhood Commercial)	15,000 sf in R-15 5,000 sf in R-5 & B-3 [3]
Industrial	B-1 (General Business) B-2 (Highway Commercial) I-1 (Light Industrial) I-2 (Heavy Industrial)	5,000 in B-1 & B-1, otherwise none

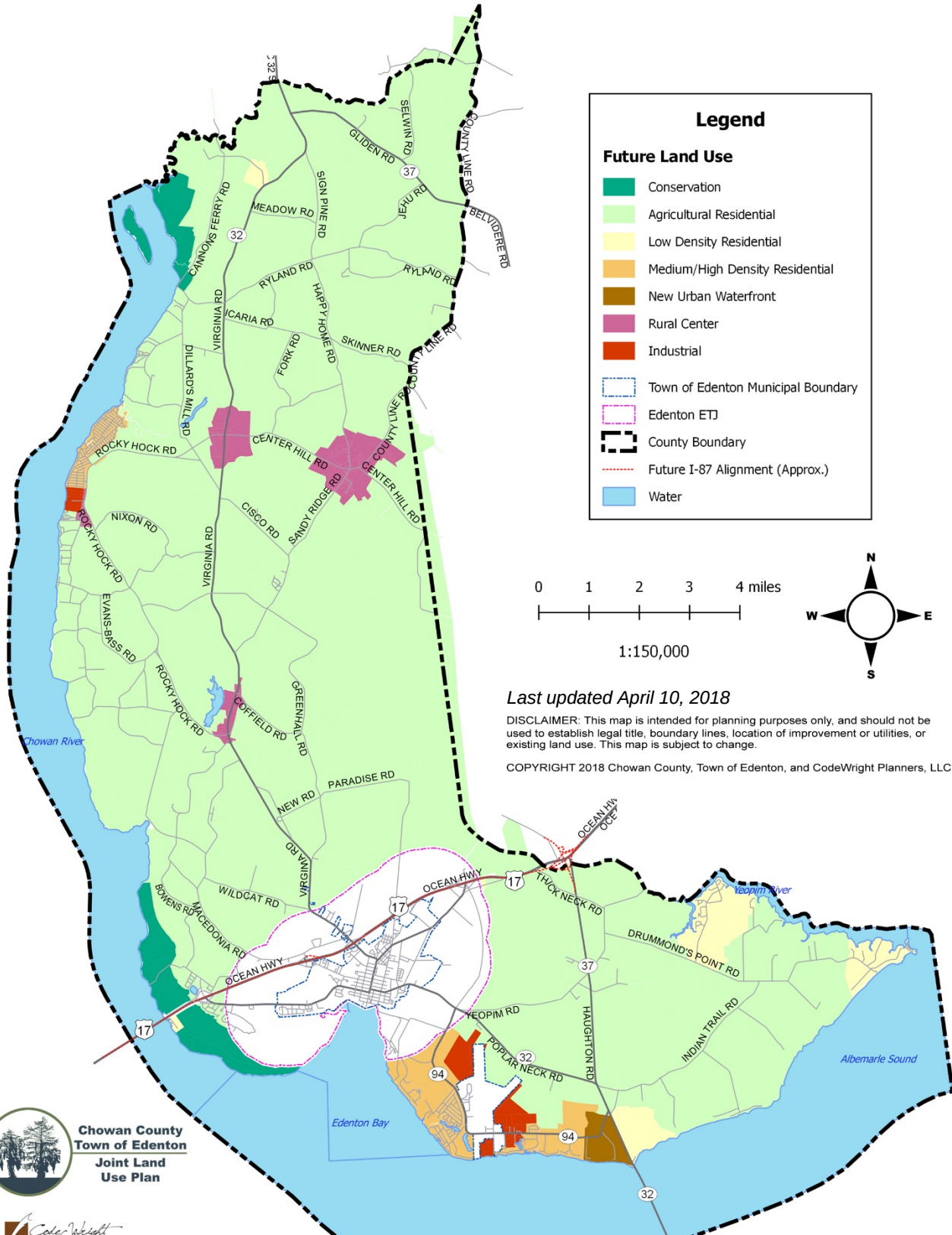
Table 2.2.D.1: Chowan County Classification Summary		
Future Land Use Map Classification	Corresponding Zoning District(s) in Chowan County Zoning Code	Minimum Lot Area [1]
NOTES: [1] The minimum lot area for a lot not served by public sewer or private centralized wastewater treatment is 25,000 square feet, and may be larger depending upon Health Department requirements. [2] Residential density may be increased up to 4 units per acre in an approved Traditional Neighborhood Development (TND). [3] Residential density may be increased up to 6 units per acre in R-15 and up to 15 units per acre in R-5, if in an approved Traditional Neighborhood Development (TND). [4] Planned Unit Developments allowed in this district.		

3. Future Land Use Map

The following page includes the Official Future Land Use Map for Chowan County. The map shows future land use classifications, major roadways, and the portions of the community within the Town's planning jurisdiction. Land use classifications generally follow parcel boundaries, and the map is part of the County's adopted land use policy guidance. A copy of the map on the next page is available at a larger scale in the offices of the Chowan County Building Inspection and Planning Division. The Official Future Land Use Map in this document may be updated from time to time following approval by the Board of County Commissioners and certification by the State.



Chowan County Future Land Use Map



E. Chowan County Implementation Plan

This section provides an action and implementation plan for the County's land use policies as described in Section C above. If goals are long-range statements of purpose and policies indicate the approach to achieving those goals, then actions are the individual steps the County intends to take toward enacting the policies and achieving the goals.

Table 2.2.E.1, Implementation Actions for Chowan County, lists the various action statements associated with each policy organized by goal or key concern. The table includes an alphanumeric symbol for each action and identifies opportunities for partnership between the County and other agencies, like the Town.

Table 2.2.E.1: Implementation Actions for Chowan County		
Action		Opportunities for Partnership
Key Concern: Encourage Population Growth		
A	The County and Town will partner to undertake a study of strategies other similar local governments are using to promote "three generation population growth" and will identify a range of further actions to take.	Town of Edenton; Colleges and Universities
B	The County and Town will implement the three-generation population growth action plan.	Town of Edenton
Key Concern: Promote Economic Development		
C	During an update to its development ordinance, the County will ensure that a broad range of commercial uses are encouraged to locate in Rural Centers areas and other commercially-zoned areas per the Future Land Use Map.	
D	The County will ensure that its development ordinance allows for the establishment of cottage industries, and include appropriate mitigation for adverse effects on neighboring properties.	
E	The County will work in partnership with the Town of Edenton, the Edenton-Chowan Partnership, the Chamber of Commerce, Destination Downtown Edenton, and other groups as necessary, to develop a plan to encourage entrepreneurship in and around the downtown area. Recommended actions as part of this strategy include market study, survey of local entrepreneurs to identify strengths and weaknesses of the entrepreneurship support system in the Town and County, and identification of funding for ongoing efforts.	Town of Edenton; Edenton-Chowan Partnership; County Chamber of Commerce; Destination Downtown Edenton
F	The County and Town will undertake a market study and industry trends survey to identify potential growth areas in the healthcare, agriculture value-added, and tourism industries in Edenton.	Town of Edenton; Colleges and Universities

Table 2.2.E.1: Implementation Actions for Chowan County		
Action		Opportunities for Partnership
G	The County, in partnership with the Town, will explore options for installation of, or attraction of, broadband internet service in the Town and strategic areas of the County.	Town of Edenton; Broadband providers
H	The County will continue to support and partner with local economic development groups in recruiting and retaining businesses and marketing the area's economic development efforts.	Edenton-Chowan Partnership; County Chamber of Commerce; Destination Downtown Edenton
Key Concern: Provide Recreation & Open Space		
I	During an update to its development ordinance, the County will ensure that the development standards and subdivision standards encourage provision of bicycle and walking trails, dedication of land for trails, or fees-in-lieu as the preferred option for open space provision.	
J	The County will conduct an inventory of current open space and recreation resources, along with an assessment of amenities provided and their condition.	Colleges and Universities
K	Based on the inventory and assessment of open space and recreation resources, the County will develop a Parks and Recreation Plan to guide future improvements and expansion of these resources.	Town of Edenton
L	The County will, as resources become available, implement the recommendations in the parks and recreation plan, with an emphasis on improving and updating existing facilities over building new facilities.	Town of Edenton
M	As funding becomes available, the County will add bicycle and pedestrian paths to County-owned properties, including easements and parkland.	
Key Concern: Foster Housing Choice		
N	The County will evaluate development standards and make revisions as necessary to ensure that a broad range of housing choices are allowed and encouraged in appropriate areas per the Future Land Use Map.	

Table 2.2.E.2, Action and Implementation Matrix for Chowan County, illustrates the timing of implementation of the various actions. For example, the table shows that across the four areas of concern, there are six (those in the second column from the left) that are planned for implementation in the short term, defined as fiscal years 2018-2019.



Table 2.2.E.2: Action & Implementation Matrix for Chowan County

Key Concern	Actions & Timing of Implementation			
	Short-term FY 2018 – FY2019	Mid-term FY 2020 – FY 2022	Long-term Post FY 2022	Ongoing
Encourage Population Growth	A	B		
Promote Economic Development	C D	E F	G	H
Provide Recreation & Open Space	I J	K		L M
Foster Housing Choice	N			

2.3. Town of Edenton Policy Guidance

A. Town of Edenton Vision Statement

In 2017, the Town of Edenton adopted an updated vision statement that includes aspirations related to the full range of issues facing the Town over the next ten years. The statements that are related to this Joint Land Use Plan are listed here. It should be noted that action items in this Plan span a five-year implementation time, while the Town's vision statement explicitly states a horizon of ten years. However, the aspirational statements in the vision are suited for land use planning purposes within the shorter time frame of this plan as well. The Town's full 2017 Vision Statement is included in Section 4, Appendix, of this document.

Guiding Principle:

"We see Edenton as a Town where history, hospitality and natural beauty come together to form a community that is proud of its past and excited about its future. The Mayor and Town Council also recognize Edenton's future prosperity depends on protecting these assets through encouraging residents and visitors to become integral participants in Edenton's unique community."

The Mayor and Town Council's vision for Edenton over the next ten years is:

- *To invigorate and enhance our downtown business district through aggressive support, supplemented by quality shopping centers and a diverse industrial mix in outlying areas that will translate into job opportunities and expanded tax base.*
- *To develop and enhance Edenton's waterfront, by expanding outdoor activities supplemented by a variety of recreational and cultural activities for residents and visitors.*
- *To have a sound, stable infrastructure that meets the needs of citizens, business and industry including well maintained streets, clean and reliable supply of water, clean and reliable wastewater treatment, environmentally sensitive storm water disposal and a reliable electrical distribution system.*
- *To be a welcoming and friendly home for young families and retirees by understanding and preserving the honor of Edenton being named one of America's prettiest Towns by Forbes.com. The Town will grow our population as sustainable opportunities present themselves, and maintain its strong sense of small town values and citizens' involvement. The Town will preserve and promote its historic resources and unique downtown and focus on community attractiveness. The Town will strive to support access to affordable, high quality medical and health care.*
- *To be known as a desirable tourist destination and perfect home for retirement. The Town will support this through enhancing its small town charm and serenity, embracing and sharing its historic past and landmark buildings, and its enticing and beautiful waterfront.*

B. Town of Edenton Land Use Goals

Goals are statements of purpose which identify individual components of the community's vision. They are still relatively broad and describe an intended future state, but focus on a particular area or issue. Based on the results from the Citizen Visioning Survey and the follow-up joint work session with the Chowan County Board of Commissioners and the Edenton Town Council on April 19, 2017 (See Section 1.3.B, Public Engagement, for additional detail), four key concerns were identified:

1. Encourage Population Growth;
2. Promote Economic Development;
3. Provide Recreation and Open Space; and
4. Foster Housing Choice.

Though the key concerns are generally shared between the Town and the County, each jurisdiction has a unique role to play in addressing them, and so each has its own set of policies and actions. The goals, policies, and actions specific to the Town of Edenton are contained within this section. Users of this Plan should also reference Section 2.4, Shared Policy Guidance.

1. Encourage Population Growth

The Town and the County both recognize that population growth is a necessary component of attracting increased commercial uses such as a second grocery store and additional restaurants. Increasing population is also important to balancing tax revenues and allowing the Town to provide the increased services and amenities desired by residents, as well as to meet ongoing capital costs.

The type of population growth, and the development that flows from any such growth, is an important consideration. The goal for both jurisdictions is “three generations of growth” – attracting a blend of younger families, working-aged people, and retirees to encourage a balanced pattern of high-quality development.

Meeting this goal requires that the Town continue pursuing the efforts at attracting more residents and visitors that are already underway (see Section 3.2 of this Plan) as well as additional research and planning for increased visitation and population growth. Part of that effort should strive to ensure that the generational preferences and needs of each group be explicitly addressed. For retirees, locational decisions may be based on availability of healthcare, cost of land or housing, and ability to find and afford housing suited to the physical needs of aging populations (single-story units, accessibility, location close to healthcare and amenities). Working-age adults tend to make locational decisions based on availability of jobs or the ability to telecommute, broad range of amenities, school quality, and quality and value of the housing available for purchase. Millennials and young families make locational decisions based on many of these same factors, particularly housing availability in walkable neighborhoods, and the ability to live in interesting places with unique identities that offer all-around high quality of life.

The combination of these groups' needs and locational decision-making factors is broad and complex, and attracting new residents from all three generations will require research and strategy beyond the scope of this Land Use Plan. For these reasons, this Plan suggests, as a next step,

the further exploration of this issue and development of a comprehensive strategy to achieve this goal.

The following statement summarizes the Town's goals with respect to population growth.

GOAL E-1: Develop and implement strategies to promote “three generations of population growth” in the Town that builds on existing resources and efforts to attract a retiree population and expands these efforts to include attracting new millennial and mid-career professional residents.

2. Promote Economic Development

A majority of Citizen Survey respondents indicated that the top priority for land use in the future should be increased commercial uses – places to shop for basic goods and services, including a second grocery store, a wider range of restaurants, and specialty stores were all mentioned as desirable uses that should be encouraged. The vast majority of these kinds of development is expected to take place within the Town.

The Town values the character of its downtown core as a place that serves both resident and visitor needs through diverse uses including a hardware store, furniture store, shoe store, coffee shops, selection of restaurants, and boutique shopping. The Town desires additional commercial uses, and would like to see the eclectic mix of downtown retail and services be preserved and grow to include an even greater range of shopping and dining opportunities. It is likely that larger uses such as a grocery store or national chain pharmacy would locate on the periphery of downtown due to land acquisition challenges in the built-out areas around downtown.

A second economic development concern is a need to create more employment opportunities in the Town. The Edenton-Chowan Partnership is currently having success with its focus on retention of existing businesses and recruitment of related uses to the major industries already located in the area. In addition to this industrial-focused strategy, there is a need to expand the scope of job-creation activities.

Healthcare is a growing industry sector both nationally and in Chowan County, and already makes up the second largest industry by employment countywide. As the Town continues to market itself as a retirement destination, healthcare uses will become more and more important to the functioning of that economic development strategy. An integral part of the Town's job creation strategy is to build on its existing healthcare sector resources – most notably the Vidant Chowan Hospital and the Edenton Office and Medical Park– to nurture and grow this critically important industry.

Along these lines, there is a need for more employment in the construction and repair trades as those currently employed in these trades begin to age out and retire. Provision of technical and vocational training is a growth area that could be explored by the Town.

There is also an opportunity to expand the tourism industry based on the Town's historic feel, natural beauty, and water access. Eco-tourism or adventure tourism, such as excursions, maritime education, or other water activities, are growth areas for tourism on the North Carolina coast generally, and would be well-suited to the Edenton area.

Finally, the Town's economic development strategy should account for and accommodate the current trends in employment and population, including the growing number of Americans who work from home either by telecommuting or as cottage industry entrepreneurs who run a wide range of businesses out of their homes.

The following four goal statements summarize the Town's goals with respect to economic development.

- GOAL E-2:** Promote the establishment of a broad range of new commercial uses in the Town, both in the downtown core and on the periphery near the Highway 17 (new Interstate 87) interchanges, with particular emphasis on grocery stores and restaurants.
- GOAL E-3:** Develop a strategy for expanding entrepreneurship opportunities in and around downtown Edenton.
- GOAL E-4:** Develop a strategy for expanding job opportunities in the healthcare, tourism, and vocational training sectors.
- GOAL E-5:** Ensure that the Town's development ordinance is conducive to emerging economic trends, such as telecommuting and cottage industry entrepreneurship.

3. Provide Recreation and Open Space

One of the frequent responses in the Citizen Visioning Survey was that the Town needs more and better recreation opportunities. The most commonly mentioned types of recreational facilities were walking and biking trails, updated playing fields, swimming pools, and a multi-sport complex. At this time, neither the Town nor the County has funding available for construction of a new multi-sport complex or any major new facilities. Rather, the Town intends to focus its efforts in this area on improving or repurposing the recreation resources that already exist, including existing playgrounds and ball fields. In keeping with this focus, the Town is currently underway with renovation to Colonial Park at the waterfront, including installation of a new bulkhead and updating the playground using universal design standards to ensure that the park is accessible to people of all physical ability levels. This renovation is expected to be complete in 2018. There is also an interest in exploring how to creatively meet some of residents' desires, such as using easements and other Town-owned lands to provide bicycle and walking paths.

The following two goal statements summarize the Town's goals with respect to recreation and open space.

- GOAL E-6:** Increase the mileage of bicycle and walking trails in the Town, particularly in waterfront areas.
- GOAL E-7:** Improve existing recreational facilities to offer a broader range of high quality recreation amenities in the Town in a cost-effective manner.

4. Foster Housing Choice

Increasing the range of housing choices for current and prospective residents is a goal for both the County and the Town. The Town's main concern is rehabilitating its existing housing stock and increasing home values along with homeownership rates. Several neighborhood-scale efforts are already underway toward this goal, such as the North Oakum Street and Mosely Street Redevelopment Plans, undertaken in partnership with Preservation North Carolina and Habitat for Humanity. An additional area for similar redevelopment efforts has been identified in the North Broad Street extension area. There is a desire to continue and broaden these efforts through Town-wide policies that allow conversion of large older homes into two-, three-, or four-family units that are more affordable, as well as the promotion of live-work units. In addition to these infill housing types, the Town is open to the development of some smaller pocket neighborhoods or other innovative housing types that meet today's market demands for housing other than traditional, large-lot single-family homes, which could locate on the periphery of downtown.

The following two statements summarize the Town's goals with respect to fostering housing choice.

- GOAL E-8:** Establish local development policies that promote rehabilitation of the Town's existing housing stock.
- GOAL E-9:** Establish local development policies, programs, and resources to promote increased homeownership in the Town.

C. Town of Edenton Land Use Policies

While goals are broad statements of purpose and describe an intended future state, policies are more specific statements of intent describing how a goal can be achieved. Policies add specificity and begin to define the approach to achieve the community's goals. This section contains policies that the Town of Edenton adopts to address the nine goals outlined in the previous section.

1. Encourage Population Growth

- POLICY E-1:** The Town will encourage the location of businesses, residential development, and service providers that serve retirees while also creating jobs for younger residents (including medical offices, health care specialists, upscale dining, and leisure activities).
- POLICY E-2:** The Town of Edenton will continue to promote Edenton as a prime retirement community, including through continued participation in the North Carolina Department of Commerce Certified Retirement Community Program.

2. Promote Economic Development

- POLICY E-3:** The Town of Edenton encourages new commercial uses to locate in any commercial area within the Town. In particular, the development of grocery stores and restaurants is encouraged.
- POLICY E-4:** The Town encourages entrepreneurship and the opening of new locally-owned businesses, particularly retail establishments and restaurants.

- POLICY E-5:** The Town promotes the expansion of the healthcare sector as a means to create jobs and better serve residents of all ages.
- POLICY E-6:** The Town is supportive of cottage industry entrepreneurship, and will put into place standards that require cottage industries that may have adverse effects, such as noise or traffic, on neighboring properties to mitigate these effects.
- POLICY E-7:** The Town encourages telecommuters to locate in the Town of Edenton.
- POLICY E-8:** The Town is supportive of the location of broadband internet and telecommunications service providers in the Town of Edenton.

3. Provide Recreation and Open Space

- POLICY E-9:** The Town promotes construction of bicycle and walking trails, with an emphasis on trails that are along waterfronts, connect to waterfront areas, or connect residential areas to commercial areas.
- POLICY E-10:** The Town will encourage residential subdivision developers to provide bicycle and walking trails, fees-in-lieu, or dedication of land, to fulfill open space and recreation requirements.
- POLICY E-11:** As funding and land resources allow, the Town will explore opportunities to install bicycle and walking trails within Town-owned easements, on Town-owned properties, and in existing parks.
- POLICY E-12:** It is the policy of the Town to improve and update existing recreation amenities, including parks, playing fields, trails, and playgrounds, as funding and other resources become available.

4. Foster Housing Choice

- POLICY E-13:** The Town of Edenton encourages the rehabilitation of its existing housing stock, particularly into units for sale.
- POLICY E-14:** The Town encourages the development of housing types that accommodate retirees, young professionals, and millennials. This includes attached single-family, duplex, triplex, and quadraplex dwellings, conversion of larger homes into multi-unit dwellings for sale, live-work units, and innovative configurations such as pocket neighborhoods and patio homes.

Actions are the steps taken by a community to implement its policies. Section E, Town of Edenton Implementation Plan, describes the actions proposed to implement the policies in this section.

D. Town of Edenton Future Land Use

1. Future Land Use Map Guiding Principles

The Future Land Use Map depicts generalized patterns of projected land use that support the goals and policies of a community. It is the graphical depiction of the desired future land use arrangement. 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 Town of Edenton and Chowan County Future Land Use Maps work in tandem to:

- Guide the most intensive development to areas with supporting infrastructure;
- Accommodate a variety of residential densities;
- Promote commercial development in Edenton and selected areas of the County;
- Encourage downtown mixed-use development;
- Promote industrial growth in the airport area;
- Discourage growth in areas with natural constraints or low development suitability; and
- Conserve fragile environments.

2. Future Land Use Categories

The Town of Edenton Future Land Use Map is comprised of seven land use categories:

- a. Conservation;
- b. Low Density Residential;
- c. Medium/High Density Residential;
- d. Public, Office, & Institutional;
- e. Commercial;
- f. Downtown Mixed Use; and
- g. Industrial.

This section provides a brief description of each land use category, including typical use types, compatible zoning districts, density and intensity of development, restrictions on development, and infrastructure and impact considerations.

Updates or revisions to the Future Land Use Map require local adoption and State certification of a Land Use Plan Amendment.

A copy of the Town's most recently updated Future Land Use Map is included in this document, but readers are encouraged to visit the Town's offices to see a larger scale version of the map.

a. Conservation

The Conservation classification occupies almost 14 percent of the land area in the Town's planning jurisdiction, and delineates areas where traditional land uses are not desirable or expected to develop. Land development may, however, include public building and facilities necessary to support existing land uses within the areas classified as Conservation.

The Conservation classification includes a large swath of land abutting Edenton Bay, lands along Pembroke Creek, coastal wetlands, estuarine waters, estuarine shoreline, public trust areas, and federally-designated "404" wetlands. Some of these areas are too small to see on the Future Land Use Map and the precise locations of these areas may only be determined through field investigation. Also included are the future greenways corridors that are located throughout the Town along creeks and rivers, as depicted in the 2003 Edenton/Chowan Greenway and Open Space Plan and reproduced in Appendix 10 of this Plan.

Commercial and industrial uses that are water dependent and which cannot function elsewhere or are supportive of commercial fishing are permissible uses in Conservation-designated areas.

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.

b. Low Density Residential

A little over half (51 percent) of the Town's planning jurisdiction is classified as Low Density Residential in areas primarily to the north and east of downtown. The Low Density Residential classification delineates lands where the predominant land use is low density single-family detached dwellings, along with supporting public and institutional land uses. The residential density within this classification ranges from one dwelling unit on five acres up to three dwelling units per acre. Generally speaking, lands proximate to the US 17 alignment on the eastern and western ends of Town are appropriate for the highest residential densities, and areas around the periphery of the Town's planning jurisdiction boundary are appropriate for the lowest densities. The Town of Edenton zoning districts that are compatible with the Low Density Residential classification are the RA, R-40, and R-20 districts. Cluster development is allowed in the R-20 district.

The Town's policy for these areas is for continued low density residential and supporting public and institutional uses where infrastructure is sufficient. Some Low Density Residential areas that are located on the immediate fringe of the intensively-developed Town core may evolve into medium density (three to seven dwellings per acre) or high density (eight to 12 dwellings per acre) areas over time, particularly where public utilities and other infrastructure will be available to support increases in residential density.

c. Medium/High Density Residential

The Medium/High Density Residential classification occupies about 20 percent of the Town's planning jurisdiction and delineates lands where the predominant land use is higher density single-family residential and multifamily development as well as supporting public and institutional land uses. Some manufactured home parks are also located with this classification. Medium density generally ranges from approximately three to seven dwelling

units per acre; high density generally ranges from approximately eight to 12 dwelling units per acre. The Town zoning districts that are compatible with the Medium/High Density Residential classification are the R-14 (14,000 square foot minimum lot size), R-10 (10,000 square foot minimum lot size), and the R-5 (5,000 square foot minimum lot size). These districts allow a density of approximately three to eight units per acre for single-family dwellings and 9-12 units per acre for multifamily dwellings. Lot coverage is restricted to 60 percent and building heights are limited to 35 feet.

Cluster development, townhouses, and other innovative housing types like pocket neighborhoods, that extend homeownership opportunities are encouraged in areas within the Medium/High Density Residential Classification that are zoned R-14, R-10, and R-5.

Public water and sewer service or an approved private wastewater treatment system is 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.

d. Public, Office, & Institutional

The Public, Office, & Institutional Classification occupies around one percent of the Town's planning jurisdiction, and delineates larger land areas that are used for governmental, public, and educational purposes, as well as medical offices and institutions that support the hospital. Land uses within this classification include government buildings and service facilities, public recreational facilities, public and private educational facilities, medical facilities and offices, and large private institutional uses.

Generally, public water service is needed to support the land uses found in this classification. Public sewer or an approved private wastewater treatment system is also needed to support the most intensive public and institutional uses. Streets with the capacity to accommodate higher traffic volumes are also necessary to support the intensity of development expected within the Public & Institutional Classification. The Public & Institutional classification is compatible with the MA (Medical Arts) and OS (Office & Services) zoning districts. The OS and MA zoning districts do not require a minimum lot size except for residential uses. Generally, the intensity of development is expected to average one public, office, or institutional use per five acres of land area.

e. Commercial

Areas classified as Commercial occupy just over three percent of the Town's planning jurisdiction, and are concentrated along Virginia Road (NC 32), US 17, and North Broad Street. These areas are anticipated to accommodate some of the more intensive land uses found in the Town's planning jurisdiction. Commercial areas may be used 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.

Commercial designated areas are compatible with the SC (Shopping Center), CH (Highway Commercial), and CN (Neighborhood Commercial) zoning districts. Densities of uses in this classification will vary depending on the underlying zoning district. The minimum lot size is five acres in the SC district and 30,000 square feet in the HC district. There is no minimum lot size in the CN district. Lot coverage is generally not restricted except that

shopping centers and superstores (retail uses with gross floor areas of greater than 25,000 square feet) cannot exceed a maximum floor area ratio of 0.30. Lot coverage is, however, limited to 50 percent in areas located within a Highway Corridor Overlay district. Building heights are limited to 50 feet. Generally, the intensity of commercial development is expected to average one to two commercial establishments per acre of land area.

A key concern with higher-intensity commercial development is compatibility with neighboring land uses, particularly residential uses. Noise, light, traffic, and aesthetic concerns should be considered and mitigated when locating commercial uses in close proximity to residential areas.

f. Downtown Mixed Use

The Downtown Mixed Use Classification occupies about 0.3 percent of the Town's planning jurisdiction and is located with Edenton's central business district and the adjacent waterfront. The classification is intended to delineate lands that can accommodate a variety of retail, office, business services, and personal services. Areas classified as Downtown Mixed Use may also include medium or high density residential uses and public and institutional land uses, particularly governmental buildings and facilities. The Downtown Mixed Use Classification specifically includes waterfront tourist-oriented land uses.

This classification is compatible with the CD, Downtown Commercial zoning district. There is no minimum lot size required in the CD district, except for permissible residential uses. For permissible nonresidential uses, lot coverage is restricted to 60 percent and building heights are limited to 50 feet. Residential densities in the Downtown Mixed Use area are approximately three to eight units per acre for single-family dwellings and 9-12 units per acre for multifamily dwellings.

Public water and sewer service is needed to support the land uses typical of this classification. Streets with the capacity to accommodate higher traffic volumes are also necessary to support the intensive land uses found in this classification. Generally, the intensity of development is expected to average four commercial establishments per acre of land area.

The Town's goals and policies support the use of land in Downtown Mixed Use 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. Redevelopment of the downtown waterfront area for tourist-oriented mixed uses consisting of retail shops, entertainment, restaurants, boating services, and overnight lodging is promoted by the town's goals and policies. The majority of the area classified as Downtown Mixed Use is already developed. Any new development or infill will be at high densities.

g. Industrial

The Industrial Classification occupies around ten percent of the Town's planning jurisdiction and is located primarily north of downtown and in the areas around the airport. The classification identifies land intended for industrial and manufacturing establishments. More intensive commercial uses as well as service and businesses which support industrial land uses are also appropriate in the Industrial Classification. Public water and sewer service is

needed to support the land uses typical 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 Classification is compatible with the IW (Industrial Warehouse) zoning district. The IW district does not have a minimum lot size standard, therefore density will vary. Generally, the intensity of industrial development is expected to average one industrial use per three acres. Lot coverage is restricted to 60 percent and building heights are limited to 50 feet.

Table 2.3.D.1, Classification Summary, summarizes the Future Land Use Map classifications, their associated zoning district designations, and minimum lot area sizes from the Town of Edenton Unified Development Ordinance.

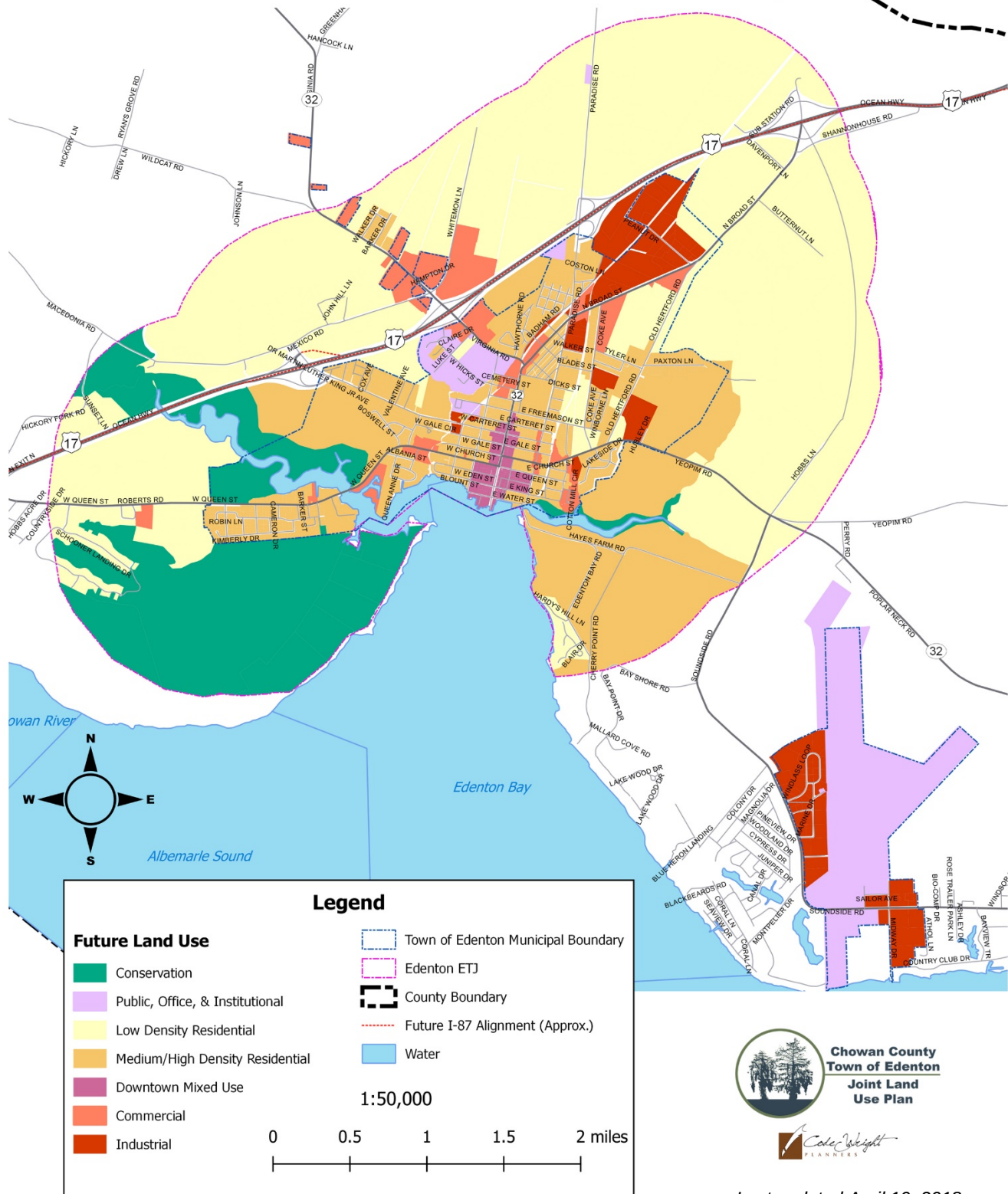
Table 2.3.D.1: Town of Edenton Classification Summary		
Future Land Use Map Classification	Corresponding Zoning District(s) in	Minimum Lot Area [1]
Conservation	Variable	N/A
Low Density Residential	RA (Residential Agricultural) R-40 (Residential) R-20 (Residential)	5 acres in RA 40,000 sf in R-40 20,000 sf in R-20
Medium/High Density Residential	R-14 (Residential) R-10 (Residential) R-5 (Residential)	14,000 sf in R-14 10,000 sf in R-10 5,000 sf in R-5 [2]
Public, Office, & Institutional	MA (Medical Arts) OS (Office & Services)	20,000 for residential in MA, otherwise none
Commercial	SC (Shopping Center) CH (Highway Commercial) CN (Neighborhood Commercial)	5 acres in SC 30,000 in CH None in CN
Downtown Mixed Use	CD (Downtown Commercial)	None
Industrial	IW (Industrial Warehouse)	None; though developments typically occupy at least 3 acres
NOTES: [1] The minimum lot area for a lot not served by public sewer or private centralized wastewater treatment is 25,000 square feet, and may be larger depending upon Health Department requirements. [2] Cluster development is allowed.		

3. Future Land Use Map

The following page includes the Official Future Land Use Map for the Town of Edenton. The map shows future land use classifications, major roadways, and some of the lands located outside the Town's planning jurisdiction. Land use classifications generally follow parcel boundaries, and the map is part of the Town's adopted land use policy guidance. A copy of the map on the next page is available at a larger scale in the offices of the Town of Edenton Planning Department. The Official Future Land Use Map in this document may be updated from time to time following approval by the Town Council and certification by the State.



Town of Edenton Future Land Use Map



DISCLAIMER: This map is intended for planning purposes only, and should not be used to establish legal title, boundary lines, location of improvement or utilities, or existing land use. This map is subject to change.

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Last updated April 10, 2018

E. Town of Edenton Implementation Plan

This section provides an action and implementation plan for the Town's land use policies as described in Section C above. If goals are long-range statements of purpose and policies indicate the approach to achieving those goals, then actions are the individual steps the Town intends to take toward enacting the policies and achieving the goals.

Table 2.3.E.1, Implementation Actions for the Town of Edenton, lists the various action statements associated with each policy organized by goal or key concern. The table includes an alphanumeric symbol for each action and identifies opportunities for partnership between the Town and other agencies, like the County.

Table 2.3.E.1: Implementation Actions for the Town of Edenton		
Action		Opportunities for Partnership
Key Concern: Encourage Population Growth		
A	The County and Town will partner to undertake a study of strategies other similar local governments are using to promote "three generation population growth" and will identify a range of further actions to take.	Chowan County; Colleges and Universities
B	The Town will implement the three-generation population growth action plan.	Chowan County
C	The Town of Edenton will continue to maintain its state certification as a Retirement Community.	NC Department of Commerce
Key Concern: Promote Economic Development		
D	The Town will ensure that its development ordinance allows for the establishment of cottage industries, and include appropriate mitigation for adverse effects on neighboring properties.	
E	The Town will work with in partnership with the Edenton-Chowan Partnership, the Chamber of Commerce, Destination Downtown Edenton, and other groups as necessary, to develop a plan to encourage entrepreneurship in and around the downtown area. Recommended actions as part of this strategy include market study and survey of local entrepreneurs to identify strengths and weaknesses of the entrepreneurship support system in the Town and County, and identification of funding for ongoing efforts	Chowan County; Edenton-Chowan Partnership; County Chamber of Commerce; Destination Downtown Edenton
F	The Town and County will undertake a market study and industry trends survey to identify potential growth areas in the healthcare industry in Edenton.	Chowan County; Edenton-Chowan Partnership; Colleges and Universities
G	The Town, in partnership with the County, will explore options for installation of, or attraction of, broadband internet service in the Town and strategic areas of the County.	Chowan County; Broadband providers

Table 2.3.E.1: Implementation Actions for the Town of Edenton	
Action	Opportunities for Partnership
H The Town will continue to support and partner with local economic development groups in recruiting and retaining businesses and marketing the area's economic development efforts.	Edenton-Chowan Partnership; County Chamber of Commerce; Destination Downtown Edenton
Key Concern: Provide Recreation & Open Space	
I As funding becomes available, the Town will add bicycle and pedestrian paths to Town-owned properties, including easements and parkland.	
Key Concern: Foster Housing Choice	
J The Town will evaluate development standards and make revisions as necessary to ensure that a broad range of housing choices are allowed and encouraged in appropriate areas per the Future Land Use Map.	
K The Town of Edenton will continue its implementation of the Oakum Street and Mosely Street Redevelopment Plans.	

Table 2.3.E.2, Action and Implementation Matrix for the Town of Edenton, illustrates the timing of implementation of the various actions, which are indicated by white letters in black circles. For example, the table shows that across the four key concerns, there are three (those in the second column from the left) that are planned for implementation in the short term, defined as fiscal years 2018-2019.

Table 2.3.E.2: Action & Implementation Matrix for the Town of Edenton				
Key Concern	Actions & Timing of Implementation			
	Short-term FY 2018 – FY2019	Mid-term FY 2020 – FY 2022	Long-term Post FY 2022	Ongoing
Encourage Population Growth	A	B		C
Promote Economic Development	D	E F	G	H
Provide Recreation & Open Space				I
Foster Housing Choice	J			K

2.4. Shared Policy Guidance

This shared policy guidance section addresses the community concerns, goals, policies, and action steps related to the Coastal Resource Commission's five management topics for CAMA communities, which include:

1. Public Access to Public Trust Water;
2. Land Use Compatibility;
3. Infrastructure Carrying Capacity;
4. Natural Hazard Areas; and
5. Water Quality.

As in the County- and Town-specific policy sections, this section also contains a set of key concerns and goals, corresponding policies that the County and Town adopt to achieve the goals, and an implementation plan with specific actions and their timing.

Though some of the policies and actions in this subsection are jurisdiction-specific, the concerns and aspirations in this section are shared between Chowan County and the Town of Edenton. Each jurisdiction should utilize this section along with the corresponding jurisdiction-specific section when making land use decisions and implementing this Plan.

For ease of reference, the goals and policies in this section each contain a prefix that corresponds to the CRC management topic to which it refers. Table 2.4 below summarizes the policy prefix codes for each management topic.

Table 2.4: CRC Management Topic Numbering Scheme	
CRC Management Topic	Policy Prefix Code
Public Access to Public Trust Waters	PA
Land Use Compatibility	LU
Infrastructure Carrying Capacity	IC
Natural Hazard Areas	NH
Water Quality	WQ

A. CRC Management Topics Goals

1. Public Access to Public Trust Waters

Waterfront lands along the Chowan River and Albemarle Sound will continue to experience residential development. Properties with water access are a limited resource and the availability of these properties will diminish over time. It is imperative that the County and the Town plan for future public and private access to public waters.

Access to public waters means different things to different people, and the County and Town must consider the various ways of interacting with the waterfront when planning for the future. In the Citizen Visioning Survey conducted as part of this planning process, respondents identified a need for additional boat ramps and kayak put-ins, but also highlighted their desires for more ways to get to the waterfront via bicycle or walking paths and opportunities to engage in recreation along, but not necessarily in, the water. This Plan identifies a need for additional exploration (in the form of a follow-up study) into what the water access resources in the County and Town currently are and what types of access are most needed in the various areas of the County and Town. The North Carolina Division of Coastal Management identifies nine water access areas within Chowan County (five within the County's planning jurisdiction and four within the Town's planning jurisdiction). The follow-up study should inventory, assess existing conditions, map, and plan for the targeted expansion of the following resources:

- Boat ramps
- Kayak or canoe put-ins
- Swimming areas
- Marinas
- Fishing piers, docks, and platforms
- Parkland along waterways
- Trails along waterways
- Trails leading to waterways from residential or commercial areas
- Parking for vehicles, bicycles, and boat trailers at water access sites
- Accessibility amenities at water access sites
- Restroom facilities at water access sites

Based on the updated inventory, the County and Town can begin to plan for expanded water access facilities in locations currently not served or underserved. It should be noted that this goal exists alongside the Provide Recreation & Open Space key concern in Section 2.2.B, Chowan County Land Use Goals, and Section 2.3.B, Town of Edenton Land Use Goals. Where possible, new or improved water access sites should build on existing County or Town resources including existing parkland and Town- and County-owned properties, and trail connections to other areas should be identified.

The following three goal statements summarize the Town and County's shared goals with respect to public access to public trust waters.

GOAL PA-1: Provide for public water access to all segments of the community, including persons with disabilities.

GOAL PA-2: Development of comprehensive policies that provide access opportunities for the public along the shoreline within the Town and County.

GOAL PA-3: Prepare a public water access assessment and plan.

2. Land Use Compatibility

Unplanned and haphazard development can threaten the basic fabric of a community. This type of development undermines the ability of the natural environment to support people's activities. Urban sprawl indiscriminately consumes productive farmland and open space and results in a burden on public services and facilities. Chowan County and the Town of Edenton must cooperate and coordinate their efforts to avoid urban sprawl and guide land development to the most appropriate locations, provide efficient public services, avoid duplication of services, and promote desirable land development in harmony with the character of the community.

To facilitate orderly and compatible growth and development, the County adopted its first zoning ordinance in 2006, and is planning to update and refine its zoning ordinance in keeping with the policies, goals, and actions in this Plan. One of the main changes that the County anticipates making is introducing a higher degree of land use planning for compatibility. Currently, the vast majority of County lands are zoned A-1, Agricultural, a designation that allows for an overly-broad range of agriculture, low-density residential, public and institutional uses, and low intensity commercial uses. The County is now seeking to increase the quality of land use planning in this large area by introducing the concept of rural centers – nonresidential nodes at major intersections where commercial, institutional, and other uses have already tended to cluster – that will now be the preferred location for all nonresidential, non-agricultural uses. This change is intended to preserve the rural character of the County by preventing haphazard “piano-key” development along major roads and by creating hamlet-like community centers that serve residents’ needs in a more central and comprehensive way than is currently occurring.

The following four goal statements summarize the Town and County’s shared goals with respect to land use compatibility.

- GOAL LU-4:** Establish local development policies that balance protection of natural resources and fragile areas with economic development.
- GOAL LU-5:** Develop policies that provide clear direction to assist local decision making and consistency findings for zoning, divisions of land, and public and private projects.
- GOAL LU-6:** Protect rural character and preserve farmland using a higher degree of land use planning in the County to direct nonresidential, non-agriculture development to rural center areas.
- GOAL LU-7:** Develop policies that provide clear direction on the appropriate location of renewable energy facilities.

3. Infrastructure Carrying Capacity

a. Adequate Levels of Service

The Town and County provide public services and facilities that serve 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

Two separate water supply systems operate within Chowan County. These systems include the Town of Edenton municipal water system and the Chowan County water system. The Town has two water treatment plants for which four deep wells which draw water from the Castle Hayne Aquifer. The Town water system can accommodate up to 1.258 MGD. The County water system maintains nine wells and approximately 300 miles of water distribution lines. The County's Vahalla water treatment plant has a capacity of 2.31 MGD. For additional information on the County and Town water systems, see Section 3.3.C.1, Water Supply Systems.

Wastewater treatment systems within the area covered by this Plan include the Town of Edenton municipal wastewater system. Chowan County currently does not operate a wastewater system. In response to projected residential growth in the Cape Colony and Country Club areas that was expected to outstrip the septic capacity of the land in that area, Chowan County prepared a feasibility study in the mid-2000s for providing sewer service to the southeastern portion of the County. However, growth has been delayed indefinitely and provision of sewer services is no longer anticipated. Due to Chowan County's lack of a county-wide wastewater system, any high-density residential or major commercial growth will be confined to areas within and around the Town of Edenton where sewer is available, or developers will need to provide package plants on-site. In the meantime, Chowan County will continue to rely on private waste-water systems and septic tanks. While there have been isolated instances of homeowners experiencing trouble with septic tanks, nonpoint source pollution is not a concern for the County or Town as a whole.

The following four goal statements summarize the Town and County's shared goals with respect to infrastructure carrying capacity.

- GOAL IC-8:** Establish service area boundaries for existing and future infrastructure.
- GOAL IC-9:** Develop infrastructure service policies and criteria consistent with future land use maps and the land use goals and policies contained in this Plan.
- GOAL IC-10:** Correlate future land use map categories with existing and planned infrastructure such as water, sewer, and transportation facilities.
- GOAL IC-11:** Ensure 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.

4. Natural Hazard Areas

Chowan 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. Chowan County and the Town of Edenton adopted the Albemarle Regional Hazard Mitigation Plan in June 2015. It is anticipated that property along the waterfront will continue to be a primary site of growth in the Town and County. Increased development within flood-prone areas will inevitably put more residents in danger during storm events. It will also make efforts to evacuate such areas more difficult.

The following three goal statements summarize the Town and County's shared goals with respect to planning in natural hazard areas.

- GOAL NH-1:** Develop 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.
- GOAL NH-2:** Develop location, density, and intensity criteria for new, existing development, and redevelopment (including public facilities and infrastructure) to avoid or better withstand natural hazards.
- GOAL NH-3:** Ensure that existing and planned development is coordinated with existing and planned evacuation infrastructure.

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 Castle Hayne groundwater aquifer. Projected demands are not expected to exceed 80% of the available supply before 2030. Much of the Edenton water supply infrastructure is old with valves not operating properly. Additionally, there are issues with high sodium content. As such, the Town is preparing to undertake a major upgrade and renovation to the water supply system in 2017-2018. Potable water supply currently is not a significant issue affecting land use and development. See Section 3.3.C.1, Water Supply Systems, for additional background information.

b. Stormwater Runoff

The existing stormwater drainage facilities consist of a system of piping, catch basins, and drainage ditches and swales. Both the Town and County are currently evaluating options for improving stormwater management.

Spurred by the damage from Hurricane Matthew in October 2016, the Town is currently undergoing a resilience evaluation and needs assessment (RENA) process in collaboration with the NC Division of Coastal Management and the National Oceanic and Atmospheric Association's (NOAA) Coastal Management Fellow. The outcome of this process will be a report containing a series of maps and recommendations aimed at increasing Edenton's preparedness for and resilience after storm events. It is expected that these final

recommendations will be incorporated into this Joint Land Use Plan through one or more amendments after the RENA project concludes in July 2018.

Land development regulations for both communities were amended in 2005 to require storm drainage plans for all new developments. More specific stormwater management requirements have recently been added to the Chowan County Subdivision Ordinance. For additional background information on the stormwater management systems in the County and Town, see Section 3.3.C.3 of this plan.

c. Hydrilla

Hydrilla is an invasive species of water plant which is spreading quickly throughout the state of North Carolina. It grows in long strands as a submersed plant which roots into the bottom and grows vertically to the surface and then horizontally just beneath the surface of the water. Mature stands tend to fill the entire water column in shallow water. Established hydrilla colonies will creep into deeper water to depths of 10 feet or more.

Damage from hydrilla infestation includes the loss of recreational use of waters; fouling of water intake systems of industries, municipalities, and irrigators; and habitat alterations and ecological shifts. Watercraft get tangled in dense stands of hydrilla to the point where docks and slips become unusable. Heavy infestations discourage or even inhibit swimming and fishing activities. Advanced infestations alter habitat and drive ecological shifts like changes in fish population dynamics.

The spread of hydrilla is best controlled through public awareness and good environmental stewardship. The use of pesticides and sterile grass carp, a fish that eats hydrilla, can also be used, though infestations are extremely difficult to control once they take root. Chowan County and the Town of Edenton are cooperating with surrounding counties to develop a regional strategy for controlling and eradicating hydrilla infestations.

The following four goal statements summarize the Town and County's shared goals with respect to water quality.

- GOAL WQ-1:** Develop policies to prevent or control nonpoint source discharges (sewage and storm water) such as impervious surface limits, vegetated riparian buffers, wetlands protection, etc.
- GOAL WQ-2:** 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 WQ-3:** Promote land uses that maximize protection of adjoining shellfishing waters.
- GOAL WQ-4:** Develop policies and strategies to prevent the spread of hydrilla and address existing infestations.

B. CRC Management Topic Policies

The Coastal Resource Commission requires that counties and municipalities formulate and adopt policies related to each management topic as described in Section 2.4.A above. Where goals are broad statements of purpose and describe an intended future state, policies are more specific statements of intent. Policies add specificity and begin to define the approach to achieve the community's goals. The following policies are intended to address the 18 shared goals identified in the previous section.

1. Public Access to Public Trust Waters

In order to achieve the CRC's management goal of ***maximizing public access to the beaches and public trust waters of the coastal region***, as well as the specific goals outlined in Section 2.4.A.1, Chowan County and the Town of Edenton adopt the following policies:

- POLICY PA-1:** The Town of Edenton and Chowan County will strive to provide a variety of opportunities for access to public trust waters to all segments of the community, including persons with disabilities.
- POLICY PA-2:** The Town of Edenton and Chowan County support the state's shoreline access policies set forth in NCAC Chapter 15A, subchapter 7M.
- POLICY PA-3:** It is the policy of Town of Edenton and Chowan County governments to 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.
- POLICY PA-4:** Chowan County shall require water access for owners of interior lots or as public access sites in major residential subdivisions located in close proximity to the water's edge. The Town of Edenton shall require residential waterfront subdivisions containing interior lots to reserve water access for owners of interior lots. Edenton shall also require that some major residential waterfront developments include in the proposed development a plan for public water access.
- POLICY PA-5:** Chowan County and the Town of Edenton will continue to investigate the viability of eco-tourism development along its waterfront areas. Eco-tourism is a thriving "clean" industry that takes advantage of existing environmental characteristics such as creeks, lakes, and rivers to promote recreational activities and attract visitors. Such an industry would be ideal for Chowan County given its existing environmental resources.
- POLICY PA-6:** The Town of Edenton and Chowan County will continue to provide for the diverse recreational needs of the permanent and seasonal populations by supporting the design and construction of the extensive waterfront area in a manner that balances water access needs with the protection of fragile natural resources.
- POLICY PA-7:** Chowan County and the Town of Edenton support the idea of providing a permanent mooring in the area to provide safe and efficient docking and boat storage opportunities to local residents.

POLICY PA-8: The development of marinas, preferably upland marinas rather than those that extend into watercourses, is supported by the Town of Edenton and Chowan County to enhance access to public trust waters.

2. Land Use Compatibility

In order to achieve the CRC's management goal of ensuring that development and use of resources or preservation of land balances protection of natural resources and fragile areas with economic development, and avoiding risks to public health, safety, and welfare, as well as the specific goals outlined in Section 2.4.A.2, Chowan County and the Town of Edenton adopt the following policies:

a. General

POLICY LU-1: The Town of Edenton and Chowan County will ensure that land use and development activities provide a balance between economic development needs and protection of natural resources and fragile environments.

POLICY LU-2: The Town of Edenton and Chowan County support growth and development in keeping with the Future Land Use Maps in this Plan.

POLICY LU-3: The Town of Edenton and Chowan County will encourage growth to occur and expand in geographical areas in and around the Town and Rural Centers as portrayed in the respective Future Land Use Maps.

POLICY LU-4: The Town of Edenton and Chowan County will manage and direct growth and development in balance with available support services.

POLICY LU-5: The Town and County support CAMA use standards for coastal wetlands.

POLICY LU-6: The Town of Edenton and Chowan County oppose any development on sound and estuarine islands located within the Edenton and Chowan County planning jurisdictions.

POLICY LU-7: The Town of Edenton and Chowan County will coordinate all development activity with the Albemarle Regional Health Department and state regulatory personnel.

POLICY LU-8: The Town of Edenton and Chowan County will cooperate with the U.S. Army Corps of Engineers in the regulation/enforcement of the 404 wetlands permit process.

POLICY LU-9: The Town of Edenton and Chowan County will encourage land use proposals which will have no negative impact on historic, cultural and/or archaeological resources. These proposals shall be reviewed through the Section 106 review process as well as through the Historic Preservation Commission and the State Historic Preservation Office.

POLICY LU-10: The Town of Edenton and Chowan County shall adhere to the state's mitigation requirements, criteria, and concepts to minimize conflicts with natural resources and fragile areas. The Town and County shall also maintain local development standards (such as distance/separation requirements, buffering/screening requirements, etc.) for special and/or conditional uses in order to assist with mitigating potential negative impacts.

POLICY LU-11: The Town of Edenton and Chowan County support citizens' awareness programs and public educational opportunities for community historic and natural resources, including the conservation, preservation and maintenance thereof.

b. Residential Land Uses

POLICY LU-12: In order to preserve farmland and rural open space, the Town of Edenton and Chowan County encourage cluster residential subdivision developments in appropriate areas such as lands classified as Medium/High Density Residential or Rural Center on the appropriate Future Land Use Map.

POLICY LU-13: To help ensure that cluster developments and planned unit developments are in harmony with adjoining land uses, Chowan County will require such developments to provide buffering between dissimilar uses and will require building setbacks that are comparable to those of the use located on the adjacent properties.

POLICY LU-14: To help ensure that planned residential developments (PRDs) are in harmony with adjoining single-family land uses, the Town of Edenton will require that the two-family and multifamily components of such developments be located more to the interior of the PRD rather than on the periphery.

POLICY LU-15: The Town of Edenton and Chowan County prohibit floating homes or watercraft with any long-term occupancy.

POLICY LU-16: Chowan County shall require that the developer or subdivider of major subdivisions located adjacent to US and primary or secondary NC Highways, railroads, or industrial or commercial developments establish and maintain a continuous and uninterrupted buffer strip in addition to the normal lot depth required in order to protect residential development from incompatible land uses.

POLICY LU-17: The Town of Edenton supports the development of live-work units and residential units built over commercial units in Downtown Edenton.

POLICY LU-18: Chowan County supports the use of cluster subdivision design for new residential development to ensure that the capacity and character of the County's public road frontages are maintained.

POLICY LU-19: Chowan County supports the development of Traditional Neighborhood Developments (TNDs) as a means of encouraging mixed-use, pedestrian-oriented communities in areas classified as Medium/High Density Residential, New Urban Waterfront, and Rural Center on the Future Land Use Map.

c. Commercial Land Uses

POLICY LU-20: Chowan County shall encourage nonresidential and higher-density residential uses to locate in one of several designated Rural Centers as indicated on the Future Land Use Map.

POLICY LU-21: The Town of Edenton and Chowan County shall maintain appearance and operational standards for nonresidential developments located within designated highway corridors to ensure no undue interference with through vehicular traffic in gaining access to proposed developments to the highway, to require architectural design compatibility within the proposed developments, and to

provide landscaping and screening to buffer adjoining residentially used or zoned properties.

POLICY LU-22: The Town of Edenton shall require shopping center developments to comply with access, screening/buffering, landscaping, setback, building scale, architectural design, outdoor lighting, outdoor storage/activity, and signage requirements to help minimize impacts to public streets and views, adjacent properties, and adjacent residentially zoned areas.

POLICY LU-23: The Town of Edenton shall maintain minimum landscaping and screening requirements that provide a visual buffer between parking and loading areas and public streets; a visual buffer between parking and loading areas and adjoining residential land uses; screening of solid waste collection dumpsters; and screening between certain incompatible uses.

d. Industrial Land Uses

POLICY LU-24: Industries which are noxious by reason of the emission of smoke, odor, dust, glare, noise, and vibrations, and those which deal primarily in hazardous products such as explosives, will not be permitted by the Town of Edenton or Chowan County.

POLICY LU-25: When reviewing proposals for new industrial development or industrial zoning, including energy-generating facilities, the Town of Edenton and Chowan County will ensure that the proposals are compatible with surrounding land uses and that identified adverse impacts are mitigated.

POLICY LU-26: The Town of Edenton and Chowan County will ensure that only commercial and industrial uses that are water dependent and which cannot function elsewhere or that are supportive of commercial fishing will be allowed in Conservation-classified areas. Examples of such uses would include, but not necessarily be limited to: commercial fishing and fish processing, marinas consistent with the policies of this Plan, boat repair and construction facilities, any business dependent upon natural salt water as a resource, and restaurants that do not extend into or over estuarine waters and/or public trust waters. All uses must be consistent with established zoning.

POLICY LU-27: Industrial development within the Town of Edenton's jurisdiction must use municipal utilities, if available. Utility systems for industrial development proposed outside of the municipal service area will be reviewed and approved on a case by case basis. Industrial development in the Chowan County planning jurisdiction shall use public water or sewer if available, or acceptable package treatment systems.

POLICY LU-28: The Town of Edenton and Chowan County shall continue to work cooperatively in identifying suitable sites for economic development and marketing them to expanding firms that would generate new job opportunities for local residents.

POLICY LU-29: The Town of Edenton and Chowan County support continued development within the Air Transpark. Great potential exists to link the airport with other transportation alternatives (water, new and existing roads, etc.) in order to develop a true commercial transportation center.

e. Forestry & Agriculture

- POLICY LU-30:** Chowan County supports the continued use of the voluntary agricultural district program for the purpose of preservation of prime farmlands.
- POLICY LU-31:** Future public improvements in the Town of Edenton and Chowan County should be planned and financed using fiscal mechanisms which avoid adverse tax impacts on the owners of prime forestry lands where such lands will not directly benefit from the planned public improvements.
- POLICY LU-32:** Chowan County shall continue to promote use-value assessment as a means of preserving the forestry resource base and encourage owners of parcels of 10 acres or more to apply for use-value assessment.
- POLICY LU-33:** Chowan County and the Town of Edenton encourage replanting of areas cleared for timber.
- POLICY LU-34:** The Town of Edenton and Chowan County will develop policies and adopt land development standards to promote rural character protection, including views from rural roadways and farmland preservation.

3. Infrastructure Carrying Capacity

In order to achieve the CRC's management goal of ensuring that public infrastructure systems are sized, located, and managed so the quality and productivity of areas of environmental concern and other fragile areas are protected or restored, as well as the specific goals outlined in Section 2.4.B.3, Chowan County and the Town of Edenton adopt the following policies:

- POLICY IC-1:** Development within the Town of Edenton or Chowan County shall only be approved where adequate public or approved private facilities and service are available, including water, sewage disposal, roads, etc.
- POLICY IC-2:** In the case that water or sewer infrastructure in Chowan County is developed and/or expanded, Chowan County will coordinate the establishment of service area boundaries with the Town of Edenton and other service providers.
- POLICY IC-3:** It is the policy of Chowan County and the Town of Edenton to ensure that infrastructure systems are correlated with population projections and the future land use classifications.
- POLICY IC-4:** In areas located outside of the Town of Edenton utility service area as depicted in Figure 8, Town of Edenton Water and Wastewater Systems Map, in Section 3.3.C of this Plan, the Town of Edenton and Chowan County will support the construction of package treatment plants which are approved and permitted by the State Division of Environmental Management. If any package plants are approved, a specific contingency plan specifying how ongoing private operation and maintenance of the plant will be provided, and detailing provisions for assumption of the plant into a public system should the private operation fail or management of the system not meet the conditions of the State permit shall be submitted and approved. The Town of Edenton and Chowan County, however, oppose the installation of package treatment plants and septic tanks or discharge

of waste in any areas classified as coastal wetlands, freshwater wetlands (404), or natural heritage areas.

- POLICY IC-5:** The Town of Edenton and Chowan County support the implementation of the 2015 Chowan County Comprehensive Transportation Plan, including the six key policy statements, as reproduced in Appendix 4 of this Plan.
- POLICY IC-6:** Any application for a wastewater disposal system which is to be located in the planning jurisdiction of the Town of Edenton or Chowan County shall be coordinated with existing facilities. Wherever possible, a wastewater permit shall not be issued without a corresponding zoning permit.
- POLICY IC-7:** The Town of Edenton strongly encourages new development to locate along existing infrastructure lines, including infill in developed areas of the Town, to the extent practicable.
- POLICY IC-8:** The Town of Edenton and Chowan County will continue to work together to provide services where needed, and as feasible, for new development.
- POLICY IC-9:** The Town of Edenton and Chowan County support the extension of infrastructure into desired growth areas, as necessary and financially feasible.
- POLICY IC-10:** Depending upon water availability and septic capability, subdivisions may develop outside of the currently developed areas served by public utilities in the Town of Edenton or Chowan County. The location and intensity of commercial uses shall be guided by the availability of public services, accessibility, and be in compliance with applicable development standards.

4. Natural Hazard Areas

In order to achieve the CRC's management goal of conserving and maintaining 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, as well as the specific goals outlined in Section 2.4.A.4, Chowan County and the Town of Edenton adopt the following policies:

- POLICY NH-1:** The Town of Edenton and Chowan County will conserve the natural resources and fragile environments that provide protection from such natural hazards as floods and storm surges.
- POLICY NH-2:** The Town of Edenton and Chowan County will minimize the threat to life, property, and natural resources that may result from land use and development within or adjacent to identified natural hazard areas.
- POLICY NH-3:** The Town of Edenton and Chowan County will continue to coordinate all development within the special flood hazard area with the NC Division of Coastal Management, FEMA, and the US Corps of Engineers. The Town of Edenton and Chowan County recognize and will continue to work with NC Emergency Management as the cognizant agency for risk management and hazard mitigation, including administration of the National Flood Insurance Program.

- POLICY NH-4:** It is the policy of Chowan County and the Town of Edenton to ensure that evacuation plans and needs are addressed as new development proposals are reviewed for approval.
- POLICY NH-5:** It is the policy of Town of Edenton and Chowan County to ensure that new development is protected from flood hazard through the administration of the flood damage prevention ordinances and continued participation in the National Flood Insurance Program.
- POLICY NH-6:** The Town of Edenton and Chowan County shall implement the recommended mitigation measures in the 2015 Albemarle Regional Hazard Mitigation Plan, as reproduced in Appendix 9 of this Plan.
- POLICY NH-7:** Chowan County will continue to support and enforce the North Carolina State Building Code, particularly requirements of construction standards to meet wind-resistive factors such as design wind velocity. Chowan County also supports provisions in the State Building Code requiring tie-downs for mobile and manufactured homes, which help resist wind damage.
- POLICY NH-8:** The Town of Edenton and Chowan County shall maintain flood damage prevention requirements that (1) Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion, flood heights or flood water velocities; (2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; (3) Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters; (4) Control filling, grading, dredging, and other development which may increase erosion or flood damage; and (5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.
- POLICY NH-9:** Chowan County 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.
- POLICY NH-10:** The Town of Edenton and Chowan County shall discourage development, especially residential development of greater than six dwelling units per acre, in its most hazardous areas (storm surge areas, areas prone to repetitive flooding, etc.) so as to decrease the number of people living in areas that may need evacuation.
- POLICY NH-11:** Based upon the availability of federal and state grant funds, the Town of Edenton and Chowan County will utilize land acquisition programs in the most hazardous areas to minimize future damage and loss of life.

5. Water Quality

In order to achieve the CRC's management goal of ***maintaining, protecting, and where possible enhancing water quality in all coastal wetlands, rivers, streams, and estuaries***, as well as the specific goals outlined in Section 2.4.A.5, Chowan County and the Town of Edenton adopt the following policies:

- POLICY WQ-1:** Chowan County and the Town of Edenton will continue to support the use of Best Management Practices (BMP) in accordance with State requirements on agricultural properties and urban developments in order to reduce sedimentation and pollution run-off into Nutrient Sensitive Waters.
- POLICY WQ-2:** Chowan County and the Town of Edenton shall require that all development adhere to State requirements concerning stormwater runoff limitations and standards.
- POLICY WQ-3:** It is the policy of Chowan County and the Town of Edenton to 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 WQ-4:** It is the policy of Chowan County and the Town of Edenton to establish land use categories that maximize the protection of open shellfishing waters and that assist with the restoration of any closed shellfishing waters.
- POLICY WQ-5:** Chowan County and the Town of Edenton shall maintain requirements that, to the extent practicable, require all development to conform to the natural contours of the land and ensure that pre-existing man-made drainage ways remain undisturbed. All developments shall be provided with a drainage system that is adequate to prevent the undue retention of surface water on the development site. No surface water may be channeled or directed into a sanitary sewer. Whenever practicable, the drainage system of a development shall coordinate with and connect to the drainage systems or drainage ways on surrounding properties or roads. All developments shall be constructed and maintained so that adjacent properties are not unreasonably burdened with surface waters as a result of such developments.
- POLICY WQ-6:** The density and intensity of land development adjacent to ground water supplies shall be in accordance with the density and intensity characteristics of the future land use designations adopted by the Town of Edenton and Chowan County.
- POLICY WQ-7:** Chowan County and the Town of Edenton shall require that new developments and expansions of existing developments comply with State requirements with regards to impervious surfaces.
- POLICY WQ-8:** Chowan County and the Town of Edenton support state efforts to reduce nutrient loading in the surrounding surface waters.
- POLICY WQ-9:** Chowan County and the Town of Edenton shall require that development adhere to the state's buffer requirements for developments abutting water bodies and/or AECs.

POLICY WQ-10: In order to minimize sedimentation and erosion, Chowan County and the Town Edenton shall require that all developments maintain a vegetated buffer along each side of a stream or natural drainageway in accordance with State requirements.

POLICY WQ-11: The Town of Edenton and Chowan County will continue cooperation with regional governments to educate the public about preventing the spread of hydrilla, and implement eradication efforts as funds become available.

C. CRC Management Topics Implementation Plan

This section provides an action and implementation plan for the policies in Section 2.4.B, CRC Management Topic Policies.

Table 2.4.C.1, Implementation Actions for Shared Goals and CRC Management Topics, lists the various action statements associated with each policy organized by goal or key concern. The table includes an alphanumeric symbol for each action and identifies opportunities for partnership between the County and the Town.

Table 2.4.C.1: Implementation Actions for Shared Goals and CRC Management Topics

Action	Responsible Planning Jurisdiction
A Conduct an assessment of the condition of currently available public and private water access sites and their location and consider a follow-up to the Citizen Visioning Survey to determine what types of water access (boat ramps, kayak launches, swimming areas, marinas, or passive “near-water” access such as walking paths) are most desired by residents.	Chowan County Town of Edenton
B During an update to the County’s zoning ordinance, explore options for requiring additional water access dedication by developers and/or fees-in-lieu towards increasing water access as more housing comes on line in future years.	Chowan County
C Review, through the subdivision plat and site plan review and approval process, proposed waterfront land development projects to ensure consistency with public water access goals and policies.	Chowan County Town of Edenton
D During an update to the County’s zoning ordinance, revise the County’s zoning districts in keeping with the future land use plan to provide for better direction of future development to minimize land use conflicts and preserve agricultural land and open space.	Chowan County
E The County and Town will continue to work together to discuss development in areas of common interest including the Town’s ETJ, municipal service areas, and the airport area.	Town of Edenton Chowan County
F The County and Town will each continue to review and update its capital improvement plan for future infrastructure improvement such as water and sewer as future growth necessitates these considerations.	Chowan County Town of Edenton
G Continue implementation of the 2015 Chowan County Comprehensive Transportation Plan.	Chowan County Town of Edenton
H During the update to the County’s zoning regulations, the County will review its zoning ordinance, subdivision regulations, and flood damage prevention provisions to ensure that all standards comply with current state law and best practices.	Chowan County
I The County and Town will avoid zoning areas susceptible to storm surge for high density residential or intensive non-residential use.	Chowan County Town of Edenton
J 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.	Chowan County Town of Edenton
K If any portion of the County or Town’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.	Chowan County Town of Edenton

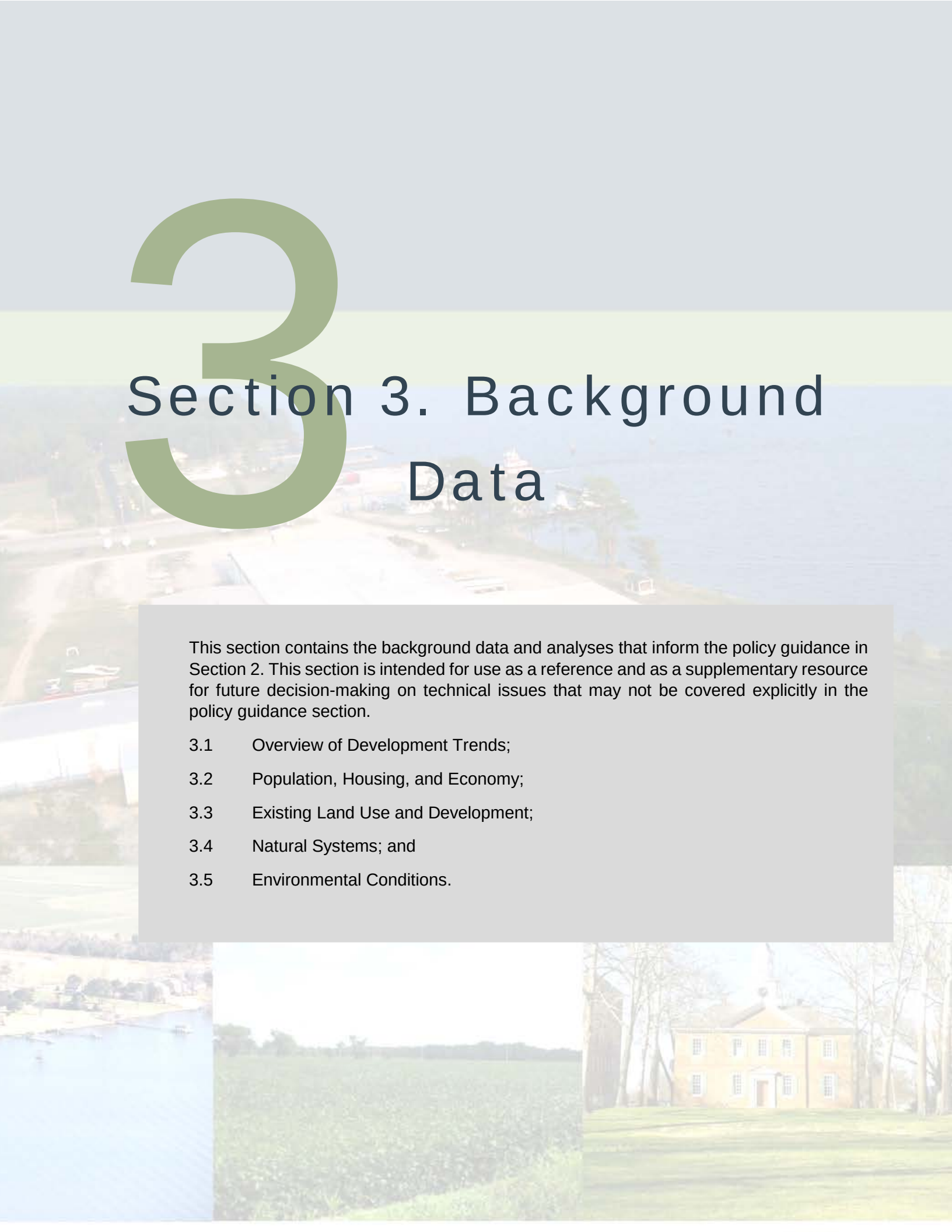
Table 2.4.C.1: Implementation Actions for Shared Goals and CRC Management Topics

Action		Responsible Planning Jurisdiction
L	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 in accordance with the 2015 Albemarle Regional Hazard Mitigation Plan. Continue the active enforcement of the State Building Code provisions regarding wind resistance requirements and participation in the National Flood Insurance Program.	Chowan County Town of Edenton
M	Continue development of a wellhead protection program ordinance to regulate land uses within areas that replenish groundwater supply.	Chowan County
N	Continue implementation of the Town's Wellhead Protection Plan.	Town of Edenton
O	Continue to require, through the subdivision regulations, adequate stormwater drainage system for new developments. Promote the use of best management practices to minimize the degradation of water quality resulting from stormwater runoff. Continue to coordinate the approval of land development projects with the applicable state agencies.	Chowan County Town of Edenton

Table 2.4.C.2, Action & Implementation Matrix for CRC Management Topics, illustrates the timing of implementation of the various actions, which are indicated by white letters in black circles. For example, the table shows that across the five CRC management topics, there are four actions (those in the second column from the left) that are planned for implementation in the short term, fiscal years 2018-2019.

Table 2.4.C.2: Action & Implementation Matrix for Shared Goals and CRC Management Topics

CRC Management Topic	Actions & Timing of Implementation			
	Short-term FY 2018 – FY2019	Mid-term FY 2020 – FY 2022	Long-term Post FY 2022	Ongoing
Public Water Access	A	B		C
Land Use Compatibility	D			E
Infrastructure Carrying Capacity			F	G
Natural Hazard Areas	H			I J K L
Water Quality	M			N O

The background of the page is a collage of three images. The top image shows a harbor with several boats and a large building on the shore. The bottom-left image shows a body of water with a small boat. The bottom-right image shows a large, two-story yellow building with a red roof and a chimney, surrounded by trees and a lawn.

3

Section 3. Background Data

This section contains the background data and analyses that inform the policy guidance in Section 2. This section is intended for use as a reference and as a supplementary resource for future decision-making on technical issues that may not be covered explicitly in the policy guidance section.

- 3.1 Overview of Development Trends;
- 3.2 Population, Housing, and Economy;
- 3.3 Existing Land Use and Development;
- 3.4 Natural Systems; and
- 3.5 Environmental Conditions.

3.1. Overview of Development Trends

At the time that the previous joint land use plan was being developed, it appeared that Chowan County and the Town of Edenton were poised to receive an abundance, possibly an over-abundance, of population growth and accompanying development. However, the economic changes that occurred during and after the Great Recession (the period from 2008 through 2015) tempered those expectations. Despite the recent economic downturn, development is coming back to eastern North Carolina, albeit at a slower rate than in past years. The things that make Chowan County and Edenton attractive places to live, like: natural beauty, access the water, rural heritage, protected history, and the close-knit community continue to attract new residents and job growth. Unemployment is at its lowest level in several years, new businesses are coming to the Town and the County, and infill residential development is occurring in downtown Edenton.

These successes are the result of a wide variety of efforts undertaken by the Town and County. Some examples of the efforts to attract sustainable population growth and beneficial development include:

- Edenton-Chowan Partnership's feasibility study that supports investment in a senior living housing development in the Town of Edenton and the group's efforts to recruit developer for that project.
- The Town continues to encourage the development of the North Oakum Street and Moseley Street Redevelopment Plans through its partnership with groups like Habitat for Humanity and Preservation North Carolina.
- The recent major industrial expansions at Jimbo's Jumbos, Regulator Marine, and Colony Tire, which will bring more jobs and investment to the region.
- The Town's 2017 Strategic Communications and Marketing Plan, which identifies sectors the Town should target to attract new families, retirees, entrepreneurs, and mobile workers. It offers specific recommendations of target audiences, message platforms, audience-specific messages, and communication tactics. The goal is to differentiate Edenton by showcasing its unique attributes and build awareness among the target audiences.
- The Colonial Park renovation and bulkhead installment, which draws more visitors and residents to the waterfront in downtown.
- The renovation and anticipated re-opening of the Hotel Hinton, which will bring around 40 new hotel rooms on-line in downtown Edenton.
- The County's investment in the Campus of the College of the Albemarle to create more opportunities for job training and help grow a 21st Century workforce.
- The partnership between the School System and the College of the Albemarle to help ensure those residents on a career track have localized training opportunities and a greater ability to find gainful employment without leaving the area.

- The County's partnership with the Boys & Girls Club to renovate the DF Walker school building with a new gymnasium and a new Boys & Girls Club facility with enhanced programming on academic enrichment and technology.
- The recent renovation of the historic Taylor Theatre on Broad Street in downtown into the Taylor Twin Cinema and the increase in the number of visitors the cinema will bring to downtown.
- Destination Downtown Edenton's efforts through the North Carolina Main Streets program, including over \$13 million in public and private investment in downtown, a net gain of 22 downtown businesses, and the continued establishment of upper-story housing units since 2003.
- The efforts of the Arts Council and the Library in growing their membership.
- The Tourism Development Authority's successes with earned media (receipt of travel media attention without paid advertisement) such as that naming of Edenton as one of America's Prettiest Towns by Forbes Magazine in 2011, or the \$250,000 in coverage in various travel publications across the United States received from the 2014 Media FAM tour.

Despite the recent downturn, the County and Town are actively engaged in promoting sustainable growth and development in the community. This Plan makes population growth its number one goal. While each jurisdiction continues to attract beneficial growth and development, a time of slow growth also offers notable opportunities. For example, the ability to assess current land use patterns and make adjustments thoughtfully rather than in reaction to high levels of development pressure - just as the County is doing with respect to its revisions to the Future Land Use Map and possible amendments to its Zoning Ordinance. Or, to carefully consider infrastructure provision and encourage infill development and revitalization of key areas a priority, as the Town is doing in its neighborhoods.

The following section details recent changes in population, the economy, and housing. The declines in population seen over the last few years are not viewed as an inevitable future for the community. Rather, they are an indication of the need to continue to focus on growing the economy, housing options, and resources to attract the next generations of residents and visitors.

3.2. Population, Housing, and Economy

A. Population Trends

This section describes past, current, and anticipated trends in population in the Town and County. Because tourism is a big part of the region's economy, and because tourists have an impact on infrastructure capacity and the quality of the natural environment, it is necessary to think both in terms of the resident population as well as the seasonal population. Along these lines, total population combines the number of permanent residents with the number of seasonal residents. The first portion of this section deals with the permanent population. Subsequent portions of this section address the seasonal and total resident populations.

1. Permanent Population

The permanent population is the number of permanent residents living in the Town or the County. The Town of Edenton is the population center of the County, and as of 2015, is home to approximately one-third of the total number of permanent residents in both jurisdictions. Table 3.2.A.1, Permanent Population, 1980-2015, shows how the community's population has changed over the previous 25 years.

Table 3.2.A.1: Permanent Population, 1980-2015					
Geography	1980	1990	2000	2010	2015
Town of Edenton	5,357	5,268	5,394	5,004	4,942
Unincorporated Chowan County	7,201	8,238	9,132	9,789	9,714
TOTAL	12,558	13,506	14,526	14,793	14,656
<i>Sources:</i> US Census Table DP-1 1980, 1990, 2000, 2010; 2011-2015 American Community Survey 5-Year Estimates Table DP-05					

In 1980, around 42 percent of the permanent population lived in Edenton; but this number has declined to 33 percent by 2015. Table 3.2.A.2, Percent Change in Permanent Population, 1980-2015, shows how the population in the community has changed each decade as well as over the first five-year period of the current decade.

Table 3.2.A.2: Percent Change in Permanent Population, 1980-2015				
Geography	1980-1990	1990-2000	2000-2010	2010-2015
Town of Edenton	-0.17%	0.24%	-0.72%	-0.12%
Unincorporated Chowan County	1.44%	1.09%	0.72%	-0.08%
TOTAL	0.75%	0.76%	0.18%	-0.09%
<i>Sources:</i> US Census Table DP-1 1980, 1990, 2000, 2010; 2011-2015 American Community Survey 5-Year Estimates Table DP-05; CodeWright Planners calculations				

2. Total Population (Permanent + Seasonal Population)

The total population of the Town of Edenton and Chowan County is derived by adding the permanent population to the peak seasonal population possible on any given night. The seasonal population number is a peak population number, or it represents the total number of people who could *possibly* be accommodated in the Town and County's visitor accommodations on an evening, not necessarily the actual number of visitors who are accommodated on any given night. Seasonal population is an important figure because it gives a deeper understanding of the infrastructure capacity necessary to serve both residents and visitors.

The combined Town and County total population in 2015 is estimated at 16,287 people, as shown in Table 3.2.A.3 below. It is derived by adding the permanent resident population (taken from the 2015 American Community Survey's 5-Year Estimates) to the peak potential seasonal population present in the Town and the County on any given evening. Seasonal population is derived by determining the number of existing seasonal (non-hotel) housing units from the 2010 decennial Census and then adding in the number of hotel units in place prior to and after 2010 (as identified by the Chowan County Tourism Development Authority). The total number of seasonal housing units (including hotels) is translated into a peak potential seasonal population figure by multiplying the number of seasonal housing units (including hotels) to the national average family size of 2.6 people (since tourists would average to the national size, not the local size). The result is a peak number of people who could stay in the Town and County on any given night. When added to the permanent population, a total population figure is derived.

Table 3.2.A.3, Total Population in 2015, lists the total population for the Town and the County in 2015 (the last year verified US Census data is available).

Table 3.2.A.3: Total Population in 2015			
Geography	Permanent Population	Peak Seasonal Population (on any given night)	Total Population
Town of Edenton	4,942	705	5,647
Unincorporated Chowan County	9,714	926	10,640
TOTAL	14,656	1,631	16,287
<i>Sources: 2015 American Community Survey 5-year Estimates Table DP-05; Peak seasonal population estimated using lodging data from the Chowan County Tourism Development Authority, current as of May 2017.</i>			

3. Population Projections (Permanent and Seasonal Projections)

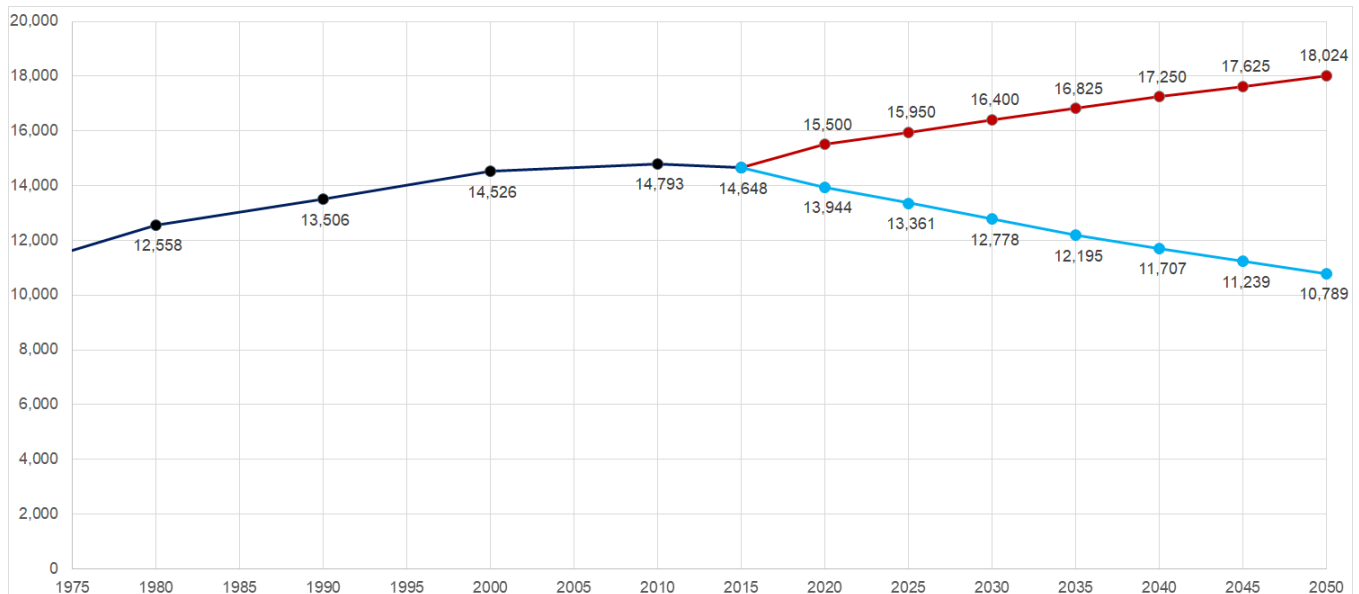
a. Permanent Population Projections

The permanent population consists of the number of residents living in the Town and the County. It does not include the peak seasonal population present on any given evening. Table 3.2.A.4, Permanent Population Projection, 2015-2050, shows how the permanent resident population for the Town and the County is projected to change over five-year increments between 2015 and 2050 (a 35-year period). Because permanent population projections can be difficult to estimate in smaller communities, and because the relative confidence of projections decreases as the amount of time increases from the commencement date, the table includes a series of two observations for each date included in the table. One population projection (shown in red) is a population projection based on a straight-line extrapolation of permanent population from the decennial census. A second population projection (shown in blue) is based on population projections from the North Carolina Office of State Budget and Management (NC OSBM). The actual permanent population in any given year can be expected to fall somewhere within the range of these figures. For example, the permanent population in 2050 is expected to fall somewhere between 10,789 people and 18,000 people.

Table 3.2.A.4: Permanent Population Projection, 2015-2050								
Population Projection Method	2015	Projections (# of people)						
		2020	2025	2030	2035	2040	2045	2050
Decennial Census Extrapolation	15,147	15,500	15,950	16,400	16,825	17,250	17,625	18,024
NC Office of State Budget & Management	14,648	13,944	13,361	12,778	12,195	11,707	11,239	10,789
Sources: US Census Table DP-1 1980, 1990, 2000, 2010; 2011-2015 American Community Survey 5-Year Estimates Table DP-05; North Carolina Office of State Budget and Management Population projections (https://www.osbm.nc.gov/demog/county-projections).								

Figure 3.2.A.4, Total Population Projection 2015-2050 shows the total population from Table 3.2.A.4 in a graphic form. This Plan anticipates that the total population for the Town and the County will fall somewhere between the two lines on the graph. The methodology used to derive these projections is included after Figure 3.2.A.4.

Figure 3.2.A.4: Permanent Population Projection, 2015-2050



The methodology associated with the permanent population figures is described in the following paragraphs. The decennial census extrapolation population estimate shown in red in the table and on the chart is derived by a straight-line extrapolation of the long-term population trends in Chowan County (including the Town) as measured by decennial Census data over the period from 1960 through 2010. The portion of the population line shown in black on the chart is derived from known decennial census population counts.

The NC Office of State Budget and Management estimates shown in blue in the table and chart are the official population projections for the entire County (including the Town) provided by the North Carolina Office of State Budget and Management (NC OSBM) (<https://www.osbm.nc.gov/demog/county-projections>). The NC OSBM projections are provided in five-year intervals and extend for twenty years to 2037. Because CAMA requirements specify population projections be provided for a period of 30 years, a straight-line extrapolation from the available projections is included for the period from 2037 to 2050.

The permanent population for the County (including the Town) over the period from 2015 to 2050 can be expected to fall somewhere between the two lines on the chart. The policy guidance in Part 2 of this Plan calls for the Town and the County to work together in the development of an action plan for increasing population growth and then to add the strategies identified in the action plan to the efforts aimed at population growth that are already underway.

b. Seasonal Population Projections

The seasonal population is a peak population figure that shows the maximum potential number of visitors who could stay in the Town and the County on any given evening. It is based on the number of seasonal housing units and hotel accommodations multiplied by national average family size. Table 3.2.A.5, Seasonal Population Projection, 2015-2050,

provides an estimate of the peak seasonal population in five-year increments between 2015 and 2050 for both the Town and the County. It depends on the assumption that the Town and County will add additional visitor accommodations at a modest 3 percent rate of increase during each five-year period. It also assumes the national average family size will remain at 2.6 persons per family through 2050. It is important to remember that this is not the total number of visitors who *will* visit the Town and the County on any given night; rather, it is the peak number of visitors who *could* visit the Town and the County on any given night based on the available supply of visitor accommodations. Peak seasonal population is a snapshot of any given night, and is not intended to be added together to provide a total number of visitation over the course of a year.

Table 3.2.A.5: Seasonal Population Projection, 2015-2050								
Geography	2015	Projections (# of people)						
		2020	2025	2030	2035	2040	2045	2050
Town of Edenton	705	726	748	770	793	817	842	867
Unincorp. Chowan County	926	954	982	1,012	1,042	1,073	1,106	1,139
TOTAL	1,631	1,680	1,730	1,782	1,835	1,891	1,947	2,006
<i>Sources:</i> <i>Peak seasonal population estimated using lodging data from the Chowan County Tourism Development Authority, current as of May 2017.</i> <i>CodeWright Planners calculations.</i>								

The data included in the table projects a fairly stable permanent population in the region over the next 30 years. Declines in permanent population may take place, but this is offset by anticipated increases in the seasonal population over the same period. The potential seasonal population is expected to grow in the Town of Edenton by 2020 when the 40 rooms in the Hotel Hinton, currently under renovation, come online, providing space for 104 additional seasonal residents. The seasonal population is expected to continue to increase at a steady pace as the County and Town enact the policies in this Plan and continue their tourism expansion efforts.

4. Median Age

The median age countywide is 44 years, slightly older than the statewide median of 38. The median age in the Town of Edenton is 38 years, younger than the County as a whole and on track with the state median.

B. Housing

As detailed in Table 3.2.B.1, Current Housing Stock by Type, the majority of housing in the County is single-family detached homes. There are only 41 units of single-family attached housing county-wide, and only about 10 percent of housing units are multi-family housing.

Table 3.2.B.1: Current Housing Stock by Type					
Geography	Single-family Detached	Single-family Attached	Multi-family [1]	Mobile or Manufactured	Total
Town of Edenton	1,724	41	621	141	2,527
Unincorporated Chowan County	3,399	0	161	1,213	4,773
TOTAL	5,123	41	782	1,354	7,300
NOTES:					
[1] Includes duplexes, triplexes, quadraplexes, and multi-family units.					
Sources:					
US Census Table DP-1 1980, 1990, 2000, 2010;					
2011-2015 American Community Survey 5-Year Estimates Table DP-05;					
CodeWright Planners calculations					

At the time of the last housing census in 2015, there were an estimated 86 homes in the Town and 307 homes in the unincorporated County used as seasonal housing, meaning units that are occupied less than half of the year by the same household. As defined in the census, seasonal housing includes vacation homes, hunting or fishing cabins, short-term rental properties, RVs, boats with dwelling units, and seasonal worker housing. For the purposes of calculating the total potential seasonal population as detailed in Section 3.2.A.2 above, hotels, motels, bed and breakfasts, extended stay facilities, and camping facilities are also included as seasonal housing.

In terms of overall number of seasonal units, the Town and unincorporated Chowan County contain roughly an even number of units, but the type is very different across jurisdictions. Unincorporated Chowan County is home to 307 of the 393 total private homes used as seasonal housing, as well as the County's one campground, which has 37 campsites available for tents and RVs. At the time of the housing census, there were also 7 RVs, boats, or vans being used as seasonal residences in unincorporated Chowan County. The County's stock of hotel, motel, and bed and breakfast units is nearly entirely concentrated in the Town of Edenton, where there are approximately 210 rooms available. There are also approximately 86 private homes used as seasonal residences in the Town. Table 3.2.B.2, Seasonal Housing Stock by Type, summarizes these figures.

Table 3.2.B.2: Seasonal Housing Stock by Type

Type of Seasonal Housing	Number of Seasonal Units by Jurisdiction		
	Town of Edenton	Unincorporated Chowan County	TOTAL
Hotel/motel rooms, including bed and breakfasts and extended stay (number of rooms)	210	5	215
Private homes (number of dwelling units)	86	307	393
Campsites, tent or RV (number of sites)	0	37	37
RV, boat, or vans used as seasonal dwelling units (number of units)	0	7	7
TOTAL	296	356	652

Sources:
US Census Table DP-1 1980, 1990, 2000, 2010;
2011-2015 American Community Survey 5-Year Estimates Table DP-05;
CodeWright Planners calculations

C. Economic Indicators

The County-wide median household annual income in is \$38,759. The median household income among Town residents is considerably lower, at \$25,601.¹

Chowan County experienced significant spikes in unemployment during the Great Recession (2008-2015), with peak unemployment at 13.1% in January 2010. The unemployment rate in Chowan remained above 10% through mid-2013, but has fallen to 4.2%, the same as the unemployment figure for North Carolina as a whole.² The drop in unemployment since 2013 shows that job growth in the County is strong, and that the economic development efforts undertaken by the Town and County are bearing fruit.

The major industries in the County include agriculture, food processing, marine industry, manufacturing, and tourism. A thriving economic cluster has developed around the growing and processing of peanuts, centered around Jimbo's Jumbo's, a large-scale peanut processing plant, and Southern Ag Carriers, Inc., focusing on wholesaling and transportation of food products. The County is also home to some of the nation's leading boat builders, including Regulator Marine and Albemarle Boats. Other manufacturing operations in the County include home construction products, fencing, and auto parts manufacturers. The Edenton-Chowan Partnership works with these industries to retain and recruit additional businesses with the goal of strengthening the existing economic clusters and creating well-paying jobs for local residents.

Destination Downtown Edenton, Inc. and the Chowan County Tourism Development Association work in partnership to improve the County's tourism resources and market the area as a desirable

¹ Source: ACS 5-year Estimates Table S1910

² Source: U.S. Bureau of Labor Statistics, Unemployment Rate in Chowan County, NC [NCCHOW1URN], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/NCCHOW1URN>, June 24, 2018.

vacation destination building on the natural resources and historic nature of both the County and the Town. Currently retail trade is the highest employing industry sector in the County, and accommodations and food services is ranked sixth.

Healthcare is a growing industry sector both nationally and in Chowan County, and already makes up the second largest industry by employment countywide. As the area continues to market itself as a retirement destination, healthcare uses will become more and more integral to the functioning of that economic development strategy. The County and Town intend to continue building on the existing resources – most notably the Vidant Chowan Hospital – to nurture this critically important industry.

Table 3.2.C lists the top ten industries in the County by employment.

Table 3.2.C: Top Ten Industries by Employment, Countywide 2015		
Ranking	Industry	Employment (# of persons)
1	Retail Trade	884
2	Healthcare	813
3	Education	738
4	Construction	478
5	Public Administration, Government	476
6	Accommodations and Food Service	397
7	Professional, Scientific, Management	361
8	Manufacturing	344
9	Agriculture and Forestry	321
10	Transportation, Warehousing, Utilities	301
	Other	598
TOTAL		5,711
Source: 2015 American Community Survey 5-year Estimates Table S2403		

3.3. Existing Land Use and Development

A. Existing Land Use Patterns

1. Existing Land Use Map

The Existing Land Use Maps in Figures 4 and 5 identify eight categories of existing land use:

- a. **Vacant (Unbuilt) Land**
Land which contains no structures, and which has not been improved for use as agricultural or forestry land.
- b. **Forestry**
Land under active forestry use, regardless of the stage of forestry. Forestry lands may be, but are not necessarily, taxed under Present Use Value.
- c. **Agriculture**
Lands under productive agricultural use for crops or livestock, including accessory buildings such as barns, storage of machinery, and grain storage facilities. Agricultural lands may be, but are not necessarily, taxed under Present Use Value.
- d. **Residential**
Areas dedicated to housing, including single-family, multi-family, mobile or manufactured homes.
- e. **Institutional**
Government offices, utilities, places of worship, public or private schools, civic institutions, and healthcare uses.
- f. **Commercial**
Land with buildings containing retail or wholesale sales, personal services, or offices.
- g. **Industrial**
Lots containing buildings used for manufacturing and related uses including warehousing and shipping.
- h. **Open Space**
Public or private parks, ballfields, dedicated open space, and natural areas which are protected from future development.



**Figure 4. Existing Land Use Map,
Chowan County**

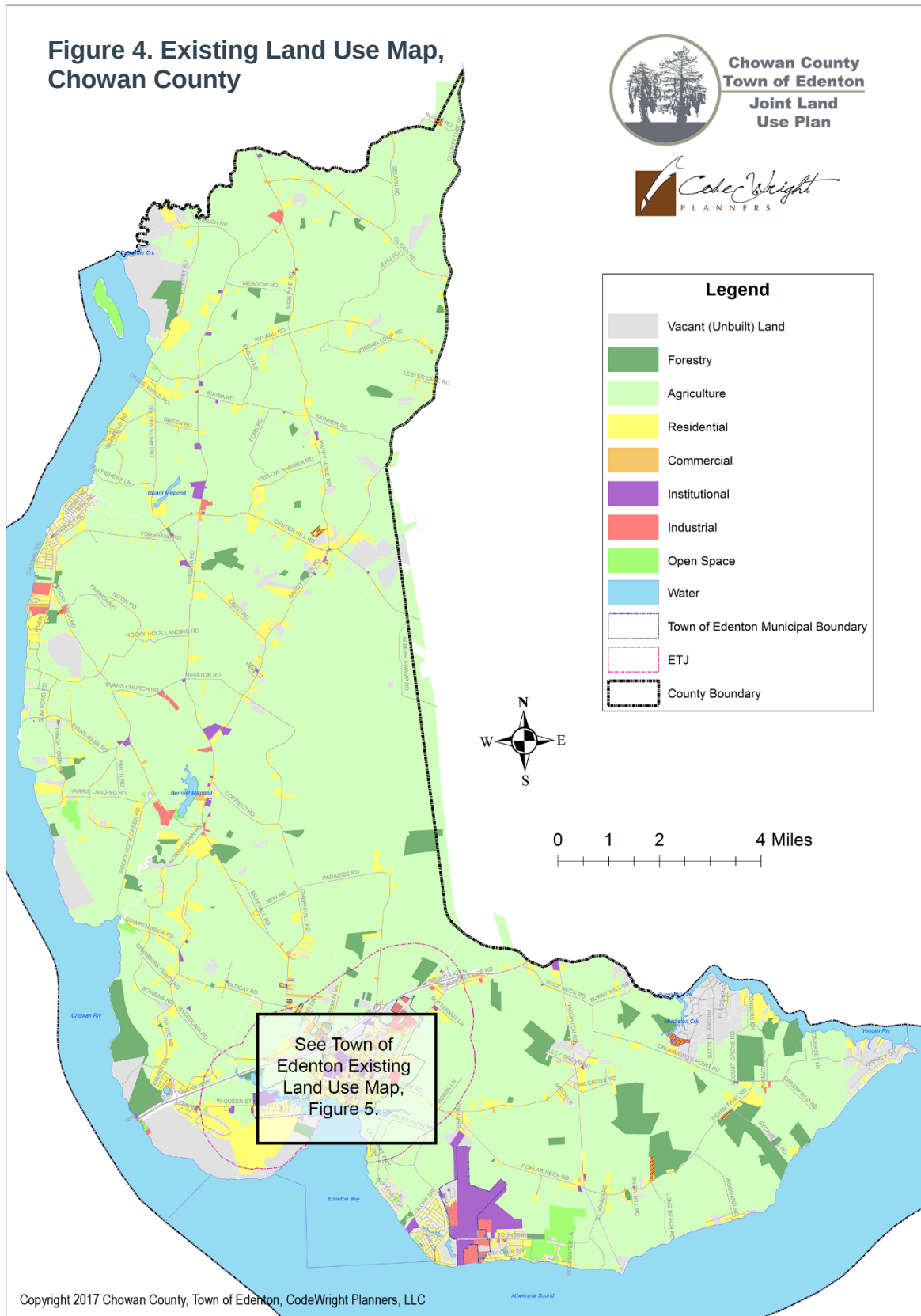
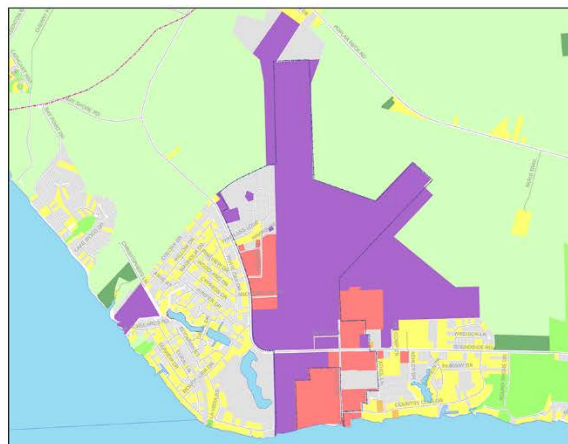
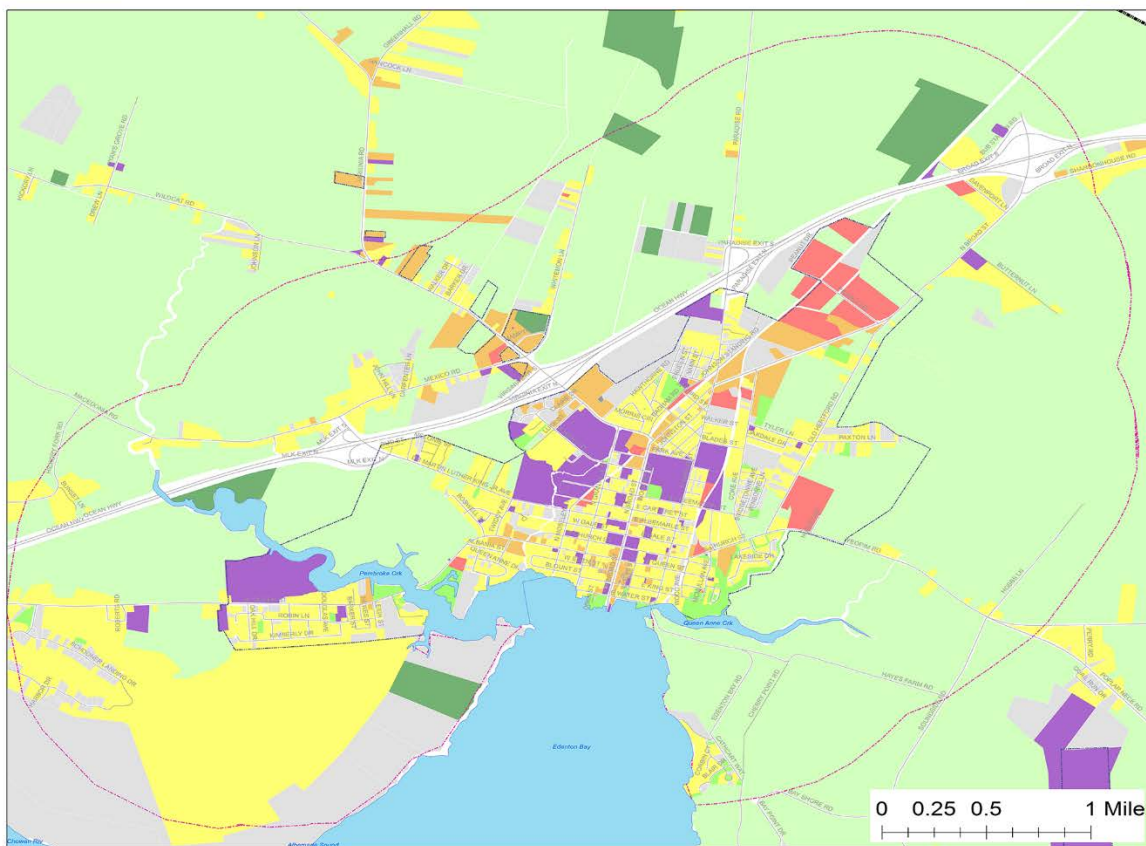




Figure 5. Existing Land Use Map, Town of Edenton



2. Land Use Patterns - Chowan County Planning Jurisdiction

Chowan County's planning jurisdiction – those lands that are located neither in the Town of Edenton or its extra-territorial jurisdiction (ETC) is distinctly rural and agricultural in nature. The most intense development is huddled around the Town, with most of the County's land area showing sparse and scattered development patterns.

The vast majority (85%) of land in the County's 100,743-acre planning jurisdiction is under current agricultural or forestry use. Another 6% is residential areas, and only 2% is used for the remaining nonresidential uses including all commercial, industrial, institutional, and open space. About 7%, or 6,576 acres, is vacant and unbuilt land. Table 3.3.A.2 below provides additional detail:

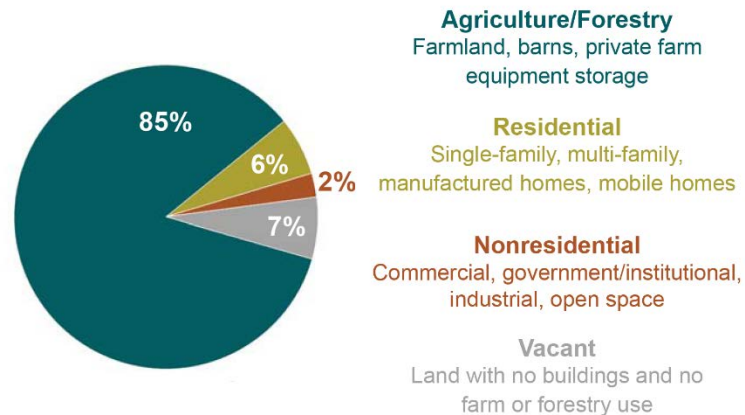


Table 3.3.A.2: Land Use by Category Chowan County Planning Jurisdiction		
Land Use Category	Land Area in Acres	Percent
Vacant (Unbuilt)	6,576	6.5%
Forestry	3,923	3.9%
Agriculture	81,403	80.8%
Residential	6,285	6.2%
Institutional	1,120	1.1%
Commercial	176	0.2%
Industrial	465	0.5%
Open Space	795	0.8%
TOTAL	100,743	100%
Source: CodeWright Planners calculations		

The highest density residential areas in the County's planning jurisdiction are located just south and southwest of the airport. This includes the Cape Colony and Country Club developments. There is also a large residential neighborhood, Arrowhead Beach, in the northwestern portion of the county along the Chowan River. Elsewhere, developed lands are comprised primarily of widely scattered residential subdivisions and clusters of low density residential development at crossroad communities like Yeopim, Vahalla, Cisco, St. Johns and along the Chowan River and Albemarle Sound waterfronts. Low density residences are also scattered along the major corridors that transverse the County. Multiple acre tracts containing a single dwelling unit are often classified as "residential" thereby

distorting somewhat the residential patterns illustrated in the map. Existing low density residential development ranges from 1 dwelling unit per five acres to 1 dwelling unit per acre. Existing medium to high density residential development consists primarily of detached single-family residences in the Cape Colony and Arrowhead Beach developments. These developments generally average approximately 8 to 10 units per acre. There are no large concentrations of multifamily residences within the County's planning jurisdiction. A few small, scattered multifamily developments with densities approaching 6-8 units per acre are located along the Highway 32 north corridor.

The majority of commercial uses in the County's planning jurisdiction are located along the US 17 and NC 32 corridors heading out of Edenton. These commercial corridor areas contain retail, personal and business services, and office uses. A few commercial uses are located at various crossroad communities throughout the County. Commercial lots typically average about 2 acres in size.

There are very few institutional uses in the Chowan County planning jurisdiction, consisting mostly of churches, cemeteries, governmental buildings and facilities, and public and private schools. There are also several parcels dedicated to utility use, including the Town of Edenton wastewater treatment plant site on Macedonia Road. Institutional and public lot sizes range from one acre to several acres, depending upon the intensity of the specific use.

The majority of industrial land located outside of Edenton is in the vicinity of the airport and south of Chowan Beach near the Chowan River. A few small industrial operations are scattered throughout rural Chowan County. Industrial lot sizes typically average approximately about 20 acres in size. In 2017, the Edenton Dye Plant building was occupied by a new water-related industrial use; one that moves scrap metal, provides towing services, and repairs barges and tug boats.

3. Land Use Patterns - Town of Edenton Planning Jurisdiction

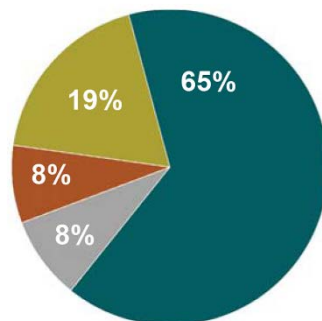
As the commercial, governmental, and housing center of the County, the Town of Edenton contains a wide variety of land uses. Compared to the County's planning jurisdiction, residential uses are more varied and include a wider range of density types. The Town also contains a higher intensity of nonresidential land use, but agriculture and forestry uses as well as vacant land are still part of the landscape.

Agriculture/Forestry
 Farmland, barns, private farm
 equipment storage

Residential
 Single-family, multi-family,
 manufactured homes, mobile homes

Nonresidential
 Commercial, government/institutional,
 industrial, open space

Vacant
 Land with no buildings and no
 farm or forestry use



The Town of Edenton's planning jurisdiction, which includes the incorporated Town and its extra-territorial jurisdiction (ETJ), is comprised of 9,337 acres of land. 65% of this land, mostly in the ETJ, is under farming or forestry use. Residential use makes up the next largest portion at 19%. Nonresidential uses, including commercial, institutional, industrial and open space, cover 8% of the land in the Town's

jurisdiction. Table 3.3.A.3 provides additional detail:

Table 3.3.A.3: Land Use by Category Town of Edenton Planning Jurisdiction		
Land Use Category	Land Area in Acres	Percent
Vacant (Unbuilt)	796	8.5%
Forestry	226	2.4%
Agriculture	5,837	62.5%
Residential	1,736	18.6%
Institutional	276	3.0%
Commercial	204	2.2%
Industrial	162	1.7%
Open Space	100	1.1%
TOTAL	9,337	100%
Source: CodeWright Planners calculations		

The Town 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 US 17 on the north and the Albemarle Sound and Edenton Bay on the south. Residential densities in this area generally range from three to seven dwelling units per acre. The Town's ETJ consists of low density residential properties immediately outside the Town limits. Existing low density residential development typically averages about two dwelling units per acre. Higher density residential development ranges between seven and ten dwelling units per acre. Pockets of higher density multifamily residential development are located along Martin Luther King Boulevard and Old Herford Road. The only condominium developments are located at Pembroke Creek, the Cotton Mill, and Wharf's Landing.

Retail, personal services, and business services are concentrated in the downtown area. Downtown Edenton is very active with commercial retail uses and professional offices. The area near the intersection of US 17 and NC 32 West is the only major concentration of retail shopping facilities outside of the downtown. Several scattered commercial uses are also located adjacent to North Broad Street. Commercial lot sizes in the downtown area average about 0.25 acres in size. Lot sizes outside of the downtown area typically range between one to two acres in size.

Institutional uses include public facilities such as town and county governmental offices and facilities, the hospital, public parks, and public schools. Private institutional uses include private recreational facilities, nursing homes, civic and fraternal organizations, places of worship and cemeteries. The largest institutional/public uses within the Edenton jurisdiction include the airport, fish hatchery, public cemetery, and hospital properties. Institutional and public lot sizes range from one acre to several acres, depending upon the intensity of the specific use.

B. Historic, Cultural, and Scenic Areas

There are several individual sites in Edenton and in Chowan County that are listed on the National Register of Historic Places. Nationally registered Historic Districts in Chowan County include the Cotton Mill District and the Edenton District, which was expanded in 2001 (see Figure 6). Chowan County listings in the National Register include the following list of properties and districts (the date provided is the date listed in the National registry):

- Albania (Edenton), 5/13/1976
- Athol (Edenton vicinity), 5/22/1980
- Barker House (Edenton), 3/24/1972
- Chowan County Courthouse (Edenton), 4/15/1970
- Cullen Jones House (Rockyhock vicinity) 5/3/2006
- Cullins-Baker House (Tyner vicinity), 4/29/1982
- Cupola House (Edenton), 4/15/1970
- Edenton Historic District (Edenton), 7/16/1973
- Edenton Historic District Boundary Expansion (Edenton), 10/5/2001
- Edenton Cotton Mill Village Historic District (Edenton), 2/5/1999
- Edenton Station (Fish Hatchery), U.S. Govt. Fish & Fisheries Commission
(Edenton), 9/14/2002
- Greenfield Plantation (Somer vicinity), 5/11/1976
- Hayes Plantation (Edenton), 3/3/1974
- Hicks Field (Edenton), 9/13/1995
- James Iredell House (Edenton), 2/26/1970
- Susan J. Armistead Moore House (NC 32 at jct), 5/18/2005
- Mulberry Hill (Edenton vicinity), 5/13/1976
- Peanut Factory (Edenton Peanut Mill (Edenton), 9/20/1979
- Pembroke Hall (Edenton), 11/7/1976
- Saint Paul's Episcopal Church and Churchyard (Edenton), 5/29/1975
- Sandy Point (Edenton vicinity), 4/25/1985
- Shelton Plantation House (Clement Hall) (Edenton vicinity), 10/29/1974

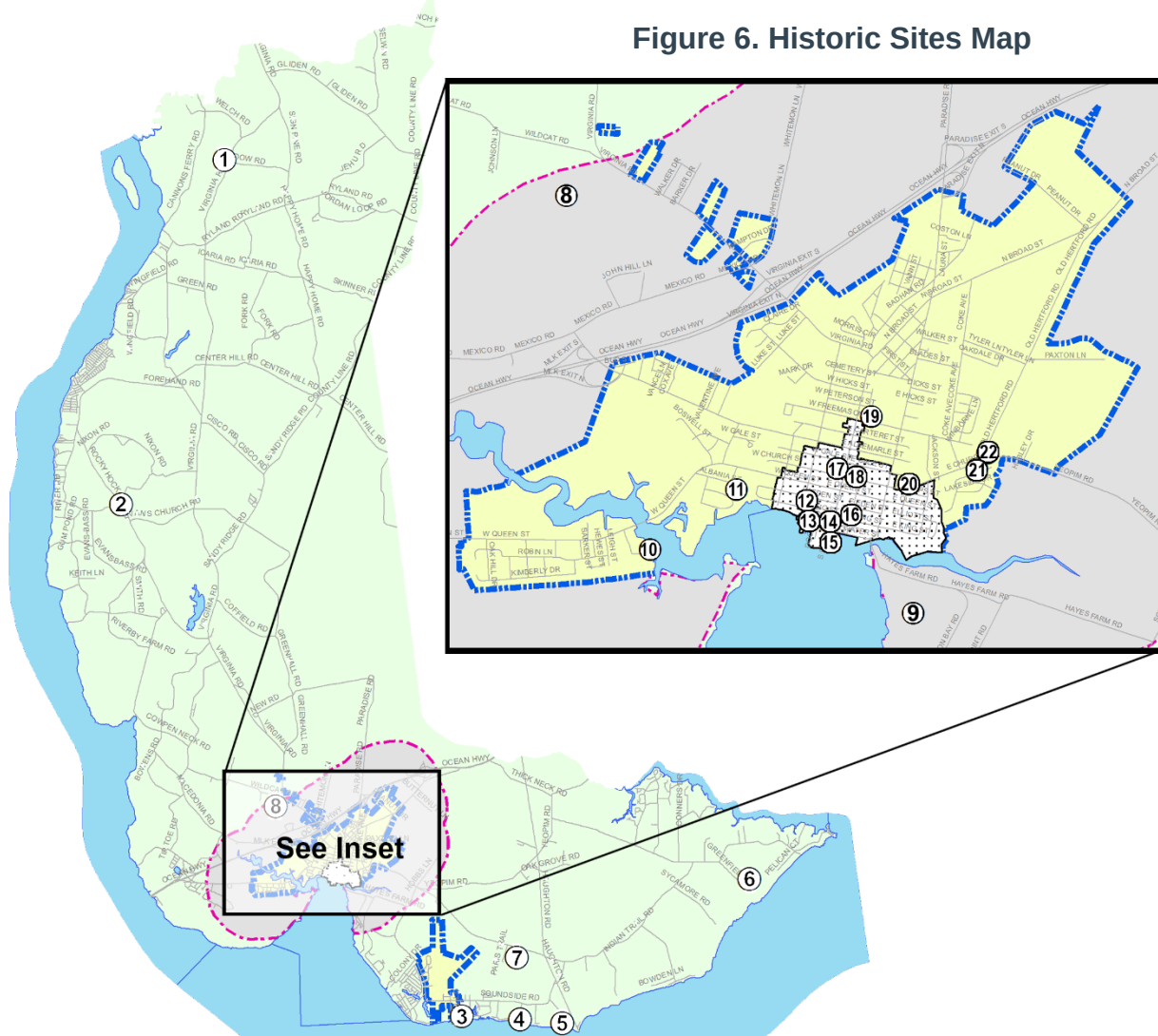


- Speight House and Cotton Gin (Edenton), 9/22/1980
- Strawberry Hill (Edenton), 5/22/1980
- Wessington House (Edenton), 3/20/1973

Figure 6 shows the locations of all historic sites listed on the National Register of Historic Places.



Figure 6. Historic Sites Map



LEGEND

- County Planning Jurisdiction
- Town of Edenton Municipal Boundary
- Edenton ETJ
- Water
- Local Historic District
- # Historic Sites

Number	Historic Sites Inventory - Chowan County Planning Jurisdiction
1	Cullins-Baker House
2	Cullen Jones House
3	Athol
4	Mulberry Hill
5	Sandy Point
6	Greenfield Plantation
7	Susan J. Armistead Moore House/Jubilee Farms

Data Source: NCOneMap Geospatial Portal,
NC Geographic Coordinating Council, 2017
NC State Historic Preservation Office

Number	Historic Sites Inventory - Town of Edenton Planning Jurisdiction (Inset Map)
8	Shelton Plantation House/Clement Hall
9	Hayes Plantation
10	Edenton Station
11	Albania
12	Wessington
13	Pembroke Hall
14	Barker House
15	Cupola House
16	Chowan County Courthouse
17	St. Paul's Episcopal Church & Churchyard
18	James Iredell House
19	Hicks Field
20	Peanut Factory
21	Strawberry Hill
22	Spaght House and Cotton Gin



Surveys of Arrowhead Beach, the possible site of the sixteenth century Chowanoke Indian village, and an underwater survey of Edenton Harbor in 1980 are major archaeological projects in the County. Over 125 sites known throughout the County are recorded in the North Carolina State Historic Preservation Office's statewide inventory for Chowan County. Most archeological sites that are identified by the NC Historic Preservation Office are not publicly disclosed for fear of damage or tampering.

There are no designated scenic views or areas in Chowan County or the Town of Edenton.

C. Community Facilities

1. Water Supply Systems

Two public water supply systems operate within Chowan County: the Town of Edenton municipal water system and the Chowan County water system. The existing service areas of each jurisdiction are delineated in Figures 7 and 8. The maps are for illustrative purposes only and are intended to delineate the general water system facilities. For more precise information, detailed maps available at the offices of the respective water system provider should be consulted. No private water systems operate within the Town or County.

a. Edenton Municipal Water System

i. Overview

The Town of Edenton maintains two water treatment plants, four well sites, two elevated water storage tanks, and approximately 70 miles of distribution system lines. The oldest water treatment plant, Freemason Street, was constructed in 1936 and is located in downtown Edenton. The Beaver Hill plant, located off Dr. Martin Luther King Avenue, was constructed in 1973. Both facilities utilize ion exchange to soften the water. The Freemason plant has a permitted capacity of 1.35 MGD and the Beaver Hill plant, 0.725 MGD. The Town draws its water for treatment from four deep wells, all drawing from the Castle Hayne aquifer. The well sites are identified as Freemason Street, Beaver Hill, Virginia Road, and Boswell Street. The total available water supply of all wells for regular use is 1.258 MGD. The four wells and two water treatment facilities can reliably provide a maximum day capacity of 1.1 MGD. The Town's water storage tanks have a total storage capacity of 800,000 gallons. Currently, the peak demand is 1.21 MGD.

In 2016, the Town water system served 2,066 metered customers; the population within the water system service area was 5,500. The average annual daily water use in 2002 was 0.402 MGD. The maximum day use, 1.21 MGD, occurred in August 2016. The 2016 average daily water use by type of customer is provided in the following table:

Table 3.3.C.1.a.i: Edenton Municipal Water System Average Daily Water Use		
Use Type	Number of Connections	Average Daily Water Use (MGD)
Residential	1,665	0.196
Commercial	368	0.091
Industrial	6	0.018
Institutional	27	0.097

ii. Current Conditions

- Currently demand for water within the Town water system is approximately 41% of available water supply.
- The Town system has an interconnection with the Chowan County water system that is capable of providing water in an emergency.
- The Town has a contract with the Chowan County water system to purchase 0.072 MGD if needed.

iii. Projected Demand

The 2016 Local Water Supply Plan for Edenton indicates that water demands will not exceed 60% of available supply by 2030. The population projections in Section 3.2.A of this Plan anticipate at most slow population growth, and support this conclusion. It is not anticipated that the water supply will need to be increased over the life of this Plan.

iv. Limitations

The Town water system has been cited by the State for exceeding the total trihalomethanes (TTHMs) maximum contaminant levels and water salinity. In 2015, following receipt of a violation notice for TTHM levels, the Town hired a consultant to explore options for addressing the issues with the water system. Solutions are still under study, but may include the addition of a reverse osmosis treatment system at one of the Town's plants, or decommissioning the Freemason plant and well in favor of expanding and upgrading the Beaver Hill treatment plant. In the meantime, the Town has increased the flushing of lines to clear TTHMs and is taking additional samples quarterly to monitor TTHM contaminant levels.

v. Planned System Improvements

The Town is currently planning for major renovations and upgrades to its two water treatment plants. Upgrades are expected to begin in the fourth quarter of 2018 and be completed by mid-2019.

It is the policy of the Town to encourage development in areas where water infrastructure already exists. In the future, if new development is proposed that is outside the currently served area but adheres to the Town's policy guidance in Section 2.3.D, Town of Edenton Future Land Use, the Town Council may revisit this issue.

b. Chowan County Water System

i. Overview

Chowan County Water System is an environmentally regulated community system (Public Water Supply Identification Number 04-21-015) that has served County needs since 1976. It consists of nine groundwater wells that produce water with high amounts of dissolved solids that are treated to meet drinking water standards at the Valhalla Water Treatment Plant. It is an ion-exchange treatment facility capable of producing 2.310 million gallons per day (MGD) that incorporates aeration, sedimentation, filtration, softening, sequestration, and disinfection processes. Finished potable water is stored

on-site in a one million gallon clear well and distributed through approximately 300 miles of piping that is 98% polyvinyl chloride. There are also four elevated storage tanks in two pressure zones, each having 200,000 gallons of storage capacity, for a system total of 1,800,000 gallons, and one booster pump station.

In 2018, the County system serves 4,484 customers with a projected population of 11,389. The average annual daily usage in 2017 was 0.827 MGD. The maximum five-consecutive-day usage of 1.222 MGD, occurred between July 10th and July 14th, 2017, with a peak day for the year on July 13th, 2017 of 1,437,000 gallons. The 2017 average daily water use by type of customer is provided in the following table:

Table 3.3.C.1.b.i: Chowan County Water System Average Daily Water Use		
Use Type	Number	Average Daily Water Use (MGD)
Residential	4,108	0.568
Commercial	370	0.054
Industrial	2	0.004
Institutional	4	0.025

ii. Current Conditions

- Current demand for the water within the County water system is approximately 36% of available supply.
- The County maintains interconnections with Edenton, Gates County, and Perquimans County water systems in order to provide water in an emergency.

iii. Projected Demand

The 2017 Local Water Supply Plan for Chowan County indicates that water demands are not expected to exceed 59% of the available water supply by 2060. The population projections in Section 3.2.A of this Plan anticipate at most slow population growth, and support this conclusion. It is not anticipated that the water supply will need to be increased over the life of this Plan.

iv. Limitations

Chowan County has discharged salty byproduct wastewater from the water treatment softening process into an unlined pond adjacent to the WTP like other treatment facilities in eastern North Carolina since the State approved the construction of its water treatment facility, years ago. The discharge has contaminated the surficial aquifer, with iron, manganese and chloride levels above water quality standards. The contamination extends beyond County-owned premises. As a result, the County is currently proceeding with capital improvements to mitigate environmental concerns associated with the Valhalla WTP discharge residuals.

As a result, the County has taken steps to afford future capital investments and continues to consider potential changes in rates and rate structure, distinguishing between fixed and variable costs. While Audited FY 2017 data reveals an operating ratio

of 0.9, FY 2018 Actuals indicate a ratio >1.0, as a result of Board of Commissioners' decision to raise rates.

In addition, non-compliance analytical results indicate tri-halomethane formation potential exists in excess of current standards. Operations may not be able to make up for treatment technique limitations with new distribution regulations or future changes to Disinfection-Disinfection By-Products Rule. Therefore, increases in storage capacity should be balanced with actual demands, as opposed to projections, or DBP precursors removed through appropriate treatment technique.

v. Planned Water System Improvements

The following costs are estimated, referencing the NC Drinking Water State Revolving Fund Intended Use Plan For 2018 Draft and other sources:

- \$8,562,000 Valhalla WTP Backwash Solids Handling;
- \$3,500,000 New one-half million gallon storage tank at Paradise Road;
- \$1,000,000 One new well at Valhalla WTP;
- \$500,000 4 Elevated Storage Tank Mixing Devices; and
- \$160,000 Annual Automated Meter Replacement Program.

Figure 7. Chowan County Water and Wastewater Systems Map

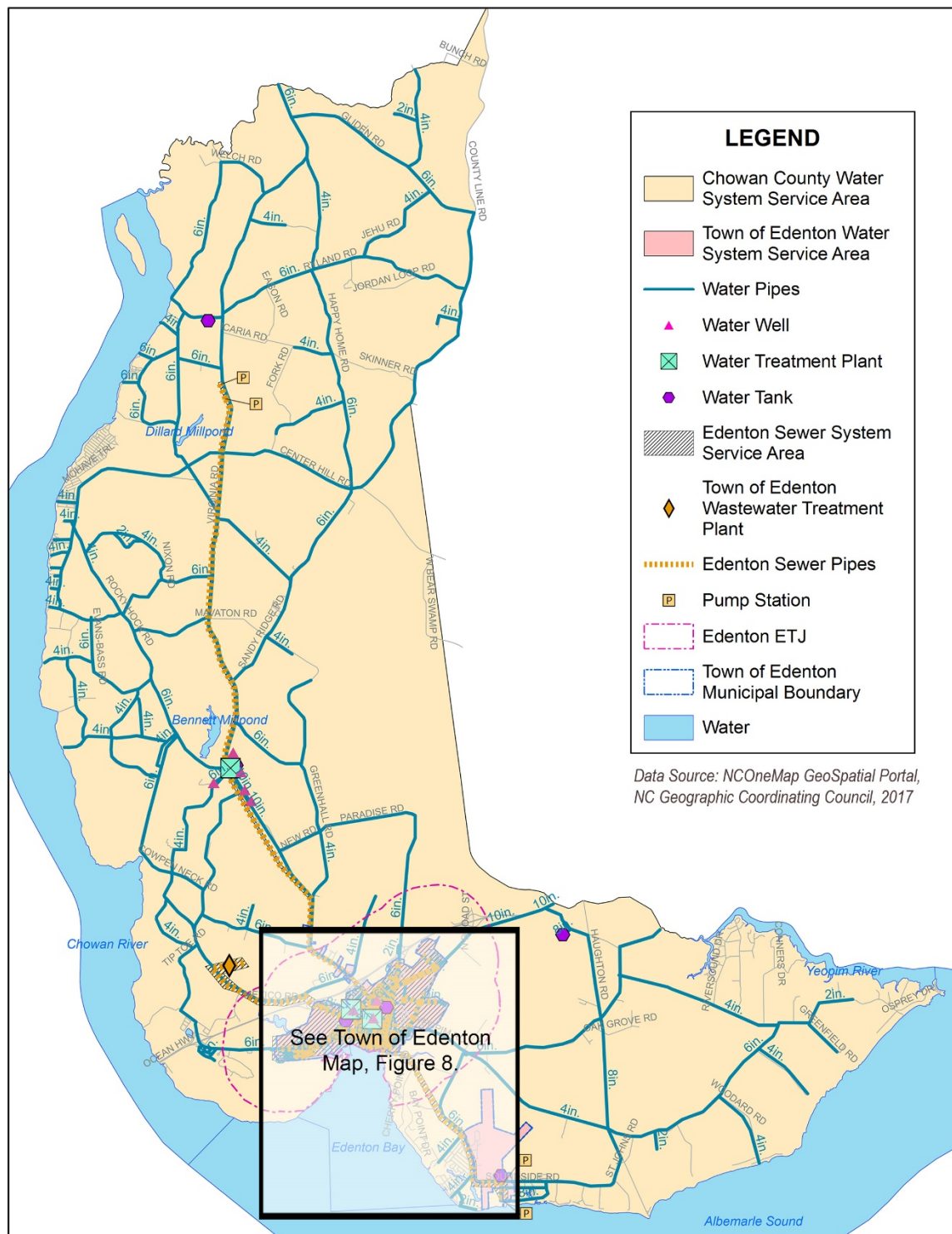
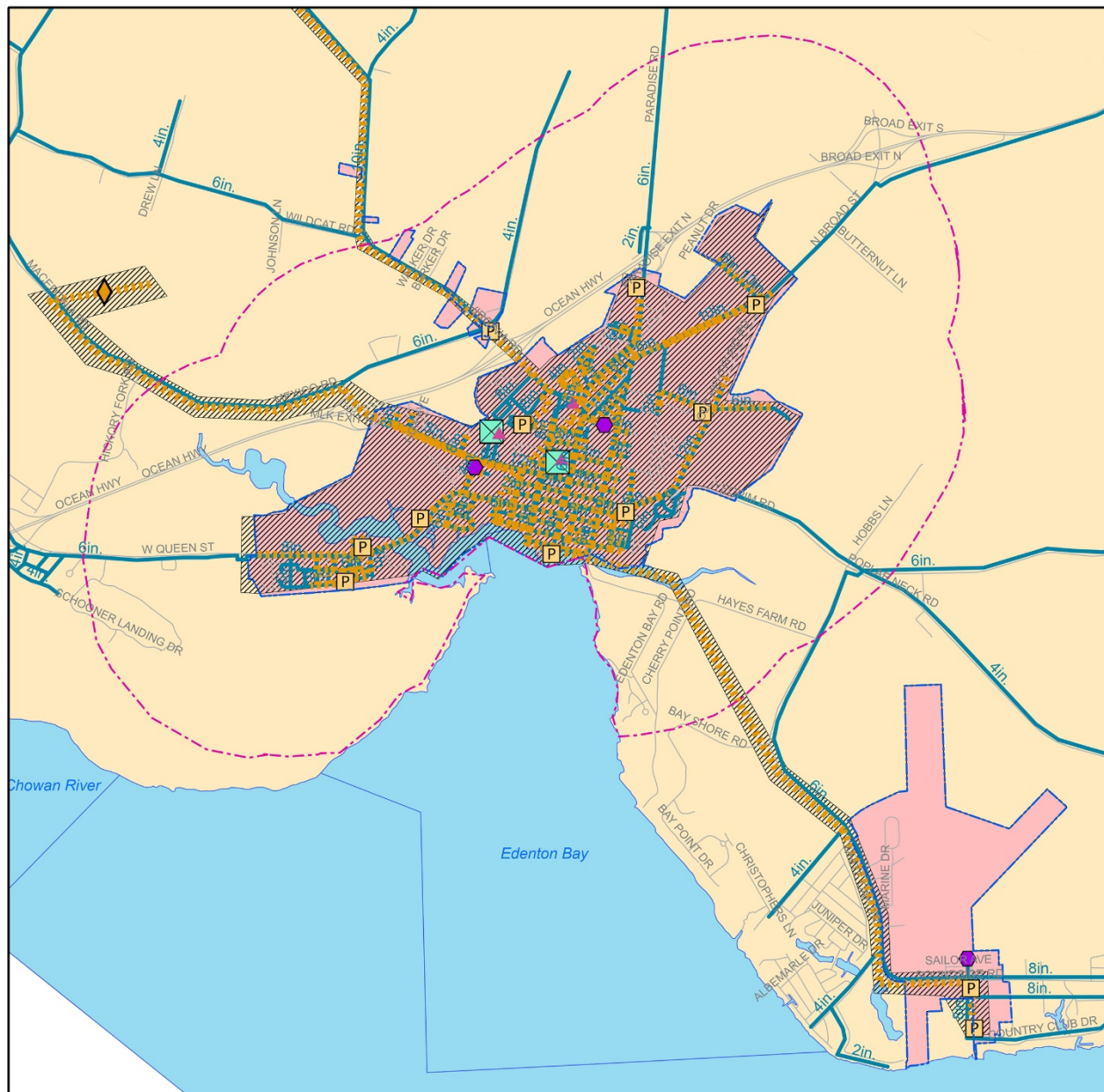




Figure 8. Town of Edenton Water and Wastewater Systems Map



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DISCLAIMER: This map is included for illustrative purposes in the Chowan County-Town of Edenton Future Land Use Map. It is for informational and planning purposes only, and should not be used to establish legal title, boundary lines, location of improvements or utilities, or land use.

LEGEND

- | | |
|---|--|
| Chowan County Water System Service Area | Edenton Sewer System Service Area |
| Town of Edenton Water System Service Area | Town of Edenton Wastewater Treatment Plant |
| Water Pipes | Edenton Sewer Pipes |
| Water Well | Pump Station |
| Water Treatment Plant | Edenton ETJ |
| Water Tank | Town of Edenton Municipal Boundary |
| | Water |
- Data Source: NCOneMap GeoSpatial Portal,
NC Geographic Coordinating Council, 2017

2. Wastewater Treatment Systems

The Town of Edenton municipal wastewater system is the only wastewater treatment systems within Chowan County. Chowan County currently does not operate a wastewater system. In 2004, Chowan County prepared a feasibility study for providing sewer service to the southeastern portion of the County, particularly the Cape Colony and Country Club areas. However, due to declines in development activity in these areas, plans to provide sewer service in the County are on hold for the foreseeable future. Edenton Dyeing and Finishing, an industrial establishment located in the west central portion of Chowan County just south of the Arrowhead Beach development, has in the past operated a private treatment plant; however, the property has recently come under new ownership and the entire system has been removed.

The existing Town of Edenton sewer service area is shown in Figure 8. This is included for illustrative purposes only and is intended to delineate the general wastewater system facilities. For more precise information, detailed maps available at the Town of Edenton Public Works Department offices should be consulted.

a. Edenton Municipal Wastewater Treatment System

i. Sewer System Description

The Town's wastewater treatment facility, built in 1988, is located off of Mexico Road. It consists of a 24-acre lagoon, three 7.5 HP floating aerators, and two 4026 GPM spray irrigation pumps for 300 acres of trees. The collection system consists of 118,931 feet of gravity sewer, 461 manholes, and 16 sewer pump stations, which pump to the main pump station located on West Water Street. This pump station pumps sewage to the wastewater treatment facility through 21,205 feet of 18-inch force main. The majority of the gravity sewer collection system was constructed before 1929 through the late 1970s. Pipes are predominantly vitrified clay ranging in size from 6-inch to 24-inch. The permitted capacity of the wastewater treatment facility is 1.076 million GPD. The Town serves approximately 1,928 sewer customers.

ii. Current Conditions

- The Town's wastewater system occasionally experiences discharges of untreated wastewater into Edenton Bay and the Chowan River Basin. This occurs during periods of heavy and intense rainfall that overwhelm the wastewater system, resulting in an overflow.
- The Town has experienced problems with inflow/infiltration in the sewer system, especially in the Broad Street business district and the surrounding residential area. Inflow and Infiltration is a situation where groundwater and stormwater enter the sanitary sewer system.
- The average annual daily discharge in 2016 was approximately 0.9 MGD.

iii. Sewer System Needs

- The population projections in Section 3.2.A of this Plan anticipate at most slow population growth, supporting local officials' conclusion that there is presently no need for additional sewer capacity. The Town will be monitoring new

development closely and will ensure that no development intended to connect to the wastewater system is permitted without the adequate capacity to serve it.

- The rehabilitation of existing sewer lines has been identified as the most important need.
- Construction of an additional treatment facility is a secondary need.

The Town of Edenton has in the past year been awarded a grant from the State for Hurricane Matthew disaster relief to address the wastewater system failures during heavy rain events. The Town recently hired a contractor to videotape sewer collection lines to find where stormwater is entering the sanitary sewer system during extreme heavy rain events. With this information, the Town can make repairs to stop the inflow and infiltration of stormwater from entering the system.

The Town is working vigorously to identify and repair damaged and out of date infrastructure to prevent future problems with the wastewater treatment system.

b. Proposed Chowan County Wastewater Treatment System

In response to projected residential growth the Cape Colony and Country Club areas that was expected to outstrip the septic capacity of the land in that area, Chowan County prepared a feasibility study in the mid-2000s for providing sewer service to the southeastern portion of the County. However, provision of sewer services in the area is no longer anticipated. Due to Chowan County's lack of a county-wide wastewater system, any high-density residential or major commercial growth will be confined to areas within and around the Town of Edenton where sewer is available, or developers will need to provide package plants on-site.

3. Stormwater Management Systems

a. Edenton

The existing stormwater drainage facilities consist of a system of piping, catch basins, and drainage ditches and swales. The Town is currently evaluating options for improving stormwater management. The Town's Unified Development Ordinance was amended in 2005 to require storm drainage plans for all new developments. The Town of Edenton is not subject to the EPA's Stormwater Phase II rules.

b. Chowan County

The existing stormwater drainage facilities consist primarily of a system of drainage ditches and swales. The County is currently evaluating options for improving stormwater management. The County's subdivision ordinance was amended in 2005 to require storm drainage plans for all new developments. More specific stormwater management requirements have been proposed in the draft revisions to the Chowan County Subdivision Regulations. Chowan County is not subject to the EPA's Stormwater Phase II rules.

c. Existing Drainage Problems

Areas of repetitive flooding, including flooding from stormwater runoff, are identified in Section 3.4.D, Flood Hazard Areas.

d. Water Quality Problems Related to Point Sources

No specific problem areas were identified.

4. Transportation Systems

Chowan County and the Town of Edenton are served by a variety of transportation systems:

- A road system maintained by the North Carolina Department of Transportation (NCDOT).
- The Chesapeake & Albemarle Railroad (CA), a short-line railroad operated by the North Carolina and Virginia Railroad (NCVA.) The CA offers interchanges with Chessie and Seaboard System Transportation (CSXT), Norfolk Southern (NS) and Norfolk and Portsmouth Belt Line Railroad (NPBL). The CA moves over 6,000 cars per year along this route.
- The Northeastern Regional Airport, located just to the southeast of Edenton, is a private airport with five runways which serves residents, visitors, and the industrial operations in the County and Town with convenient air travel.
- Navigable waterways including the Albemarle Sound, Chowan River, and Perquimans River.
- Local systems of sidewalks, bicycle lanes, and paths provide pedestrian and bicycle connections and travel ways.

Chowan County and the Town of Edenton do not currently have any fixed public transportation routes. The Inter-County Public Transport Authority (ICPTA), a division of the Albemarle Regional Health Services, provides on-demand transportation within Chowan County. This service is intended to transport people to nutrition sites, medical appointments, and other locations in order to access services.

Maps of the existing and planned transportation systems in Chowan County and the Town of Edenton from the 2015 Comprehensive Transportation Plan are reproduced in Appendix 4.

a. Transportation and Land Use Patterns

Transportation systems are the structure that defines how many people can get where, in what amount of time and with what degree of ease. Because of this, transportation systems are deciding factors in land use patterns in every community.

The transportation system in the Chowan County planning jurisdiction is fairly typical for a rural agricultural community: it consists primarily of state secondary and tertiary roads, forming a loose network across vast stretches of farmland and meeting for form “crossroads” areas where slightly higher concentrations of population and commercial uses tend to occur. This plan capitalizes on this trend by designating the most active and developed of these crossroads areas as areas for future growth in the County, as designated by the Rural Center designation on the Future Land Use Map in Section 2.2.D.

The County has few formal bicycle or pedestrian resources; rather, cyclists ride on the shoulders of less busy roadways, and some scattered pedestrian trails exist, mostly within residential subdivisions. As indicated in the Citizen Survey conducted as part of this planning process, County residents would like to see an increase in bicycle and pedestrian connections, particularly to recreation resources and water access points.

The roadway system in the Town of Edenton reflects the Town's colonial founding: small blocks laid out in an orthogonal grid pattern fanning out from the main shopping street and oriented toward the waterfront. This traditional pattern still shapes downtown development, providing a structure for infill that fits the local typical building size and mass, and promoting dense, walkable, and picturesque downtown environments. Moving away from the core of downtown, later developments turned to the more modern trend of cul-de-sac or curvilinear streets. While some of these developments maintain connectivity to nearby destinations, many are cut off with only one or two ingress and egress sites. These more typical suburban developments create traffic congestions and discourage bicycle and pedestrian movement. The Town contains a broad network of sidewalk facilities, which contributes to its desirability as a place to live, work, and visit.

b. Level of Service

Chowan County and the Town of Edenton adopted an updated joint Comprehensive Transportation Plan in 2015. The vast majority of roadways in the County and Town are well under their average daily traffic volume capacity as of 2014. No roadways or roadway segments were identified as over or near capacity.

Seven bridges within the County and Town were identified as deficient. Of these, one (Bridge #12 on the map on page 4-39 of this document) has been replaced since the CTP was adopted, and two others are scheduled for replacement in the 2016-2025 Transportation Improvement Plan (TIP). Three of the deficient bridges are located in the County's planning jurisdiction along NC 32 in the northern part of the County. The other four deficient bridges are within the Town of Edenton's planning jurisdiction, and are located on the US 17 Bypass, which is itself scheduled for significant upgrades as part of the Future I-87 project (see Section 3.3.C.4.d, Upgrade of U.S. 17 to Future I-87, for more detail). The deficient bridges are mapped and further detailed within the 2015 Comprehensive Transportation Plan, selected sections of which have been reproduced in the Appendices of this Plan.

c. Transportation Improvement Plan

The major recommendations in the 2015 Comprehensive Transportation Plan are as follows:

i. Highways

- US 17: Upgrade to interstate standards from Bertie County to Perquimans County.
- Luke Street Extension/Western Connector: Construct a two-lane minor thoroughfare on new location from US 17 Business/NC 32 (Virginia Road) to Dr. Martin Luther King Junior Ave (SR 1234).

ii. Public Transportation and Rail:

New Intercity Bus Route (Greyhound Lines): Intercity bus route from Raleigh to Norfolk VA, via Elizabeth City along US 64, US 301, US 264, and US 17 with stops at Raleigh, Rocky Mount, Wilson, Greenville, Washington, Williamston, Edenton and Elizabeth City.

iii. Bicycle

There is one state designated bicycle route in the study area. Additionally, the Albemarle Rural Planning Organization and the local stakeholders identified some onroad bicycle facilities that need improving. These routes are mapped and can be viewed within the Comprehensive Transportation Plan.

In accordance with American Association of State Highway and Transportation Officials (AASHTO), roadways identified as bicycle routes should incorporate the following standards as roadway improvements are made and funding is available:

- Curb & gutter sections require a minimum five-foot bike lanes or 14 foot wide shoulder lanes.
- Shoulder sections require a minimum of four-foot paved shoulder.
- All bridges along the roadways where bike facilities are recommended shall be equipped with 54 inch railings.

iv. Pedestrian

A number of recommendations for pedestrian facilities throughout the planning area were identified during the development of this CTP. These features are mapped and can be viewed within the Comprehensive Transportation Plan.

The following areas were identified as needing sidewalks:

- W. Carteret Street from N. Granville Street to 0.25 miles west of N. Granville Street;
- W. Freemason Street from NC 32 to 0.3 miles west of NC 32 and from N. Granville Street to 0.3 miles west of N. Granville Street;
- Hicks Street from Luke Street to NC 32; and
- Moseley Street from US 17 Business (W. Queen Street) to E. Carteret Street.

d. Upgrade of U.S. 17 to Future I-87

The N.C. Department of Transportation is currently in the feasibility stages of a planned upgrade of U.S. 17, the major roadway running east to west across Chowan County, to an interstate (Future I-87). Future I-87 is planned to connect Williamston, in Martin County, to the Virginia state line and the Norfolk metropolitan area. While NCDOT officials have noted that the project is a long-term one, and could take up to 20 years to complete, the upgrade of this major transportation route to interstate status is very likely to affect the land use patterns and growth of Chowan County.

The majority of the Future I-87 route through Chowan County is already limited access, so only minor changes, such as widening the shoulder, are needed to meet Interstate standards. The current interchanges at West Queen, Dr. Martin Luther King, Jr., Virginia,

Paradise, and North Broad are proposed to be retained as exits off Future I-87. Those roadways that access current US 17 using a diamond interchange – West Queen, Virginia, and North Broad – should see little change in the roadway alignment with the transition to Interstate status. The interchanges at Dr. Martin Luther King, Jr. and Paradise are, at present, planned for conversion to diamond interchanges, which will involve some right-of-way acquisition to the north and south of current US 17.

At present, NCDOT's feasibility study on this segment of roadway show that the existing bridge over the Chowan River will be retained for use as an interstate bridge. Near the Chowan County boundary line to the east, existing US 17 becomes full-access, so more wide-sweeping realignments and road closures will occur in neighboring Perquimans County. Thick Neck Road in Chowan County is proposed to lose access to the highway and instead connect to a service road. The first interchange on Future I-87 in western Perquimans County is proposed to be located at Davenport Lane.

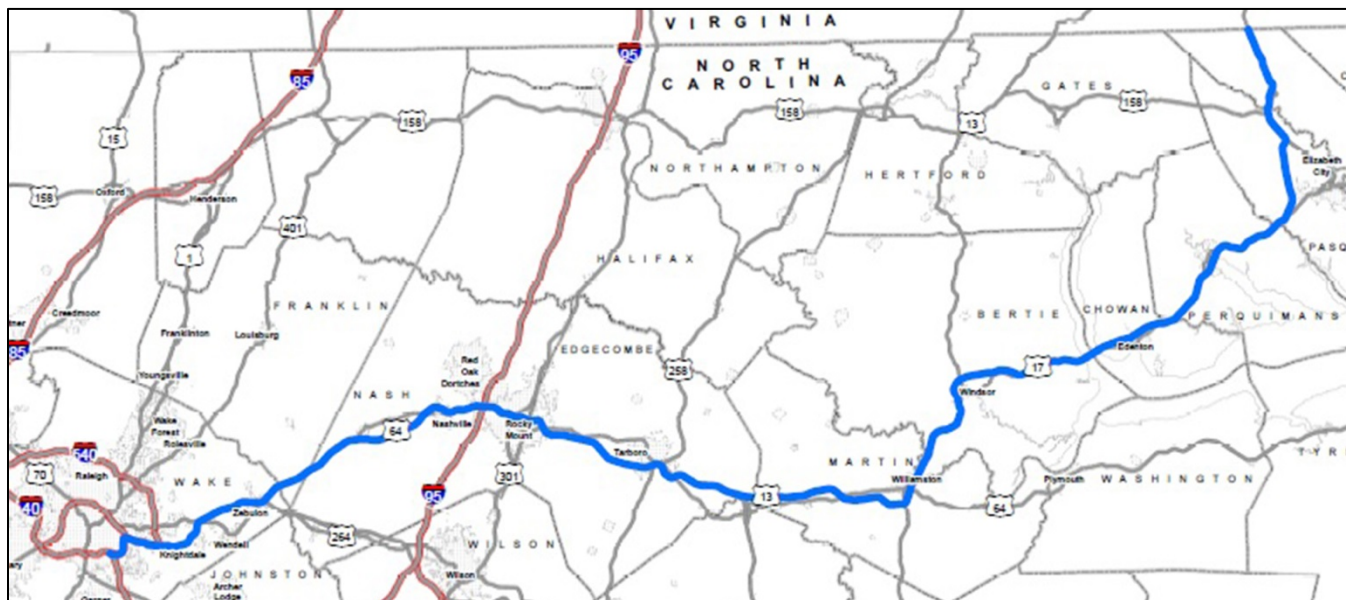
Even before additional growth along the Future I-87 corridor accelerates, the new interstate is expected to absorb some of the heavy traffic that currently travels the I-95 corridor, so additional vehicles and people are expected to flow through Chowan County and Edenton from the outset. This increased traffic creates several distinct opportunities for economic development:

- Highway-oriented commercial for travelers passing through the area who need easily accessible services mid-trip (fast food or casual restaurants, hotels and motels, fuel and convenience stores);
- Visitor-serving commercial for those who find Chowan-Edenton a more accessible vacation destination as a result of interstate access (hotels, motels, and other visitor accommodations, higher-end restaurants, ecotourism, boutique shopping);
- Industrial and other employment uses that would benefit from the new connections to the Norfolk area and the transportation and shipping networks beyond (expansions of existing industrial firms, new related firm branches, industrial services, shipping and logistics support); and
- Healthcare uses that would benefit from additional customers having more direct access to the area (extensions of the existing Vidant Chowan Hospital, specialists, medical supply providers).

In sum, though the time horizon for completion of Future I-87 is long, the upgrade of this key roadway will likely bring a variety of opportunities for Chowan County and Edenton to grow and develop over the coming decades. The future land use policies and map contained in this Plan reflect the current state of the communities and their goals. As Future I-87 nears completion, it will be important to again take stock of existing and projected conditions as a recalibration of the future land use map will likely be necessary.



Figure 3.3.C.1: Proposed Interstate 87 Alignment



3.4. Natural Systems

A. Areas of Environmental Concern

Areas of Environmental Concern (AEC) within the Chowan County area include the following:

1. Public Trust Waters

All waters of the Atlantic Ocean and submerged lands where the public has rights of use and/or ownership. Public trust waters overlap with estuarine waters AEC but include inland fishing waters that are not within the estuarine waters AEC. Public trust waters in Chowan County include the Chowan River, Edenton Bay, Albemarle Sound, and all creeks.

2. Estuarine Waters

All waters of the Atlantic Ocean and all the water of bays, sounds, rivers, and tributaries thereto seaward of the dividing line between coastal fishing waters and inland fishing waters. Estuarine waters in Chowan County include the Albemarle Sound and all man-made tributaries, the Yeopim River (below Norcum Point), the Chowan River and Edenton Bay.

3. Coastal Shoreline

Coastal shorelines include estuarine shorelines and public trust shorelines. Estuarine shorelines AEC are those non-ocean shorelines extending from the normal high-water level or normal water level along the estuarine waters, estuaries, sounds, bays, fresh and brackish waters, and public trust areas. The estuarine shoreline includes dry land up to 75 feet landward of abutting estuarine waters. Estuarine shorelines immediately contiguous to waters classified as Outstanding Resource Waters (ORW) by the Environmental Management Commission, the estuarine shoreline AEC includes dry land up to 575 feet landward from the normal high-water level or normal water level; however, there are no ORW-designated waters in Chowan County. Public trust shorelines AEC are non-ocean shorelines immediately contiguous to public trust areas. They are located inland of the dividing line between coastal fishing waters and inland fishing waters as set forth in that agreement and extend 30 feet landward of the normal high-water level or normal water level.

4. 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. Coastal wetlands comprise approximately 47 acres of the Chowan County planning jurisdiction and less than one acre of the Edenton planning jurisdiction. The precise location of coastal wetlands must be determined by field investigation by the Division of Coastal Management.

Development within the designated Areas of Environmental Concern is limited by CAMA regulations and development guidelines. A map delineating AECs in Edenton and Chowan County is available for public review and inspection at the Town of Edenton Planning Department and the Chowan County Planning and Inspections Department.

B. Soil Characteristics

Generally, most of the soils in Chowan 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. Over 91 percent of all the soils in Chowan County are rated as having slight limitations for septic tank absorption fields. 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.

Specific soil limitations data for sewage disposal, dwellings, and small commercial buildings are provided in Appendix 5. Soils that are classified as prime farmland and hydric are also delineated in Appendix 5.

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 50 percent of the total Chowan County land area contains soils that are identified as prime farmland, farmland of statewide importance, and farmland of unique importance. The largest concentrations of such classified soils are located in the northern, southeastern, and central portions of the Chowan County. An additional 28 percent of the County land area is classified as having prime farmland soils if those soils are drained.

Prime farmland, as defined by the US Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. Farmland of statewide importance includes land that does not meet all of the characteristics of prime farmland soils but are lands that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable. Farmland of unique importance includes land other than prime farmland that is used for the production of specific high-value food and fiber crops. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of specific high-value food and fiber crops. In North Carolina, soils on which blueberries are produced meet these requirements. Drained phases of the Leon, Lynn, and Murville series are examples of soils in this category. A map delineating prime farmland in Edenton and Chowan County is available for public review and inspection at the Town of Edenton Planning Department and the Chowan County Planning and Inspections Department.

A variety of mechanisms are currently available in North Carolina to assist with farmland preservation including:

- Voluntary agricultural district program
- Use value taxation

- Conservation easements
- Transfer of development rights
- Right to farm laws

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.

Soils data is important information for site planning purposes as well as for the formulation of public policies and regulatory mechanisms regarding infrastructure development and land use planning. More detailed data regarding the criteria 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.

Soils maps and data are available for public review and inspection at the Chowan Soil and Water Conservation District Office located in the Chowan Agriculture Building at 730 North Granville Street, Suite B, Edenton, NC.

C. Water Quality Classifications and Use Support Designations

1. 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). All primary and secondary water quality classifications are described in Appendix 6.

Chowan County is divided by two separate river basins, the Chowan River Basin and the Pasquotank River Basin. The Chowan County waters within the Chowan River Basin include a variety of primary and secondary water quality classifications, including C, B, and NSW. All waters within the Chowan River basin have a supplemental classification of NSW. The Chowan County waters within the Pasquotank River Basin include C, SC, SB, and Sw. For additional detail on the

use support ratings of the waters within Chowan County, see Tables 3.4.C.2.A and 3.4.2.C.2.B below.

2. Use Support Designations

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 and impaired. 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 subbasin 03-01-03 and 03-01-04 of the Chowan River basin, all monitored waters are Supporting for aquatic life and primary recreation. Subbasin 03-01-52 is in the Pasquotank River basin and monitored waters are Supporting in the aquatic life category. However, waters are Impaired in the fish consumption category in subbasins 03-01-04 and 03-01-52 due to the Department of Health and Human Services Fish Consumption Dioxin Advisory for the Albemarle Sound and the mouth of the Chowan River.

All of the waters in and around Chowan County are closed to shellfishing. The majority of these waters have been closed to shellfishing for many years; the waters east of Bluff Point to the Yeopim River were open to shellfishing as recently as ten years ago, but are now closed. There are no major productive shellfishing areas in Chowan County.

The tables below provide more detailed information regarding use support ratings for each subbasin:

Table 3.4.C.2.A: Use Support Ratings for Monitored and Evaluated Freshwater Streams Chowan River Basin		
Subbasin 03-01-03 Use Support Ratings	Aquatic Life	Recreation
Monitored Waters		
Supporting	14.1 miles	14.1 miles
Total Monitored	14.1 miles	14.1miles
Unmonitored Waters		
No Data	17.1 miles	17.1 miles



Table 3.4.C.2.A: Use Support Ratings for Monitored and Evaluated Freshwater Streams Chowan River Basin		
Total Unmonitored	17.1miles	17.1 miles
Total All Waters [1]	31.2 miles	31.2 miles
Subbasin 03-01-04 Use Support Ratings	Aquatic Life	Recreation
Monitored Waters		
Supporting	9.1 miles 15,600.4 acres	7.8 miles 15,600.4 acres
Not Rated	7.8 miles	0
Total Monitored	16.9 miles 15,600.4 acres	7.8 miles 15,600.4 acres
Unmonitored Waters		
No Data	58.9 miles 1,370.3 acres	68.1 miles 1,370.3 acres
Total Unmonitored	58.9 miles 1,370.3 acres	58.9 miles 1,370.3 acres
Total All Waters[1]	75.8 miles 16,879.7 acres	75.8 miles 16,879.7 acres
NOTES:		
[1] Total Monitored + Total Unmonitored = Total All Waters		
Source: Chowan River Basinwide Water Quality Plan, 2007		

Table 3.4.C.2.B: Use Support Ratings for Monitored and Evaluated Freshwater Streams Pasquotank River Basin				
Subbasin 03-01-52 Use Support Ratings	Aquatic Life		Recreation	
	Freshwater (miles)	Saltwater (acres)	Freshwater (miles)	Saltwater (acres)
Monitored Waters				
Supporting	25.0	73,736.7	7.9	74,429.3
Impaired [2]	7.9 (19.8%)	692.6 (0.9%)	0	0
Not Rated	7.1	0	0	0
Total Monitored	40.0	74,429.3	7.9	74,429.3
Unmonitored Waters				
Not Rated	8.0	14.7	0	0
No Data	40.9	18,220.6	80.9	18,235.3
Total Unmonitored	28.9	18,235.3	80.9	18,235.3
Total All Waters [1]	88.9	92,664	88.8	92,664.6
NOTES:				
[1] Total Monitored + Total Unmonitored = Total All Waters				
[2] The noted percent impaired is the percent of monitored miles/acres only.				
Source: Pasquotank River Basinwide Water Quality Plan, 2007				

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 9% percent of the county's land area is within a 100-year floodplain. The most significant floodplains are located along the creeks and tributaries that feed into the Chowan River. The 100-year floodplain is delineated in Figure 9, based on data current as of June 2017 from the North Carolina Flood Risk Information System.

E. Storm Surge Areas

Storm surge is the rise in sea level caused by water being pushed towards land by hurricane winds. Storm surge inundation areas are predicted based upon National Hurricane Center's latest Sea, Lake, and Overland Surges from Hurricanes (SLOSH) 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. Flooding as well as high winds would impact the Chowan County area during a major coastal storm.

Storm surge areas for slow- and fast-moving hurricanes of various categories are shown in Figures 10 and 11. The areas subject to storm surge inundation delineated on this map are based upon the most intense storm intensity and storm speed.

While the identified hurricane storm surge inundation areas often parallel the 100-year flood hazard area shown in Figure 11, there are some additional portions of Chowan County and Edenton that are particularly subject to Category 4 and 5 hurricane-induced flooding. These areas are generally located in along the Chowan River and all rivers and tributaries that feed into the Chowan River. In slow-moving storms, the areas fronting and inland from the Yeopim River also show significant storm surge risk.

Note that a slow-moving storm of any strength is predicted to cause a higher storm surge and more flooding than a fast-moving storm. This is because of Chowan County's location off the Albemarle Sound. While fast-moving storms cause greater storm surges in communities directly on open ocean coastlines, slower moving storms have more time to push large quantities of water into bays, sounds, and estuaries, which act as funnels. Because of this effect, Chowan County's worst-case scenario for storm surge would be a slow-moving category 4 or 5 hurricane. As shown in Figure 10, storm surge from such an event could subject more than 25 percent of the land area in the County to flooding, including over half of the land area in the Town of Edenton and its ETJ.

More detailed storm hurricane surge maps are available for review in the offices of the Town of Edenton Planning Department and Chowan County Planning and Inspections Department and online at the National Hurricane Center website.



Figure 9. 100-Year Floodplain

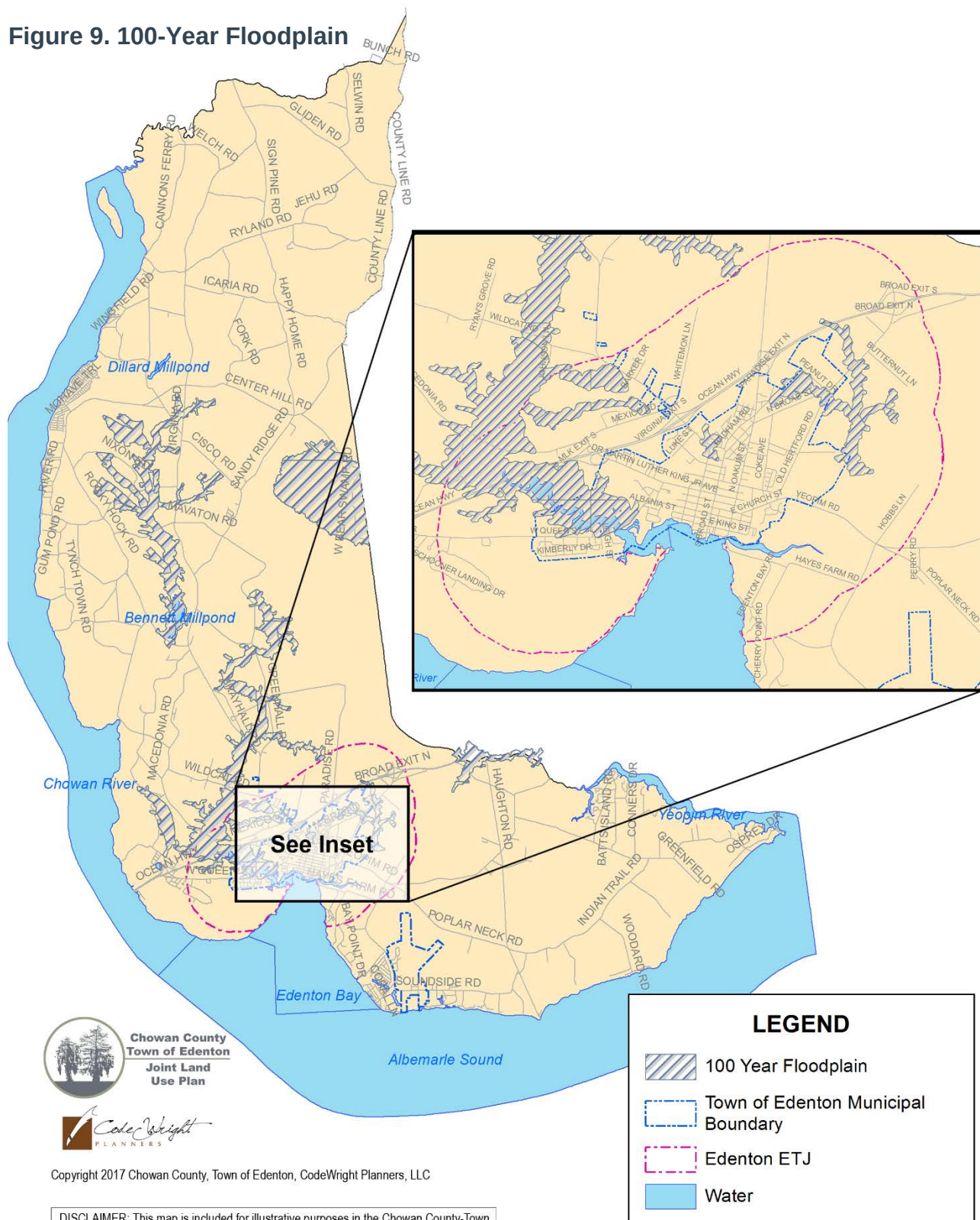
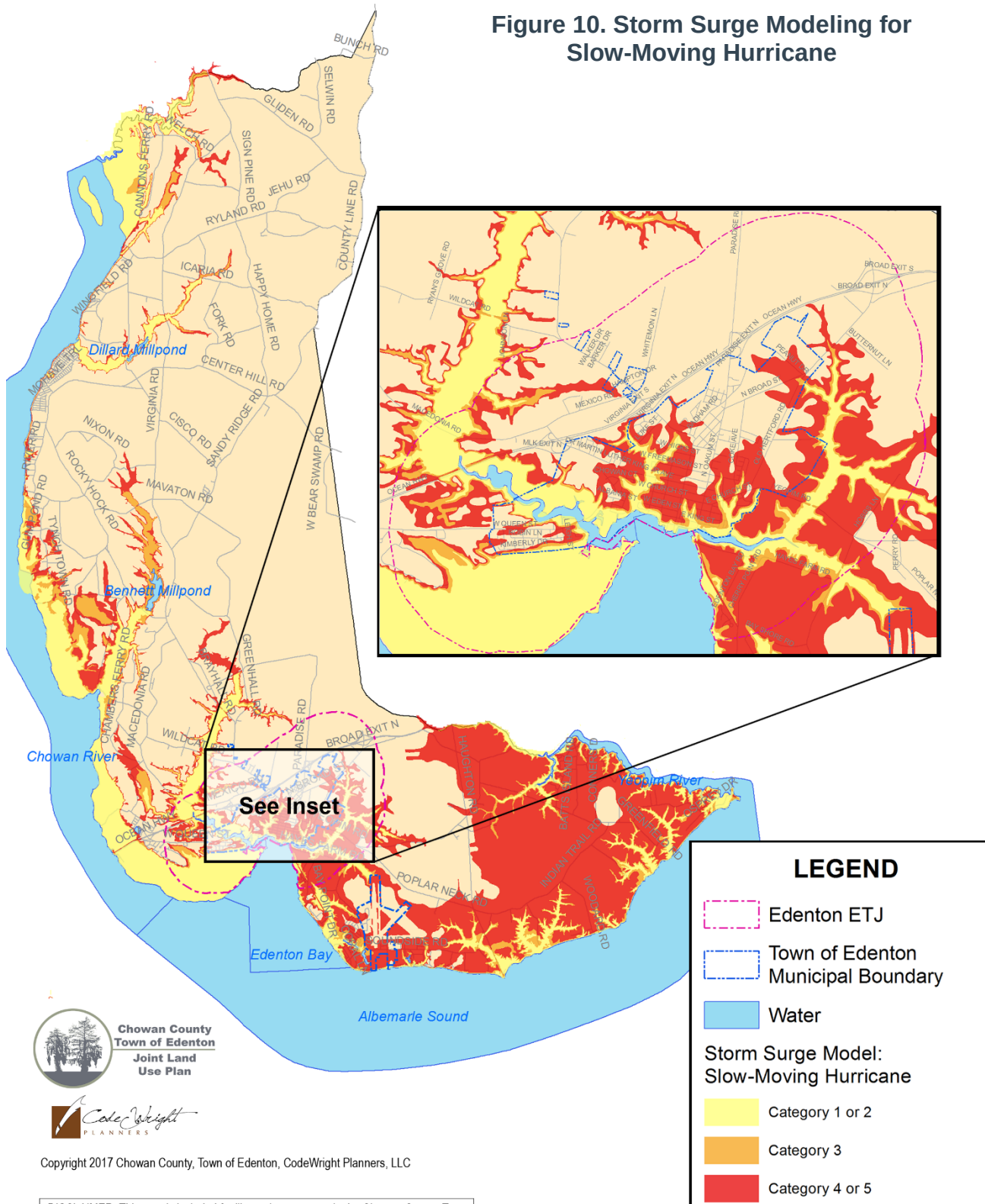




Figure 10. Storm Surge Modeling for
Slow-Moving Hurricane



Chowan County
Town of Edenton
Joint Land
Use Plan



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DISCLAIMER: This map is included for illustrative purposes in the Chowan County-Town of Edenton Future Land Use Map. It is for informational and planning purposes only, and should not be used to establish legal title, boundary lines, location of improvements or utilities, or land use.

Data Source: NCOneMap Geospatial Portal, NC
Geographic Coordinating Council, 2017
National Hurricane Center



Figure 11. Storm Surge Modeling for
Fast-Moving Hurricane



F. Non-Coastal Wetlands

Non-coastal wetlands include all other wetlands not classified as coastal wetlands. 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 “Section 404” or freshwater 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. Major non-coastal wetlands areas are located in the northwestern, western, and south central portions of Chowan County. Non-coastal wetlands account for approximately 28.2 percent of the total Chowan County land area.

G. Water Supply Watersheds and Wellhead Protection Areas

There are no public water supply watersheds within Chowan County or the Town of Edenton. The Town of Edenton adopted a Wellhead Protection Plan in August 2016 that establishes a wellhead protection area surrounding the Town’s four wells. The Town’s plan uses a non-regulatory approach to managing its wellhead protection areas, which focuses on education of residents and businesses within the wellhead protection area. Maps of the wellhead protection area as well as educational materials and background information on the wellhead protection initiative are available from the Town of Edenton Planning Department and on the Town website. Chowan County does not currently designate wellhead protection areas and does not have a wellhead protection plan in place. As of June 2017, the Chowan County Water Department is working with the state to identify wellhead protection areas and prepare a plan.

H. Primary Nursery Areas

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

No Primary, Special Secondary, or Permanent Secondary Nursery Areas have been identified within the waters of Chowan County. However, the Division of Marine Fisheries has identified and documented Anadromous Fish Spawning Areas (AFSA) in Chowan County. The waters of the Chowan River and its tributaries, as well as the near shore waters of the Albemarle Sound, serve as nursery area for anadromous species (striped bass, blueback herring, alewife, American shad and hickory shad), resident species (white perch, yellow perch, catfishes, etc.) and estuarine dependent species (spot, croaker, striped mullet, southern flounder, blue crabs, etc.). Due to overlapping jurisdictional boundaries between the Marine Fisheries Commission and the NC Wildlife Resources Commission (NCWRC), which controls inland waters, there are three classifications of AFSA waters which control which set of rules must be followed:

- Edenton Bay is designated as AFSA in rule by the Marine Fisheries Commission (MFC) and must follow MFC rules as found in 15A NCAC 03R .0115.
- Stumpy Creek, Indian Creek, Rockyhock Creek, Queen Anne Creek, and Pembroke/Pollocks Swamp are identified as AFSA in rule by the Wildlife Resources

Commission (NCWRC) and must follow WRC rules as described in 15A NCAC 10C .0603.

- The Chowan River is designated as AFSA by both MFC and NCWRC jurisdictions, and must follow rules within the MFC rules.

Submerged Aquatic Vegetation is also found in the waters around Chowan County. This type of habitat is not only important to the species listed above but also to forage species. The NC Coastal Habitat Protection Plan (2016) identified Submerged Aquatic Vegetation as one of six critical habitat types in North Carolina.

I. Environmentally Fragile Areas & Significant Natural Heritage Areas

One of the key functions of the North Carolina Natural Heritage Program is identification of the most important areas for the natural diversity of our State. These “Significant Natural Heritage Areas” (SNHA) may derive their significance from the presence of rare species, rare or high quality natural communities, or other important ecological features. The SNHAs located in Chowan County are summarized below. The designation of a Significant Natural Heritage Area conveys no protection status. Many of these significant natural heritage areas are privately owned, and not protected.

Cherry Point Woods is considered of regional significance for a high-quality example of the Mesic Mixed Hardwood Forest natural community — one of the best in the region.

Chowan River Aquatic Habitat is state significant, and contains habitat for an assemblage of rare mollusks, including Tidewater mucket (*Leptodea ochracea*), Triangle floater (*Alasmidonta undulata*), alewife floater (*Anodonta implicata*), Eastern lampmussel (*Lampsilis radiata*), and Eastern pondmussel (*Ligumia nasuta*).

Chowan Swamp is considered of state significant for one of the most extensive mature Tidal/Nonriverine Swamp Forest complexes in the state. The site contains one of the few known examples in the state for the Freshwater Variant of the Tidal Freshwater Marsh natural community.

Drummond Point Woods is state significant for Cluster of natural tidal and upland natural communities, with bald eagle (*Haliaeetus leucocephalus*) nesting site. Natural communities include Tidal Cypress-Gum Swamp, Coastal Plain Semipermanent Impoundment, and Mesic Mixed Hardwood Forest.

Gallberry Swamp is regionally significant for a fair quality example of the globally rare Nonriverine Swamp Forest natural community.

Lower Indian Creek Swamp and Ravine is considered of regional significance for its combination of good quality natural communities, including Tidal Freshwater Marsh, Tidal Cypress--Gum Swamp, and Dry-Mesic Oak—Hickory Forest.

Reedy Point Swamp is regionally significant and contains a good example of Pond Pine Woodland natural community. This example is among the best in the region north of Albemarle Sound.

Rocky Hock Swamp Forest is state significant, and contains the only known population of whiskfern (*Psilotum nudum*) population in North Carolina; this represents a significant range extension for the species. This site contains a not-well-developed example of the rare Nonriverine Swamp Forest natural community, and could be the only protected forest community on mineral soils in Chowan County.

Snow Hill Bay is regionally significant for an unusual example of Nonriverine Swamp Forest natural community.

Warwick Creek Oak Flats and Slopes is county significant for fairly good quality examples of Mesic Mixed Hardwood Forest and Cypress-Gum Swamp natural communities. The site significance has been reduced since the 1990 report by recent clearcutting and field clearing.

These areas serve as important natural vegetated buffers and provided wildlife habitat. A larger map delineating the general location of SNHAs in Edenton and Chowan County is available for public review and inspection at the Chowan County and Town of Edenton Planning and Inspections Departments. Appendix 7 contains an inventory of natural areas and rare species found in Chowan County.

3.5. Environmental Conditions

A. Water Quality Assessment

Chowan County spans two river basins, the Pasquotank River Basin and the Chowan River Basin. These basins lie 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 in the Chowan Basin is 1.75 square miles, the Pasquotank Basin 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.

Chowan County is within subbasins 03-01-03, 03-01-04 and 03-01-52. The northern portions of Chowan County are within subbasin 03-01-03. The County comprises approximately 9% of this subbasin. The central portion of Chowan County, including the Town of Edenton, are also with subbasin 03-01-04. The County comprises approximately 12.9% of this subbasin. The eastern portions of Chowan County are within subbasin 03-01-52. The County comprises approximately 14.9% of this subbasin. The majority of subbasin 03-01-52 is within Perquimans County.

Water quality is generally good within the Pasquotank and Chowan River Basins. The main water quality issue within the Pasquotank River Basin is habitat degradation, including loss of riparian vegetation, channelization, and erosion. Nonpoint source surface runoff is a threat to water quality for both the Chowan and Pasquotank River basins.

Use support designations for all three Chowan County river subbasins can be found in Section 3.4.C.2 of this plan. Additional detail on each subbasin is provided in the following sections.

1. Subbasin 03-01-03

The 2007 Chowan River Basinwide Water Quality Plan classifies all of the 23 square miles of waters in subbasin 03-01-03 as Nutrient Sensitive Waters (NSW). However, no water quality criteria were exceeded at either of two monitoring sites at the last measurement, and as of 2007, the Department of Water Quality recommended removing this segment of the Chowan River from the 303(d) list of impaired waters. The closure of the Edenton Dyeing and Finishing Plant, the subbasin's largest historic source of effluent limit violations, has contributed to the subbasin's water quality improvements.

DWQ recommends the continued issuance of permits for point sources using the Nutrient Sensitive Waters (NSW) management strategy that involves nitrogen and phosphorus limits and land application requirements.

2. Subbasin 03-01-04

The 2007 Chowan River Basinwide Water Quality Plan noted that this 45 square mile portion of the Chowan River is influenced by development in Edenton, which at the time of the plan was expected to boom. Bluegreen algal blooms are a frequent problem in this portion of the Chowan River, and though reductions in nutrient inputs has led to a steady decline in both the frequency and intensity of algal blooms, there were significant blooms in 2016 that resulted in a Division of Water Resources report issued in July 2016.

The water quality data collected in 2007 suggest little change in water quality since the previous reporting period in 2000. The subbasin showed high salinity, but no problems with dissolved oxygen, nutrients, or pH.

This section of the Chowan River is listed as Impaired in the fish consumption category because of a dioxin advisory issued in 2001. All waters within this subbasin are classified as Nutrient Sensitive Waters (NSW), and the subbasin remains on the 303(d) list of impaired waters.

3. Subbasin 03-01-52

The 2007 Pasquotank River Basinwide Water Quality Plan noted that nonpoint source runoff seems to be the greatest problem in this subbasin. The nonpoint source pollution potential from cropland was determined to be moderate to high.

Burnt Mill Creek is currently rated as supporting and is no longer considered impaired. DWQ will continue to develop biocriteria to better assess use supports in waters and swamp characteristics. 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 was 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.

4. Lower Chowan River

The lower Chowan River, from the subbasin boundary to the Albemarle Sound (7.8 miles), is Not Rated+ in the aquatic life category. A Good benthic bioclassification at site DB14 was given based on draft Coastal B criteria. Coastal B rivers are defined as waters in the coastal plain that are deep (nonwadeable), freshwater systems with little or no visible current under normal or low flow conditions. Other characteristics may include an open canopy, low pH and low DO. Boat sampling is required for these waters.

Any bioclassifications derived from sampling data should be considered draft and not used for use support decisions; therefore the lower Chowan River is Not Rated (BAU, July 2006).

Since 1983, the lower Chowan River has been sampled nine times. Bioclassifications have ranged from Fair to Good. Since 1995, the river has been rated using draft criteria for Coastal B rivers. The 2005 Good bioclassification is an improvement from the Good-Fair it received during 2000. The improvement was noted in the number of species collected in 2005 compared to 2000.

No water quality standards were exceeded at the ambient monitoring station (DA11); however, salinity values over 3.0 parts per trillion (ppt) have been recorded 10 percent of the time. Because salinity can be above 3.0 ppt, the lower Chowan River has historically been classified as both freshwater and oligohaline. Oligohaline is an estuarine classification for waters with salinity between 0.5 and 5.0 ppt. Due to the low salinity during this assessment period, however, the bioclassification at site DB14 was based on draft criteria for Coastal B rivers. The lower Chowan River will continue to be sampled as a freshwater site with saltwater intrusions from 0.5 to 5.0 ppt (oligosaline).

This segment of the Chowan River (7.8 mi.) is Impaired in the fish consumption category because of a dioxin advisory issued by the Department of Health and Human Services in 2001.

Water quality conditions appear to be improving in the lower Chowan River. This segment of the Chowan River was identified as one of seven targeted local watersheds in the Chowan River Basin Restoration Priorities (2009) planning document and has been removed from the 303(d) list of impaired waters in the 2016 draft 303(d) designations.

5. Upper Chowan River

The upper portion of the Chowan River, from the subbasin 03-01-01 and 03-01-03 boundary to the subbasin 03-01-03 and 03-01-04 boundary (14.1 miles), is Supporting in the aquatic life category due to ambient water quality data collected at sites DA9 and DA10. No water quality standards were exceeded at either of the two ambient monitoring stations.

This segment of the Chowan River was recently removed from the 303(d) list of impaired waters based on noted water quality improvements. Edenton Dyeing and Finishing has a history of effluent limit violations, but the facility has closed and is no longer producing effluent.

6. Albemarle Sound

The Albemarle Sound is Supporting in both the aquatic life and recreation categories. However, the waters are Impaired for fish consumption based on the dioxin advisory issued by the Department of Health and Human Services in 2001. Dioxins are the byproducts of industrial processes and are formed during the chlorine bleaching process at pulp and paper mills. The advisory is for the consumption of catfish and carp in the Albemarle Sound from Bull Bay to Harvey Point; West to the mouth of the Roanoke River and to the mouth of the Chowan River to the U.S. Highway 17 Bridge (Perquimans, Chowan, Bertie, Washington, and Tyrrell Counties). Women of childbearing age and children should not eat any catfish or carp from this area until further notice. All other persons should eat no more than one meal per month of catfish and carp from this area. For more information on this advisory please visit the DHHS website.

7. Pollock Swamp and Rockyhock Creek

Pollock Swamp drains to Edenton Bay and Rockyhock Creek is a tributary to the Chowan River, these waters were not monitored and are therefore not given a use support ratings. Water quality conditions are of concern here because Valhalla WTP (NC0032719) is discharging to an unnamed tributary to the Pollock Swamp when they are permitted to discharge to Rockyhock Creek. The facility is currently out of compliance with toxicity issues; the lagoon is leaking to old borrow pits on the south side and may be contaminating surface waters. The plant holds a temporary permit for the new discharge site, while the renewal permit is being processed for discharge into the unnamed tributary of Pollock swamp. The new permit will require toxicity monitoring. DWQ recommends the lagoon be repaired and excess solids be cleaned out.

Pollock Swamp drains into Pembroke Creek along the western edge of Edenton and Queen Ann's Creek flows along the eastern side of Edenton. Resource agencies have identified these creeks as priority in need of riparian buffers, stormwater wetlands and critical area plantings to improve water quality.

B. Chronic Wastewater Treatment Malfunctions

There are no reports of areas in the County or the Town experiencing chronic wastewater treatment malfunctions. The Town is working to address its occasional wastewater malfunctions, as described in Section 3.3.C.2.a.

C. Non-point Source Pollution

While there have been reports of algal blooms in the surrounding waterways in recent years, they have not been linked to runoff sources within Chowan County or the Town of Edenton. There are no currently identified non-point source pollution problems in the County or Town.

D. 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 2016 draft 303(d) list identifies two sections of impaired waters in Chowan County, both in the Pasquotank River Basin in the southern tip of the county. AU 30b, the Albemarle Sound from 0.5 miles east of Kendricks Creek to the Harvey Point/ Bull Bay Crossing, was designated impaired in 2008 due to levels of copper exceeding Clean Water Act criteria. AU 26, the freshwater portion of Albemarle Sound (formerly part of Chowan River Basin) was designated impaired in 2010 through a DHHS fish consumption advisory due to elevated dioxin levels in fish tissue.

E. Closed Shellfishing Areas

The North Carolina Shellfish Sanitation and Recreational Water Quality Section of the Department of Environmental Quality is responsible for protecting the consuming public from shellfish and crustacea 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 crustacea for sale to the general public. Waters are sampled regularly and closed if levels of fecal coliform indicate that harvesting shellfish from those waters could cause a public health risk.

All of the waters in and around Chowan County are closed to shellfishing. The majority of these waters have been closed to shellfishing for many years; the waters east of Bluff Point to the Yeopim River were open to shellfishing as recently as ten years ago, but are now closed. There are no major productive shellfishing areas in Chowan County.

Land uses that potentially adversely impact shellfishing 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 stormwater runoff from developed uses also can adversely impact shellfishing waters.

F. Natural Hazards

The 2015 Hazard Mitigation Plan identifies nine properties in the County and Town as repetitive loss properties. Generalized areas of repetitive flooding that are identified in the 2015 Albemarle Regional Hazard Mitigation Plan include the following:

1. Areas of Repetitive Flooding in the Town of Edenton Planning Jurisdiction:

- Pembroke Circle (storm surge)
- Water Street (storm surge)
- Queen Street & Broad Street intersection (heavy rain)
- Court Street & E. Eden Street intersection (heavy rain)

2. Areas of Repetitive Flooding in the Chowan County Planning Jurisdiction:

- Cape Colony Neighborhood; Blackbeard Road (storm surge)
- Old Ferry Road; Chowan River (storm surge)
- Cannon's Ferry Road; Chowan River (storm surge)

The 2015 Albemarle Regional Hazard Mitigation Plan also identifies general coastal flooding as a hazard that often results from a strong southwest wind that raises water levels and, in turn, floods parts of waterfront neighborhoods. The Hazard Mitigation Plan identifies the following areas as being susceptible to flooding:

- Morris Circle and Stratford Drive
- South side of Albemarle Court adjacent to Fisher Field
- Stratford Road and Second Street
- Badham Road and the businesses in the Fisher Field area
- East Water Street
- East King Street

Flooding problems resulting from excessive rainfall have been identified in the Inflow and Infiltration Study, 2001 and the Albemarle Court/Morris Circle Drainage Evaluation, 2002 prepared by Hobbs Upchurch and Associates. The Hazard Mitigation Plan identifies and analyzes natural hazards, evaluates vulnerability to natural hazards, assesses the county and town's capability to mitigate the effects of natural hazards, and outlines mitigation strategies and recommended actions.

The Chowan County and Town of Edenton hazard mitigation goals, as outlined in the Hazard Mitigation Plan, are to:

- Monitor the ongoing status and condition of all repetitive loss properties; and

- Explore options for relocating or flood proofing the Edenton Police Department, which is located in the 100 year floodplain.

The following table summarizes the hazards identified and assessed in the Hazard Mitigation Plan:

Table 3.5.2: Hazard Identification and Risk Assessment				
Type of Hazard	Likelihood of Occurrence [1]	Possible Affected Area [2]	Impact [3]	Rank [4]
Hurricane	Likely	Large	Critical	1
Flooding	Likely	Large	Limited	3
Erosion	Possible	Small	Limited	5
Tornado	Likely	Small	Catastrophic	2
Nor'easter	Likely	Large	Limited	2
Wildfire	Likely	Medium	Limited	3
Drought	Possible	Medium	Limited	3
Severe Winter Storm	Likely	Large	Negligible	3
NOTES: [1] Highly Likely, Likely, Possible, or Unlikely [2] Small, Medium, Large, or Extensive [3] Catastrophic, Critical, Limited, or Negligible [4] The ranking is based on a scale of 1 to 5 with 1 being the highest rank of concern.				
Source: 2005 Hazard Mitigation Plan				

As part of the hazard mitigation planning process, the types of Critical Facilities were identified within Chowan County and the Town of Edenton. These facilities are necessary to maintain the health, safety and viability of the community during hazardous events.

Highly Critical Facilities identified in the Hazard Mitigation Plan include:

- Schools
- Town, County, State & Federal Office
- Hospitals
- EMS/police/fire stations
- Sewage Treatment Plant and pump stations
- Water Treatment Facility
- Historical Structures
- Churches

The Hazard Mitigation Plan specifically lists 15 highly critical structures, 12 of which are located within the Town of Edenton. A map delineating the general location of the Critical Facilities is provided in the Hazard Mitigation Plan. Structures identified in the Hazard Mitigation Plan as being vulnerable to natural hazards include the following:

a. Critical Structures Risk Assessment in Chowan County

- Schools: some are located in wooded areas; all are prone to hurricanes, wildfires, drought, Nor'easters, winter storms, and tornadoes.
- Commercial Airport: located in a wooded area; prone to hurricanes, wildfires, drought, Nor'easters, winter storms, and tornadoes.
- Historic Structures: some are located in the 100-year flood zone and wooded areas; all are prone to flooding, hurricane damage, wildfires, drought, Nor'easters, winter storms, and tornadoes.
- Churches: some are located in the 100-year flood zone; all are prone to hurricanes, wildfires, drought, Nor'easters, winter storms, and tornadoes.

b. Critical Structures Risk Assessment in the Town of Edenton

- Town, county, state and federal offices: some are located within the 100-year flood zone; all are prone to hurricanes, wildfires, drought, Nor'easters, winter storms, and tornadoes.
- Schools: some are located in highly populated areas; all are prone to hurricanes, wildfires, drought, Nor'easters, winter storms, and tornadoes.
- Hospital: prone to hurricanes, wildfires, drought, Nor'easters, winter storms, and tornadoes.
- EMS/police/fire: some are located in the 100-year flood zone; all are prone to flooding, hurricane damage, wildfires, drought, Nor'easters, winter storms, and tornadoes.
- Sewer Treatment Plant and Pump Stations: located in a wooded area with pump station located throughout the town all near or within the 100-year flood zone. Prone to hurricanes, flooding and wildfires.
- Water Treatment Facility: facilities are located near the 100-year flood zone; prone to hurricane damage, drought, Nor'easters, winter storms, and tornadoes.
- Historical structures: some are located in the 100-year flood zone and wooded areas; all are prone to flooding, hurricane damage, wildfires, drought, Nor'easters, winter storms, and tornadoes.
- Churches: some are located in the 100-year flood zone; all are prone to hurricanes, wildfires, drought, Nor'easters, winter storms, and tornadoes.

The Hazard Mitigation Plan states that erosion has not been a significant issue for Chowan County or the Town of Edenton. However, continued hurricanes and other storms which cause high storm surges could eventually cause erosion problems. Currently, there are no areas experiencing significant shoreline erosion as evidenced by the presence of threatened structures or public facilities.

G. Natural Resources

Environmentally fragile areas and natural resource areas that may be impacted as a result of incompatible development are delineated in Section 3.4.I, Environmentally Fragile Areas. Identified environmentally fragile areas include AECs, 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.

The potential for sand, rock, and gravel deposits suitable for extraction is limited within Chowan 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 Chowan 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 nine active mining permits for sand and gravel operations within the county. These mining operations include a total of 146 permitted acres.

According to Forest Statistics for North Carolina, 2002, 44,600 acres (or approximately 40%) of Chowan County’s total land area is forest land. Of that total amount of timberland, 6,700 acres (15%) is owned by the forest industry and 37,900 acres (85%) is in nonindustrial, private ownership.

Commercial forest lands are largely concentrated in the southeastern section of the county south of the Yeopim River and east of NC Highway 37.

H. 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, stormwater 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 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 percent of the lot area located within the AEC boundary; (v) the development comply with state soil erosion, sedimentation, and stormwater management regulations; and (vi) the development comply with the CAMA Land Use Plans. Specific CAMA development standards for AECs can be found in 15 NCAC 7H.

The Town of Edenton historic waterfront presents a tremendous opportunity for development and economic activity. However, any development or activity along the waterfront must be cognizant of the environmental constraints that waterfront property presents.

The US Army Corps of Engineers is responsible for regulating non-coastal or “Section 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 Edenton 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.

Section 4. Appendices

4.1. CRC Matrix

4.2. Public Engagement Report

4.3. Town of Edenton Vision Statement (2017)

4.4. Transportation Maps

4.5. Soils Data

4.6. Water Quality Classifications

4.7. Natural Areas and Rare Species Inventory

4.8. Mapping Methodology

4.9. Hazard Mitigation

4.10. Greenway Corridors



Appendix 1: CAMA Land Use Plan Matrix of Required Elements

Matrix for Land Use Plan Elements – 15A NCAC 7B .0702	
	Page Reference(s)
Organization of the Plan	
Matrix that shows the location of the required elements as set forth in this Rule	4-1 to 4-4
Community Concerns and Aspirations	
Description of the dominant growth-related conditions that influence land use, development, water quality and other environmental concerns in the planning area	2-3; 2-21; 3-1 to 3-2
Description of the land use and development topics most important to the future of the planning area, including:	
Public Access	2-36
Land Use Compatibility	2-37
Infrastructure Carrying Capacity	2-38
Natural Hazard Areas	2-39
Water Quality	2-39 to 2-40
Community Vision	
Description of the general physical appearance and form that represents the local government's plan for the future. It shall include objectives to be achieved by the plan and identify changes that may be needed to achieve the planning vision.	2-2; 2-20
Existing and Emerging Conditions	
Population, Housing and Economy	
Discussion of the following data and trends:	
Permanent population growth trends using data from the two most decennial Censuses	3-3
Current permanent and seasonal population estimates	3-3 to 3-4
Key population characteristics including age and income	3-7; 3-9 to 3-10
Thirty-year projections of permanent and seasonal population in five-year increments	3-5 to 3-7
Estimate of current housing stock, including permanent and seasonal units, tenure, and types of units (single-family, multifamily, and manufactured)	3-8 to 3-9
Description of employment by major sectors and community economic activity	3-9 to 3-10
Natural Systems	
Description of natural features in the planning jurisdiction to include:	
Areas of Environmental Concern (AECs) as set forth in Subchapter 15A NCAC 07H	3-33
Soil characteristics, including limitations for septic tanks, erodibility, and other factors related to development	3-34 to 3-35; 4-49 to 4-77
Environmental Management Commission (EMC) water quality classifications and related use support designations	3-35 to 3-37; 4-78
Division of Marine Fisheries (DMF) shellfish growing areas and water quality conditions	3-36 to 3-37; 3-48
Flood and other natural hazard areas	3-38 to 3-41

• Storm surge areas	3-38 3-40 to 3-41
• Non-coastal wetlands, including forested wetlands, shrub-scrub wetlands and freshwater marshes	3-42
• Water supply watersheds or wellhead protection areas	3-42
• Primary nursery areas	3-42 to 3-43
• Environmentally fragile areas, such as wetlands, natural heritage areas, areas containing endangered species, prime wildlife habitats, or maritime forests	3-43 to 3-44; 4-79 to 4-97
Natural Systems, contd.	Page Reference(s)
• Additional natural features or conditions identified by the local government	3-43 to 3-44
Environmental Conditions	
Discussion of environmental conditions within the planning jurisdiction to include an assessment of the following conditions and features:	
• Status and changes of surface water quality; including:	
- Impaired streams from the most recent Division of Water Resources (DWR) Basin Planning Branch Reports	3-45 to 3-47
- Clean Water Act 303 (d) List	3-48
- Other comparable data	n/a
• Current situation and trends on permanent and temporary closures of shellfishing waters as determined by the Report of Sanitary Survey by the Shellfish Sanitation and Recreational Water Quality Section of the DMF	3-48
• Areas experiencing chronic wastewater treatment malfunctions	3-26 to 3-27; 3-48
• Areas with water quality or public health problems related to non-point source pollution	3-48
• Areas subject to recurrent flooding, storm surges and high winds	3-38 to 3-41; 3-49 to 3-51
• Areas experiencing significant shoreline erosion as evidenced by the presence of threatened structures or public facilities	3-50 to 3-51
• Environmentally fragile areas (as defined in Part (c)(2)(A)(ix) of this Rule) or areas where resources functions are impacted as a result of development	3-52
• Natural resource areas that are being impacted or lost as a result of incompatible development. These may include, but are not limited to the following: coastal wetlands, protected open space, and agricultural land.	3-52 to 3-53
Existing Land Use and Development	
MAP of existing land use patterns	3-12; 3-13
• Description of the existing land use patterns	3-14 to 3-16
• Estimates of the land area allocated to each land use category	3-14 to 3-16
• Characteristics of each land use category	3-11
MAP of historic, cultural, and scenic areas designated by a state or federal agency or by the local government	3-19
• Descriptions of the historic, cultural and scenic areas	3-17 to 3-20
Community Facilities	
Evaluation of existing and planned capacity, location and adequacy of community facilities to include:	
MAP of existing and planned public and private water supply service areas	3-24; 3-25
• Description of existing public and private water supply systems to include:	
- Existing condition	3-20 to 3-23
- Existing capacity	3-20 to 3-23
- Documented overflows, bypasses or other problems that may degrade water quality or constitute a threat to public health as documented by the DWR	3-21 to 3-23
- Future water supply needs based on population projections	3-21 to 3-22
MAP of existing and planned public and private wastewater service areas	3-24; 3-25
• Description of existing public and private wastewater systems to include:	
- Existing condition	3-26 to 3-27
- Existing capacity	3-26 to 3-27

- Documented overflows, bypasses or other problems that may degrade water quality or constitute a threat to public health as documented by the DWR	3-26 to 3-27	
- Future wastewater system needs based on population projections	3-26	
MAP of existing and planned multimodal transportation systems and port and airport facilities	4-33 to 4-39	
• Description of any highway segments deemed by the NC Department of Transportation (NCDOT) as having unacceptable service as documented in the most recent NCDOT Transportation and/or Thoroughfare Plan	3-29	
• Description of highway facilities on the current thoroughfare plan or current transportation improvement plan	3-29 - 3-30	
• Description of the impact of existing transportation facilities on land use patterns	3-28 to 3-31	
• Description of the existing public stormwater management system	3-27 to 3-28	
• Identification of existing drainage problems and water quality issues related to point-source discharges of stormwater runoff	3-27 to 3-28	
	Policy Citation(s)	Page Reference(s)
Future Land Use		
Policies		
• Policies that exceed the use standards and permitting requirements found in Subchapter 7H, State Guidelines for Areas of Environmental Concern	n/a	n/a
Policies that address the Coastal Resources Commission's (CRC's) management topics:		
Public Access Management Goal: <i>Maximize public access to the beaches and the public trust waters of the coastal region.</i>		
The planning objectives for public access are local government plan policies that:		
• Address access needs and opportunities	C-8; E-9 PA-1, PA-2, PA-3, PA-4, PA-5, PA-6, PA-7, PA-8	2-7; 2-25; 2-41 to 2-42
• Identify strategies to develop public access	PA-3, PA-4, PA-6, PA-7, PA-8	2-41 to 2-42
• Address provisions for all segments of the community, including persons with disabilities	PA-1	2-41
• For oceanfront communities, establish access policies for beach areas targeted for nourishment	n/a	n/a
Land Use Compatibility Management Goal: <i>Ensure that development and use of resources or preservation of land balance protection of natural resources and fragile areas with economic development, and avoids risks to public health, safety, and welfare.</i>		
The planning objectives for land use compatibility are local government plan policies that:		
• Characterize future land use and development patterns	LU-1 to LU-34	2-42 to 2-45
• Establish mitigation criteria and concepts to minimize conflicts	LU-1, LU-2, LU-4, LU-9, LU-10, LU-12, LU-13, LU-14, LU-20, LU-21, LU-22, LU-23, LU-24, LU-25	2-42 to 2-44
Infrastructure Carrying Capacity Management Goal: <i>Ensure that public infrastructure systems are sized, located, and managed so the quality and productivity of AECs and other fragile areas are protected or restored.</i>		



The planning objectives for infrastructure carrying capacity are local government plan policies that:		
Establish service criteria	IC-1 to IC-10	2-45 to 2-46
Ensure improvements minimize impacts to AECs and other fragile areas	IC-3; IC-4	2-45 to 2-46
Natural Hazard Areas Management Goal: <i>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.</i>		
The planning objectives for natural hazard areas are local government plan policies that:		
Establish mitigation and adaptation concepts and criteria for development and redevelopment, including public facilities	NH-1 to NH-11	2-46 to 2-47
Minimize threats to life, property and natural resources resulting from erosion, high winds, storm surge, flooding, or other natural hazards	NH-1 to NH-11	2-46 to 2-47
Water Quality Management Goal: <i>Maintain, protect and where possible enhance water quality in all coastal wetlands, rivers, streams, and estuaries.</i>		
The planning objectives for water quality are local government plan policies that:		
Establish strategies and practices to prevent or control nonpoint source pollution	WQ-1 to WQ-10	2-48 to 2-49
Establish strategies and practices to maintain or improve water quality	WQ-1 to WQ-10	2-48 to 2-49
Future Land Use Map	Page Reference(s)	
MAP of future land uses that depicts the policies for growth and development and the desired future patterns of land use and development with consideration given to natural system constraints and infrastructure	2-16; 2-32	
Descriptions of land uses and development associated with the future land use map designations	2-9 to 2-15; 2-26 to 2-30	
Tools for Managing Development		
Description of the role of plan policies, including the future land use map, in local decisions regarding land use and development	1-2 to 1-3	
Description of the community's development management program, including local ordinances, codes, and other plans and policies	1-3 to 1-4	
Action Plan and Implementation Schedule		
Description of actions that will be taken by the local government to implement policies that meet the CRC's management topic goals and objectives, specifying fiscal year(s) in which each action is anticipated to start and finish	2-50 to 2-51	
Identification of specific steps the local government plans to take to implement the policies, including adoption and amendment of local ordinances, other plans, and special projects	2-50 to 2-51	

Appendix 2. Public Engagement Report

This appendix contains a reproduction of the Public Engagement Report originally produced on March 30, 2017, which provides detail on the first public forum and citizen survey conducted during the land use plan update project.

The original Public Engagement Report included its own set of appendices, which contained materials from the first public forum and a full inventory of individual survey responses. For brevity and to avoid confusion, this portion of the original report has been omitted. It can be viewed on the Chowan County and Town of Edenton websites, or by request at the County and Town Planning Departments.

Chowan County-Town of Edenton Land Use Plan Update

Public Engagement Summary Report



March 30, 2017



**Chowan County
Town of Edenton**
**Land Use
Plan Update**



The Land Use Plan Update Project

In July 2016, the Chowan County Board of Commissioners and Edenton Town Council issued a Request for Proposals (RFP) for assistance with an update to the 2008 Chowan-Edenton Core Land Use Plan. The RFP lists several goals for the land use plan update process:

1. Update the existing and future land use maps for both the County and the Town;
2. Integrate updated land use planning policies adopted by the Town of Edenton related to land use decision-making and residential densities;
3. Revise the planning assumptions in accordance with current economic conditions;
4. Involve the public in the project through formal and informal meetings and public hearings;
5. Periodically meet with the County and Town Planning Boards, Town Council, and Board of Commissioners to discuss the project's findings and receive guidance.

Using grant funding from the North Carolina Coastal Resources Commission, the County and Town hired CodeWright Planners in September 2016 to assist with the project. CodeWright's scope of work contains eight tasks as outlined in Table 1, below.

Table 1. Land Use Plan Update Project Schedule		
Task	Activities & Deliverables	Timing
1. Project Initiation	Review of background documents; initiation trip to meet with staff, tour the County and Town, and interview stakeholders	Completed in October 2016
2. Land Use Survey	Draft existing land use maps	Completed in February 2017
3. Public Engagement	Existing conditions analysis; first public forum; public engagement report	Completed in March 2017
4. Staff Review Draft	Full first draft of the updated land use plan	3 months May 2017
5. Public Review Draft & Presentation	Revisions to staff draft to produce public review draft of updated plan; second public forum	1 month June 2017
6. Coastal Resource Commission Review	Revision of plan based on public forum input; transmittal and review by CRC; meeting with staff to discuss CRC comments	Plan submission for review by June 30, 2017 Review lasts approximately 10 weeks
7. Adoption	Revision of plan to produce adoption version; two public hearings	To Be Determined – dependent on elected body schedules
8. Delivery of Final Version	Final revisions based on adoption hearings; transmittal to CRC and County and Town Staff	1 week after adoption



This report is the final step in Task 3, Public Engagement. It contains a summary of the input received at the first public forum and through the citizen vision survey, and describes the next steps necessary to move into the drafting process.

Part 1. Public Forum

On Thursday, February 9th, the first public forum of the Land Use Plan Update was held at the Chowan County Public Safety Center. The purpose of the public forum was to inform the public about the land use plan update project and solicit community input on the draft existing land use map and the vision and goals related to land use in the County and the Town.

Of the 16 people who attended, four identified themselves as Town residents and 12 identified themselves as County residents.

The forum was formatted in an “open house” drop-in style. A short presentation was given at the start of the forum which introduced the land use plan update project, the project team, and the basics of land use planning. As new groups of people entered the forum, the presentation was repeated as needed, or a project team member oriented newcomers to the forum verbally. A copy of this presentation can be found in Appendix 1 of this document.

Following the presentation, participants were invited to engage in four exercises at stations set up around the room. The room was roughly divided down the middle so that each planning jurisdiction (Chowan County and the Town of Edenton) had a parallel set of stations and exercises. Participants were invited to choose which jurisdiction to participate in, or to give input in both jurisdictions. The exercises included: A discussion of the existing conditions in the County and Town; a series of large boards containing visioning and goal-related questions for participants to respond to using “sticky” notes and markers; a large-format print of the draft existing land use map for participants to



Participants gathered for the introductory presentation



The forum stations with parallel exercises for the County (left side of the room) and Town (right side of the room)



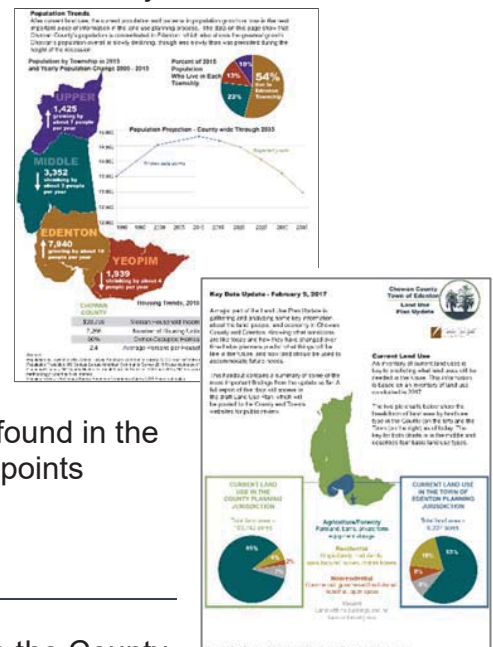
examine and provide feedback on; and a survey table where participants were asked to complete a written version of the visioning survey for one or both jurisdictions.

The remainder of this section of the report describes each of the four public forum exercises in more detail, then provides a summary of the input received related to each jurisdiction.

Throughout the document, input received related to Chowan County is denoted by blue headings, and input related to the Town is denoted by green headings.

Public Forum Exercise 1: Existing Conditions

Current data on land use, population, housing, and economics is a key component of the updated land use plan. County and Town staff facilitated conversations with participants about the updated existing conditions using a handout prepared by the project team (shown to the right). A copy of this handout can be found in the Appendix 2 of this document. The following is a summary of key points related to each jurisdiction.



Chowan County

- The County's planning jurisdiction is defined as the land in the County that is neither in the incorporated Town of Edenton or Edenton's extra-territorial jurisdiction (ETJ). The total size of the County's planning jurisdiction is 100,743 acres.
- 85% of the land area in the County's planning jurisdiction (85,326 acre) is currently used for agriculture or forestry.
- About 7% (6,576 acres) of the land area in the County's planning jurisdiction is vacant.
- 6% of the land area in the County's planning jurisdiction (6,285 acres) is used for residential purposes.
- About 2% (2,556 acres) is used for nonresidential land uses such as commercial, industrial, open space, and government purposes.
- The population of the County's planning jurisdiction in 2015 is around 9,714 people.
- The County's total population (including the Town of Edenton and its ETJ) grew slowly between 1990 and 2010, fell between 2010 and 2015, and is projected to continue falling slowly for the next 20 years.
- The median household income in the County is \$38,759.
- 66% of homes in the County and the Town of Edenton are owner-occupied.

Town of Edenton

- The Town's planning jurisdiction includes the incorporated Town and its extra-territorial jurisdiction (ETJ). The total size of the Town's planning jurisdiction is 9,337 acres. This is about 9% of the total land area of Chowan County.
- 65% of the land area in the Town's planning jurisdiction (6,063 acres) is currently used for agriculture or forestry. This was a surprising figure given that the Town is the urban



center of the County, but it reflects the large land area in the Town's ETJ that is currently farming use.

- About 20% of the land area in the Town's planning jurisdiction (1,736 acres) is used for residential purposes.
- 742 acres, or about 8%, is used for nonresidential land uses such as commercial, industrial, and government purposes.
- 796 acres, or about 8%, is vacant.
- The Town of Edenton's population in 2015 is estimated at 4,942 people. This is one third of the total County population.
- The median household income in the Town is \$25,601 annually, lower than the County median of \$38,759.
- 44% of homes in the Town are owner-occupied, meaning most homes in the Town are renter-occupied.

Public Forum Exercise 2: Sticky Note Boards

In order to learn more about what residents value about the County and Town now, and what they want to see change in the future, participants were asked to respond to three basic open-ended questions in their own words using sticky notes and markers. The responses are summarized on this page. A full inventory of all responses is included in Appendix 3.

Chowan County

Question 1 - What do you love about Chowan County?

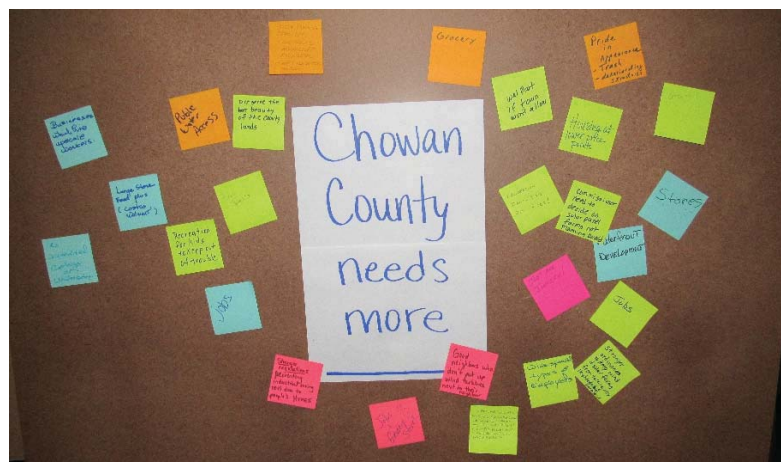
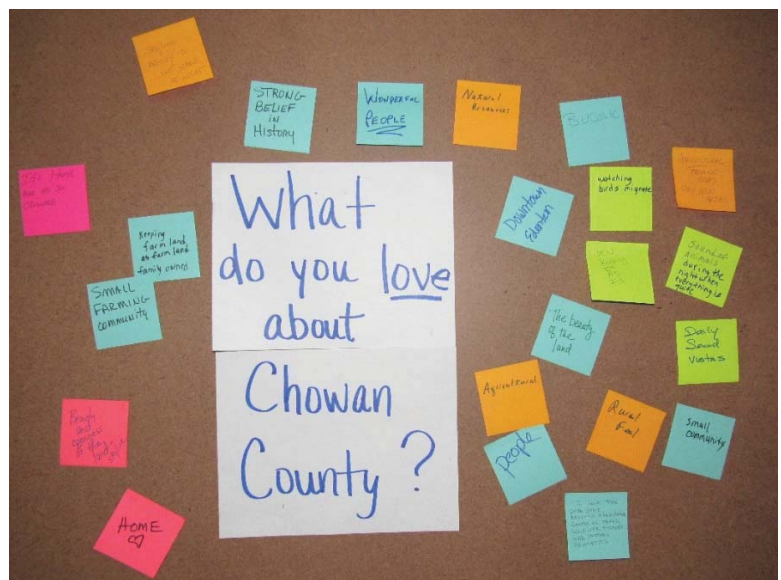
Responses focused on:

- The people;
- Natural resources;
- Wildlife and nature;
- History; and
- The uncrowded, bucolic agricultural setting.

Question 2 - Chowan County needs more...

Several responses were common to more than one person:

- Better defined zoning of areas for residential vs. industrial uses;
- Jobs;
- Grocery stores;



- Recreational opportunities;
- More and different shops; and restaurants;
- Attention to areas outside the downtown core; and
- More diverse industry and job opportunities.

Other responses included senior retirement or continuing care facilities and sidewalks.

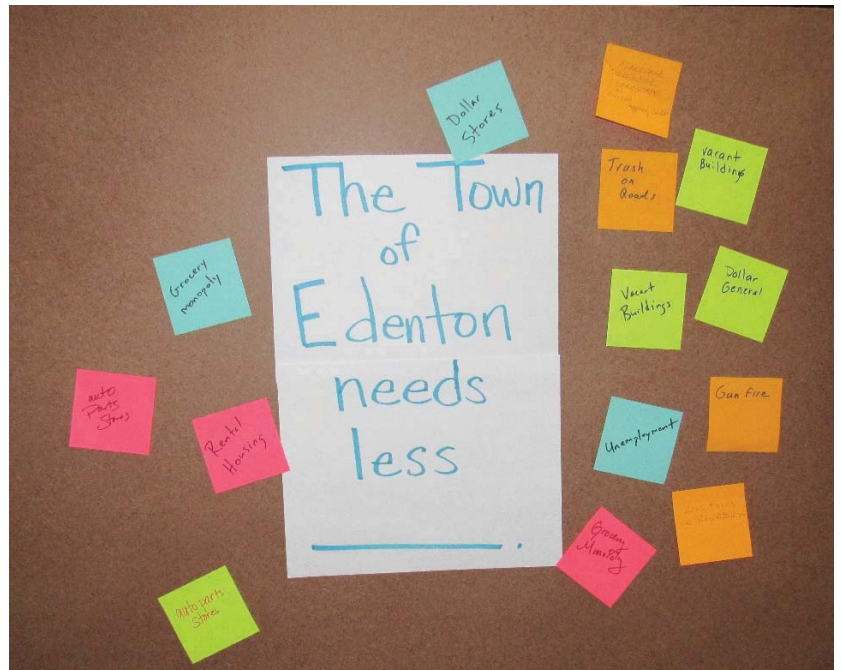
Question 3 - The Town of Edenton needs less...

The most common responses were:

- Vacant buildings;
- Auto parts stores;
- Dollar stores; and
- Grocery store monopoly.

Other responses included:

- Rental housing;
- Unemployment;
- Gunfire;
- Trash on roads; and
- Focus on downtown.



Public Forum Exercise #3: Draft Existing Land Use Map

The third station for each jurisdiction featured a large-format map of existing land uses by parcel prepared by the project team. Participants were asked to first orient themselves by placing a dot sticker on the map where they lived. Then, they were asked to review the land use designations shown on the map and make notes on any parcels that were improperly categorized. The draft existing land use maps are reproduced in Appendix 4 of this document.

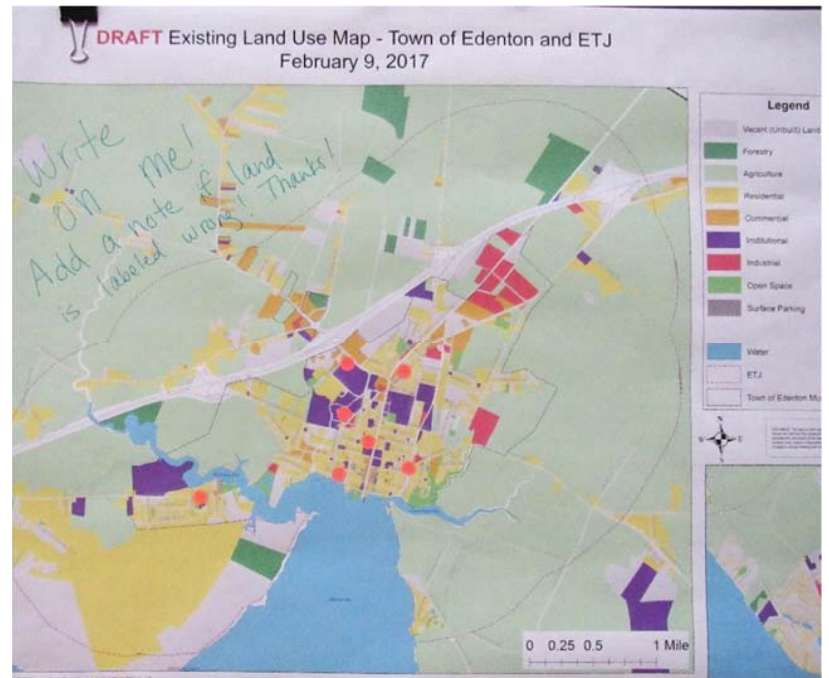
Chowan County

Participants indicated several parcels in the northern part of the county which needed to be reclassified from agricultural to residential. These changes will be made in the next version of the existing land use map.

Town of Edenton

Participants did not indicate any needed revisions on the Town's Existing Land Use Map, so this is the version that will be used in the updated land use plan.





Draft existing land use maps with participant notations

Public Forum Exercise #4: Visioning Survey Table

At this station, participants were asked to complete a visioning survey for one or both planning jurisdictions. The survey was designed to help the project team learn what features of the County and Town should be preserved in the future, and what things residents would like to see change. The input from the surveys will help the project team in updating the vision statements, goals, and future land use maps for the County and Town.



Public forum participants completing surveys

Nine surveys for Chowan County and three were submitted for Town of Edenton during the forum. The results of the survey are summarized in the next section, and a full inventory of survey responses can be found in Appendix 5 of this document.



Part 2. Online Visioning Survey

The purpose of the visioning survey was to gather public input on what aspects of the County and Town should be preserved in the future, and what residents would like to see changed. In order to gauge any differences in the vision for the Town and the County, the project team prepared two parallel surveys, one for each jurisdiction.

The input from the surveys will help the project team in updating the vision statements, goals, and future land use maps for the County and Town. They also inform the next steps discussed in the following section of this report.

Chowan County Land Use Visioning Survey

Think about the different ways that land is used. How would you describe the amount of each land use in CHOWAN COUNTY today?

	Not enough	About the right amount	Too much	Don't know
Housing for young families	☐	☐	☐	☐
Places to start new businesses (land or buildings)	☐	☐	☐	☐
Housing for young people or couples without children	☐	☐	☐	☐
Places to shop for specialty goods	☐	☐	☐	☐
Housing for older adults	☐	☐	☐	☐
Places to shop for basic needs	☐	☐	☐	☐
Access to the water	☐	☐	☐	☐

A screenshot of one of the questions from the online survey

In addition to the paper surveys administered at the public forum, the project team prepared an online version of the visioning survey. This was intended to increase the reach of the survey to residents who could not attend the forum. The survey was open for two weeks, February 10-24, 2017. County and Town staff publicized the survey via the County and Town webpage, Twitter accounts, and Facebook pages.

A total of 310 visioning surveys were collected. 194 Chowan County visioning surveys were submitted (nine at the public forum and 185 online). 116 Town of Edenton surveys were submitted (three at the public forum and 113 online).

The survey contained four questions aimed at soliciting community members' vision for the future of Chowan County and the Town of Edenton in terms of land use. This section lists each question, the project team's rationale for asking it, and a summary of the responses. The questions appear in blue for the County and green for the Town. A full inventory of responses can be found in Appendix 5 of this report.

Chowan County Question 1. What makes Chowan County special today?

Rationale:

This question, much like the sticky note board question, "What do you love about Chowan County," was intended to draw out things which residents value about the County and would like to see retained and strengthened in the future.



Summary of Responses:

The top six most frequently named features of the County that residents love were:

- Natural beauty;
- Waterways;
- Agricultural land;
- People;
- History; and
- Uncongested, small-town feel.

Others said that they love the County's:

- Low crime rates;
- Strong church communities;
- Location near Edenton, the Outer Banks, and other destinations; and
- Opportunities for hunting and fishing.

Town of Edenton Question 1. What makes Edenton special today?

Rationale:

This question, much like the sticky note board question, "What do you love about the Town of Edenton," was intended to draw out things which residents value about the County and would like to see retained and strengthened in the future.

Summary of Responses:

The top four features mentioned were:

- The Town's history;
- The waterfront;
- Sense of community and people; and
- Downtown.

Many respondents pointed to specific features of downtown that they appreciate, including small locally-owned businesses, the movie theater, and clean well-lit streets.

Other features of the Town that were mentioned frequently were:

- The surrounding natural beauty;
- Walkability;
- Parks;
- Safety;
- Family-friendly atmosphere;
- The farmer's market;
- The community college;
- The abundance of trees; and
- A slow pace of life.

Chowan County Question 2. Think about the different ways that land is used. How would you describe the amount of each land use in Chowan County today?

Rationale:

This question was intended to help respondents think about land use – the focus of this plan – and to give some thought to the mix of land use in the County currently. These responses help the project team in revising the future land use map to include a mix of land uses that meet the needs and desires of County residents.



Summary of Responses:

Respondents overwhelmingly reported that there is not enough land dedicated to places to shop for basic needs (74% of respondents), places to shop for specialty goods (70%), and recreation and open space (57%). Housing for older adults and land used for industry and manufacturing were also ranked as “not enough” by the majority of respondents.

Respondents were nearly evenly split over whether there is not enough, or about the right amount, of places to start new businesses (land or buildings), housing for young people or couples without children, or housing for young families in the County.

Most respondents felt that there is about the right amount of land dedicated to farming, forestry, and access to the water.

None of the listed land uses received a majority of responses in the “too much” column.

This question also had an open response comment box for additional comments, questions, or concerns. Fifty-six respondents left comments on this question. Many comments focused on:

- Recreational needs for children and youth;
- Public water access;
- Need for more jobs; and
- Concern about the effects of windmills and solar farms on the agricultural feel of the County.

Town of Edenton Question 2. Think about the different ways that land is used. How would you describe the amount of each land use in Edenton today?

Rationale:

This question was intended to help respondents think about land use – the focus of this plan – and to give some thought to the mix of land use in the Town currently. These responses help the project team in revising the future land use map to include a mix of land uses that meet the needs and desires of Town residents.

Summary of Responses:

Respondents overwhelmingly reported that there is not enough land dedicated to places to shop for basic needs (77% of respondents), recreation and open space (69%) or places to shop for specialty goods (63%). Housing for young families, housing for older adults, housing for young people or couples without children, and places to start new businesses were also ranked as “not enough” by the majority of respondents.

Most respondents felt that there is about the right amount of land dedicated to farming, forestry, and industry or manufacturing. Respondents were nearly evenly split over whether there is not enough, or about the right amount of access to the water in the Town.

None of the listed land uses received a majority of responses in the “too much” column, though 14% of respondents said there is too much land in the Town used for farming.



This question also had an open response comment box for additional comments, questions, or concerns. Thirty-four respondents left comments on this question. Many comments focused on the need for more recreational land uses, and specifically mentioned uses such as public swimming access, disc golf course, and a dog park. Another major focus of the comments was the need to expand the range of businesses in Town, particularly in areas outside of the downtown core.

Chowan County Question 3. Thinking about the same list of ways land is used, which are the 3 most important to focus on in Chowan County in the future?

Rationale:

This question was intended to refine the answers from Question #2 by asking respondents to prioritize the land uses they would like to see the plan focus on. For instance, a particular respondent may feel that there is not enough housing for older adults, but may prioritize other land uses, such as increasing water access, over increasing housing for older adults.

Summary of Responses:

The most frequently prioritized land use was places to shop for basic needs. 57% of respondents chose this as one of their top three priorities. 46% of respondents indicated that recreation and open space should be a priority. Access to the water, places to shop for specialty goods, and places to start new businesses (land or buildings) each had 30% or more of respondents indicate it as a priority land use.

In priority order, the remaining land uses which each had 25% or less of respondents indicate them as a priority, were: land used for farming, land used for industry or manufacturing, housing for older adults, housing for young families, land used for forestry, and housing for young people or couples without children.

In addition to the set of land uses described above, the question also allowed respondents to fill in an “other” land use for focus. Fifteen respondents filled in an “other” priority. Responses varied widely and included:

- Agricultural product processing;
- A new high school;
- Better recreation facilities;
- Child care facilities; and
- Sprawl prevention.

This question also had an open response comment box for additional comments, questions, or concerns. Thirty-two respondents left comments on this question. Several commenters focused on a desire for grocery or other shopping options in the County and on recreational options for children and teenagers. Others want to see senior living facilities and increased attention on orderly development that preserves farmland and the rural feel of the County.



Town of Edenton Question 3. Thinking about the same list of ways land is used, which are the 3 most important to focus on in Edenton in the future?

Rationale:

This question was intended to refine the answers from Question #2 by asking respondents to prioritize the land uses they would like to see a focus on. For instance, a particular respondent may feel that there is not enough housing for older adults, but may prioritize other land uses, such as increasing water access, over increasing housing for older adults.

Summary of Responses:

The most frequently prioritized land use was places to shop for basic needs. 57% of respondents chose this as one of their three priorities. Following closely behind was recreation and open space, with 51% of respondents indicating it as a priority. Access to the water, places to start new businesses (land or buildings), and places to shop for specialty goods each also had more than 25% of respondents indicate that they should be a priority in the land use plan update.

In priority order, the remaining land uses which each had less than 25% or less of respondents indicate them as a priority, were: housing for young families, land used for industry or manufacturing, housing for older adults, housing for young people or couples without children, land used for forestry, and land used for farming.

In addition to the set of land uses described above, the question also allowed respondents to fill in an “other” land use for focus. Fourteen respondents filled in an “other” priority. Several responses were related to recreation, such as a Boys and Girls Club, community center, or a rec center closer to Town. Other responses included:

- Medical facilities;
- Non-fast food restaurants; and
- Upscale housing for seniors.

This question also had an open response comment box for additional comments, questions, or concerns. Twenty-two respondents left comments on this question. Several comments linked additional retail or restaurant land uses to more jobs in the Town. Others expanded on the need for specific recreational land uses that should be added, including:

- Ball fields;
- A public beach or swimming pool; and
- Places to walk and run.

Chowan County Question 4. Imagine that you travel to the future and see Chowan County in 20 years. What do you hope you see as you look around?

Rationale:

This question was intended to elicit visions of the County that could include land uses and also



other aspects of development which may be addressed in the land use plan. An open-ended question is also useful in allowing top priorities to emerge.

Summary of Responses:

Many responses focused on a desire to see the County balance preservation of rural scenery and agricultural lifestyles with controlled growth to serve current residents and attract new ones. Others envision a future Chowan County that is home to a more diverse population in terms of age, specifically young families living alongside retirees with a greater mix of housing options to serve both populations. Improved recreational opportunities, such as public beaches and a sports complex, were frequently mentioned as well. Overwhelmingly, respondents did not want to see wind or solar farms as a major land use in the County in the future.

Town of Edenton Question 4. Imagine that you travel to the future and see Edenton in 20 years. What do you hope you see as you look around?

Rationale:

This question was intended to elicit visions of the Town that could include land uses and also other aspects of development which may be addressed in the land use plan. An open-ended question is also useful in allowing top priorities to emerge.

Summary of Responses:

Many responses focused on the desire for the Town to retain its historic look and small-town feel while also moving forward to provide more and better services to Town residents. Many respondents envision a future Edenton with expanded water access and recreational opportunities that take advantage of the Town's natural beauty and waterfront views. Others envisioned progress in improving the water quality of the Town's waterways. Several respondents included economic development in their visions by describing an Edenton where young people find work and settle down locally, and all people are able to prosper and live high-quality lives.

The next section of this report summarizes this input received and identifies some areas where further exploration by the elected officials is needed.



Part 3. Summary and Next Steps

Based on the input received at the public forum and through the visioning survey, the project team has compiled the following summaries of key findings and questions for further exploration in the next phase of the Land Use Plan Update Project. To help the project team identify the policies that should be included in the land use plan update, we suggest that these questions be considered at a joint County-Town worksession in the coming weeks.

Chowan County

This table lists key findings about Chowan County from the public input task, including the public forum and the visioning survey in the left-hand column. In the right-hand column, the project team lists follow-up questions and suggestions based on each key finding. The questions are intended to form the basis of the suggested joint County-Town worksession.

Key Findings:	Questions for Further Exploration:
County residents highly value the agricultural landscape and way of life and the natural beauty of land in the County. However, unlike other similar jurisdictions in which we work, residents did not overwhelmingly call for character protection as a key concern.	Should we explore policies that would promote rural character protection in agricultural areas?
Several respondents suggested a need for more job opportunities for young people who want to stay in Chowan County long-term.	Should we include strategies intended to address retaining young adults? Is population loss among this age group a top concern?
County residents are concerned about potential negative effects of windmills and solar farms, particularly in close proximity to residential areas.	How should these renewable energy industrial uses be treated in the land use plan update? Should they be avoided altogether, mitigated with compatibility measures, or restricted to certain areas planned for future industrial use? Agricultural use?



Key Findings:	Questions for Further Exploration:
County residents would like to see more commercial opportunities, particularly larger retail stores, grocery stores, and restaurants, in the County.	What kind of commercial development is the County willing to support in terms of character and location? Should commercial development be encouraged to locate solely in the Town, or in the County as well? If in the County, in what areas or configurations? Will the market support new commercial establishments in the County? Are there any changes in policy needed to attract or incentivize desired commercial uses?
County residents would like to see more land dedicated to recreational uses. Frequently mentioned were water access, community centers, ball fields, and trails for biking and walking.	Is there a shortage of recreational facilities now, or is this perception issue? Are there resource issues involved? Is there a willingness to place more responsibility for these kinds of features on neighborhood associations? What is the political will regarding requirements for new development to be more involved in funding these features?
County residents indicated that there is a need for more affordable housing for young families and older adults.	Is there a desire to incentivize cluster development, townhouses, or other forms of more affordable residential development other than suburban style large-lot single-family homes?
Some residents indicated a desire to see land uses “better organized” in the County.	Is there a desire to incorporate more land use planning in the County (e.g., rural hamlets, sending commercial development to corridors, raising allowable densities in areas proximate to Town, etc?)

Town of Edenton

This table lists key findings about the Town of Edenton from the public input task, including the public forum and the visioning survey in the left-hand column. In the right-hand column, the project team lists follow-up questions and suggestions based on each key finding. The questions are intended to form the basis of the suggested joint County-Town worksession.



Key Findings:	Questions for Further Exploration:
Edenton residents value the Town's historic aesthetics and small-town feel. Interestingly, in contrast with other similar jurisdictions in which we work, residents did not overwhelmingly call for character protection as a key concern.	Is there any need for policies addressing character protection or historic preservation in the land use plan, or is current policy sufficient?
While many respondents said that they love downtown's quaint character and local businesses, many others said there is a need for more, or different, types of commercial goods and services in the Town. Specifically, participants call for an additional grocery store, a wider range of retail, and more restaurant choices.	What kinds of additional commercial development is the Town willing to support? Is there support for different policies for different character areas – i.e., Broad Street as more tourist-serving “destination retail” and the areas near the highway as resident-serving retail? Will the market support new commercial uses in the Town, and if so, what kinds and where? Are there infill opportunities that are not being taken advantage of, and if so, are there policies that could promote infill development? Is there a desire for mixed-use development in the Town? How important is new waterfront development around downtown? What form should that kind of development take?
Many Town residents indicated a desire for more recreational uses, and specifically named water access (both for swimming and boating) and trails for biking and walking as top needs.	Is there a shortage of recreational facilities now, or is this perception issue? Are there resource issues involved? Is this an area where the Town and County could work together to provide different recreation types, i.e. placement of more land-intensive types like bike trails or ball fields in the County? What is the political will regarding requirements for new development to be more involved in funding these features?



Key Findings:	Questions for Further Exploration:
Several respondents indicated that they see Edenton as a retirement destination. Others would like to see more young people moving into, or staying in, the Town.	What is the Town's stance with regards to increasing services that attract retirees? Is there a desire to have policies designed to retain young people? Is population growth a goal for the Town?
Many residents indicated a need for more housing choices in the Town, particularly for senior citizens and young families.	Is there interest in examining new solutions such as cluster development, townhouses, or other housing products that are more affordable to middle-class families than large-lot single-family dwellings? Are there other problems regarding investment or home ownership that need to be addressed?



Appendix 3. Town of Edenton Full Draft Vision Statement

This appendix contains a copy of the Town of Edenton's full vision statement, which is in draft form as of June 2017.

Because this vision statement addresses a wide variety of issues of interest to the Town, and is not restricted to land use topics, the text of Section 2.3.A, Town of Edenton Land Use Vision Statement, contains an abbreviated version of this full vision statement that highlights the aspirational statement that are suited for land use planning purposes and the time frame of this plan.

Edenton Town Council 2017 Vision Statement

The Edenton Town Council met on Saturday, March 25, 2017 to update the Vision Statement for the Town of Edenton and to review short term goals. Mayor Roland Vaughan, Council Members Steve Biggs, Sam Dixon, Bob Quinn, Norma Simpson and Jimmy Stallings were present along with Town Manager Anne Marie Knighton. Absent was Councilman Elton Bond.

The Mayor and Town Council have formulated their direction and vision for Edenton with the following statement as their guiding principle:

“We see Edenton, as a Town where history, hospitality and natural beauty come together to form a community that is proud of its past and excited about its future. The Mayor and Town Council also recognize Edenton’s future prosperity depends on protecting these assets through encouraging residents and visitors to become integral participants in Edenton’s unique community.”

The Mayor and Town Council’s vision for Edenton over the next ten years is:

1. To strive to be a crime- free community through education, enforcement and vigilance on the part of all citizens and our police authority.
2. To invigorate and enhance our downtown business district through aggressive support, supplemented by quality shopping centers and a diverse industrial mix in outlying areas that will translate into job opportunities and expanded tax base.
3. To develop and enhance Edenton’s waterfront, by expanding outdoor activities supplemented by a variety of recreational and cultural activities for residents and visitors.
4. To have a sound, stable infrastructure that meets the needs of citizens, business and industry including well maintained streets, clean and reliable supply of water, clean and reliable wastewater treatment, environmentally sensitive storm water disposal and a reliable electrical distribution system.
5. To be a municipal government that works collaboratively with citizens and other governments to plan for and respond to citizen needs and provide timely, efficient, effective and customer friendly services.
6. To be a welcoming and friendly home for young families and retirees by understanding and preserving the honor of Edenton being named one of America’s prettiest Towns by Forbes.com. The Town will grow our population as sustainable opportunities present themselves, and maintain its strong sense of small town values and citizens involvement. The Town will preserve and promote its historic resources and unique downtown and focus on community attractiveness. The Town will strive to support access to affordable, high quality medical and health care.

7. To be known as a desirable tourist destination and a perfect home for retirement. The Town will support this through enhancing its small town charm and serenity, embracing and sharing its historic past and landmark buildings, enticing and beautiful waterfront.
8. Create an adequate and sustainable annual budget that insures uninterrupted delivery of public safety, fire and other quality services to our citizens and to have a sound, stable fiscal reserve to meet unanticipated needs and emergencies.

Strategies to Achieve Vision

1. To strive to be a crime- free community through education, enforcement and vigilance on the part of all citizens and our police authority.

- a. Support, encourage and maintain strong communication with the neighborhood watch groups through communication, education and enforcement.
- b. Reduce the number of uninhabitable and dangerous structures abandoned or “boarded up” that provide shelter and gathering places for criminal elements and undesirables and negatively impact the value of neighboring properties through vigorous enforcement of the and Moseley Street, the Minimum Standards Housing Code, Unsafe Building Code and Prevention of Demolition By Neglect Ordinance.
- c. Publicize to landlords the availability of a tenant reference center through the Police Department to assist in evaluating tenant’s acceptability as renters through criminal history records checks.
- d. Develop an amendment to lease application forms that gives the prospective tenant’s permission for landlord to obtain a criminal record check to be completed by the Edenton Police Department. Publicize and distribute amendment to landlords and encourage use of tenant reference center.
- e. Develop a “crime free rental agreement” for landlords and encourage its use.
- f. Enhance police/community partnerships by officers engaging in community policing efforts that include: foot patrols, bike patrols, golf cart patrols, citizen watch group meetings and personal police zones that improve communications and increase individual officer accountability.
- g. Renew concentration on enforcement of noise ordinance, especially focusing on loud music emanating from vehicles and loud mufflers.
- h. Explore strategies available within the two Redevelopment Zones to establish residential housing incentives for town employees to live in our neighborhoods.
- i. Expand use of Geo-Policing strategies using crime data and information from citizens

that targets nuisances and crimes trends in specific neighborhoods.

j. Support establishment of citizens-based Crime Stoppers program.

k. Evaluate expansion of the National Register Historic District to include North Edenton to make available federal and state historic preservation tax credits to rehabilitate deteriorating dwelling units.

2. ***To invigorate and enhance our downtown business district through aggressive support, supplemented by quality shopping centers and a diverse industrial mix in outlying areas that will translate into job opportunities and expanded tax base***

Strategies:

a. Hire expert to conduct assessment of community revitalization, planning and redevelopment opportunities to create new investment and jobs.

b. Seek support and funding for implementation of the Road Diet Plan for North Broad Street

c. Hire professional engineer to develop technical plans for street light and streetscape plan of the North Oakum Street corridor and a street light replacement plan for the entire Broad Street corridor

d. Continue to collaborate with the Edenton Chowan Partnership, NC Department of Commerce, Economic Development Partnership of NC, NCEast Alliance, Albemarle Commission, Edenton Chowan Chamber of Commerce and Chowan County to facilitate expansions for existing industries and recruit and entice new investment and job creation opportunities.

e. Advocate for expansion of natural gas to more neighborhoods in Edenton.

f. Work to retain and attract state and federal agencies to locate in our community, and advocate for continued presence of such agencies in the State's new prosperity zone initiative.

g. Promote regional economic development efforts with the Tidewater, VA area to Edenton and Northeastern NC, with focus on the Virginia Ports Authority and the railroad. Promote the benefits of Edenton and Chowan County being a part of the Foreign Trade Zone that connects us with the Ports of Virginia.

h. Strive through the use of tax incentives, tax credits and other economic development tools to redevelop buildings and opportunities in our downtown.

i. Continue to support and be an active participant in the Town's Main Street Program.

Support Destination Downtown Edenton's Strategic Plan and marketing efforts.

j. Support development of office incubator space, live work space to help attract entrepreneurs to live in Edenton.

3. *To develop and enhance Edenton's waterfront by expanding outdoor activities supplemented by a variety of recreational and cultural activities for residents and visitors.*

- a. Encourage protection of existing public boating access & look to supplement water access.
- b. Continue to seek opportunities to implement the Greenway and Open Space Master Plan.
- c. Be more vigorous in marketing Edenton Harbor as a destination for boaters, kayakers, fishermen and other water-related activities.
- d. Pursue development of boardwalk/nature trail on Filbert's Creek.
- e. Support the Chowan County Tourism Development Authority and the Edenton Historical Commission Strategic Plan and Vision
- f. Consider ways to bridge connections with Edenton to our regional neighbors, including Albemarle Plantation and Scotch Hall
- g. Support research, education and outreach programs to protect and improve water quality of Edenton Bay, the Chowan River, Albemarle Sound and the town's three creeks – Queen Anne's Creek, Filbert's Creek and Pembroke Creek.
- h. Investigate feasibility of adding fuel service at Edenton Harbor
- i. Identify land for development of a dog park and seek grant funding opportunities

4. *To have a sound, stable infrastructure that meets the needs of citizens, business and industry including well maintained streets, clean and reliable supply of water, clean and reliable wastewater treatment, environmentally sensitive storm water disposal and a reliable electrical distribution system.*

- a. Consider long term funding approaches for flood hazard mitigation projects such as drainage system improvements
- b. Implementation of street repaving/overlay surge plan that also creates a sustainable repaving plan after initial surge.

- c. Continue to advocate for high speed, affordable broad-band internet access throughout Chowan County and the entire northeast region.
- d. Continue to invest in our fine general aviation airport and aviation services, and support the Airport Commission in its efforts to promote our aviation assets.

5. *To be a municipal government that works collaboratively with citizens and other governments to plan for and respond to citizen needs and provide timely, efficient, effective, and customer friendly services.*

- a. Continue to track and insure follow-through on citizen/Council requests.
- b. Continue to provide staff training on employee safety and wellness, with focus on defensive and safe driving skills.
- c. Look for ways to translate importance of customer response to employees.
- d. Work with Chowan County collaboratively on existing and future programs to benefit the citizens of Edenton & Chowan County.
- e. Continue to train supervisors in skills to communicate organizational goals to employees.
- f. Annually hear formal presentations at Council Meetings from Town boards and commissions and other partners the Town provides funding to: Edenton Chowan Partnership, Chowan Arts Council, Destination Downtown Edenton, Edenton Historical Commission, Albemarle Hopeline, Albemarle Commission and US Highway 17 Association.
- g. Improve new employee orientation to instill team concept, focus on working for the Town, not just a specific department.
- h. Hire firm to conduct a comprehensive compensation/salary study to achieve goal of paying employees a living wage, competitive salaries and benefits to retain a qualified and dedicated workforce. Provide each employee with a report of the value of the benefits they receive from the Town.
- i. Continue initiatives to ensure that all town facilities are energy-efficient and continue to search for ways to help citizens learn about energy-savings opportunities.

6. ***To be a welcoming and friendly home for young families and retirees by understanding and preserving the honor of Edenton being named one of America's prettiest Towns by Forbes.com. The Town will grow our population as sustainable opportunities present themselves, and maintain its strong sense of small town values and citizens involvement. The Town will preserve and promote its historic resources and unique downtown and focus on community attractiveness. The Town will strive to support access to affordable, high quality medical and health care.***

a. Encourage Chowan County to repurpose the former D. F. Walker High School and save it from demolition.

b. Encourage Chowan County and the Board of Education to develop long range plans to renovate J. A. Holmes High School facilities and keep the high school in downtown Edenton.

c. Encourage stick built construction on existing vacant lots, with special emphasis on properties within the two redevelopment zones. Study feasibility of adopting residential architectural guidelines.

d. Support economic development efforts to create high-skill level jobs that will help keep young people here. Focus on maintaining a diverse industrial base.

e. Seek NCDOT funding for implementation of N. Broad Street Streetscape Plan, per the recommendation of the Town's Corridor Overlay Plan

f. Continue to support NC Coastal Land Trust's efforts to acquire preservation easements and open space to protect rural characteristics of our community.

g. Seek grant opportunities to help fund acquisitions of open space

h. Ensure that all Town-owned buildings, facilities and publicly maintained areas including parking lots and sidewalks are handicap accessible.

7. ***To be known as a desirable tourist destination and a perfect home for retirees. The Town will support this through enhancing its small town charm and serenity, embracing and sharing its historic past and landmark buildings, enticing and beautiful waterfront.***

a. Hire marketing professionals to help the Town create a place branding strategy. The brand will be used to market and promote Edenton as a desirable and attractive place for millennials, professionals and retirees to live and work.

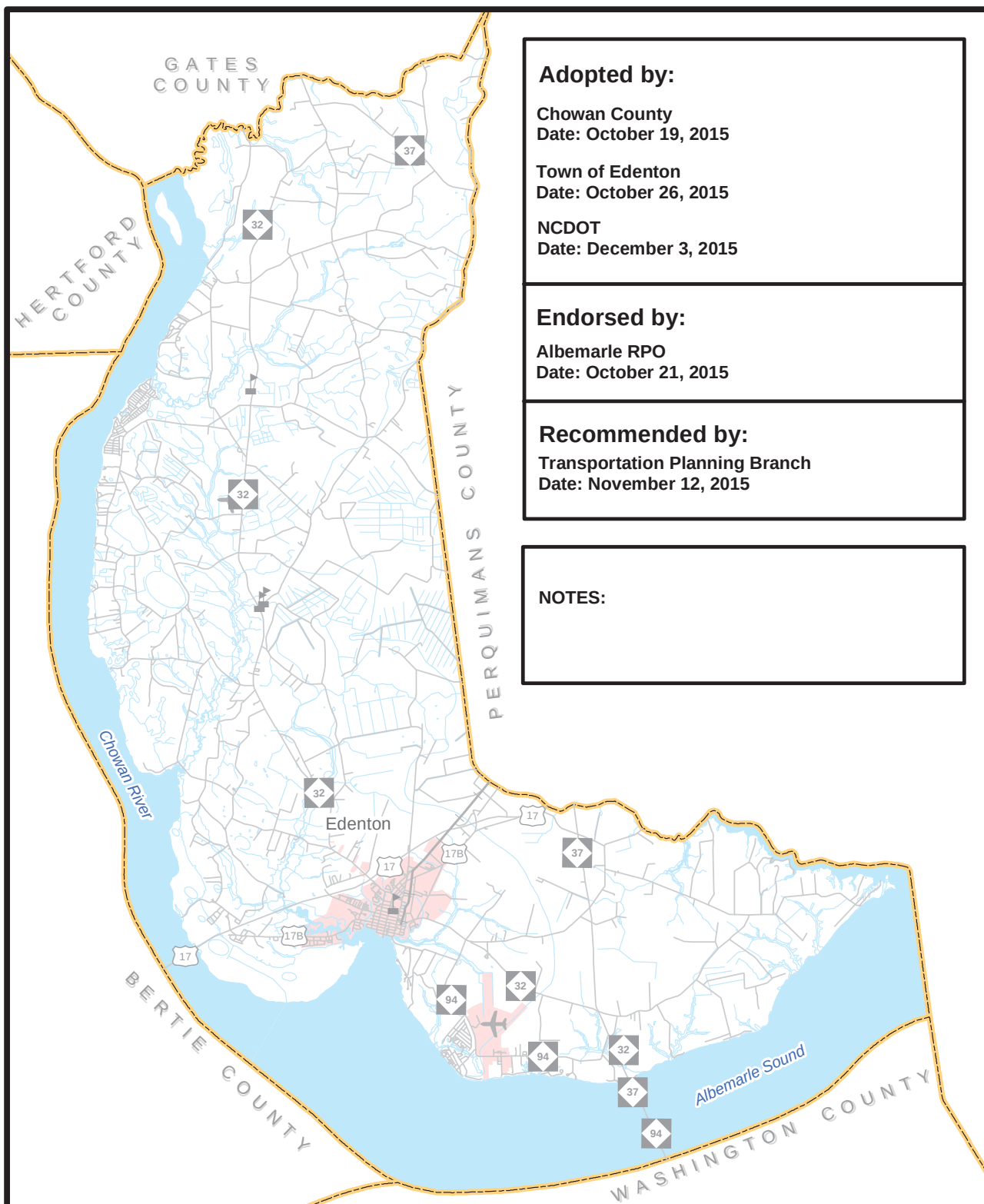
b. Continue to support the Chowan Arts Council and civic organizations efforts to provide quality cultural events

- b. Encourage more water, eco-tourism and heritage tourism opportunities
 - c. Continue to support Destination Downtown Edenton and the Main Street Program.
 - d. Encourage TDA & DDE to continue to grow Edenton as a ‘wedding destination’ and a “weekend getaway” destination.
8. ***Create an adequate and sustainable annual budget that insures uninterrupted delivery of public safety, fire and other quality services to our citizens and to have a sound, stable fiscal reserve to meet unanticipated needs and emergencies.***
- a. Maintain a sound, stable fiscal reserve to meet unanticipated needs and emergencies.
 - b. Monitor the Town’s Financial Management Policies & Goals on an annual basis.

Appendix 4. Transportation

This appendix contains information from the 2015 Comprehensive Transportation Plan (CTP) for Chowan County and the Town of Edenton: first, a set of maps depicting existing and recommended future transportation resources, followed by a reproduction of the Recommendations section of the CTP, which includes the following:

- Upgrade existing US 17 Business to Interstate standards from the south end of the Chowan River Bridge to US 17 Business in Edenton (see page 4-45 of this appendix);
- Construction of a new minor thoroughfare from Luke Street to Reginald & Mary Avenue (see page 4-46 of this appendix);
- Minor widening improvements (consisting of 12-foot lanes and paved shoulders) on Hobbs Lane, Luke Street, and Reginald & Mary Avenue (see page 4-46 of this appendix);
- Improvement or establishment of bicycle facilities on roadways identified as bicycle routes on the Bicycle Map on page 4-37 of this appendix, as funding becomes available. Improvements are described on page 4-47 of this appendix; and
- Sidewalks and multi-use paths need to be built as indicated on the Pedestrian Map on page 4-38 of this appendix (see page 4-48 of this appendix).



Adopted by:

Chowan County
Date: October 19, 2015

Town of Edenton
Date: October 26, 2015

NCDOT
Date: December 3, 2015

Endorsed by:

Albemarle RPO
Date: October 21, 2015

Recommended by:

Transportation Planning Branch
Date: November 12, 2015

NOTES:

- Sheet 1 Adoption Sheet
- Sheet 2 Highway Map
- Sheet 3 Public Transportation and Rail Map
- Sheet 4 Bicycle Map
- Sheet 5 Pedestrian Map

Legend

- Schools
- Airports
- Railroads
- Roads
- Rivers and Streams
- Water Bodies
- Municipal Boundary
- County Boundary

0 0.5 1 2 3 Miles



Figure 1

Sheet 1 of 5

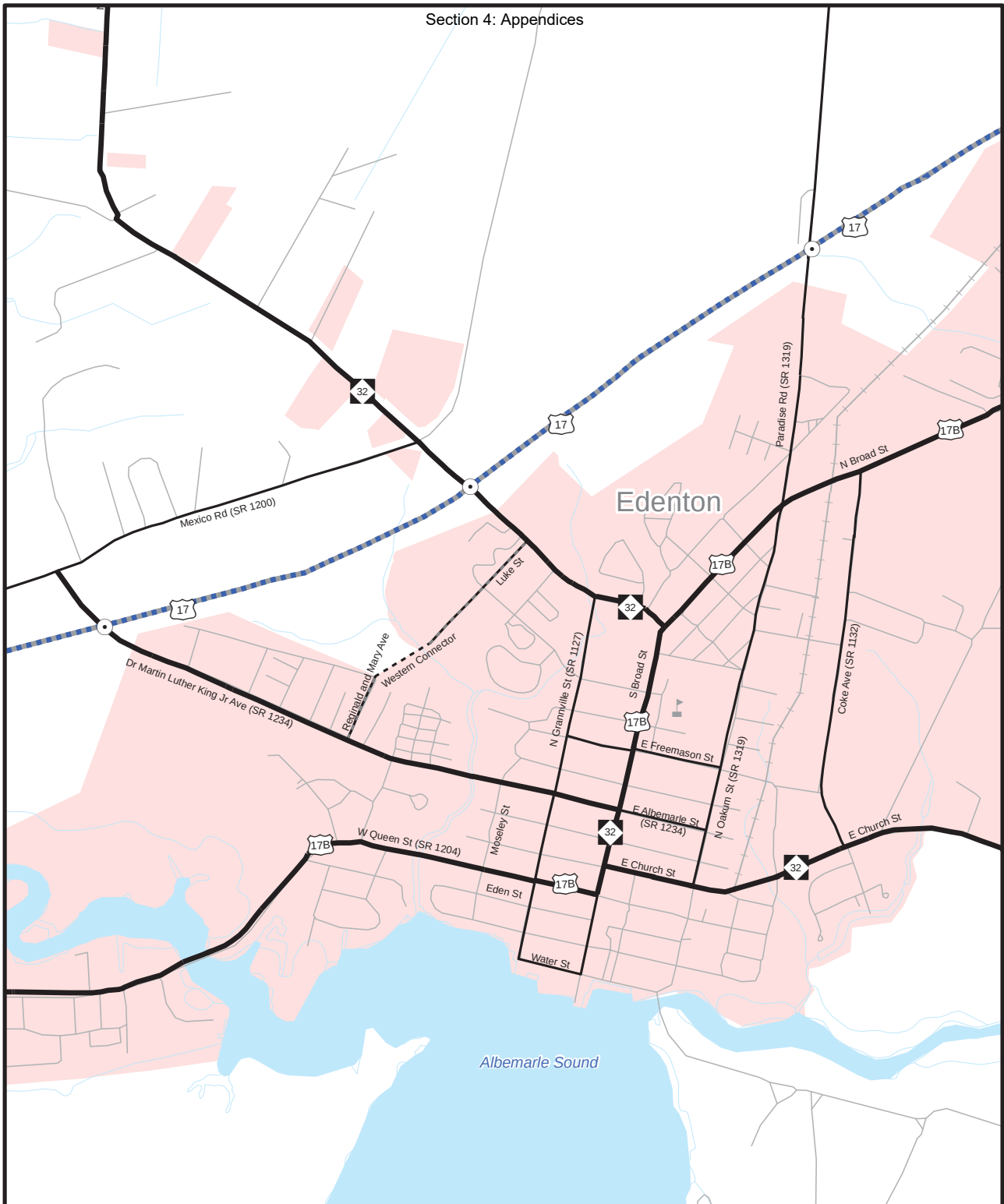
Base map date: June 17, 2014

Refer to CTP document for more details



Chowan County
North Carolina

**Comprehensive
Transportation Plan**
Plan date: August 12, 2015



Freeways

- Existing
- - - Needs Improvement
- · · Recommended

Expressways

- Existing
- - - Needs Improvement
- · · Recommended

Boulevards

- Existing
- - - Needs Improvement
- · · Recommended

Other Major Thoroughfares

- Existing
- - - Needs Improvement
- · · Recommended

Minor Thoroughfares

- Existing
- - - Needs Improvement
- · · Recommended

- Existing Interchange
- Proposed Interchange
- Interchange Needs Improvement
- Existing Grade Separation
- Proposed Grade Separation

0 0.1 0.2 0.4 Miles



Figure 1

Sheet 2A of 5

Base map date: June 17, 2014

Refer to CTP document for more details

Highway Map, Inset B



Chowan County

North Carolina

**Comprehensive
Transportation Plan**

Plan date: August 12, 2015

Section 4: Appendices

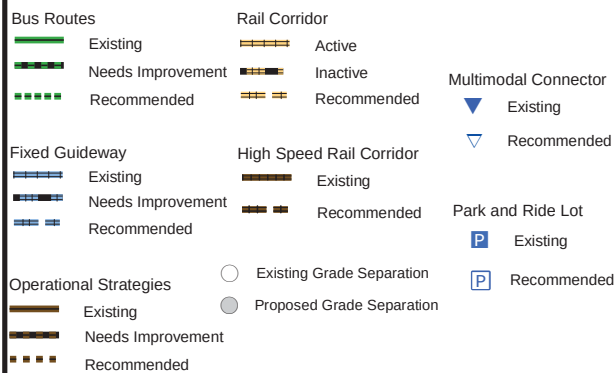
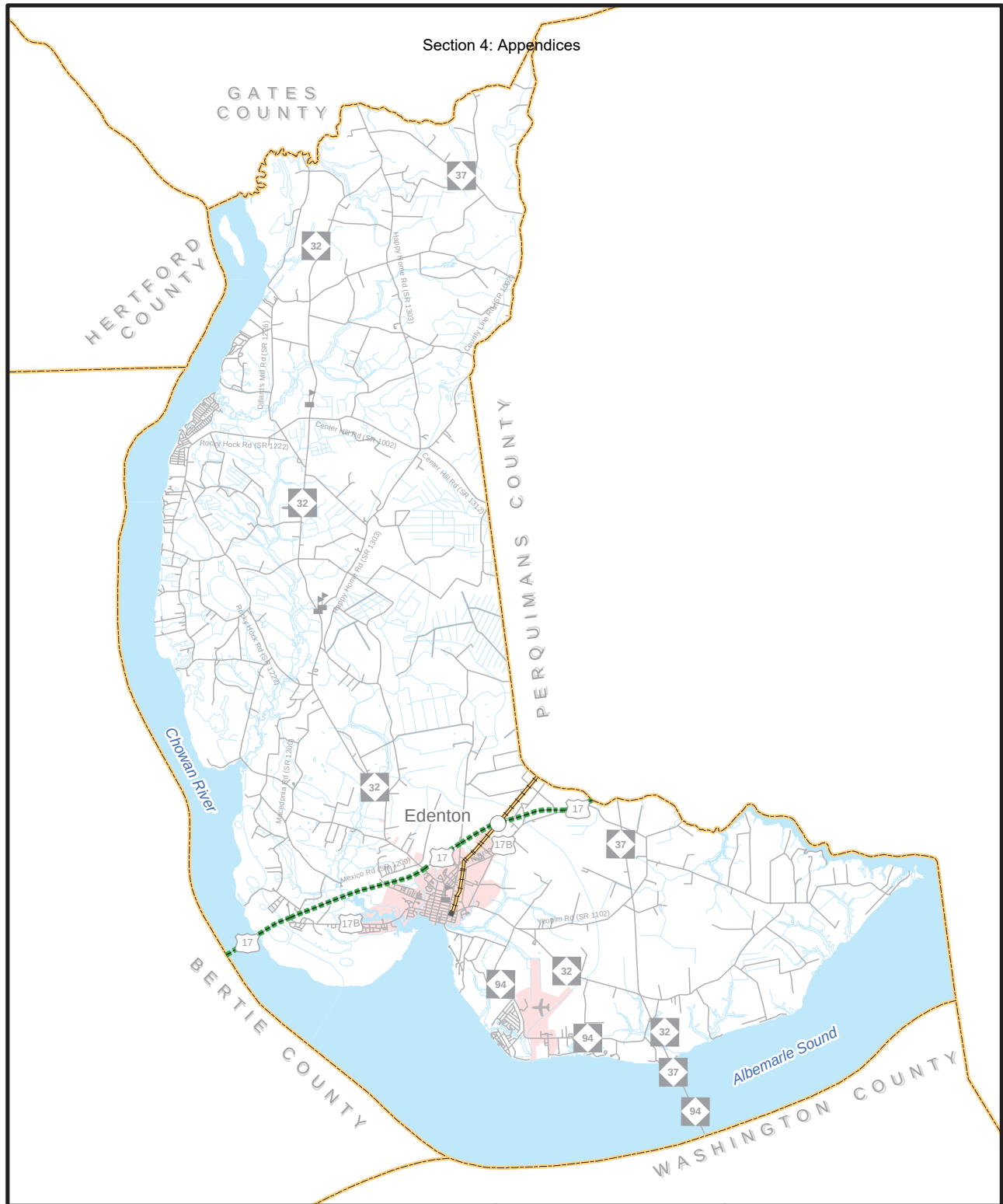


Figure 1

Sheet 3 of 5

Base map date: June 17, 2014

Refer to CTP document for more details

Public Transportation and Rail Map

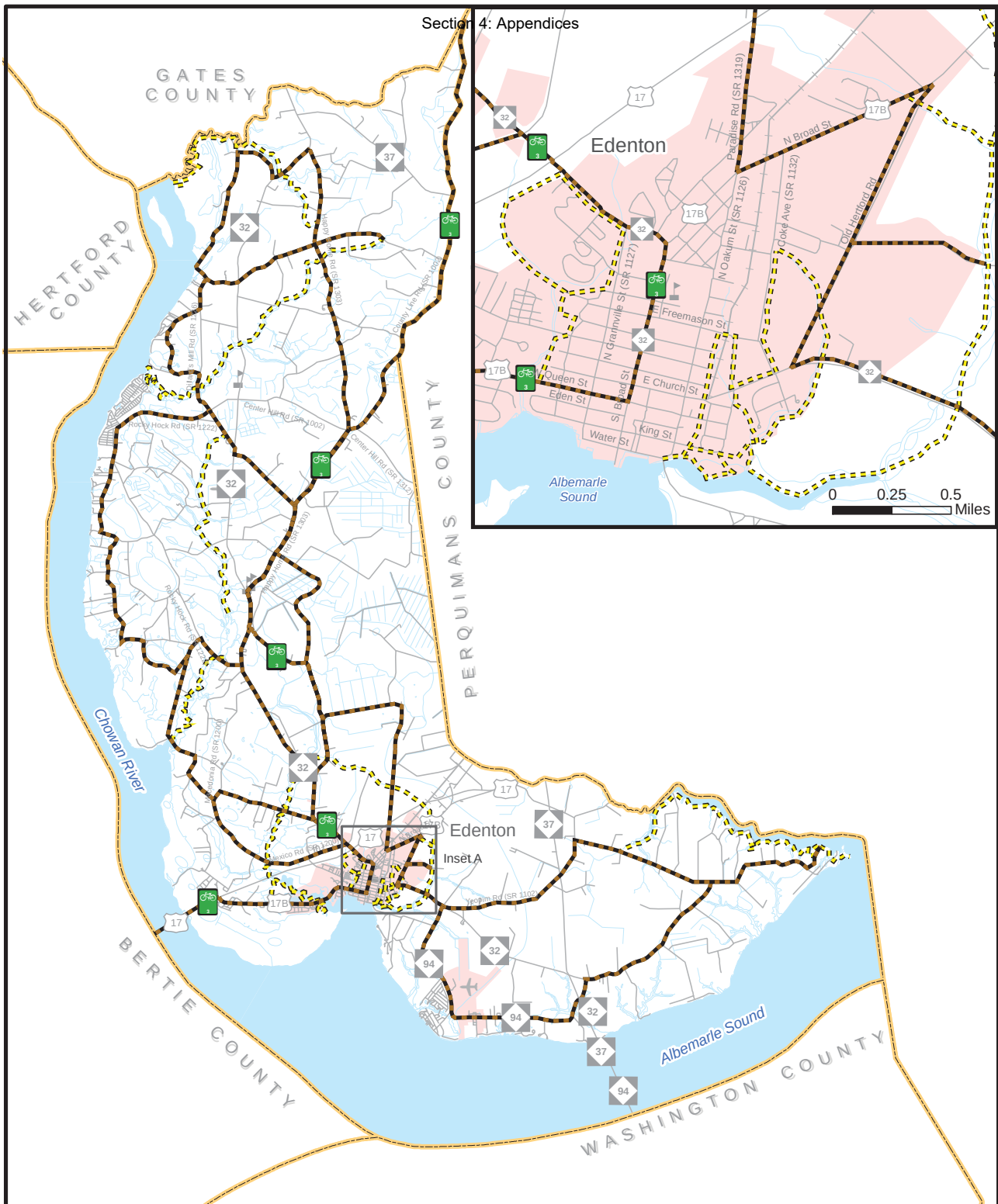


Chowan County
North Carolina

Comprehensive Transportation Plan

Plan date: August 12, 2015

Section 4: Appendices



On-road

- Existing
- Needs Improvement
- ... Recommended

Off-road

- Existing
- Needs Improvement
- ... Recommended

Multi-Use Paths

- Existing
- Needs Improvement
- ... Recommended

- Existing Grade Separation
- Proposed Grade Separation

0 0.5 1 2 3 Miles



Figure 1

Sheet 4 of 5

Base map date: June 17, 2014

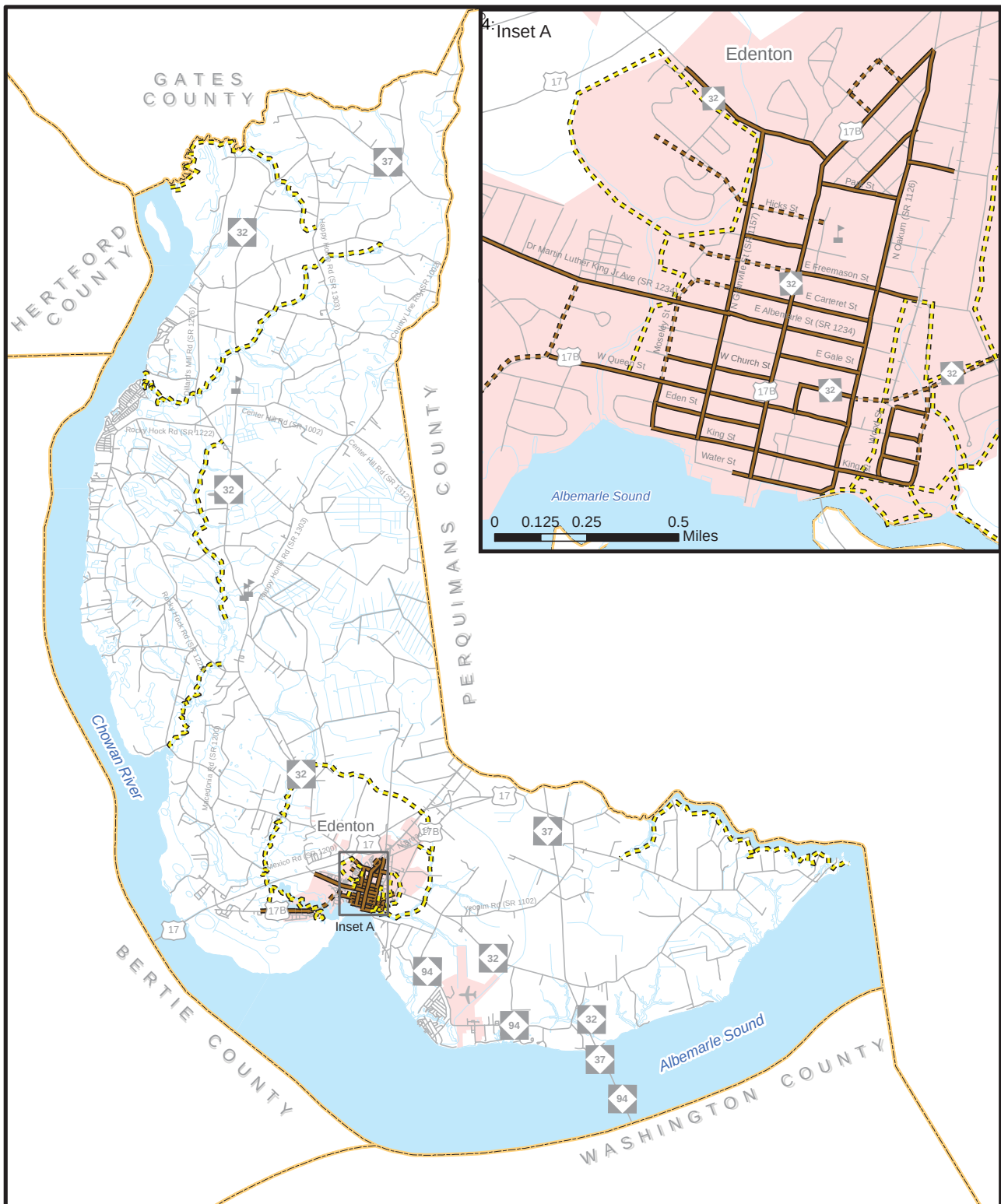
Refer to CTP document for more details

Bicycle Map



Chowan County
North Carolina

**Comprehensive
Transportation Plan**
Plan date: August 12, 2015



Sidewalks

- Existing
- - - Needs Improvement
- . . . Recommended

Off-Road

- Existing
- - - Needs Improvement
- . . . Recommended

Multi-Use Paths

- Existing
- - - Needs Improvement
- . . . Recommended

- Existing Grade Separation
- Proposed Grade Separation

0 0.5 1 2 3 Miles



Figure 1

Sheet 5 of 5

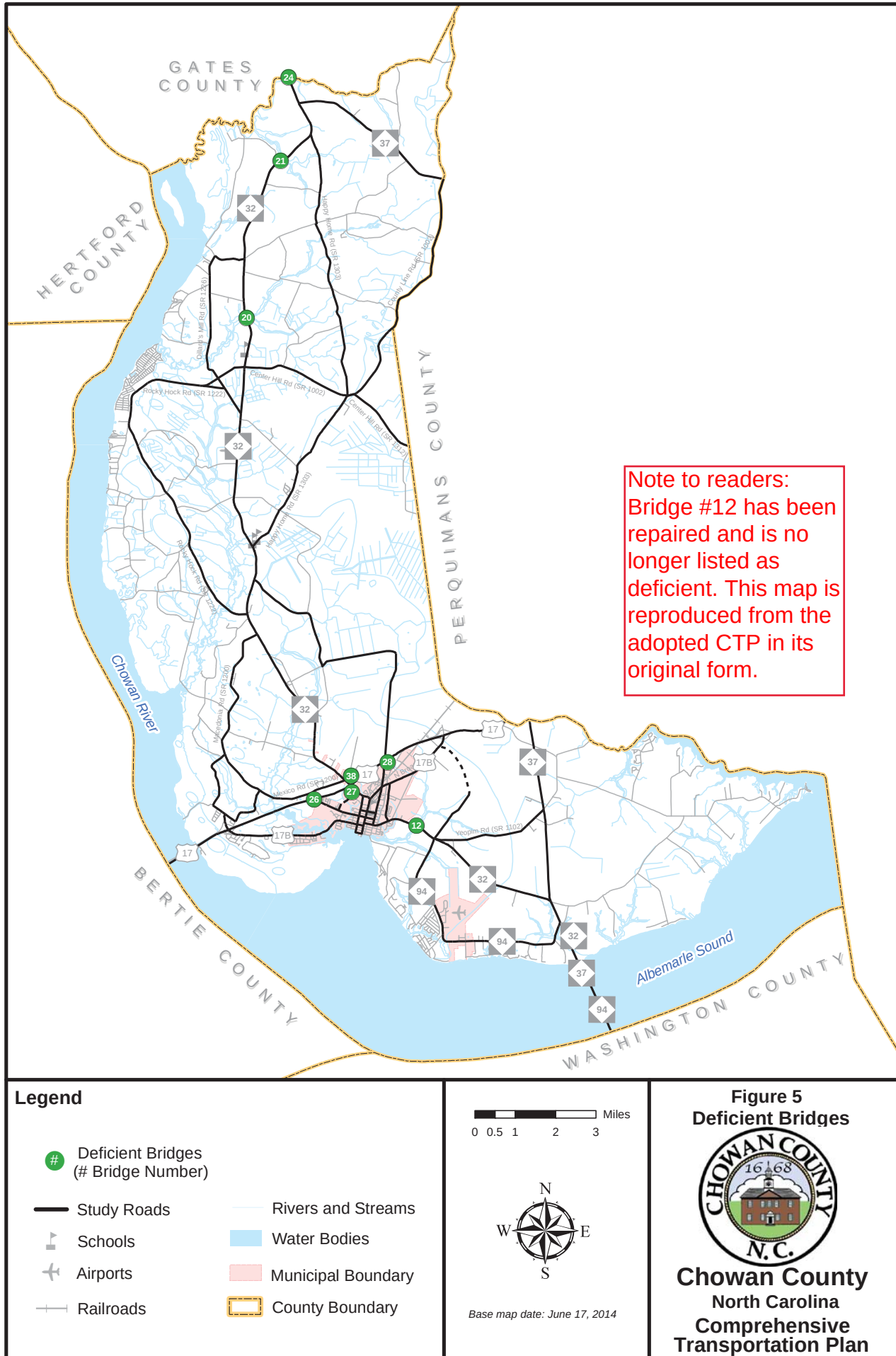
Base map date: June 17, 2014
Refer to CTP document for more details

Pedestrian Map



Chowan County
North Carolina

**Comprehensive
Transportation Plan**
Plan date: August 12, 2015



2. Recommendations

This chapter presents recommendations for each mode of transportation in the 2015 Chowan County CTP as shown in Figure 1. More detailed information on each recommendation is tabulated in Appendix C.

NCDOT adopted a "Complete Streets"¹ policy in July 2009. The policy directs the Department to consider and incorporate several modes of transportation when building new projects or making improvements to existing infrastructure. Under this policy, the Department will collaborate with cities, towns and communities during the planning and design phases of projects. Together, they will decide how to provide the transportation options needed to serve the community and complement the context of the area. The benefits of this approach include:

- making it easier for travelers to get where they need to go;
- encouraging the use of alternative forms of transportation;
- building more sustainable communities;
- increasing connectivity between neighborhoods, streets, and transit systems;
- improving safety for pedestrians, cyclists, and motorists.

Complete streets are streets designed to be safe and comfortable for all users, including pedestrians, bicyclists, transit riders, motorists and individuals of all ages and capabilities. These streets generally include sidewalks, appropriate bicycle facilities, transit stops, right-sized street widths, context-based traffic speeds, and are well-integrated with surrounding land uses. The complete street policy and concepts were utilized in the development of the CTP. The CTP proposes projects that include multi-modal project recommendations as documented in the problem statements within this chapter. Refer to Appendix C for recommended cross sections for all project proposals and Appendix D for more detailed information on the typical cross sections.

2.1 Implementation

The CTP is based on the projected growth for the planning area. It is possible that actual growth patterns will differ from those logically anticipated. As a result, it may be necessary to accelerate or delay the implementation of some recommendations found within this plan. Some portions of the plan may require revisions in order to accommodate unexpected changes in development. Therefore, any changes made to one element of the CTP should be consistent with the other elements.

Initiative for implementing the CTP rests predominately with the policy boards and citizens of the county and its municipalities. As transportation needs throughout the state exceed available funding, it is imperative that the local planning area aggressively pursue funding for priority projects. Projects should be prioritized locally and submitted to the Albemarle RPO for regional prioritization and submittal to NCDOT. Refer to Appendix A for contact information on regional prioritization and funding. Local

¹ For more information on Complete Streets, go to: <http://www.completestreetsnc.org/>

governments may use the CTP to guide development and protect corridors for the recommended projects. It is critical that NCDOT and local governments coordinate on relevant land development reviews and all transportation projects to ensure proper implementation of the CTP. Local governments and NCDOT share the responsibility for access management and the planning, design and construction of the recommended projects.

Recommended improvements shown on the CTP map represent an agreement of identified transportation deficiencies and potential solutions to address the deficiencies. While the CTP does propose recommended solutions, it may not represent the final location or cross section associated with the improvement. All CTP recommendations are based on high level systems analyses that seek to minimize impacts to the natural and human environment. Prior to implementing projects from the CTP, additional analysis will be necessary to meet the National Environmental Policy Act (NEPA) or the North Carolina (or State) Environmental Policy Act² (SEPA). During the NEPA/SEPA process, the specific project location and cross section will be determined based on environmental analysis and public input. This CTP may be used to support transportation decision making and provide transportation planning data in the NEPA/SEPA process.

2.2 Problem Statements

Following are problem statements for each recommendation, organized by CTP modal element. The information provided in the problem statement is intended to help support decisions made in the NEPA/SEPA process. A full, minimum or reference problem statement is presented for each recommendation, with full problem statements occurring first in each section. Full problem statements are denoted by a gray shaded box containing project information. Minimum problem statements are more concise and less detailed than full problem statements, but include all known or readily available information. Reference problem statements are developed for TIP projects where the purpose and need for the project has already been established.

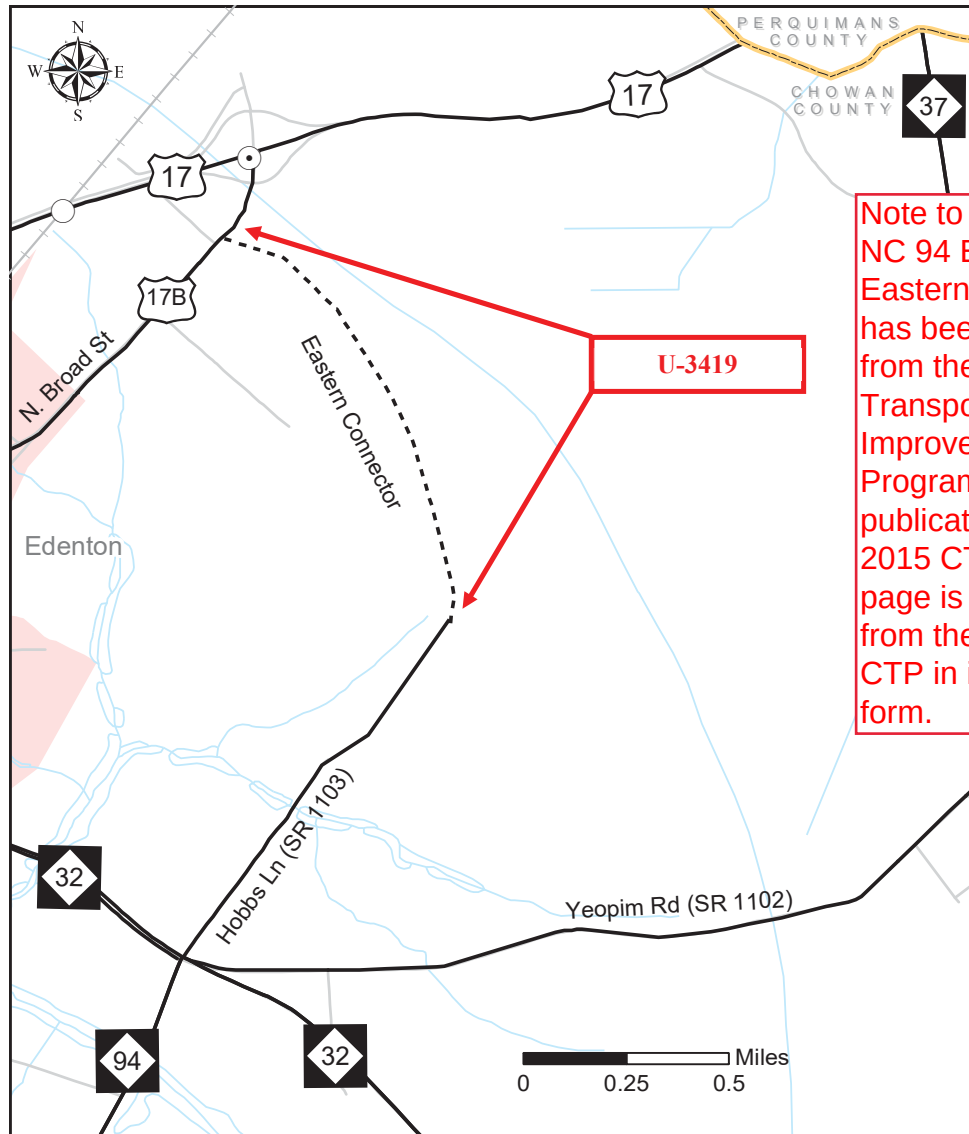
² For more information on SEPA, go to: <http://www.doa.nc.gov/clearing/faq.aspx>.

HIGHWAY

**NC 94 Extension (Eastern Connector) on new location
from Hobbs Lane (SR 1103) to US 17 Business**

Local ID: U-3419

Last updated: 8/12/2015



Identified Problem

NC 94 is a two lane major thoroughfare with 11 foot lanes entering Chowan County from Washington County and terminating at NC 32 (Yeopim Road). Hobbs Lane (SR 1103) currently terminates approximately 1.4 miles north of NC 32 (Yeopim Road). Improvements are needed to provide better north-south mobility and connectivity east of the town center and to provide an alternate north-south route between US 17 Business and NC 94 on the eastern side of Edenton.

Note to readers: The NC 94 Extension/Eastern Connector has been removed from the NCDOT Transportation Improvement Program since the publication of the 2015 CTP. This page is reproduced from the adopted CTP in its original form.

Justification of Need

Currently, vehicles from the airport area travelling north on NC 94 to access US 17 must travel west on NC 32, then north on US 17 Business through the center of Edenton, which is approximately 8 miles total. Alternatively, the only other available route is to travel east on NC 94, then west on NC 37 into Perquimans County to connect with US 17 for a total of approximately 9 miles. Hobbs Lane (SR 1103) is currently a two lane minor thoroughfare with 10 foot lanes on the eastern side of Edenton that currently dead ends approximately 0.2 miles from its beginning. Improvements are needed to enhance mobility and connectivity in this part of the county; to provide an alternate route between US 17 to the north and NC 94 that bypasses the town of Edenton's central business district; to provide improved access to the industrial area at the Edenton Airport; and to help reduce the growing number of trucks that travel thorough the town of Edenton's historic district.

Community Vision and Problem History

This problem has not been identified on any previous plan.

CTP Project Proposal

Project Description and Overview

The CTP project proposal (Local ID: U-3419) is to construct a two lane minor thoroughfare with 12 foot lanes on new location, extending Hobbs Lane (SR 1103) to US 17 Business (N Broad Street).

A crash assessment performed during the development of the CTP indicated that the intersection of NC 32 and NC 94 each experienced 4 to 9 crashes between January 1, 2007 and December 31, 2011. Refer to Chapter 1 of the CTP report for more detailed information on this location.

Relationship to Land Use Plans

Land use in the vicinity of the proposed project is currently agricultural and forestry. The Future Land Use Map (FLUM) from the 2008 Chowan County/Town of Edenton North Carolina Core Land Use Plan³ categorizes this area as low density residential. The proposed project will provide improved access for development in the area and to the airport industrial area.

Linkages to Other Plans and Proposed Project History

This project was removed from the State Transportation Improvement Program (STIP) in 2011 and appeared in the deleted section of the 2012-2021 STIP. It is not currently funded within the 2016 – 2025 STIP.

This proposed project directly connects to minor widening improvements (CHOW0003-H) that are recommended on the existing Hobbs Road (SR 1103).

³ To view this plan, go to: <http://www.chowancounty-nc.gov> .

Natural & Human Environmental Context

Based on a planning level environmental assessment using available GIS data, the proposed project is within landscape habitat indicator guilds and natural heritage element occurrence areas.

Multi-modal Considerations

There are no other modes of transportation associated with this proposed project.

Public/ Stakeholder Involvement

Improvements to Hobbs Lane (SR 1103) and the proposed NC 94 Extension were identified most frequently as a transportation issue by the steering committee for this study. Committee members were concerned on the following issues: connectivity, truck traffic and airport access.

Note to readers: The NC 94 Extension/Eastern Connector has been removed from the NCDOT Transportation Improvement Program since the publication of the 2015 CTP. This page is reproduced from the adopted CTP in its original form.

US 17, TIP No. R-5731 and CHOW0001-H

US 17 is a major east-west corridor through Chowan County along the northern Edenton town limits. This facility is currently a four lane freeway with 12 foot lanes from Bertie County to US 17 Business and a four lane expressway with 12 foot lanes from US 17 Business to Perquimans County. Access along the freeway section is fully controlled with limited access along the expressway section. Improvements are needed to maintain mobility along the corridor.

The 2016 – 2025 TIP includes project R-5731 that will upgrade the existing facility to interstate standards from the south end of the Chowan River Bridge in Bertie County to US 17 Business in Edenton. Additionally, the section from US 17 Business to Perquimans County is recommended to be upgraded to interstate standards as project CHOW0001-H. The entire US 13/17 corridor from US 64 in Williamston to Virginia is being evaluated for upgrade to interstate standards as a part of NCDOT feasibility study FS-1501A which is currently in progress.

The US 17 corridor is identified as a Strategic Transportation Corridor (STC) within the North Carolina Transportation Network⁴ (NCTN). The STC Policy and Map was adopted by the NCDOT on March 4, 2015. The purpose of the NC Transportation Network (NCTN) is to preserve and maximize mobility and connectivity on a core network of multimodal transportation corridors, promoting environmental stewardship and economic prosperity. The recommended improvements will help to meet this goal.

The 2008 Chowan County/Town of Edenton North Carolina Core Land Use Plan⁵ identifies the land along US 17 as commercially-used land. This commercial corridor area contains retail, personal and business services, and some office uses.

In February of 2015, Chowan County and the Town of Edenton passed resolutions in support of a future Interstate designation for the US 64 corridor and the US 17 corridor which extends from Raleigh to the Hamptons Roads area of Virginia. The initiative is supported both locally and regionally. Supporters of this initiative include the regional metropolitan transportation planning agencies serving Raleigh, Hampton Roads, and Rocky Mount, NC, several rural planning organizations, as well as the business organizations serving these areas. Legislation was introduced, and passed, in both houses of Congress to designate the corridor as a future Interstate. The designation was included in the FAST Act which President Obama signed into law in December of 2015.

⁴ For more information on NCTN, go to:
<https://connect.ncdot.gov/projects/planning/Pages/NCTransportationNetwork.aspx>.

⁵ To view this plan, go to: <http://www.chowancounty-nc.gov>.

Luke Street Extension (Western Connector), Local ID: CHOW0002-H

Luke Street is a two lane minor thoroughfare located adjacent to the Vidant Chowan Hospital in Edenton and is currently a dead end facility. Improvements are needed to enhance connectivity and mobility in western Edenton.

Within western Edenton, there is no direct access to Dr. Martin Luther King Jr Avenue (SR 1234) from NC 32 (Virginia Rd). There are interchange connections to both facilities further west of town along the freeway section of US 17. Additionally, the Vidant Chowan Hospital is located in the eastern quadrant of the NC 32 and Luke Street intersection. Currently, emergency vehicles travelling to and from southwestern Edenton must travel through the historic district of downtown Edenton to the hospital or travel further out using the freeway facility. Improvements are needed for improved mobility and connectivity in this area of town.

A short minor thoroughfare with 12 foot lanes is proposed on new location from Luke Street to Reginald and Mary Avenue. The proposed connector will provide more direct access to the hospital and southwestern Edenton.

Land use in the vicinity of the proposed project is currently institutional/public, including the Vidant Chowan Hospital, as well as residential and undeveloped land. The Future Land Use Map (FLUM) from the 2008 Chowan County/Town of Edenton North Carolina Core Land Use Plan⁶ categorizes this area as institutional/public and medium/high residential.

Based on a planning level environmental assessment using available GIS data, the proposed project is within a natural heritage element occurrence area and a national wetland inventory area. The proposed project is near a water distribution treatment plant, hospital, and historic resources district.

This project has not been identified on any previous transportation plan.

Minor Widening Improvements

The following routes are not expected to exceed capacity, but were identified as candidates for upgrading to NCDOT design standards. All facilities listed are recommended to have a minimum of 12 foot lanes with paved shoulders in order to improve mobility, safety and/or to accommodate bicycles. Additionally, some facilities may require improvements to the vertical and/or horizontal alignment. Implementation of the proposed projects should be coordinated through NCDOT's Highway Division 1 office (reference Appendix A for contact information).

- **Hobbs Lane (SR 1103), CHOW0003-H:** from NC 32 (Yeopim Road) to 1.4 miles north of NC 32 (Yeopim Road).
- **Luke Street, CHOW0004-H:** from NC 32 (Virginia Road) to 0.4 miles south of NC

⁶ To view this plan, go to: <http://www.chowancounty-nc.gov>.

32 (Virginia Road).

- **Reginald and Mary Avenue, CHOW0005-H:** from Dr. Martin Luther King Jr Avenue (SR 1234) to 0.4 miles north of Dr. Martin Luther King Jr Avenue (SR 1234).

PUBLIC TRANSPORTATION & RAIL

A public transportation and rail assessment was completed during the development of the CTP. There is one active rail line within the county; however, there are no planned improvements. There are currently no existing fixed route public transportation services in the county. The 2016 – 2025 TIP includes the following new route:

Raleigh to Norfolk, VA Intercity Bus Route (Greyhound Lines), TIP No. TI-6104

Intercity bus route from Raleigh to Norfolk VA, via Elizabeth City along US 64, US 301, US 264, and US 17 with stops at Raleigh, Rocky Mount, Wilson, Greenville, Washington, Williamston, Edenton and Elizabeth City. For additional information about the proposed route, contact the NCDOT Public Transportation Division. (Refer to Appendix A for contact information.)

BICYCLE

The 2013 Albemarle Regional Bicycle Plan⁷, the 2003 Chowan County & Edenton Greenways and Open Space Plan⁸, and the 2013 North Carolina Statewide Pedestrian and Bicycle Plan (WalkBikeNC)⁹ were used to identify bicycle routes throughout the county. These facilities are shown on the Bicycle Map, Sheet 4 of Figure 1.

In accordance with American Association of State Highway and Transportation Officials (AASHTO), roadways identified as bicycle routes should incorporate the following standards as roadway improvements are made and funding is available:

- Curb & gutter sections require a minimum 5 foot bike lanes or 14 foot wide shoulder lanes.
- Shoulder sections require a minimum of 4 foot paved shoulder.
- All bridges along the roadways where bike facilities are recommended shall be equipped with 54 inch railings.

⁷ The 2013 Albemarle Regional Bicycle Plan can be viewed at: <http://www.albemarlebikeplan.com/>.

⁸ The 2003 Chowan County & Edenton Greenway & Open Space Plan can be viewed at:

http://www.townofedenton.com/index.asp?Type=B_BASIC&SEC={98A904CF-0EE0-4C8C-83F3-5FB3E029FD61}.

⁹ For more information on WalkBikeNC, go to: <http://www.ncdot.gov/bikeped/planning/walkbikenc/>.

PEDESTRIAN

The 2013 Albemarle Regional Bicycle Plan and 2003 Chowan County & Edenton Greenways and Open Space Plan were used to identify existing sidewalks, recommended sidewalks, and multi-use trails throughout the county. These features are shown on the Pedestrian Map, Sheet 5 of Figure 1.

Additionally, during the development of the Chowan County CTP the following facilities were identified as needing sidewalks. These needs are identified below.

- **E. Carteret Street, CHOW0001-P:** from N. Granville Street to 0.25 miles west of N. Granville Street
- **E. Freemason Street, CHOW0002-P:** from NC 32 to 0.3 miles west of NC 32 and from N. Granville Street to 0.3 miles west of N. Granville Street
- **Hicks Street, CHOW0003-P:** from Luke Street to NC 32
- **Mosely Street, CHOW0004-P:** from US 17 Business (W. Queen Street) to E. Carteret Street

Note to readers: this list is reproduced directly from the adopted 2015 CTP. Note that the CTP incorrectly identifies E. Carteret and E. Freemason Streets. The first bullet point should read "W. Carteret Street..." and the second should read "W. Freemason Street..." The fourth bullet point misspells Moseley Street. These corrections are reflected in the text of the Joint Land Use Plan in Section 3.3.C.4.c.

Appendix 5. Soils Data

This appendix contains soils data from the USDA Natural Resources Conservation Service current as of June 2017, including:

- Acreage and Proportionate Extent of Soils – A description of the major soils that occur in the County, including the soil map symbol and acreage within each soil map unit.
- Sewage Disposal – Rating classes and limiting features for septic tank absorption fields and sewage lagoons.
- Dwellings and Small Commercial Buildings – Rating classes and limiting features for dwellings without basements, dwellings with basements, and small commercial buildings.
- Prime and Other Important Farmland Soils – Delineates soils that are classified as prime farmland.
- Hydric Soils – Delineates soils that are classified as hydric soils.

Soils maps have been digitized. Soils maps and tabular data are available from the Natural Resources Conservation Service at www.ncrs.usda.gov. Soils maps and data are also available for public review and inspection at the Chowan Soil and Water Conservation District Office located in the Chowan Agriculture Building at 730 North Granville Street, Suite B, Edenton, NC.

Acreage and Proportionate Extent of the Soils

Chowan County, North Carolina

Map symbol	Map unit name	Acres	Percent
AaA	Altavista fine sandy loam, 0 to 2 percent slopes	3,482	2.2
Ap	Arapahoe fine sandy loam	2,377	1.5
At	Augusta fine sandy loam	3,029	2.0
Au	Augusta-Urban land complex	463	0.3
BoA	Bojac loamy fine sand, 0 to 3 percent slopes	373	0.2
CaB	Cainhoy fine sand, 0 to 6 percent slopes	879	0.6
Cf	Cape Fear loam	690	0.4
Ch	Chapanoke silt loam	1,191	0.8
CO	Chowan silt loam	4,980	3.2
CtB	Conetoe loamy sand, 0 to 5 percent slopes	5,256	3.4
DgA	Dogue fine sandy loam, 0 to 2 percent slopes	4,527	2.9
DgB	Dogue fine sandy loam, 2 to 6 percent slopes	3,075	2.0
DO	Dorovan muck	6,908	4.5
Ds	Dragston loamy fine sand	1,226	0.8
Ec	Echaw fine sand	3,625	2.3
Ic	Icaria fine sandy loam	6,157	4.0
Ly	Lynn Haven sand	2,603	1.7
MuA	Munden loamy fine sand, 0 to 2 percent slopes	709	0.5
Nm	Nimmo loamy fine sand	780	0.5
Pe	Perquimans silt loam	2,270	1.5
Pt	Portsmouth loam	8,416	5.4
Ro	Roanoke silt loam	20,111	13.0
Sc	Scuppernong muck	956	0.6
Se	Seabrook fine sand	1,383	0.9
StA	State loamy fine sand, 0 to 2 percent slopes	1,854	1.2
StB	State loamy fine sand, 2 to 6 percent slopes	1,882	1.2
SuA	State-Urban land complex, 0 to 2 percent slopes	295	0.2
Tm	Tomahawk loamy fine sand	3,619	2.3
To	Tomotley fine sandy loam	7,676	5.0
UD	Udorthents, loamy	208	0.1
Ur	Urban land	299	0.2
VaB	Valhalla fine sand, 0 to 6 percent slopes	1,994	1.3
W	Water	44,874	29.0
WaA	Wahee fine sandy loam, 0 to 2 percent slopes	1,851	1.2
WnB	Wando fine sand, 0 to 5 percent slopes	3,771	2.4
YeA	Yeopim loam, 0 to 2 percent slopes	687	0.4
YeB	Yeopim loam, 2 to 6 percent slopes	308	0.2
Total		154,784	100.0

* Less than 0.1 percent.

Sewage Disposal

This table shows the degree and kind of soil limitations that affect septic tank absorption fields and sewage lagoons. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches or between a depth of 24 inches and a restrictive layer is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Saturated hydraulic conductivity (Ksat) is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a Ksat rate of more than 14 micrometers per second are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Report—Sewage Disposal

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Sewage Disposal—Chowan County, North Carolina					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AaA—Altavista fine sandy loam, 0 to 2 percent slopes					
Altavista	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50		

Sewage Disposal—Chowan County, North Carolina					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ap—Arapahoe fine sandy loam					
Arapahoe, drained	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Arapahoe, undrained	10	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
At—Augusta fine sandy loam					
Augusta, drained	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50		
Augusta, undrained	5	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50		
Au—Augusta-Urban land complex					
Augusta	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50		
Urban land	45	Not rated		Not rated	
BoA—Bojac loamy fine sand, 0 to 3 percent slopes					
Bojac	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.72
CaB—Cainhoy fine sand, 0 to 6 percent slopes					
Cainhoy	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00	Slope	0.08

Sewage Disposal—Chowan County, North Carolina					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Cf—Cape Fear loam, 0 to 2 percent slopes, rarely flooded					
Cape fear, drained	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Flooding	0.40
		Flooding	0.40		
Ch—Chapanoke silt loam					
Chapanoke, drained	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
Chapanoke, undrained	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
CO—Chowan silt loam					
Chowan, undrained	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
				Seepage	1.00
CtB—Conetoe loamy sand, 0 to 5 percent slopes					
Conetoe	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.08
DgA—Dogue fine sandy loam, 0 to 2 percent slopes					
Dogue	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
		Seepage, bottom layer	1.00		
DgB—Dogue fine sandy loam, 2 to 6 percent slopes					
Dogue	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.32
		Seepage, bottom layer	1.00		

Sewage Disposal—Chowan County, North Carolina					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
DO—Dorovan muck, 0 to 2 percent slopes, frequently flooded					
Dorovan, undrained	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	0.50
Ds—Dragston loamy fine sand					
Dragston, drained	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Dragston, undrained	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Ec—Echaw fine sand					
Echaw	75	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00		
Ic—Icaria fine sandy loam					
Icaria, drained	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50		
Icaria, undrained	10	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50		
Ly—Lynn Haven sand					
Lynn haven, undrained	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00

Sewage Disposal—Chowan County, North Carolina					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
MuA—Munden loamy fine sand, 0 to 2 percent slopes					
Munden	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Nm—Nimmo loamy fine sand					
Nimmo, drained	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Nimmo, undrained	10	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Pe—Perquimans silt loam					
Perquimans, drained	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
Perquimans, undrained	10	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
Pt—Portsmouth loam					
Portsmouth, drained	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50		
Portsmouth, undrained	10	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50		

Sewage Disposal—Chowan County, North Carolina					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ro—Roanoke silt loam					
Roanoke, drained	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
Roanoke, undrained	10	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
Sc—Scuppernong muck, 0 to 2 percent slopes, rarely flooded					
Scuppernong, rarely flooded	94	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40
Se—Seabrook fine sand					
Seabrook	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00		
StA—State loamy fine sand, 0 to 2 percent slopes					
State	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.72
		Slow water movement	0.50		
StB—State loamy fine sand, 2 to 6 percent slopes					
State	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.72
		Slow water movement	0.50	Slope	0.32

Sewage Disposal—Chowan County, North Carolina					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
SuA—State-Urban land complex, 0 to 2 percent slopes					
State	50	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.72
		Slow water movement	0.50		
Urban land	45	Not rated		Not rated	
Tm—Tomahawk loamy fine sand					
Tomahawk	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
To—Tomotley fine sandy loam					
Tomotley, drained	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.68	Flooding	0.40
		Flooding	0.40		
Tomotley, undrained	10	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.68	Flooding	0.40
		Flooding	0.40		
UD—Udorthents, loamy					
Udorthents, loamy	95	Somewhat limited		Somewhat limited	
		Slow water movement	0.82	Seepage	0.18
Ur—Urban land					
Urban land	95	Not rated		Not rated	
VaB—Valhalla fine sand, 0 to 6 percent slopes					
Valhalla	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.72
				Slope	0.08
W—Water					
Water	100	Not rated		Not rated	

Sewage Disposal—Chowan County, North Carolina					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
WaA—Wahee fine sandy loam, 0 to 2 percent slopes					
Wahee, drained	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Wahee, undrained	10	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
WnB—Wando fine sand, 0 to 5 percent slopes					
Wando	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00	Slope	0.08
		Depth to saturated zone	0.40		
YeA—Yeopim loam, 0 to 2 percent slopes					
Yeopim	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
YeB—Yeopim loam, 2 to 6 percent slopes					
Yeopim	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Slope	0.32

Data Source Information

Soil Survey Area: Chowan County, North Carolina
 Survey Area Data: Version 16, Sep 19, 2016

Dwellings and Small Commercial Buildings

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. This table shows the degree and kind of soil limitations that affect dwellings and small commercial buildings.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Report—Dwellings and Small Commercial Buildings

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Dwellings and Small Commercial Buildings—Chowan County, North Carolina							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AaA—Altavista fine sandy loam, 0 to 2 percent slopes							
Altavista	80	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39

Dwellings and Small Commercial Buildings--Chowan County, North Carolina							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ap--Arapahoe fine sandy loam							
Arapahoe, drained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Arapahoe, undrained	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
At--Augusta fine sandy loam							
Augusta, drained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Augusta, undrained	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Au--Augusta-Urban land complex							
Augusta	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Urban land	45	Not rated		Not rated		Not rated	
BoA--Bojac loamy fine sand, 0 to 3 percent slopes							
Bojac	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
CaB--Cainhoy fine sand, 0 to 6 percent slopes							
Cainhoy	80	Not limited		Not limited		Not limited	
Cf--Cape Fear loam, 0 to 2 percent slopes, rarely flooded							
Cape fear, drained	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.04			Shrink-swell	0.04

Dwellings and Small Commercial Buildings--Chowan County, North Carolina							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ch—Chapanoke silt loam							
Chapanoke, drained	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Chapanoke, undrained	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
CO—Chowan silt loam							
Chowan, undrained	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Organic matter content	1.00		
CtB—Conetoe loamy sand, 0 to 5 percent slopes							
Conetoe	85	Not limited		Not limited		Not limited	
DgA—Dogue fine sandy loam, 0 to 2 percent slopes							
Dogue	85	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
DgB—Dogue fine sandy loam, 2 to 6 percent slopes							
Dogue	85	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
						Slope	0.01

Dwellings and Small Commercial Buildings--Chowan County, North Carolina							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
DO—Dorovan muck, 0 to 2 percent slopes, frequently flooded							
Dorovan, undrained	90	Very limited		Very limited		Very limited	
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00	Organic matter content	1.00
Ds—Dragston loamy fine sand							
Dragston, drained	45	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
Dragston, undrained	40	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
Ec—Echaw fine sand							
Echaw	75	Not limited		Very limited		Not limited	
				Depth to saturated zone	1.00		
Ic—Icaria fine sandy loam							
Icaria, drained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Icaria, undrained	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Ly—Lynn Haven sand							
Lynn haven, undrained	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
MuA—Munden loamy fine sand, 0 to 2 percent slopes							
Munden	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39

Dwellings and Small Commercial Buildings--Chowan County, North Carolina							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Nm--Nimmo loamy fine sand							
Nimmo, drained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Nimmo, undrained	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Pe--Perquimans silt loam							
Perquimans, drained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Perquimans, undrained	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Pt--Portsmouth loam							
Portsmouth, drained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Portsmouth, undrained	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Ro--Roanoke silt loam							
Roanoke, drained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Roanoke, undrained	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Dwellings and Small Commercial Buildings--Chowan County, North Carolina							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Sc--Scuppernong muck, 0 to 2 percent slopes, rarely flooded							
Scuppernong, rarely flooded	94	Very limited		Very limited		Very limited	
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00			Organic matter content	1.00
Se--Seabrook fine sand							
Seabrook	80	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
StA--State loamy fine sand, 0 to 2 percent slopes							
State	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
StB--State loamy fine sand, 2 to 6 percent slopes							
State	85	Not limited		Somewhat limited		Somewhat limited	
				Depth to saturated zone	0.61	Slope	0.01
SuA--State-Urban land complex, 0 to 2 percent slopes							
State	50	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
Urban land	45	Not rated		Not rated		Not rated	
Tm--Tomahawk loamy fine sand							
Tomahawk	80	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39

Dwellings and Small Commercial Buildings--Chowan County, North Carolina							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
To—Tomotley fine sandy loam							
Tomotley, drained	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Tomotley, undrained	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
UD—Udorthents, loamy							
Udorthents, loamy	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Ur—Urban land							
Urban land	95	Not rated		Not rated		Not rated	
VaB—Valhalla fine sand, 0 to 6 percent slopes							
Valhalla	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
W—Water							
Water	100	Not rated		Not rated		Not rated	
WaA—Wahee fine sandy loam, 0 to 2 percent slopes							
Wahee, drained	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.08	Shrink-swell	0.50
Wahee, undrained	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.08	Shrink-swell	0.50
WnB—Wando fine sand, 0 to 5 percent slopes							
Wando	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.15		

Dwellings and Small Commercial Buildings—Chowan County, North Carolina							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
YeA—Yeopim loam, 0 to 2 percent slopes							
Yeopim	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
YeB—Yeopim loam, 2 to 6 percent slopes							
Yeopim	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
						Slope	0.01

Data Source Information

Soil Survey Area: Chowan County, North Carolina
Survey Area Data: Version 16, Sep 19, 2016

Prime and other Important Farmlands

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands

Prime and other Important Farmlands—Chowan County, North Carolina		
Map Symbol	Map Unit Name	Farmland Classification
AaA	Altavista fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland
Ap	Arapahoe fine sandy loam	Prime farmland if drained
At	Augusta fine sandy loam	Prime farmland if drained
Au	Augusta-Urban land complex	Not prime farmland
BoA	Bojac loamy fine sand, 0 to 3 percent slopes	Farmland of statewide importance
CaB	Cainhoy fine sand, 0 to 6 percent slopes	Not prime farmland
Cf	Cape Fear loam, 0 to 2 percent slopes, rarely flooded	Farmland of statewide importance
Ch	Chapanoke silt loam	Prime farmland if drained
CO	Chowan silt loam	Prime farmland if protected from flooding or not frequently flooded during the growing season
CtB	Conetoe loamy sand, 0 to 5 percent slopes	Farmland of statewide importance
DgA	Dogue fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland
DgB	Dogue fine sandy loam, 2 to 6 percent slopes	All areas are prime farmland
DO	Dorovan muck, 0 to 2 percent slopes, frequently flooded	Not prime farmland
Ds	Dragston loamy fine sand	Farmland of statewide importance

Prime and other Important Farmlands—Chowan County, North Carolina		
Map Symbol	Map Unit Name	Farmland Classification
Ec	Echaw fine sand	Not prime farmland
Ic	Icaria fine sandy loam	Prime farmland if drained
Ly	Lynn Haven sand	Farmland of unique importance
MuA	Munden loamy fine sand, 0 to 2 percent slopes	Farmland of statewide importance
Nm	Nimmo loamy fine sand	Farmland of statewide importance
Pe	Perquimans silt loam	Prime farmland if drained
Pt	Portsmouth loam	Prime farmland if drained
Ro	Roanoke silt loam	Farmland of statewide importance
Sc	Scuppernong muck, 0 to 2 percent slopes, rarely flooded	Not prime farmland
Se	Seabrook fine sand	Not prime farmland
StA	State loamy fine sand, 0 to 2 percent slopes	All areas are prime farmland
StB	State loamy fine sand, 2 to 6 percent slopes	All areas are prime farmland
SuA	State-Urban land complex, 0 to 2 percent slopes	Not prime farmland
Tm	Tomahawk loamy fine sand	Farmland of statewide importance
To	Tomotley fine sandy loam	Prime farmland if drained
UD	Udorthents, loamy	Not prime farmland
Ur	Urban land	Not prime farmland
VaB	Valhalla fine sand, 0 to 6 percent slopes	Farmland of statewide importance
W	Water	Not prime farmland
WaA	Wahee fine sandy loam, 0 to 2 percent slopes	Farmland of statewide importance
WnB	Wando fine sand, 0 to 5 percent slopes	Not prime farmland
YeA	Yeopim loam, 0 to 2 percent slopes	All areas are prime farmland
YeB	Yeopim loam, 2 to 6 percent slopes	All areas are prime farmland

Data Source Information

Soil Survey Area: Chowan County, North Carolina

Survey Area Data: Version 16, Sep 19, 2016

Hydric Soils

This table lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.
- Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

Report—Hydric Soils

Hydric Soils—Chowan County, North Carolina				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
AaA—Altavista fine sandy loam, 0 to 2 percent slopes				
	Tomotley, undrained	5	Depressions on stream terraces, flats on marine terraces	2
Ap—Arapahoe fine sandy loam				
	Arapahoe, drained	80	Depressions, flats	2
	Arapahoe, undrained	10	Depressions, flats	2
At—Augusta fine sandy loam				
	Tomotley, undrained	5	Depressions on stream terraces, flats on marine terraces	2
Au—Augusta-Urban land complex				
	Roanoke, undrained	3	Depressions on marine terraces, flats on marine terraces	2
	Tomotley, undrained	2	Depressions on stream terraces, flats on marine terraces	2
Cf—Cape Fear loam, 0 to 2 percent slopes, rarely flooded				
	Cape fear, drained	85	Depressions, marine terraces, pocosins, drainageways, flats	2
	Portsmouth	8	Marine terraces, flats	2
	Roanoke	7	Terraces, drainageways, flats	2
Ch—Chapanoke silt loam				
	Perquimans, undrained	3	Depressions on marine terraces, flats on marine terraces	2
	Gertie, undrained	2	Depressions on marine terraces, flats on marine terraces	2
CO—Chowan silt loam				
	Chowan, undrained	90	Flood plains	2, 4
CtB—Conetoe loamy sand, 0 to 5 percent slopes				
	Leon	5	Flats on marine terraces	2

Hydric Soils—Chowan County, North Carolina				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
DO—Dorovan muck, 0 to 2 percent slopes, frequently flooded				
	Dorovan, undrained	90	Depressions, flood plains, pocosins, flats	1, 4
	Chowan, undrained	6	Flood plains	2, 4
	Belhaven, undrained	4	Depressions, flood plains, pocosins, flats	1
Ds—Dragston loamy fine sand				
	Portsmouth, undrained	3	Depressions on marine terraces, flats on marine terraces	2
	Nimmo, undrained	2	Depressions on marine terraces, flats on marine terraces	2
Ec—Echaw fine sand				
	Murville, undrained	5	Depressions on marine terraces, flats on marine terraces	2
	Leon	5	Flats on marine terraces	2
Ic—Icaria fine sandy loam				
	Icaria, drained	80	Depressions	2
	Icaria, undrained	10	Depressions	2
Ly—Lynn Haven sand				
	Lynn haven, undrained	85	Flats on marine terraces	2
MuA—Munden loamy fine sand, 0 to 2 percent slopes				
	Nimmo, undrained	5	Depressions on marine terraces, flats on marine terraces	2
Nm—Nimmo loamy fine sand				
	Nimmo, drained	80	Depressions on marine terraces, flats on marine terraces	2
	Nimmo, undrained	10	Depressions on marine terraces, flats on marine terraces	2

Hydric Soils—Chowan County, North Carolina				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
Pe—Perquimans silt loam				
	Perquimans, drained	80	Depressions on marine terraces, flats on marine terraces	2
	Perquimans, undrained	10	Depressions on marine terraces, flats on marine terraces	2
	Gertie, undrained	2	Depressions on marine terraces, flats on marine terraces	2
	Pasquotank, undrained	2	Depressions on marine terraces, flats on marine terraces	2
	Tomotley, undrained	1	Depressions on stream terraces, flats on marine terraces	2
Pt—Portsmouth loam				
	Portsmouth, drained	80	Depressions on marine terraces, flats on marine terraces	2
	Portsmouth, undrained	10	Depressions on marine terraces, flats on marine terraces	2
Ro—Roanoke silt loam				
	Roanoke, drained	80	Depressions on marine terraces, flats on marine terraces	2
	Roanoke, undrained	10	Depressions on marine terraces, flats on marine terraces	2
Sc—Scuppernong muck, 0 to 2 percent slopes, rarely flooded				
	Scuppernong, rarely flooded	94	Depressions, pocosins	1
	Roper, drained	3	Depressions on marine terraces, flats on marine terraces	2
	Pungo, rarely flooded, frequently ponded	3	Depressions, pocosins, flats	1, 2, 3
Se—Seabrook fine sand				
	Nimmo, undrained	2	Depressions on marine terraces, flats on marine terraces	2
	Leon	1	Flats on marine terraces	2

Hydric Soils—Chowan County, North Carolina				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
Tm—Tomahawk loamy fine sand				
	Leon	3	Flats on marine terraces	2
	Woodington, undrained	2	Depressions on marine terraces, flats on marine terraces, broad interstream divides on marine terraces	2
	Icaria, undrained	2	Depressions	2
To—Tomotley fine sandy loam				
	Tomotley, drained	80	Depressions on stream terraces, flats on marine terraces	2
	Tomotley, undrained	10	Depressions on stream terraces, flats on marine terraces	2
WaA—Wahee fine sandy loam, 0 to 2 percent slopes				
	Roanoke, undrained	5	Depressions on marine terraces, flats on marine terraces	2
WnB—Wando fine sand, 0 to 5 percent slopes				
	Leon	3	Flats on marine terraces	2
	Muckalee, undrained	2	Flood plains	2

Data Source Information

Soil Survey Area: Chowan County, North Carolina

Survey Area Data: Version 16, Sep 19, 2016

Appendix 6. Water Quality Classifications

The following tables provide an overview of the various North Carolina Water Quality Classifications and their applications to water bodies within Chowan County and the Town of Edenton.

North Carolina Water Quality Classifications Defined	
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 shellfishing 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	Shellfishing 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.

Chowan County and Town of Edenton Water Quality Classifications		
Water Body Name	Stream Index	Classification
Chowan River Basin		
Chowan River	25	B; NSW
Warwick Creek (Welsh Pond)	25-18-2	C; NSW
Stumpy Creek	25-19	B; NSW
Indian Creek (Dillard Millpond)	25-20	B; NSW
Rockyhock Creek (Bennett Millpond)	25-22	B; NSW
Pasquotank River Basin		
Pembroke Creek	26-1-1	B; NSW
Pollock Swamp	26-1-1-1	C; NSW
Queen Anne Creek	26-1-2	C; NSW
Albemarle Sound	30	SB
Yeopim River	30-8	SC
Burnt Mill Creek	30-8-1	C; Sw
Middleton Creek	30-8-2	C; Sw

Appendix 7. Natural Areas & Rare Species Inventory

This appendix contains information on endangered and threatened species observed in Chowan County from the U.S. Fish & Wildlife Service and the North Carolina Natural Heritage Program.

A species/community search provides lists of rare plants and animals, natural communities, and important animal assemblages (e.g., heronries and colonial waterbird nesting sites) known to the North Carolina Natural Heritage Program. By default, records are summarized by county, but you also have the option to summarize the records by USGS topographic maps or simple statewide summaries. For more information or for an explanation of the results of the search, see the "Help" and "Definitions" links above.

Use of North Carolina Natural Heritage Program data should not be substituted for actual field surveys, particularly if the project area contains suitable habitat for rare species. If a database search lists no records for a project area, it does not necessarily mean that they are not present. The area may not have been surveyed by biologists, or the data may not have been reported to the Natural Heritage Program.

Taxonomic Group	Scientific Name	Common Name	NC Status	Federal Status	State Rank	Global Rank	County	County Status
Freshwater Fish	Acipenser brevirostrum	Shortnose Sturgeon	E	E	S1	G3	Chowan	Current
Freshwater Fish	Acipenser oxyrinchus	Atlantic Sturgeon	E	E	S2	G3	Chowan	Current
Freshwater Bivalve	Anodonta imbecilis	Alewife Floater	T		S2	G5	Chowan	Historical
Dragonfly or Damselfly	Arigomphus villosipes	Unicorn Clubtail	W3		S3	G5	Chowan	Current
Vascular Plant	Bacopa innominata	Tropical Water-hyssop	SC-H		SH	G3G5	Chowan	Historical
Vascular Plant	Bidens mitis	Coastal Plain Tickseed	W7		S2?	G4?	Chowan	Historical
Vascular Plant	Bidens trichosperma	Crowned Beggar-ticks	SR-P		S1	G5?	Chowan	Historical

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Vascular Plant	Carex decomposita	Cypress Knee Sedge	SC-V		S2	G3G4	Chowan	Current
Vascular Plant	Ceratophyllum australe	Southern Hornwort	SR-P		S1	G5TNR	Chowan	Current
Natural Community	Coastal Plain Semipermanent Impoundment (Cypress-Gum Subtype)				S4	G4G5	Chowan	Current
Mammal	Corynorhinus rafinesquii macrotis	Eastern Big-eared Bat	SC	FSC	S3	G3G4T3	Chowan	Current
Reptile	Crotalus horridus	Timber Rattlesnake	SC		S3	G4	Chowan	Current
Natural Community	Cypress--Gum Swamp (Intermediate Subtype)				S3S4	G4	Chowan	Current
Vascular Plant	Didiplis diandra	Water Purslane	SR-P		S1	G5	Chowan	Historical
Natural Community	Dry-Mesic Oak--Hickory Forest (Coastal Plain Subtype)				S3	G3G4	Chowan	Current
Vascular Plant	Dryopteris carthusiana	Spinulose Woodfern	W7		S2	G5	Chowan	Historical
Vascular Plant	Dryopteris ludoviciana	Southern Woodfern	W1		S2	G4	Chowan	Current
Vascular Plant	Eurybia spectabilis	Showy Aster	SR-O		S2?	G5	Chowan	Historical
Reptile	Farancia erytrogramma	Rainbow Snake	SR		S3	G4	Chowan	Current
Bird	Haliaeetus leucocephalus	Bald Eagle	T	BGPA	S3B,S3N	G5	Chowan	Current
Vascular Plant	Heteranthera reniformis	Kidneyleaf Mud-plantain	W7		S2?	G5	Chowan	Current
Reptile	Kinosternon baurii	Striped Mud Turtle	W3		S3S4	G5	Chowan	Current
Freshwater Bivalve	Lampsilis radiata	Eastern Lampmussel	T		S3	G5	Chowan	Historical

Section 4: Appendices

Vascular Plant	<i>Lathyrus palustris</i>	Marsh Peavine	W7		S2?	G5	Chowan	Historical
Freshwater Bivalve	<i>Leptodea ochracea</i>	Tidewater Mucket	T		S2	G3G4	Chowan	Current
Freshwater Bivalve	<i>Ligumia nasuta</i>	Eastern Pondmussel	T		S2	G4	Chowan	Current
Vascular Plant	<i>Lilium</i> sp. 1	Blackwater Turk's Cap Lily	W2		S1	G1G3Q	Chowan	Current
Vascular Plant	<i>Ludwigia ravenii</i>	Raven's Seedbox	T	FSC	S1	G1G2	Chowan	Historical
Vascular Plant	<i>Malaxis spicata</i>	Florida Adder's-mouth	SC-V		S1	G4?	Chowan	Current
Natural Community	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)				S3	G3	Chowan	Current
Mammal	<i>Myotis austroriparius</i>	Southeastern Bat	SC	FSC	S2	G4	Chowan	Current
Vascular Plant	<i>Najas gracillima</i>	Slender Waternymph	W7		S2	G5?	Chowan	Historical
Natural Community	Nonriverine Swamp Forest (Mixed Subtype)				S3	G3	Chowan	Current
Reptile	<i>Ophisaurus attenuatus</i>	Slender Glass Lizard	SR		S2	G5	Chowan	Current
Crustacean	<i>Orconectes virginienensis</i>	Chowanoke Crayfish	SC	FSC	S3	G3	Chowan	Current
Vascular Plant	<i>Persicaria glabra</i>	Dense-flower Knotweed	W1		S3	G5	Chowan	Current
Natural Community	Pond Pine Woodland (Canebrake Subtype)				S1	G1	Chowan	Current
Natural Community	Pond Pine Woodland (Northern Subtype)				S1	G2?	Chowan	Current

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Amphibian	Siren lacertina	Greater Siren	W3		S3	G5	Chowan	Current
Dragonfly or Damselfly	Somatochlora provocans	Treetop Emerald	W3		S3?	G4	Chowan	Current
Vascular Plant	Spartina pectinata	Freshwater Cordgrass	SC-V		S1	G5	Chowan	Historical
Vascular Plant	Symphyotrichum elliotii	Elliott's Aster	W1		S2S3	G4	Chowan	Historical
Natural Community	Tidal Freshwater Marsh (Mixed Freshwater Subtype)				S1	G2?	Chowan	Current
Natural Community	Tidal Swamp (Cypress--Gum Subtype)				S4	G3G4	Chowan	Current
Vascular Plant	Verbena scabra	Sandpaper Vervain	W7		S2?	G5	Chowan	Historical
Freshwater or Terrestrial Gastropod	Vertigo teskeyae	Swamp Vertigo	W3		S3	G5	Chowan	Current

U.S. Fish & Wildlife Service

Endangered Species, Threatened Species, Federal Species of Concern, and Candidate Species,

Chowan County, North Carolina



Note: Marine Threatened and Endangered Species information can be found at the [National Marine Fisheries Service \(NMFS\) Endangered and Threatened Species website](#)

Updated: 3-9-2015

Common Name	Scientific name	Federal Status	Record Status
Vertebrate:			
American eel	<i>Anguilla rostrata</i>	FSC	Current
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGPA	Current
Rafinesque's big-eared bat	<i>Corynorhinus rafinesquii</i>	FSC	Current
Red knot	<i>Calidris canutus rufa</i>	T	Current
Southeastern myotis	<i>Myotis austroriparius</i>	FSC	Obscure
West Indian manatee	<i>Trichechus manatus</i>	E	Current

Invertebrate:

Vascular Plant:

Raven's boxseed	<i>Ludwigia ravenii</i>	FSC	Historic
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Nonvascular Plant:

Lichen:

Definitions of Federal Status Codes:

E = endangered. A taxon "in danger of extinction throughout all or a significant portion of its range."

T = threatened. A taxon "likely to become endangered within the foreseeable future throughout all or a significant portion of its range."

C = candidate. A taxon under consideration for official listing for which there is sufficient information to support listing. (Formerly "C1" candidate species.)

BGPA =Bald and Golden Eagle Protection Act. See below.

FSC=Federal Species of Concern. FSC is an informal term. It is not defined in the federal Endangered Species Act. In North Carolina, the Asheville and Raleigh Field Offices of the US Fish and Wildlife

Service (Service) define Federal Species of Concern as those species that appear to be in decline or otherwise in need of conservation and are under consideration for listing or for which there is insufficient information to support listing at this time. Subsumed under the term "FSC" are all species petitioned by outside parties and other selected focal species identified in Service strategic plans, State Wildlife Action Plans, or Natural Heritage Program Lists.

T(S/A) = threatened due to similarity of appearance. A taxon that is threatened due to similarity of appearance with another listed species and is listed for its protection. Taxa listed as T(S/A) are not biologically endangered or threatened and are not subject to Section 7 consultation. See below.

EXP = experimental population. A taxon listed as experimental (either essential or nonessential). Experimental, nonessential populations of endangered species (e.g., red wolf) are treated as threatened species on public land, for consultation purposes, and as species proposed for listing on private land.

P = proposed. Taxa proposed for official listing as endangered or threatened will be noted as "PE" or "PT", respectively.

Bald and Golden Eagle Protection Act (BGPA):

In the July 9, 2007 Federal Register(72:37346-37372), the bald eagle was declared recovered, and removed (de-listed) from the Federal List of Threatened and Endangered wildlife. This delisting took effect August 8, 2007. After delisting, the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668d) becomes the primary law protecting bald eagles. The Eagle Act prohibits take of bald and golden eagles and provides a statutory definition of "take" that includes "disturb". The USFWS has developed National Bald Eagle Management Guidelines to provide guidance to land managers, landowners, and others as to how to avoid disturbing bald eagles. For mor information, visit <http://www.fws.gov/migratorybirds/baldeagle.htm>

Threatened due to similarity of appearance(T(S/A)):

In the November 4, 1997 Federal Register (55822-55825), the northern population of the bog turtle (from New York south to Maryland) was listed as T (threatened), and the southern population (from Virginia south to Georgia) was listed as T(S/A) (threatened due to similarity of appearance). The T(S/A) designation bans the collection and interstate and international commercial trade of bog turtles from the southern population. The T(S/A) designation has no effect on land management activities by private landowners in North Carolina, part of the southern population of the species. In addition to its official status as T(S/A), the U.S. Fish and Wildlife Service considers the southern population of the bog turtle as a Federal species of concern due to habitat loss.

Definitions of Record Status:

Current - the species has been observed in the county within the last 50 years.

Historic - the species was last observed in the county more than 50 years ago.

Obscure - the date and/or location of observation is uncertain.

Incidental/migrant - the species was observed outside of its normal range or habitat.

Probable/potential - the species is considered likely to occur in this county based on the proximity of known records (in adjacent counties), the presence of potentially suitable habitat, or both.

TERMINOLOGY AND DEFINITIONS

June 2017

ELEMENTS

The North Carolina Natural Heritage Program (NC NHP) collects information on occurrences of rare plants and animals, exemplary or unique natural communities, and important animal assemblages (e.g., heronries and colonial waterbird nesting sites). Collectively, these plants, animals, natural communities, and animal assemblages are referred to as “elements of natural diversity” or simply as “elements.” Specific occurrences of these elements are referred to as “element occurrences.”

TAXONOMIC GROUP

A taxonomic group is the broad biological group into which the element falls. Most are well known, such as mammals, crayfish, and mosses. Less familiar groups are *natural communities*, which are a distinct and reoccurring assemblage of populations of plants, animals, bacteria, and fungi naturally associated with each other and their physical environment; and *animal assemblages*, which are a concentration of animal species using the same site for a phase of their life cycle (feeding, reproduction, migration, hibernating, etc.), e.g. bird colonies, bat or reptile hibernacula, concentrations of migrating shorebirds, multispecific spawning grounds, or multispecific mussel habitats.

SCIENTIFIC NAME

Plant names follow those used in “Flora of the Southern and Mid-Atlantic States” by Alan Weakley (2015 draft). For the most part, animal names follow those found in NatureServe Explorer (<http://www.natureserve.org/explorer/>). Names of natural communities are from a “Guide to the Natural Communities of North Carolina, Fourth Approximation” by Michael P. Schafale, 2012.

COMMON NAME

Plant names follow those used in “Flora of the Southern and Mid-Atlantic States” by Alan Weakley (2015 draft). For the most part, animal names follow those found in NatureServe Explorer (<http://www.natureserve.org/explorer/>).

STATUS AND RANK CODES

Definitions of the state and federal protection status for plants and animals differ. The North Carolina Natural Heritage Program (NCNHP) also maintains Watch Lists for species of plants and animals that are rare or uncommon, are not well studied, or are otherwise threatened with serious decline but for which current information does not justify placement on the Rare List by NCNHP.

EXPLANATION OF RANK CODES FOR NATURAL COMMUNITIES

Natural Heritage Programs and the NatureServe Network have developed a consistent method for evaluating the relative imperilment of species and ecological communities. Status and rank codes for natural community types are derived from the Natural Heritage Database (2015). An S or G rank involving two numbers indicates uncertainty of rank. For instance, a G2G3 rank indicates that the community appears to warrant either a G2 or a G3 ranking, but existing data do not allow that determination to be made. Number of occurrences is given as a general guide. Ranks also depend on other factors that affect vulnerability, including extent of occurrences, range, trends, and threats.

N.C. RANK

RANK	DEFINITION
S1	Critically imperiled in North Carolina because of extreme rarity or because of some factor making it especially vulnerable to extirpation from the state. Typically 1-5 occurrences and/or less than 2,000 acres occupied in the state.

S2	Imperiled in North Carolina because of rarity or because of some factor making it very vulnerable to extirpation from the state. Typically 6-20 occurrences and/or 2,000-10,000 acres occupied in the state.
S3	Rare or uncommon in North Carolina. Typically 21-100 occurrences and/or 10,000-50,000 acres occupied in the state.
S4	Apparently secure in the state.
S5	Demonstrably secure in the state.
S_?	Rank uncertain.

GLOBAL RANK

RANK	DEFINITION
G1	Critically imperiled globally because of extreme rarity or because of some factor making it especially vulnerable to extinction throughout its range. Typically 5 or fewer occurrences and/or less than 2,000 acres occupied globally.
G2	Imperiled globally because of rarity or because of some factor making it very vulnerable to extinction throughout its range. Typically 6-20 occurrences and/or 2,000-10,000 acres occupied globally.
G3	Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range or because of other factors making it vulnerable to extinction throughout its range. Typically 21-100 occurrences and/or 10,000-50,000 acres occupied globally.
G4	Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
G5	Demonstrably secure globally, though it may be quite rare in parts, especially at the periphery.
G_?	Uncertain rank.
G_Q	Questionable taxonomy that may reduce conservation priority. Distinctiveness of this entity as a type or subtype at the current level is questionable.

EXPLANATION OF STATUS AND RANK CODES FOR PLANTS

Status Codes

In North Carolina, Endangered, Threatened, and Special Concern species have legally protected status through the North Carolina Plant Conservation Program (NCPCP). The Natural Heritage Program maintains computerized records and GIS map files on Significantly Rare species, as well as species considered extirpated in the state.

United States Status is designated by the U.S. Fish and Wildlife Service (USFWS) and the U.S. National Marine Fisheries Service (USNMFS) in accordance with the U.S. Endangered Species Act of 1973 (USESA), as amended. Plants and plant varieties, (including fungi and lichens), animal species and subspecies, and vertebrate populations are considered for Endangered or Threatened status according to the criteria established under the USESA. Proposals and determinations to add taxa or populations to the Lists of Endangered and Threatened Wildlife and plants are published in the Federal Register. Additionally, the USFWS and the USNMFS periodically publish a Notice of Review or Notice of Reclassification in the Federal Register that presents an updated list of plant and animal taxa that are regarded as candidates or proposed for possible addition to the Lists of Endangered and Threatened Wildlife and Plants. Contact the Asheville or Raleigh Ecological Services Field Offices for more information.

N.C. STATUS – PLANTS

N.C. STATUS CODE	STATUS	DEFINITION
E	Endangered	Any native or once-native species of higher taxon of plant whose continued existence as a viable component of the state's flora is determined to be in jeopardy or any species of plant determined to be an Endangered species pursuant to the Endangered Species Act. (GS19B-106:202.12.)
T	Threatened	Any native or once-native 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, or one that is designated as a Threatened species pursuant to the Endangered Species Act. (GS19B-106:202.12.)
SC-V	Special Concern-Vulnerable	Any species or higher taxon of plant which is likely to become a threatened species within the foreseeable future. (NCAC 02 NCAC 48F .0401.)
SC-H	Special Concern-Historical	Any species or higher taxon of plant that occurred in North Carolina at one time, but for which all known populations are currently considered to be either historical or extirpated. (NCAC 02 NCAC 48F .0401)
SR	Significantly Rare	This is a NCNHP designation. Any species which has not been listed by the NCPCP as an Endangered, Threatened, or Special Concern species, but which exists in the state (or recently occurred in the state) in small numbers (generally 1-100 statewide populations) and has been determined by the NCNHP to need monitoring. Significantly Rare species include species of historical occurrence with some likelihood of rediscovery in the state and species substantially reduced in numbers by habitat destruction, direct exploitation, or disease. Species considered extirpated in the state, with little likelihood of rediscovery, are given no N.C. status (unless already listed by the NCWRC or NCPCP as E, T, or SC).
SR-L	Significantly Rare-Limited	The range of the species is limited to North Carolina and adjacent states (endemic or near endemic). These are species that may have 20-50 populations in North Carolina, but fewer than 100 populations rangewide. The preponderance of their distribution is in North Carolina and their fate depends largely on conservation here.
SR-T	Significantly Rare-Throughout	The species is rare throughout its range (fewer than 100 populations total).
SR-D	Significantly Rare-Disjunct	The species is disjunct to North Carolina from a main range in a different part of the country or world.
SR-P	Significantly Rare-Peripheral	The species is at the periphery of its range in North Carolina. These species are generally more common somewhere else in their ranges, occurring in North Carolina peripherally to their main ranges, mostly in habitats that are unusual in North Carolina.
SR-O	Significantly Rare-Other	The range of the species is sporadic or cannot be described by the other Significantly Rare categories.
WL	Watch List	This is an NCNHP designation for any other species believed to be rare and of conservation concern in the state but not warranting active monitoring at this time.

U.S. STATUS – PLANTS

U.S. STATUS CODE	STATUS	DEFINITION
E	Endangered	A taxon that is in danger of extinction throughout all or a significant portion of its range (Public Law 93-205 87 Stat. 884).
T	Threatened	A taxon that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (Public Law 93-205 87 Stat. 884).
C	Candidate	Taxa for which the USFWS has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened. Proposed rules have not yet been issued because this action is precluded at present by other listing activity. Development and publication of proposed rules on these taxa are anticipated. The USFWS encourages state and other federal agencies as well as other affected parties to give consideration to these taxa in environmental planning [Federal Register, 5 December 1996 Volume 61(235):64481]. Taxa formerly considered “Category 1” are now considered “Candidate.”
FSC	Federal Species of Concern	Those species that appear to be in decline or otherwise in need of conservation and are under consideration for listing or for which there is insufficient information to support listing at this time. Subsumed under the term FSC are all species petitioned by outside parties and other selected focal species identified in USFWS strategic plans, state Wildlife Action Plans, or Natural Heritage Program Lists.

Ranking System

Natural Heritage Programs and the NatureServe Network have developed a consistent method for evaluating the relative imperilment of both species and ecological communities. These assessments led to the designation of a conservation status rank. These ranks provide an estimate of extinction risk. Conservation rank values have been assigned over the past 30 years by the NCNHP, NatureServe, and a large number of collaborators in government agencies, universities, natural history museums, botanical gardens, and other conservation organizations. This information has been developed primarily to help in guiding conservation and informing environmental planning and management.

Conservation ranks are either state (S) or global (G) and are based on a one-to-five scale, ranging from critically imperiled (S1 or G1) to demonstrably secure (S5 or G5). These assessments are based on the best available information, considering a variety of factors such as abundance, distribution, population trends, and threats. Global ranks apply to the status of a species throughout its range. The system is widely used by nationwide agencies and organizations, as the best available scientific and objective assessment of a species' rarity throughout its range.

A rank involving two numbers indicates uncertainty of rank. For example, an S2S3 or a G2G3 rank indicates that the species may be S2 or S3 (or G2 or G3), but that existing data do not allow that determination to be made.

N.C. RANK – PLANTS

N.C. RANK	NUMBER OF EXTANT POPULATIONS	DESIGNATION	DESCRIPTION
S1	1-5	Critically Imperiled	Critically imperiled due to extreme rarity or some factor(s) making it especially vulnerable to

N.C. RANK	NUMBER OF EXTANT POPULATIONS	DESIGNATION	DESCRIPTION
			extirpation (local extinction) from the state. Typically 5 or fewer occurrences or very few remaining individuals (<1,000).
S2	6-20	Imperiled	Imperiled due to rarity or some factor(s) making it very vulnerable to extirpation from the state. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000).
S3	21-100	Vulnerable	Vulnerable to extinction either because rare or uncommon, found only in a restricted range (even if abundant at some locations), or due to other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences or between 3,000 to 10,000 individuals.
S4	101-1,000	Apparently Secure	Apparently secure and widespread, usually with more than 100 occurrences and more than 10,000 individuals.
S5	1,001+	Secure	Common, widespread, and abundant. Essentially ineradicable under present conditions. Typically with considerably more than 100 occurrences and more than 10,000 individuals.
SH	0?	Historical	Of historical occurrence, with some expectation that it may be rediscovered. Its presence may not have been verified in the past 20 years. Upon verification of an extant occurrence, SH-ranked elements would typically receive an S1 rank. Note: an element is not automatically assigned an SH (or SX) rank if it has not been verified in the past 20 years; some effort must have been made to locate or relocate occurrences.
SX	0	Presumed Extirpated	Believed to be extirpated. Has not been located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
SU	Unknown	Unrankable	Currently unrankable due to lack of information or substantially conflicting information about status or trends. More information is needed.
SNR	Unknown	Not Ranked	Statewide rank not yet assessed.
SNA	N/A	Not Applicable	A conservation status rank is not applicable because the element is not a suitable target for conservation for one of these reasons: • Hybrid – an interspecific hybrid without conservation value; • Exotic Origin – not native to North Carolina; • Accidental/Nonregular – outside usual range and not regularly found in North Carolina;

N.C. RANK	NUMBER OF EXTANT POPULATIONS	DESIGNATION	DESCRIPTION
			- Not Confidently Present – never documented as present in NC; - Synonym – the taxon is not recognized by the NCNHP.
S ?	---	Uncertain	Denotes inexact or uncertain numeric rank.

GLOBAL STATUS - PLANTS

GLOBAL RANK	NUMBER OF EXTANT POPULATIONS	DESIGNATION	DESCRIPTION
G1	1-5	Critically Imperiled	Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction. Typically five or fewer occurrences or very few remaining individuals (<1,000) or acres (<2,000) or linear miles (<10).
G2	6-20	Imperiled	Imperiled globally because of rarity or because of some factor(s) making it very vulnerable to extinction. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000) or acres (2,000 to 10,000) or linear miles (10 to 50).
G3	21-100	Vulnerable	Vulnerable globally either because very rare throughout its range, found only in a restricted range (even if abundant at some locations), or other factors making it vulnerable to extinction. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.
G4	101-1,000	Apparently Secure	Uncommon but not rare (although it may be rare in parts of its range, particularly on the periphery) and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern. Typically more than 100 occurrences and more than 10,000 individuals.
G5	1,001+	Secure	Common, widespread, and abundant (although it may be rare in parts of its range, particularly on the periphery). Not vulnerable in most of its range. Typically with considerably more than 100 occurrences and more than 10,000 individuals.
GH	0?	Historical	Known only from historical occurrences, but with some expectation that it may be rediscovered. May still be extant; further searching is needed.
GX	0	Presumed Extinct	Believed to be extinct throughout its range (e.g., passenger pigeon) with virtually no likelihood that it will be rediscovered. Not located despite intensive searches of historical sites and other appropriate habitat.

GLOBAL RANK	NUMBER OF EXTANT POPULATIONS	DESIGNATION	DESCRIPTION
GU	Unknown	Unrankable	Currently unrankable due to lack of information or due to substantially conflicting information about status or trends; need more information.
GNR	Unknown	Not Ranked	Global rank not yet assessed.
G_T_	---	Subspecies or Variety Rank	The rank of a taxonomic subspecies or variety. As an example, G4T1 would apply to a subspecies of a species with an overall rank of G4, but the subspecies warranting a rank of G1.
G_?	---	Uncertain	Denotes inexact or uncertain numeric rank.
G_Q	---	Questionable Taxonomy	Taxonomic classification that may reduce conservation priority. Distinctiveness of this entity as a taxon at the current level is questionable. Resolution of this uncertainty may result in change from a species to a subspecies or inclusion of this taxon in another taxon, with the resulting element having a lower-priority conservation status rank.

EXPLANATION OF STATUS AND RANK CODES FOR ANIMALS

Status Codes

In North Carolina, Endangered, Threatened, and Special Concern species have legally protected status through the North Carolina Wildlife Resources Commission (NCWRC). The Natural Heritage Program maintains computerized records and GIS map files on Significantly Rare species, as well as species considered extirpated in the state.

United States Status is designated by the U.S. Fish and Wildlife Service (USFWS) and the U.S. National Marine Fisheries Service (USNMFS) in accordance with the U.S. Endangered Species Act of 1973 (USESA), as amended. Plants and plant varieties, (including fungi and lichens), animal species and subspecies, and vertebrate populations are considered for Endangered or Threatened status according to the criteria established under the USESA. Proposals and determinations to add taxa or populations to the Lists of Endangered and Threatened Wildlife and plants are published in the Federal Register. Additionally, the USFWS and the USNMFS periodically publish a Notice of Review or Notice of Reclassification in the Federal Register that presents an updated list of plant and animal taxa that are regarded as candidates or proposed for possible addition to the Lists of Endangered and Threatened Wildlife and Plants. Contact the Asheville or Raleigh Ecological Services Field Offices for more information.

N.C. STATUS – ANIMALS

N.C. STATUS 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 to be in jeopardy or any species of wild animal determined to be an Endangered species pursuant to the Endangered Species Act. (G.S. 113-25.)
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. (G.S. 113-25.)

N.C. STATUS CODE	STATUS	DEFINITION
SC	Special Concern	Any species of wild animal native or once-native to North Carolina which is determined by the NCWRC to require monitoring but which may be taken under regulations adopted under the provisions of the Article. (G.S.113-25)
SR	Significantly Rare	This is a NCNHP designation. Any species which has not been listed as an Endangered, Threatened, or Special Concern species, but which exists in the state (or recently occurred in the state) in small numbers (generally 1-100 statewide populations) and has been determined by the NCNHP to need monitoring. Significantly Rare species include species of historical occurrence with some likelihood of rediscovery in the state and species substantially reduced in numbers by habitat destruction, direct exploitation, or disease. Species considered extirpated in the state, with little likelihood of rediscovery, are given no N.C. status (unless already listed by the NCWRC or NCPCP as E, T, or SC).
SR-G	---	Species is a game animal or a furbearer, and therefore (by law) cannot be listed for state protection as E, T, or SC.
WL	Watch List	This is an NCNHP designation for any other species believed to be rare and of conservation concern in the state but not warranting active monitoring at this time.

U.S. STATUS – ANIMALS

U.S. STATUS CODE	STATUS	DEFINITION
E	Endangered	A taxon that is in danger of extinction throughout all or a significant portion of its range (Public Law 93-205 87 Stat. 884).
T	Threatened	A taxon that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (Public Law 93-205 87 Stat. 884).
C	Candidate	Taxa for which the USFWS has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened. Proposed rules have not yet been issued because this action is precluded at present by other listing activity. Development and publication of proposed rules on these taxa are anticipated. The USFWS encourages state and other federal agencies as well as other affected parties to give consideration to these taxa in environmental planning (Federal Register, 28 February 1996). Taxa formerly considered “Category 1” are now considered “Candidate.”
FSC	Federal Species of Concern	Those species that appear to be in decline or otherwise in need of conservation and are under consideration for listing or for which there is insufficient information to support listing at this time. Subsumed under the term FSC are all species petitioned by outside parties and other selected focal species identified in USFWS strategic plans, state Wildlife Action Plans, or Natural Heritage Program Lists.

U.S. STATUS CODE	STATUS	DEFINITION
BGPA	Bald and Golden Eagle Protection Act	In the 9 July 2007 Federal Register (72:37346-37372), the bald eagle was declared recovered and removed (delisted) from the Federal List of Threatened and Endangered Wildlife. After delisting, the Bald and Golden Eagle Protection Act (Eagle Act)(16U.S.C. 668-668d) becomes the primary law protecting bald eagles. The Eagle Act prohibits take of bald and golden eagles and provides a statutory definition of “take” that includes “disturb.” The USFWS has developed National Bald Eagle Management Guidelines to provide guidance to land managers, landowners, and others as to how to avoid disturbing bald eagles. For additional information please see http://www.fws.gov/migratorybirds/baldeagle.htm .
EXP	Experimental Population	A taxon listed as experimental (either essential or nonessential). Experimental, nonessential populations of endangered species (e.g., red wolf) are treated as threatened species on public land, for consultation purposes, and a species proposed for listing on private land.
P_	Proposed	Species proposed in the Federal Register as a status different from its current federal status.
T (S/A)	Threatened due to Similarity of Appearance	Section 4 (e) of the USESA authorizes the treatment of a species (subspecies or population segment) as endangered or threatened even though it is not otherwise listed as endangered or threatened if (a) the species so closely resembles in appearance an endangered or 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 an endangered or threatened species, and (c) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of the USESA [Federal Register 4 November 1997, Volume 62(213):59605-59623].
T-4(d)	Threatened with a 4(d) Rule	Section 4(d) of the ESA allows special regulations for threatened species that modify normal ESA protections when it is determined that such a modification is necessary and advisable to provide for the conservation of that species. A 4d rule is specific to the particular plant or animal for which it was created. For additional information, see http://www.fws.gov/midwest/endangered/mammals/nlba/ .

Ranking System

Natural Heritage Programs and the NatureServe Network have developed a consistent method for evaluating the relative imperilment of both species and ecological communities. These assessments led to the designation of a conservation status rank. These ranks provide an estimate of extinction risk. Conservation rank values have been assigned over the past 30 years by the NCNHP, NatureServe, and a large number of collaborators in government agencies, universities, natural history museums, botanical gardens, and other conservation organizations. This information has been developed primarily to help in guiding conservation and informing environmental planning and management.

Conservation ranks are either state (S) or global (G) and are based on a one-to-five scale, ranging from critically imperiled (S1 or G1) to demonstrably secure (S5 or G5). These assessments are based on the best available information, considering a variety of factors such as abundance, distribution, population trends,

and threats. Global ranks apply to the status of a species throughout its range. The system is widely used by nationwide agencies and organizations, as the best available scientific and objective assessment of a species' rarity throughout its range.

A rank involving two numbers indicates uncertainty of rank. For example, an S2S3 or a G2G3 rank indicates that the species may be S2 or S3 (or G2 or G3), but that existing data do not allow that determination to be made.

N.C. RANK – ANIMALS

N.C. RANK	NUMBER OF EXTANT OCCURRENCES	DESIGNATION	DESCRIPTION
S1	1-5	Critically Imperiled	Critically imperiled due to extreme rarity or some factor(s) making it especially vulnerable to extirpation (local extinction) from the state. Typically 5 or fewer occurrences or very few remaining individuals (<1,000).
S2	6-20	Imperiled	Imperiled due to rarity or some factor(s) making it very vulnerable to extirpation from the state. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000).
S3	21-100	Vulnerable	Vulnerable to extinction either because rare or uncommon, found only in a restricted range (even if abundant at some locations), or due to other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences or between 3,000 to 10,000 individuals.
S4	101-1,000	Apparently Secure	Apparently secure and widespread, usually with more than 100 occurrences and more than 10,000 individuals.
S5	1,001+	Secure	Common, widespread, and abundant. Essentially ineradicable under present conditions. Typically with considerably more than 100 occurrences and more than 10,000 individuals.
SH	0?	Historical	Of historical occurrence, with some expectation that it may be rediscovered. Its presence may not have been verified in the past 20 years. Upon verification of an extant occurrence, SH-ranked elements would typically receive an S1 rank. Note: an element is not automatically assigned an SH (or SX) rank if it has not been verified in the past 20 years; some effort must have been made to locate or relocate occurrences.
SX	0	Presumed Extirpated	Believed to be extirpated. Has not been located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
SU	Unknown	Unrankable	Currently unrankable due to lack of information or substantially conflicting

N.C. RANK	NUMBER OF EXTANT OCCURRENCES	DESIGNATION	DESCRIPTION
			information about status or trends. More information is needed.
SNR	Unknown	Not Ranked	Statewide rank not yet assessed.
SNA	N/A	Not Applicable	A conservation status rank is not applicable because the element is not a suitable target for conservation for one of these reasons: • Hybrid – an interspecific hybrid without conservation value; • Exotic Origin – not native to North Carolina; • Accidental/Nonregular – outside usual range and not regularly found in North Carolina; • Not Confidently Present – never documented as present in NC; • Synonym – the taxon is not recognized by the NCNHP.
S_B	1-?	Breeding	Rank of the breeding population in the state. Used for migratory species only. Ex: Bachman's sparrow (<i>Peucaea aestivalis</i>) is S3B,S2N).
S_N	1-?	Nonbreeding	Rank of the nonbreeding population in the state. Used for migratory species only. Ex: Bachman's sparrow.
S_?	---	Uncertain	Denotes inexact or uncertain numeric rank.

GLOBAL RANK – ANIMALS

GLOBAL RANK	NUMBER OF EXTANT POPULATIONS	DESIGNATION	DESCRIPTION
G1	1-5	Critically Imperiled	Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction. Typically five or fewer occurrences or very few remaining individuals (<1,000) or acres (<2,000) or linear miles (<10).
G2	6-20	Imperiled	Imperiled globally because of rarity or because of some factor(s) making it very vulnerable to extinction. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000) or acres (2,000 to 10,000) or linear miles (10 to 50).
G3	21-100	Vulnerable	Vulnerable globally either because very rare throughout its range, found only in a restricted range (even if abundant at some locations), or other factors making it vulnerable to extinction. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.

GLOBAL RANK	NUMBER OF EXTANT POPULATIONS	DESIGNATION	DESCRIPTION
G4	101-1,000	Apparently Secure	Uncommon but not rare (although it may be rare in parts of its range, particularly on the periphery) and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern. Typically more than 100 occurrences and more than 10,000 individuals.
G5	1,001+	Secure	Common, widespread, and abundant (although it may be rare in parts of its range, particularly on the periphery). Not vulnerable in most of its range. Typically with considerably more than 100 occurrences and more than 10,000 individuals.
GH	0?	Historical	Known only from historical occurrences, but with some expectation that it may be rediscovered. May still be extant; further searching is needed.
GX	0	Presumed Extinct	Believed to be extinct throughout its range (e.g., passenger pigeon) with virtually no likelihood that it will be rediscovered. Not located despite intensive searches of historical sites and other appropriate habitat.
GU	Unknown	Unrankable	Currently unrankable due to lack of information or due to substantially conflicting information about status or trends; need more information.
GNR	Unknown	Not Ranked	Global rank not yet assessed.
G_T_	---	Subspecies or Variety Rank	As an example, G4T1 would apply to a subspecies of a species with an overall rank of G4, but the subspecies warranting a rank of G1.
G_?	---	Uncertain	Denotes inexact or uncertain numeric rank.
G_Q	---	Questionable Taxonomy	Taxonomic classification that may reduce conservation priority. Distinctiveness of this entity as a taxon at the current level is questionable. Resolution of this uncertainty may result in change from a species to a subspecies or inclusion of this taxon in another taxon, with the resulting element having a lower-priority conservation status rank.

Appendix 8. Mapping Methodology

This appendix contains a reproduction of a memo dated January 12, 2017, which provides background detail on the sources and methodology used in producing the Existing Land Use Maps for the County and Town.

Memorandum



To: Elizabeth Bryant, Anne-Marie Knighton, Sam Barrow
From: CodeWright Planners
Date: January 12, 2017
RE: Draft Existing Land Use Map - Land Use Determination Methodology

This memo outlines the sources and methodology used to produce the draft existing land use maps of Chowan County and the Town of Edenton.

Due to the large land area and the parcel-by-parcel level of detail that an existing land use map calls for, we anticipate producing a series of four maps for staff and public review: one for the Town of Edenton and one for each County township (Upper, Middle, and Yeopim). (The maps can also be printed in combination to show the entire County and Town.)

Data Sources

In order to produce the existing land use maps, we combined 17 layers of geospatial information from a variety of sources:

	Map Layers	Geometry Type	Source
1	County boundary	Polygon	County
2	Edenton corporate boundary	Polygon	NC OneMap
3	Edenton ETJ boundary	Shapefile	NC OneMap
4	Township boundaries	Polygon	NC OneMap
5	Edenton Historic District boundaries	Polygon	County GIS
6	Parcels	Polygon	County GIS
7	Census Place names	Point	TIGERLines 2016
8	Geographical features	Point	TIGERLines 2016
9	Roadways	Line	TIGERLines 2016
10	Railroads	Line	NCDOT
11	Waterways with names	Polygon	TIGERLines 2016
12	14-digit Watershed boundaries	Polygon	USDA
13	Airport coverage	Polygon	County
14	Orthoimagery	Raster	The National Map
15	County current zoning	Polygon	County
16	Edenton current zoning	Polygon	County
17	Present Use Value participation	Polygon	County Tax Office

All map layers use the Lambert Conformal Conic projection and the NAD 1983 State Plane (NC FIPS 3200 feet) projected coordinate system.

The primary source of visual data for determining land uses is orthoimagery from The National Map, a resource of the U.S. Geological Survey which provides high-resolution aerial imagery with functional spatial accuracy at a variety of resolutions. The National Map coverages for Chowan County contain imagery from 2015 and 2016 during the winter ("leaf off" conditions for better visibility) and have a

Chowan County/Town of Edenton Land Use Plan Update

Existing Land Use Map

January 9, 2017



Land Use Determination Methodology

resolution of 1 foot, which allows for clear viewing of structures, vegetation, roadways, and other features of the landscape.

Methodology

The existing land use maps were produced using ESRI ArcGIS 10.4.1 software. Land use type determinations were made at a parcel level and recorded using a dummy code system embedded in the parcels shapefile layer originally obtained by the County. For reference, roadways with names, sub-county place names, bodies of water, the County boundary, and geographical landmarks are identified on the map.

The methodology of determining land uses included several stages: the staff-led tour of the county and rough sketches collected during and after the tour provided the background knowledge for the mapping exercise. As noted above, the primary source for visual data was The National Map orthoimagery, accurate to 1 foot, which was examined on the parcel level. The imagery was simultaneously compared to the existing land use map from the 2008 plan and with Google Maps to make an initial determination. Then, the map was cross-referenced with the data on participation in the Present Use Value program, which identifies active farms and forestry operations by parcel. This information, current as of 2016, was used to distinguish between forestry and agricultural uses versus vacant or unbuilt land. The geospatial information for parcel also contains information on ownership, which also provides clues as to the land use in some cases as noted in the paragraphs below. As a final check, in some cases Google Maps Street View was used to confirm land use determinations from the ground level.

The maps currently distinguish between eight key land use types, which are described below along with key factors in determining the land use type. These use types can be adjusted as necessary to meet the County and Town's needs and goals in the planning process.¹

1. **Vacant (Unbuilt) Land:** Land which contains no structures or improvements, and which has not been improved for use as agricultural or forestry land. The latter distinction is made by examining vegetation on the site, if any exists. Vacant land contains a variety of vegetation distributed unevenly across the site. In the orthoimagery for Chowan County, this frequently appears as "scrub" type vegetation mixed with evergreen trees, in sparse or uneven patterns. Land that appeared vacant in the orthoimagery was also cross-referenced with the Present Use Value dataset to ensure it was not actually under farming or forestry use.
2. **Forestry:** Land under active use as forestry land appears either heavily forested, usually with a visible pattern of planted rows or in "uniform blocks" of tree cover with sharp edges at lot lines, or if recently logged, appears as bare soil, sometimes with machinery tracks visible. Forestry land tends to be concentrated in large tracts. Forestry uses are also identified in the Present Use Value data, and so tracts flagged as forestry uses were cross-referenced for confirmation.

¹ A publication of the US Geological Survey entitled A Land Use and Land Cover Classification System for Use with Remote Sensor Data was used as the reference point for some components of the classification system used and described here. A version of this paper is available at <http://www.state.nj.us/dep/gis/digidownload/metadata/lulc02/anderson2002.html>.

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Existing Land Use Map

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3. **Agriculture:** Agricultural land is typically, though not always, on larger parcels, and may have dirt or gravel roads (unnamed in the roadways map layer) or paths running through or around the land. The land itself may appear in one of several presentations: crop fields may appear in darker colors with a lined pattern (if recently ploughed or harvested) or in light or medium yellows to dark greens (if in rotation with winter crops or cover crops). The primary methodology used for distinguishing agricultural land from forestry is the density of vegetative cover: forestry lands tend to appear nearly 100% covered in vegetation, while agricultural lands tend to have less full coverage and show shadow lines or walkways between rows of crops. Agricultural lands may also contain buildings, including barns and storage facilities, and the imagery may also show farm equipment being stored on site. Agricultural lands are identified in the Present Use Value data, and so tracts flagged as agricultural uses were cross-referenced for confirmation.
4. **Residential:** Residential structures are easily identified by their relatively small structure size, roofline patterns, smaller lot sizes, and accessory uses such as swimming pools, garages, porches and decks. In some mixed-use areas, Google Maps Street View was used to ensure that residential, commercial, and institutional distinctions were properly made.
5. **Institutional:** Institutional parcels are most easily identified through the parcel identification records stored within the map layers from Chowan County; the institution's name (typically a faith-based institution or governmental authority) appears in the parcel owner field. Institutional uses are also identified visually by larger building sizes and by the presence of parking areas for more vehicles than a typical residential use.
6. **Commercial:** Small commercial land uses are typically identified using Google Maps Street View to distinguish them from residential and institutional uses. Larger commercial uses are more easily identified in the orthoimagery by their larger size and parking facilities, as well as contextual cues such as location along a major roadway or intersection or near other known commercial uses. In many cases, a parcel's identification as commercial land use is confirmed by the ownership field of the County GIS parcel information.
7. **Industrial:** Large industrial parcels are easily identified by the large sizes of both parcels and structures, the wide flat roofs of most industrial buildings, and small parking areas relative to building size. Smaller industrial uses are identified first through visual cues (roof shape, geographical context, parking lot) and confirmed through Google Maps Street View imagery. Industrial uses almost always have a company name listed as the owner of the parcel in County GIS data; if an identification is in doubt, an internet search of the company name allows for confirmation.
8. **Open Space:** The open space land use category includes both public and private open spaces, which may be determined through one of several means. For visual identification, open spaces may be primarily parkland or may contain play structures, ball fields, tennis or basketball courts, gardens, benches, shelters, or small buildings housing restrooms. Most have parking areas for at least two vehicles, and usually more. However, many open spaces are simply dedicated unbuilt areas of a subdivision, potentially with access to water or a trailhead. These are primarily identified through the ownership field in the County GIS records, which indicates ownership by the Town or County or an HOA. Note that golf courses are also categorized as open space.

Chowan County/Town of Edenton Land Use Plan Update

Existing Land Use Map

January 9, 2017



Land Use Determination Methodology

The map key also shows a **“Questions for Staff”** category; these are parcels our methodology did not indicate a clear land use, and we ask that staff assist us in categorizing these parcels. These parcels are marked with numerals and address information to aid staff in identifying land uses during future discussion of the draft map.

Data Not Displayed in Draft Existing Land Use Maps

For reasons of clarity and readability, the following items are recorded in the ArcMap GIS files, but are not shown on these draft maps. These can be included in future maps or analyses if desired:

- Vacant (unbuilt) residential tracts which are platted but not built upon are flagged separate from general vacant/unbuilt lands in the map data, but are represented on the draft maps as simply vacant/unbuilt land.
- Vacant (built, but not occupied) commercial and industrial uses, when apparent, are flagged in the map data, but are represented on the draft maps along with other commercial and industrial uses. Note that the methodology used here does not allow for easy identification of vacant buildings, and there are likely many more vacant commercial and industrial structures in the County and Town that have not been identified through this analysis.

The following items are *neither* shown in the maps nor currently recorded in the data:

- Number of housing units – This information is available through other sources including the American Community Survey and the County Tax Office, and will be accessed for use in the data update portion of this project.
- Vacant residential structures – The methodology used here does not allow for reliable identification of vacant residential structures. This information is available through the American Community Survey, which will be accessed for use in the data update portion of this project.
- Confined Animal Feeding Operations (CAFO) – A very small number of these are flagged in the data but not shown on the map, but we believe there may be more of them in operation than are apparent from the methodology used here. We will provide a follow-up map highlighting the CAFO uses identified so far and ask that staff help us to identify other CAFO uses, which can then be added to the next draft of the maps.

Appendix 9. Hazard Mitigation

This appendix contains a reproduction of the recommended mitigation measures in the 2015 Albemarle Regional Hazard Mitigation Plan, as referenced in Policy NH-6 in Section 2.4.B.4 of this plan.

Table 7.2.2. – Chowan County Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CHO1	GIS mapping locations of damaged utilities caused by previous hurricanes.	Hurricanes	Medium	Chowan County GIS	General Fund	Chowan County views this as a critical tool in assessing vulnerability and potential Emergency Management issues that may arise during a natural hazard event. These efforts will be continued on an as needed basis following an event.
CHO2	Locate different funding sources that can aid in the improvements of drainage within the County.	Hurricanes, Floods, Nor'easters	High	Chowan County Administration	General Fund	The County has a fairly good handle on drainage issues within rural portions of the County. County administration will continue to address issues as they arise, if feasible through the use of grant funds.
CHO3	Provide public service messages that discuss preparations in the event of a hurricane to be sent out annually in the early spring.	Hurricane	High	Chowan County Emergency Management	General Fund	Emergency Management officials work closely with local media outlets to prepare citizens for hazards associated with Hurricane season. These efforts are generally outlined within the County's EOP.
CHO4	Update and identify all areas not previously labeled on the 100-year flood map that were flooded during major rainfall events and hurricanes.	Hurricanes, Floods, Nor'easters	High	Chowan County Planning	General Fund	The County conducted this analysis following Hurricane Isabel, and will continue to do so following all substantial flooding /hurricane events.
CHO5	Elevate repetitive loss structures or acquire repetitive loss properties	Hurricanes, Floods, Nor'easters	High	Chowan County Planning	General Fund, Grants Fund	Currently the County does not have any structures that qualify for treatment as a repetitive loss property. The County has not treated any units over the last five years
CHO6	Determine specific reasons why each area was damaged (amount of times flooded, and whether this damage is expected from future flooding). This will work in concert with all future repetitive loss analysis.	Hurricanes, Floods, Nor'easters	High	Chowan County Planning	General Fund	The County conducted this analysis following Hurricane Isabel, and will continue to do so following all substantial flooding /hurricane events
CHO7	Consider and review all changes established through the updated NFIP Floodplain Mapping Program, when required.	Hurricanes, Floods, Nor'easters	High	Chowan County Planning, Chowan County Inspections	General Fund	New Action
CHO8	Use special consideration for development permits for structures proposed within the Areas of Special Flood Hazard (ASFH)	Hurricanes, Floods, Nor'easters	High	Chowan County Planning, Chowan County Inspections	General Fund	This process is carried out through enforcement of the County's Flood Damage Prevention Ordinance. These efforts will continue.
CHO9	Require all new structures finished floor elevation (FFE) be at or above the current BFE*.	Hurricanes, Floods, Nor'easters	High	Chowan County Planning, Chowan County Inspections	General Fund	This strategy was deemed unnecessary and therefore has been removed from the plan

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Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CHO10	Locate different funding sources that can aid in the improvements of drainage within the Town and County caused by regular flooding events (such as grants through CDBG, NCDENR, etc.)	Hurricanes, Floods, Nor'easters	High	Chowan County Planning, Chowan County Inspections	General Fund, Grant Funds	The County has a fairly good handle on drainage issues within rural portions of the County. County administration will continue to address issues as they arise, if feasible through the use of grant funds.
CHO11	Work with the curriculum directors of both the public and private schools to add all Mitigation Hazards prevention and preparedness information.	All Hazards	High	Chowan County Planning, Chowan County Inspections	General Fund	County Emergency Management Officials visit and work closely on an annual basis with local schools to prepare for natural disasters, especially tornadoes and hurricanes.
CHO12	Work with local charities, Meals on Wheels and/or Habitat for Humanity chapters, to apply non-structural mitigation measures to the homes of low-income senior citizens in during times of disaster.	All Hazards	High	Chowan County Administration, Chowan County Health Department	General Fund	New Action
CHO13	Compile flood mitigation information and make it available to Chowan County and Edenton residents and business owners."	Hurricanes, Flooding, Nor'easters	High	Chowan County Planning, Chowan County Inspections	General Fund, Grant Funds	This information is always available through the Town and County Inspections Office. The materials are provided by FEMA
CHO14	The County will assess erosion following substantial natural hazard events in an effort to insure that it does not encroach upon developed portions of the County.	Hurricanes, Flooding, Nor'easters, Erosion	High	Chowan County Planning, Chowan County Inspections	General Fund, Grants Fund	New Action
CHO15	Provide emergency broadcast the located and approximate time for areas likely to be hit by a tornado.	Tornadoes	High	Chowan County Emergency Management	General Fund, Grant Funds	Emergency Management officials work closely with local media outlets to prepare citizens for hazards associated with Hurricane season. These efforts are generally outlined within the County's EOP.
CHO16	Create a systematic warning system aimed at posting electrical highway signs that warn of extreme weather conditions.	All Hazards	High	Chowan County Emergency Management	General Fund, Grant Funds	The County maintains a County Emergency Notification System geared towards notifying citizens of impending inclement weather or emergency situations. This system is updated as funds are available.
CHO17	Improve the wind resistance of structures within the County and Town by continuing to enforce the North Carolina Building Code.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	High	Chowan County Planning, Chowan County Inspections	General Fund	Enforcement is accomplished through the issuance of building permits and inspections through the County's permitting office.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CHO18	Support efforts of utility providers to monitor trees and branches at risk of breaking or falling in windstorms.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	High	Chowan County Planning, Inspection, Utility Providers	General Fund	Chowan County relies on the utility providers to conduct these efforts; the County will continue to support their efforts.
CHO19	Prepare County and Town notification when water conservation plans are in effect once the water levels drop below the revised County and Town water levels.	Drought	High	Chowan County Emergency Management	General Fund	Chowan County has, will continue to enforce the County's Water Shortage Management Plan. This plan outlines procedures for water rationing during periods of extreme droughts.
CHO20	Create a GIS map of areas in critical need of improvement.	All Hazards	High	Chowan County Land Records	General Fund, Grant Funds	The County has created a GIS website. In the process of budgeting and acquiring grants for survey equipment needed to accurately locate facilities (Incomplete).
CHO21	Require all public utility companies as well as County and Town-owned utilities to inspect and repair damage due to Hurricane within a 5-year time frame.	Hurricane	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund	Creating additional funding within County and Town utilities departments.
CHO22	Utilize GPS to transfer to GIS mapping system. Include consistent problem areas on the current flood maps. Those areas include: Pembroke Circle, Dillard Mill, and Cypress Point Marina, as well as Woodlawn Park.	Flooding	High	Chowan County Land Records	General Fund	The County has created a GIS website. In the process of budgeting and acquiring grants for survey equipment needed to accurately locate facilities.
CHO23	List areas in need of repair, replacement and improvement.	Flooding	High	Chowan County & Town of Edenton Administration	General Fund	There are no additional funds required for this measure. Complete.
CHO24	Determined priority level by past flooding experience, extent and value of damage, and cost of repairs.	Flooding	High	Chowan County & Town of Edenton Administration	General Fund	There are no additional funds required for this measure. Complete.
CHO25	Identify all structures located within the revised Areas of Special Flood Hazard (ASFH).	Flooding	High	Chowan Planning & Inspection Department	General Fund	This strategy was deemed ambiguous and vague. Due to these deficiencies it has been eliminated.
CHO26	For structures located within the ASFH, determine whether the structure's finished floor elevation (FFE) is above or below the base flood elevation (BFE).	Flooding	High	Chowan Planning & Inspection Department	General Fund	No additional costs are expected. Complete
CHO27	Identify structures that have been damaged by flooding in the past due to distance and/or height of structure.	Flooding	High	Chowan County & Town of Edenton Administration	General Fund	No additional costs are expected. Complete
CHO28	Require all new structures to include drainage ditches and/or culverts installed around perimeter of property to prevent flooding and flood damage to structures.	Flooding	Medium	Chowan Planning & Inspection Department	General Fund	No additional costs are expected. Complete
CHO29	Research possible seawall options to prevent tidal flooding.	Flooding	High	Chowan County Board of Commissioners & Town of Edenton Town.	General Fund, Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction. Funding Hurdles.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CHO30	Begin monitoring erosion complaints, considering locations, possible events, and past complaints about the areas.	Erosion	Medium	Chowan County Planning & Inspection Department	General Fund	Budget to be created (for the County and Town) at a later date depending on amount of complaints and legitimacy.
CHO31	Research and interview with property owners	Erosion	Medium	Chowan County Planning & Inspection Department	General Fund	Budget may need to be created (for the County and Town) at a later date depending on amount of complaints and legitimacy.
CHO32	Research possible seawall options to prevent future erosion along Edenton Bay and rivers	Erosion	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund, Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction.
CHO33	Consider bringing in fill and additional necessary materials to replace erosion in designated areas.	Erosion	Medium	Chowan County Board of Commissioners & Town of Edenton Town Council to consider repair measures.	General Fund	Soil to be replaced as needed. No Action at this Time.
CHO34	Posting signs in areas considered eroded	Erosion	Medium	Chowan County Planning & Inspection Department	General Fund	Budget may need to be created (for the County and Town) at a later date depending on amount of complaints and legitimacy. No Action at this Time.
CHO35	Research and interview with property owners	Storm Surge	Medium	Chowan County Planning & Inspection Department	General Fund	Budget may need to be created (for the County and Town) at a later date depending on amount of complaints and legitimacy. No Action at this Time.
CHO36	Document specific accounts of storm surge levels within different areas per storm & calculate value of loss. *Information to be included in future Hazard Mitigation Plan updates (once every 5 years).	Storm Surge	Medium	Chowan County Planning & Inspection Department	General Fund	Budget may need to be created (for the County and Town) at a later date depending on amount of complaints and legitimacy. No Action at this Time.
CHO37	Research possible seawall options to prevent future erosion along Edenton Bay and rivers	Storm Surge	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund, Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction.
CHO38	Provide public mailings to discuss what to do in case of expected storm surge.	Storm Surge	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	County Webpage has been updated to reflect this information.
CHO39	Start radio or newspaper advertisement, to warn citizens of hazards and safety precautions that should be taken.	Tornadoes	High	Chowan County Emergency Services	General Fund	Program has been eliminated due to a lack of political will and tools available to achieve the stated outcome.
CHO40	Prepare a series of mailings to citizens discussing the proper safety procedures for each hazard addressed in this plan.	Tornadoes	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	Information made available on County website. County/Town will budget for advertisements to invite public to view

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CHO41	Require all new structures to include drainage ditches and/or culverts installed around perimeter of property to prevent flooding and flood damage to structures.	Nor'easters	High	Chowan Planning & Inspection Department	General Fund	Program has been eliminated due to a lack of political will and tools available to achieve the stated outcome.
CHO42	Provide safety warning radio broadcasts, determining the approximate time and area a nor'easter would be likely to hit.	Nor'easters	Medium	EMS/Chowan County & Town of Edenton Fire & Law Enforcement	General Fund	The County has implemented a "One-Call" call alert contract. An auto dialer contacts every phone number in the county with automated message of pending danger. NOAA also sends alerts on radio and TV. Complete.
CHO43	Prepare a series of mailings to citizens discussing what the proper safety procedures for each hazard addressed in this Plan.	Nor'easters	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	Information made available on County Website. County/Town will budget for advertisements to invite public to view.
CHO44	Post warning signs in areas stating the likelihood of fires in the area due to the current weather conditions, including the dangers that may lead to wildfires.	Wildfires	High	North Carolina Forestry Service, Chowan County Fire Department and Town of Edenton Fire Department.	General Fund	Implemented by State. Information also made available on County website.
CHO45	Require owners (by advertisement in the local papers) to annually remove any brush or downed limbs promptly to prevent fires from moving quickly along the ground.	Wildfires	High	Chowan County Board of Commissioners & Town of Edenton Town Council to add new amendment to ordinances	General Fund	Added new amendments to ordinances.
CHO46	Assign new regulations that will revise the current water level for both the Town of Edenton Water Department and the Chowan County Water Department.	Drought	Medium	County and Town Water Departments	General Fund	No additional costs to either the County or Town water departments. Town of Edenton has adopted a Water Shortage Response Plan. The County has received verbal agreement to purchase water from neighboring county in event of emergency. Complete, but remains open to be revised as needed.
CHO47	Start radio or newspaper advertisement, to warn citizens of hazards and safety precautions that should be taken.	Winter Storms	High	Chowan County Emergency Services	General Fund	Program has been eliminated due to a lack of political will and tools available to achieve the stated outcome.
CHO48	Prepare a series of mailings to citizens discussing what the proper safety procedures for each hazard addressed in this Plan.	Winter Storms	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	Information made available on County website. County/Town will budget for advertisements to invite public to view.

Table 7.2.3 Town of Edenton Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
EDN1	Develop plan to assist property owners with safe and efficient post-disaster cleanup (New Strategy).	All Hazards	Medium	Edenton Public Works Department, Edenton Administration	General Fund, Grant Funds	New Action
EDN2	Improve stormwater drainage and land management preparation for flooding events (New Strategy).	Hurricanes, Nor'easters, Flooding	High	Edenton Planning Department	General Fund, Grant Funds	New Action
EDN3	Elevate repetitive loss structures or acquire repetitive loss properties.	Hurricanes, Floods, Nor'easters	High	Edenton Planning Department	General Fund, Grant Funds	Currently the Town does not have any structures that qualify for treatment as a repetitive loss property. There have not been any units treated over the last five years.
EDN4	Compile flood mitigation information and make it available to Chowan County and Edenton residents and business owners.	Hurricanes, Floods, Nor'easters	High	Edenton Planning Department, Chowan County Planning, Chowan County Inspections	General Fund, Grant Funds	This information is always available through the Town and County Inspections Office. The materials are provided by FEMA. Information is also made available on County Website. County/Town considering budget for advertisements to invite public to view.
EDN5	Prepare County and Town notification when water conservation plans are in effect once the water levels drop below the revised County and Town water levels.	Drought	High	Chowan County Emergency Management	General Fund	The Town of Edenton, along with Chowan County has, will continue to enforce the County's Water Shortage Management Plan. This plan outlines procedures for water rationing during periods of extreme droughts.
EDN6	Advocate the Use of Existing State and Federal Regulatory Programs for Protecting and Preserving Coastal Wetland Areas of Environmental Concern (New Strategy)	Hurricanes, Floods, Nor'easters	Medium	Edenton Planning Department	General Fund	New Action
EDN7	Support Improvements to Regional Transportation Systems for Safe Traffic Flow (New Strategy)	Hurricanes, Nor'easters, Flooding, Winter Storms	Medium	Edenton Planning Department, Edenton Administration, NCDOT	General Fund, Grant Funds	New Action
EDN8	Create a systematic warning system aimed at posting electrical highway signs that warn of extreme weather conditions.	All Hazards	High	Chowan County Emergency Management	General Fund, Grant Funds	The County maintains a County Emergency Notification System geared towards notifying citizens of impending indement weather or emergency situations.
EDN9	Work with the curriculum directors of both the public and private schools to add all Mitigation Hazards prevention and preparedness information (Strategy reworded to include all hazards).	All Hazards	High	Chowan County Planning, Chowan County Inspections, Town of Edenton Planning Department	General Fund	County Emergency Management Officials visit and work closely on an annual basis with local schools to prepare for natural disasters, especially tornadoes and hurricanes. (Strategy reworded to include all hazards).
EDN10	Improve the wind resistance of structures within the County and Town by continuing to enforce the North Carolina Building Code.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	High	Chowan County Planning, Chowan County Inspections, Town of Edenton Planning Department, Town of Edenton Inspections	General Fund	Enforcement is accomplished through the issuance of building permits and inspections through the County's permitting office.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
EDN11	Create a GIS map of areas in critical need of improvement.	Hurricanes	High	Chowan County Land Records	General Fund, Grant Funds	The County has created a GIS website. In the process of budgeting and acquiring grants for survey equipment needed to accurately locate facilities.
EDN12	GIS mapping locations of damaged utilities caused by previous hurricanes.	Hurricanes	High	Chowan County Land Records	General Fund, Grant Funds	The County has created a GIS website. In the process of budgeting and acquiring grants for survey equipment needed to accurately locate facilities.
EDN13	Require all public utility companies as well as County and Town-owned utilities to inspect and repair damage due to Hurricane within a 5-year time frame.	Hurricanes	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund	Incomplete and in process of creating additional funding within County and Town utilities departments.
EDN14	Locate different funding sources that can aid in the improvements of drainage within the Town and County.	Hurricanes	High	Chowan/Edenton Administration	General Fund, Grant Funds	Past drainage studies performed by Town and seawall constructed. Acquiring additional grants for further improvements.
EDN15	Provide public service messages that discuss preparations in the event of a hurricane to be sent out annually in the early spring.	Hurricanes	High	Chowan/Edenton Administration	General Fund, Grant Funds	Information made is available on County Website. County/Town considering budget for advertisements to invite public to view.
EDN16	Utilize GPS to transfer to GIS mapping system. Include consistent problem areas on the current flood maps. Those areas include: Pembroke Circle, Dillard Mill, and Cypress Point Marina, as well as Woodlawn Park.	Flood	High	Chowan County Land Records	General Fund, Grant Funds	Incomplete, however the County has created a GIS website. In the process of budgeting and acquiring grants for survey equipment needed to accurately locate facilities.
EDN17	Update and identify all areas not previously labeled on the 100-year flood map that were flooded during major rainfall events and hurricanes.	Flood	High	Chowan County & Town of Edenton Administration	General Fund, Grant Funds	1 private home and 1 historic home have been elevated since 2005. Will continue to apply for grant assistance to elevate and/or acquire such properties.
EDN18	List areas in need of repair, replacement and improvement.	Flood	High	Chowan County & Town of Edenton Administration	General Fund, Grant Funds	This strategy was deemed ambiguous and vague. Due to these deficiencies it has been eliminated.
EDN19	Determined priority level by past flooding experience, extent and value of damage, and cost of repairs.	Flood	High	Chowan County & Town of Edenton Administration	General Fund, Grant Funds	List updated and reprioritization post event.
EDN20	Determine specific reasons why each area was damaged (amount of times flooded, and whether this damage is expected from future flooding). The majority of these areas would be located in the Town of Edenton.	Flood	High	Chowan County & Town of Edenton Administration	General Fund, Grant Funds	The County conducted this analysis following Hurricane Isabel, and will continue to do so following all substantial flooding /hurricane events.
EDN21	Identify all structures located within the revised Areas of Special Flood Hazard (ASFH).	Flood	Medium	Chowan Planning & Inspection Department	General Fund	This strategy was deemed ambiguous and vague. Due to these deficiencies it has been eliminated.
EDN22	For structures located within the ASFH, determine whether the structure's finished floor elevation (FFE) is above or below the base flood elevation (BFE).	Flood	High	Chowan Planning & Inspection Department	General Fund	Information determined based upon updated FIRM's.
EDN23	Identify structures that have been damaged by flooding in the past due to distance and/or height of structure.	Flood	High	Chowan County & Town of Edenton Administration	General Fund	List of structures updated post event. Limited resources available to update regularly on regular basis post event (incomplete data)

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
EDN24	Use special consideration for development permits for structures proposed within the Areas of Special Flood Hazard (ASFH).	Flood	High	Chowan Planning & Inspection Department	General Fund	All structures proposed within ASFH must meet flood damage prevention ordinance.
EDN25	Require all new structures finished floor elevation (FFE) be elevated at or above the current base flood elevation (BFE).	Flood	High	Chowan Planning & Inspection Department	General Fund	All structures proposed within ASFH must meet flood damage prevention ordinance thus requiring all new structures to meet or exceed BFE.
EDN26	Require all new structures to include drainage ditches and/or culverts installed around perimeter of property to prevent flooding and flood damage to structures.	Flood	High	Chowan Planning & Inspection Department	General Fund	On a case by case basis, the local Building Inspector and the Planning Board, if necessary, will determine if rerouting the flow of ditches is environmentally sound. Depending on the situation, a CAMA permit may also need to be issued before any installations begin.
EDN27	Locate different funding sources that can aid in the improvements of drainage within the Town and County caused by regular flooding events (such as grants through CDBG, NCDENR, etc...)	Flood	High	Chowan/Edenton Administration	Grant Funds	Chowan County & the Town of Edenton will be applying for aid through FEMA.
EDN28	Research possible seawall options to prevent tidal flooding.	Flood	High	Chowan County Board of Commissioners & Town of Edenton	Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction.
EDN29	Compile flood mitigation information and make it available to Chowan County and Edenton residents and business owners.	Flood	High	Chowan County Planning & Inspection Department	General Fund	Section 4: Appendices Information made is available on County Website. County/Town considering budget for advertisements to invite public to view.
EDN30	Work with the curriculum directors of both the public and private schools to add flood disaster, hurricane, tornado, and wildfire prevention and preparedness information.	Flood, Hurricane, Tornadoes, Wildfires	High	Chowan County EMS/EMT personnel and Chowan County & Town of Edenton Fire Dept. personnel	General Fund	Per state requirements, fire and tornado drills are routinely performed at local schools. Information also is available on County Website.
EDN31	Work with local charities, Meals on Wheels and/or Habitat for Humanity chapters, to apply non-structural mitigation measures to the homes of low-income senior citizens in the Flood Hazard Area.	Flood	High	Chowan County & Town of Edenton Administration to organize volunteer groups	Volunteer/Charitable, General Fund, Grant Funds	Seek out grant funds and partnerships with Charitable organizations where practical on a case by case basis (incomplete).
EDN32	Begin monitoring erosion complaints, considering locations, possible events, and past complaints about the areas.	Hurricanes, Nor'easters, Flooding, Thunderstorms	Medium	Chowan County Planning & Inspection Department	General Fund, Grant Funds	Budget being considered (for the County and Town) reflective on the amount of complaints and legitimacy of the complaints of erosion issues (incomplete).
EDN33	Research and interview with property owners regarding erosion.	Hurricanes, Nor'easters, Flooding, Thunderstorms	Medium	Chowan County Planning & Inspection Department	General Fund, Grant Funds	Budget being considered (for the County and Town) reflective on the amount of complaints and legitimacy of the complaints of erosion issues (incomplete).

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
EDN34	Research possible seawall options to prevent future erosion along Edenton Bay and rivers.	Hurricanes, Nor'easters, Flooding, Thunderstorms	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund, Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction.
EDN35	Consider bringing in fill and additional necessary materials to replace erosion in designated areas.	Hurricanes, Nor'easters, Flooding, Thunderstorms	Medium	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund	Soil replaced as needed in designated areas, monitored for a case by case basis.
EDN36	Posting signs in areas considered eroded.	Hurricanes, Nor'easters, Flooding, Thunderstorms	Medium	Chowan County Planning & Inspection Department	General Fund, Grant Funds	Budget being considered (for the County and Town) reflective on the amount of complaints and legitimacy of the complaints of erosion issues (incomplete).
EDN37	Research and interview with property owners regarding storm surge damage.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tsunamis	Medium	Chowan County Planning & Inspection Department	General Fund, Grant Funds	Budget being considered (for the County and Town) reflective on the amount of complaints and legitimacy of the complaints as a result of damage caused by storm surge (incomplete).
EDN38	Document specific accounts of storm surge levels within different areas per storm & calculate value of loss. *Information to be included in future Hazard Mitigation Plan updates (once every 5 years).	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tsunamis	Medium	Chowan County Planning & Inspection Department	General Fund, Grant Funds	Budget being considered (for the County and Town) reflective on the amount of complaints and legitimacy of the complaints as a result of damage caused by storm surge (incomplete). Information to be included in this update herein (Albemarle Regional Hazard Mitigation Plan).
EDN39	Research possible seawall options to prevent future erosion along Edenton Bay and rivers.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tsunamis	Medium	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund, Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction.
EDN40	Provide public mailings to discuss what to do in case of expected storm surge.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tsunamis	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	County Webpage is updated annually to reflect this information.
EDN41	Provide safety warning radio broadcasts, determining the approximate time and area a tornado would be likely to hit.	Tornado	High	EMS/Chowan County & Town of Edenton Fire & Law Enforcement	General Fund	The County has implemented a "One-Call" call alert contract. An auto dialer contacts every phone number in the county with automated message of pending danger. NOAA also sends alerts on radio and TV.
EDN42	Start radio or newspaper advertisement, to warn citizens of hazards and safety precautions that should be taken.	Tornado	High	Chowan County Emergency Services	General Fund	Chowan County does not have the resources or tools available to carry out this process; therefore, it has been eliminated from the plan.

Action	Description/Strategy	Hazard () Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
EDN43	Improve the wind resistance of structures within the County and Town by continuing to enforce the North Carolina Building Code through the County's minimum housing code.	Hurricanes, Nor'easters, Tornadoes, Thunderstorms	High	Chowan County Planning & Inspection Department	General Fund	Required by enforcing the NC State Building Code.
EDN44	Require all new structures to include drainage ditches and/or culverts installed around perimeter of property to prevent flooding and flood damage to structures.	Hurricanes, Nor'easters, Tornadoes, Thunderstorms	High	Chowan County Planning & Inspection Department	General Fund	Incomplete and required on a case by case basis
EDN45	Provide safety warning radio broadcasts, determining the approximate time and area a nor'easter would be likely to hit.	Nor'easters	High	EMS/Chowan County & Town of Edenton Fire & Law Enforcement	General Fund	The County has implemented a "One-Call" call alert contract. An auto dialer contacts every phone number in the county with automated message of pending danger. NOAA also sends alerts on radio and TV.
EDN46	Prepare a series of mailings to citizens discussing what the proper safety procedures for each hazard addressed in this Plan.	All Hazards	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	Chowan County does not have the resources or tools available to carry out this process; therefore, it has been eliminated from the plan.
EDN47	Post warning signs in areas stating the likelihood of fires in the area due to the current weather conditions, including the dangers that may lead to wildfires.	Wildfires	High	North Carolina Forestry Service, Chowan County Fire Department and Town of Edenton Fire Department	State, General Fund	Implemented by State. Information also made available on County website.
EDN48	Require owners (by advertisement in the local papers) to annually remove any brush or downed limbs promptly to prevent fires from moving quickly along the ground.	Wildfires	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund	Incomplete and for consideration in future amendment to both County and Town Code of Ordinances.
EDN49	Assign new regulations that will revise the current water level for both the Town of Edenton Water Department and the Chowan County Water Department.	Drought	High	County and Town Water Departments	General Fund	Town of Edenton has adopted a Water Shortage Response Plan. The County has received verbal agreement to purchase water from neighboring county in event of emergency.
EDN50	Start radio or newspaper advertisement, to warn citizens of hazards and safety precautions that should be taken.	Winter storm	High	Chowan County Emergency Services	General Fund	The County has implemented a "One-Call" call alert contract. An auto dialer contacts every phone number in the county with automated message of pending danger. NOAA also sends alerts on radio and TV.
EDN51	Prepare a series of mailings to citizens discussing what the proper safety procedures for each hazard addressed in this Plan.	Winter storm	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	Information made is available on County Website. County/Town considering budget for advertisements to invite public to view.

Section 4: Appendices

Appendix 10. Greenway Corridors

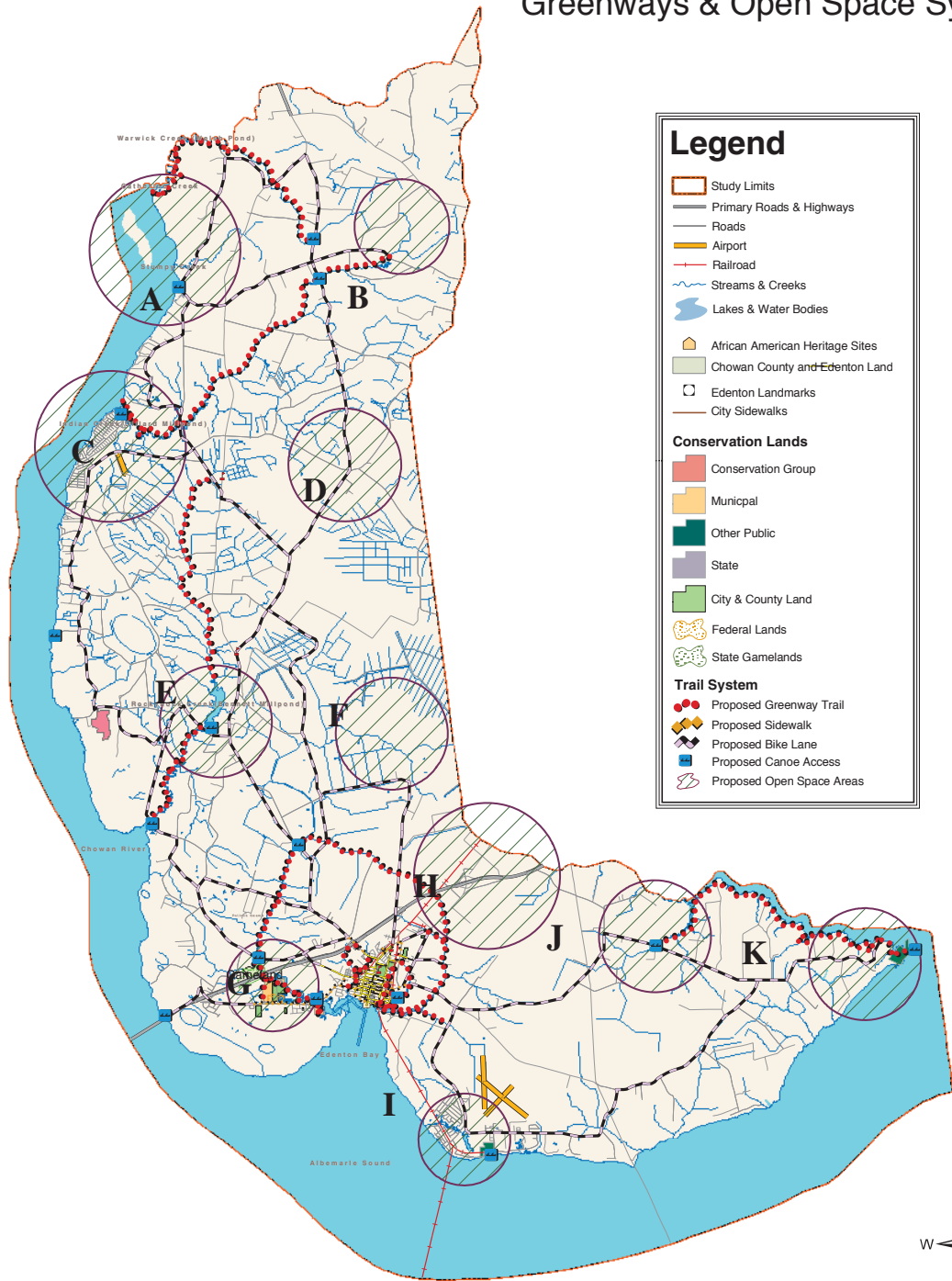
This appendix contains a reproduction of the maps of future greenway corridors from the 2003 Edenton/Chowan Greenway and Open Space Plan referenced in Sections 2.2.D.2.a and 2.3.D.2.a of this plan. The scale of the future land use map is such that it is not readily apparent that they are included in the Conservation future land use designation. This appendix shows the locations proposed greenway trails are intended for inclusion in the Conservation future land use designation.

The lands that make up the referenced greenway corridors and which are included in the Conservation future land use designation for the County and Town bear the designation "Proposed Greenway Trail" on the map on page 4-115. Pages 4-116 through 4-120 include supplemental detailed maps of selected greenways shown on page 4-115 and are designated as "GWI Greenway Trail" on the detailed maps.

Detailed maps do not currently exist for some portions of the proposed greenway that run along the Yeopim River, Middleton Creek, Warwick Creek, and the northern part of Indian Creek. However, these greenways are identified in the map on page 4-115.

Chowan County & Edenton North Carolina

Greenways & Open Space System



Prepared by:

GREENWAYS
INCORPORATED
Landscape Architecture
Multi-Objective Trail Planning
Open Space Planning

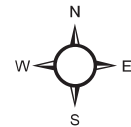
Prepared for:



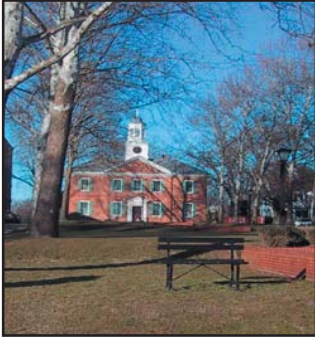
Data Sources:

NC Center for Geographic Information and Analysis
NC Department of Transportation (GIS Mapping Unit)
Edenton-Chowan, Planning and Inspections Department
Edenton-Chowan Parks & Recreation Department
The Town of Edenton and Chowan County, NC
(Requests for additional information regarding the data presented on this map should be directed to one of the entities above.)

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



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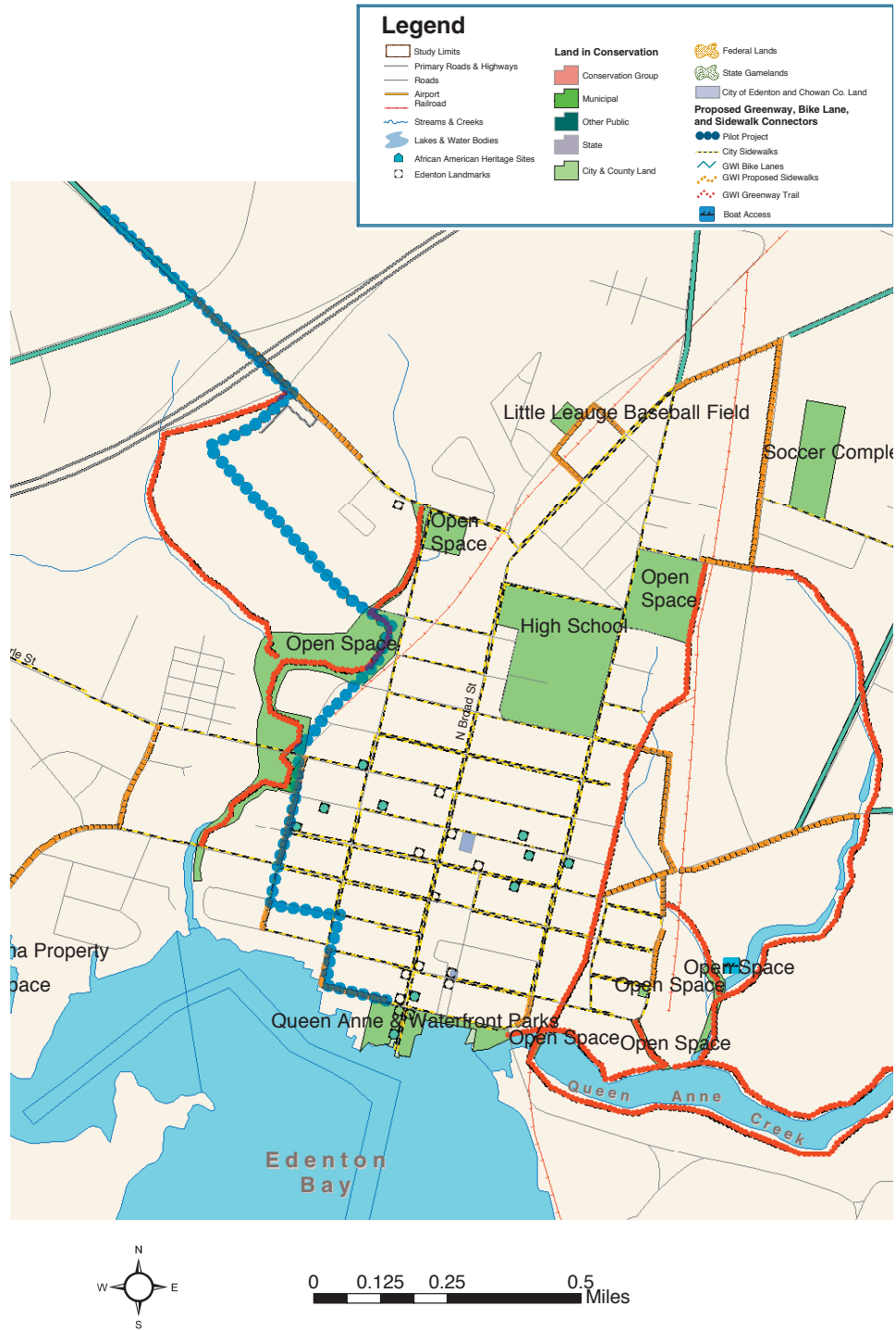
A. Downtown Corridor

Description:

This pilot project links the hotels and restaurants near the intersection of Hwy 17 Bypass and Hwy 32 with the African American Cemetery and the downtown waterfront area. Running south from Hwy 32, the route follows Claire Road to W. Hicks St, then continues SE to Granville St. Along Granville Street and into the cemetery, the route follows new sidewalks and eventually connects with the abandoned rail corridor in the cemetery, terminating at Moseley St. The corridor then winds along W. Eden, Granville and W. Water Street to its endpoint.

Objective:

This corridor is a pilot project and should be used to jumpstart additional interest and investment in the larger greenway and open space system. It would serve immediately as an alternative travel route between popular tourist destinations and would allow the community to highlight some of its cultural resources. Additionally, by connecting to many existing open spaces and to the hospital area, it serves as a potentially popular bike and walking route for the town residents. Additional information about this corridor is available in Appendix E.





B. Pembroke Creek

Description:

Commencing in Pollock Swamp to the north and west of Edenton, Pembroke Creek becomes one of the most major surface water features in the county as it winds south and east under the US 17 Bypass and under the West Queen St. Bridge where it supports a small marina and then feeds into Edenton Bay.

Objective:

This waterway provides a canoeable route that reaches several miles upstream from Edenton Bay. Through the construction of several canoe access points, the area is set to be a prime destination for water-based recreation. A permanently protected buffer along the creek corridor into Pollock Swamp allows for the protection of the water quality, the species habitat, and with appropriate facility development, provides the first stage of a major loop trail around the Edenton area.





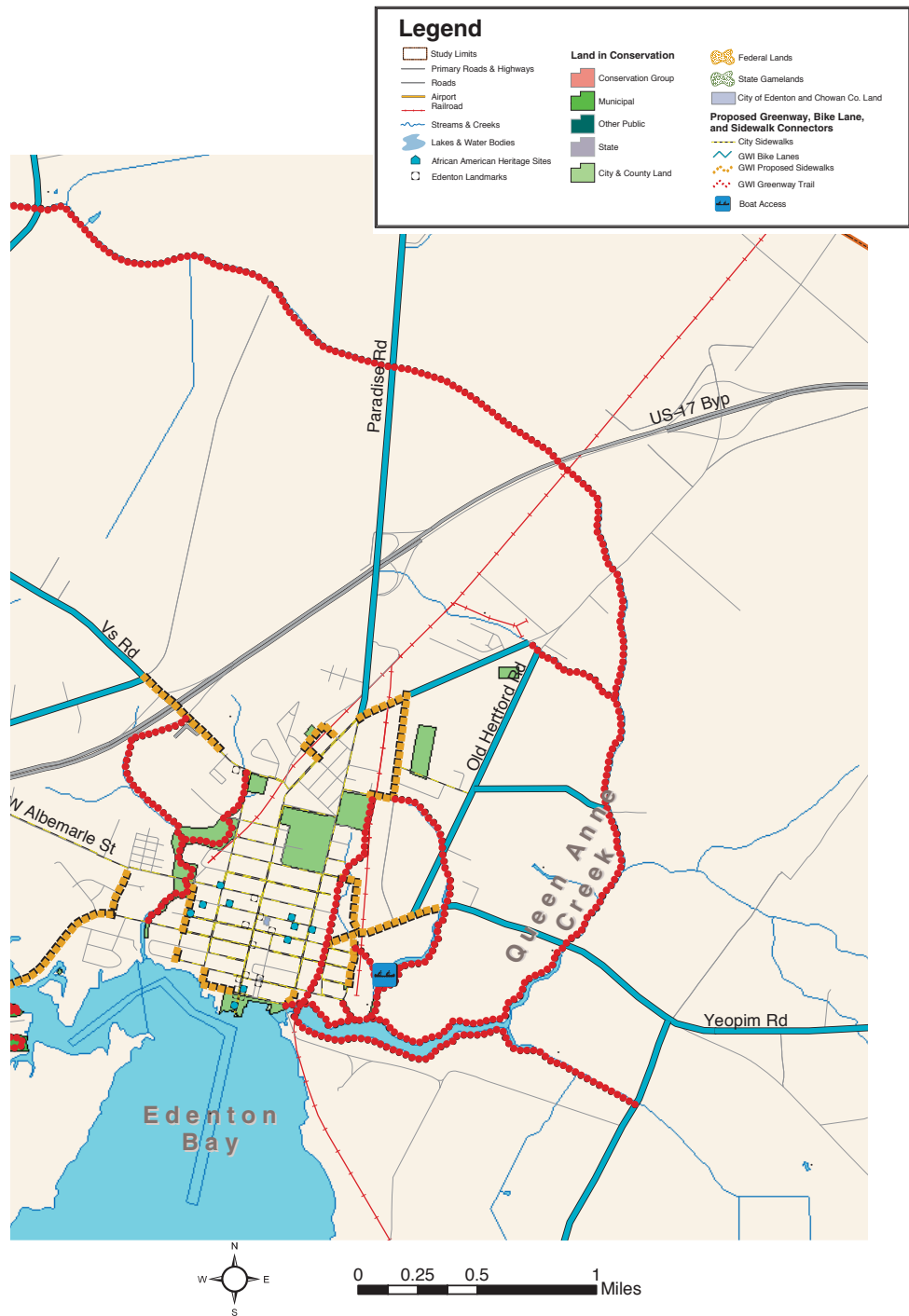
C. Queen Anne Creek

Description:

Queen Anne Creek is the major watercourse that flows in from the east of Edenton along the beginnings of the Downtown waterfront area and into Edenton Bay near the Town Square. Its canoeable route ends near the intersection of east-bound Hwy 32, but continues as a more minor creek for several miles northward.

Objective:

This corridor provides a scenic setting for homes and businesses located just east of the downtown waterfront. Placement of a canoe access point would allow another water-sport option for local residents and tourists. Completion of a designated greenway along the corridor would provide an excellent recreational and transit opportunity for the residents living in communities just east of downtown, and perhaps more importantly, when followed north all along its corridor, provides a prime opportunity to link across the farmland to the north of town with the Pembroke Creek/Pollock Swamp Corridor.



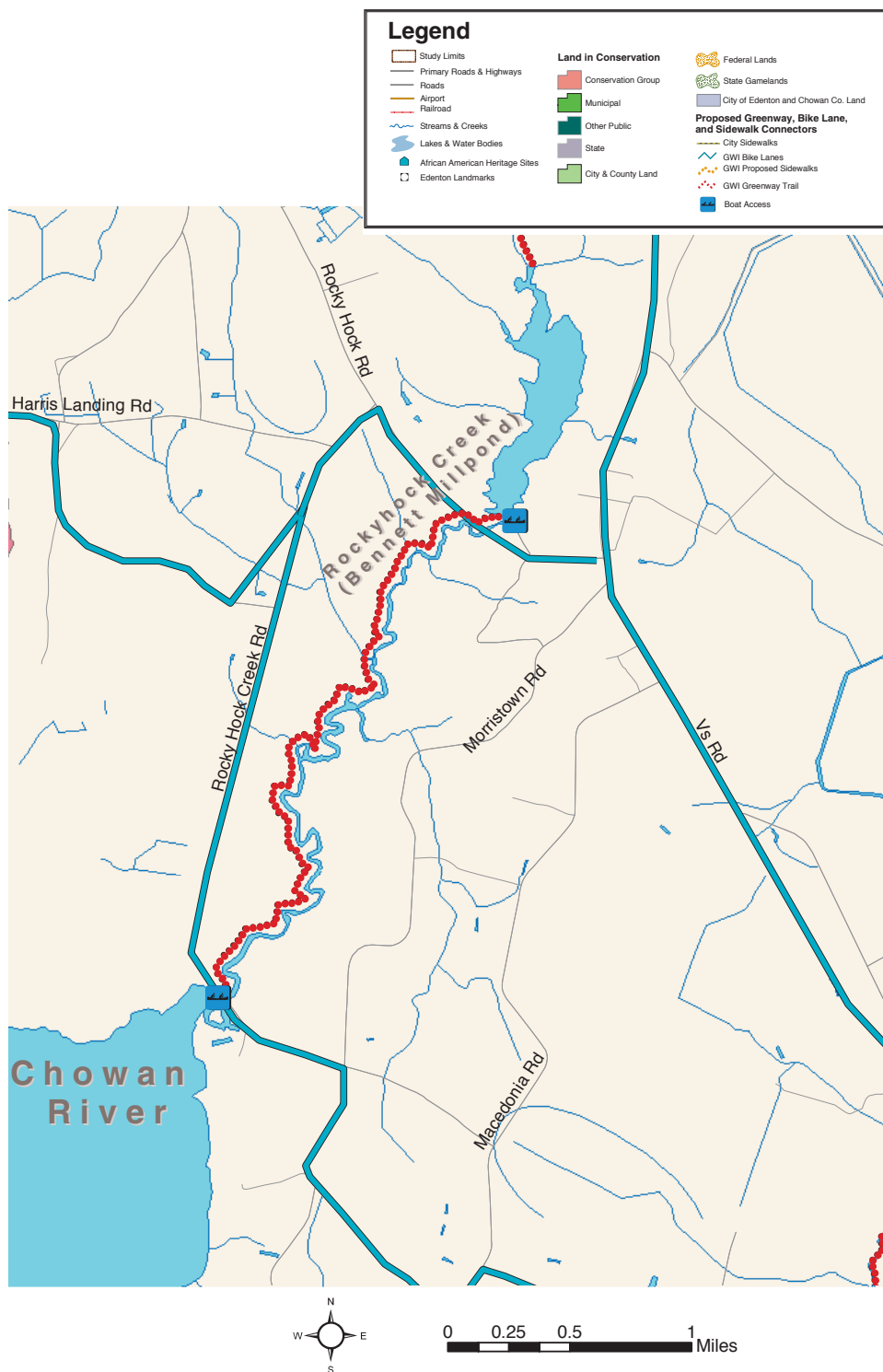
D. Rockyhock Creek

Description:

A land and water corridor stretching from Chowan Middle School near Virginia Road and Dillard's Mill Road to the incredibly scenic Bennet Millpond and then following the creek to its confluence with the Edenton River.

Objective:

Completion of this corridor serves to link several major education and recreation destinations. Through the placement of several canoe access points, this corridor adds to the growing number of water-based trails available to the boating public. The protection of a vegetative buffer along the stream corridor will help ensure high quality wildlife habitat and will serve to protect water quality in the Edenton River, Edenton Bay, and the Albemarle Sound.



E. Edenton-Indian Creek Corridor

Description:

Primarily follows existing roads using an on-road bikeway or sidewalk, the route would begin at the Hwy 32 and Hwy 17 bypass intersection and head north and east along Mexico Road, Chamber's Ferry Road, Morristown Road, Cowpen Neck Road. Eventually linking to Harris Landing Road, and heading North along SR 1214 and River Road into the Indian Creek communities.

Objective:

Provides a primary corridor between Edenton and Indian Creek with potential links to Bennet Millpond and a canoe access point on the Chowan River. With improvements for safer pedestrian and bicycle travel, the Indian Creek Corridor provides an excellent alternative transit route for residents and a scenic tour for tourists.

