



# MEMORANDUM

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**To:** Mayor and City Councilors  
**From:** Rich Olson, City Manager  
**Date:** September 27, 2013  
**Re:** Joint Meeting – Regional Bike Plan Update/Adoption of Resolution

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***BACKGROUND:***

During the joint City/County meeting, Steven Lambert, Planning Director with the Albemarle Commission, will be presenting the Albemarle Regional Bike Plan. Attached you will find an Executive Summary of the plan. The plan is straightforward and represents a coordinated effort of the counties in northeastern North Carolina.

The plan can be utilized to secure grants from the North Carolina Department of Transportation to build a bicycle/trail network. The Albemarle Commission is requesting that all municipalities and counties adopt a resolution of support for the plan. Attached you will find the proposed resolution.

***STAFF RECOMMENDATION:***

By motion, adopt the attached resolution as presented.

RCO/vdw

RESOLUTION NO. \_\_\_\_\_

**A RESOLUTION SUPPORTING ADOPTION OF THE ALBEMARLE REGIONAL BICYCLE PLAN**

**WHEREAS**, the Albemarle Commission and Albemarle RPO, participating local governments, and its subcontractor Alta/Greenways, has prepared the Albemarle Regional Bicycle Plan (the Plan) and;

**WHEREAS**, the purpose of the Plan is to study the feasibility of establishing an interconnected network of off-road and on-road bicycle facilities throughout the entire Albemarle region and;

**WHEREAS**, the proposed bicycle network includes lands located within the multiple counties and municipalities of the Albemarle Region, and;

**WHEREAS**, the Plan process involved public participation, and;

**WHEREAS**, the Plan was financed by a North Carolina Department of Transportation grant.

**NOW, THEREFORE, BE IT HEREBY RESOLVED** by the City Council of the City of Elizabeth City that:

- a. The Plan and related materials are acceptable to the City of Elizabeth City, and;
- b. The Plan and related materials will be used to guide future bicycle transportation development, operations, and maintenance.

ADOPTED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, \_\_\_\_\_, by the

\_\_\_\_\_  
Joseph W. Peel  
Mayor

Attest: \_\_\_\_\_  
Dianne S. Pierce-Tamplen, MMC  
City Clerk



# St. Bernard Regional Bicycle Plan



## Executive Summary





# Acknowledgements

## SPECIAL THANKS

Thank you to the hundreds of people who participated in the development of this plan through public comment forms, social media, public outreach events, and meetings.

## ALBEMARLE REGIONAL PLANNING COMMISSION

Camden County: Clayton Riggs, Bill Norton At-Large  
Chowan County: Jeff Smith, Jack Perry At-Large  
Currituck County: Marion Gilbert  
Dare County: Robert Woodard, Sr.  
Gates County: Henry Jordan  
Hyde County: Earl Pugh, Jr.  
Pasquotank County: Gary White  
Perquimans County: Tammy Miller-White  
Tyrrell County: Leroy Spivey, Chuck Boucher At-Large  
Washington County: Tracey Johnson, Charles Sharp At-Large

## NC DOT

Helen Chaney, Division of Bicycle and Pedestrian Transportation  
John Vine-Hodge, Division of Bicycle and Pedestrian Transportation

## CONSULTANTS

Alta/Greenways (lead consultant)  
Kinley-Horn & Associates  
Street Plans Collaborative

## STEERING COMMITTEE

Steve Lambert, Albemarle Rural Planning Organization Director\*  
Erin Burke, Town of Manteo Planning and Zoning  
Gretchen Byrum, NCDOT District Engineer  
Willie Mack Carawan, Tyrrell County Administration  
Angela Cole, Elizabeth City Planning and Community Development  
Chip Cowan, Citizen Representative  
Shelley Cox, Pasquotank County Planning  
Donna Creef, Dare County Planning  
Andy Garmann, Town of Duck Community Development  
Donna Godfrey, Perquimans County Planning and Zoning  
Mary Helen Goodloe-Murphy, Citizen Representative  
Jay Greenwood, Merchant's Millpond State Park  
Joy Greenwood, Dismal Swamp State Park  
Wes Hasket, Town of Southern Shores Planning & Code Enforcement  
Joe Heard, Town of Kitty Hawk Planning and Inspections  
Landin Holland, Chowan County/Town of Edenton Planning Consultant  
Morgan Jethro, Gates County Planning & Development Services  
Ann Keyes, Washington County Planning and Safety  
Doug Lequire, Pettigrew State Park  
Greg Loy, Town of Kill Devil Hills Planning and Inspections  
Garry S. Mitchell, Citizen Representative  
Mike Murray, National Park Service Outer Banks Group  
Kris Noble, Hyde County Economic Development and Planning  
Dan Porter, Camden County Planning and Development  
Brandon Shoaf, Town of Hertford Planning and Zoning  
Donna Stewart, Dismal Swamp State Park  
Elizabeth Teague, Town of Nags Head Planning and Development  
Bobbi White, Elizabeth City Parks and Recreation  
Holly White, Currituck County Planning and Inspections  
Ben Woody, Currituck County Planning and Inspections  
\*Project Manager



# Albemarle Regional Bicycle Plan

## Executive Summary

### INTRODUCTION

The Albemarle Regional Bicycle Plan provides a framework for improving bicycle transportation and recreation in the Albemarle RPO region. The plan acts as a blueprint for improving both regional and local connectivity with a comprehensive toolbox of facility types that are appropriate for a range of landscapes, rural to urban. The plan emphasizes safe,

separated bicycle facilities for both long-distance, recreational bicycling and short, utilitarian bicycle trips. In addition to a connected bicycle network, the plan recommends policies and programs, along with an implementation strategy for all recommendations, designed to effectively and efficiently improve the region's bikeability.

### Summary Contents

- Introduction
- Vision Statement & Goals
- Planning Process
- Existing Conditions
- Needs Assessment
- Recommendations
- Implementation

### VISION STATEMENT & GOALS

The following vision statement guides the Albemarle Regional Bike Plan:

*The Albemarle region is a **Bicycle Destination for the World** where roadways comfortably accommodate all modes of transportation. Opportunities exist for residents and visitors to safely and efficiently bicycle for both transportation and recreation. Cycling is a common, fun, and preferred means of transportation, recreation, and healthy living that improves our communities.*

The purpose of this plan is to make this vision a reality. Specific goals derived from this vision are listed below.

- Goal 1: Increase the quality of bicycling throughout the region
- Goal 2: Improve health outcomes in the region
- Goal 3: Improve safety for all cyclists
- Goal 4: Increase bicycling trips by residents and visitors
- Goal 5: Promote and encourage the growth of the tourism economy

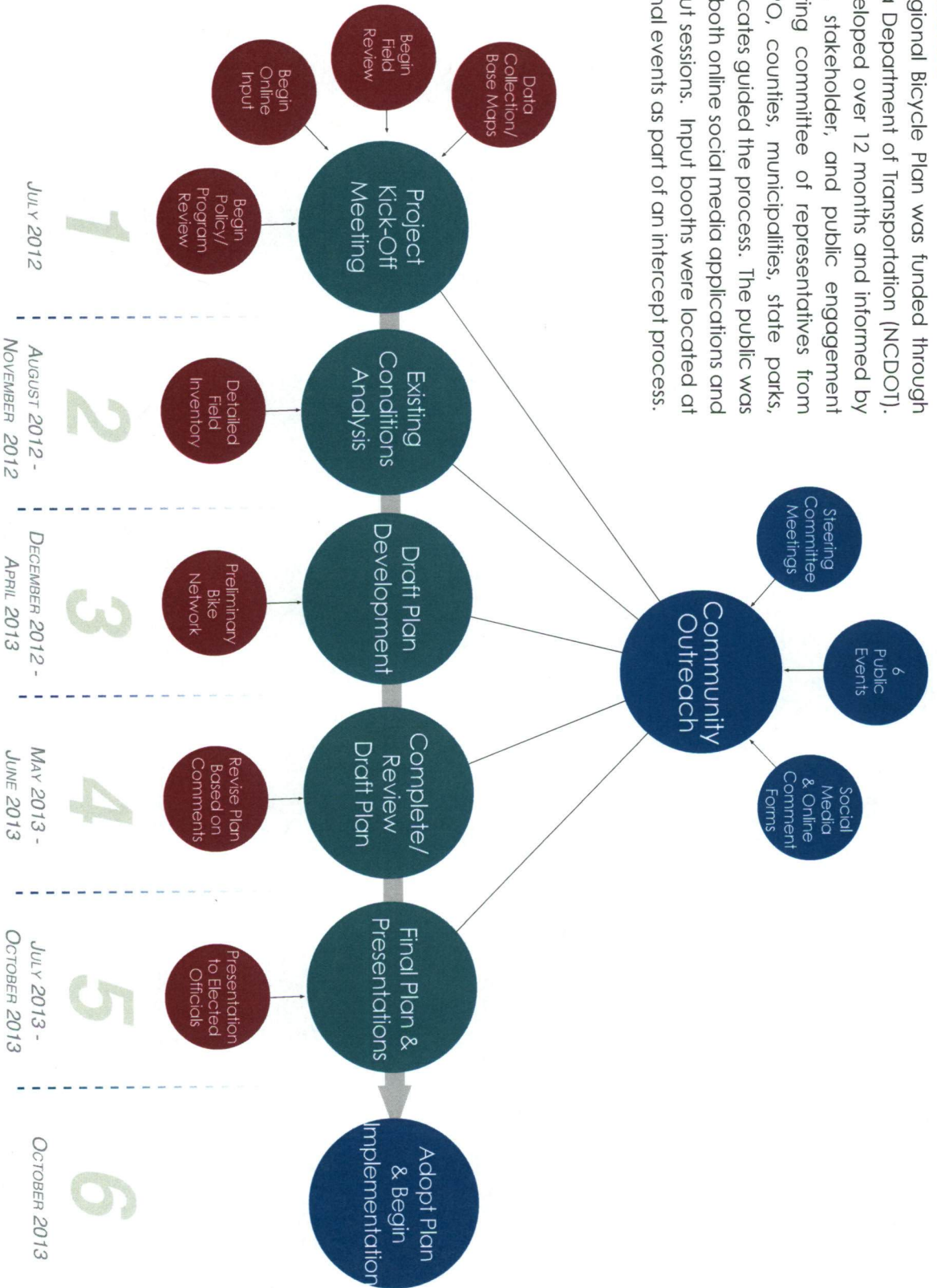


Public Input was collected at regional events, stakeholder meetings, and through social media.



**PLANNING PROCESS**

The Albemarle Regional Bicycle Plan was funded through the North Carolina Department of Transportation (NCDOT). The plan was developed over 12 months and informed by a robust agency, stakeholder, and public engagement process. A steering committee of representatives from the Albemarle RPO, counties, municipalities, state parks, NCDOT, and advocates guided the process. The public was engaged through both online social media applications and on-the-ground input sessions. Input booths were located at six, targeted regional events as part of an intercept process.





## EXISTING CONDITIONS

The Albemarle region is a diverse landscape with a variety of land uses, demographics, ecological habitats, and economies. To account for this variation, the study area was divided into three subregions - North of Sound, South of Sound, and the Outer Banks. Each subregion holds unique challenges and opportunities for bicycle transportation.

This diversity requires a broad toolbox of engineering, policy, and program treatments. For closer analysis, the region was classified into seven settlement types that were used to structure context-sensitive recommendations:

### REGIONAL SETTLEMENT TYPES

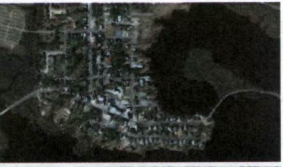


Natural

Farmland

Hamlet

Village



Town

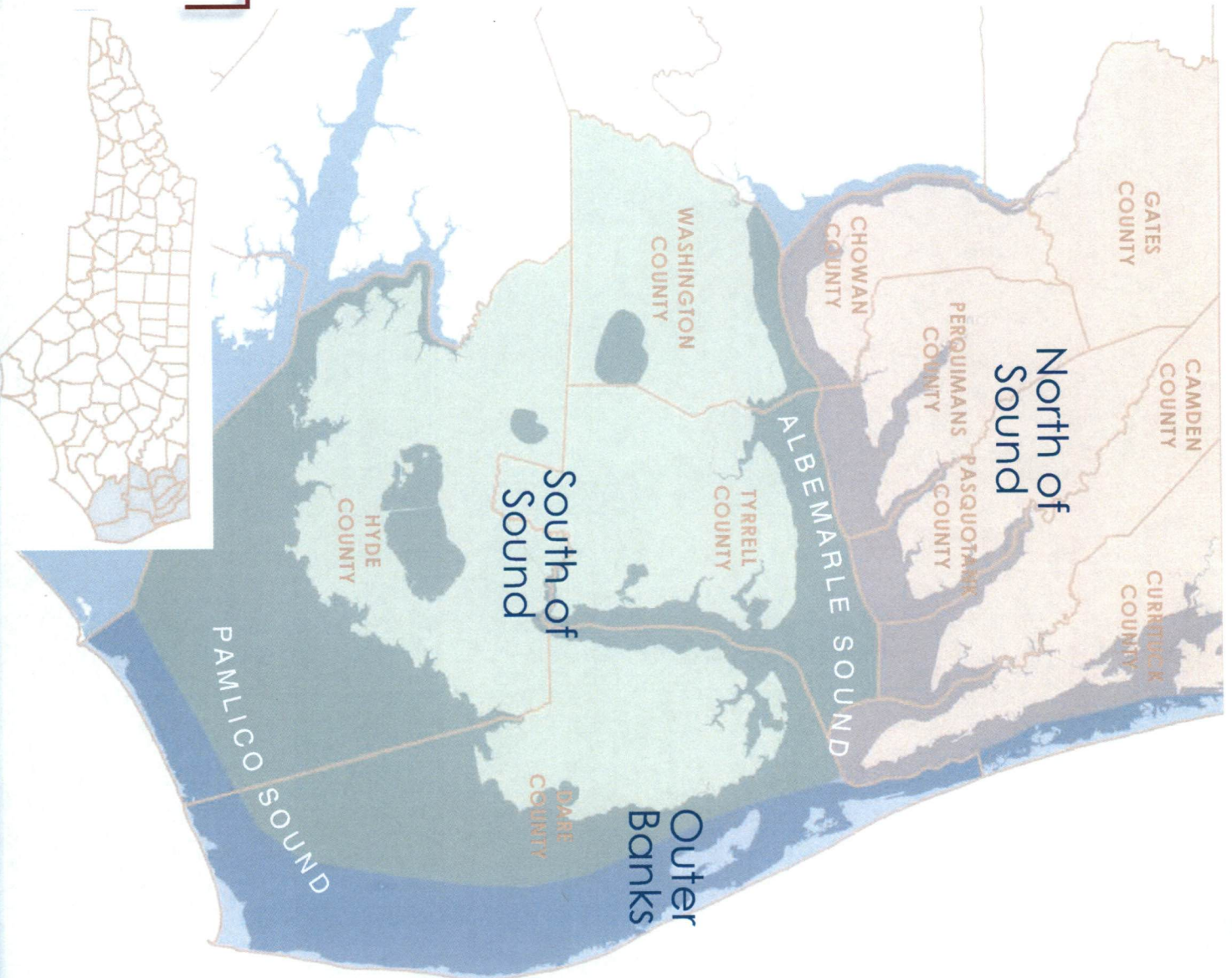


City



Beach District

See Chapter 2 for more on this topic.





**CHALLENGES:** Like most of North Carolina, driving an automobile is currently the most convenient mode of travel in the region because the roadway network is designed for driving. Land uses are typically segregated by long distances, making bicycling from origin to destination tedious for most trips. The area also lacks a connected and consistent network of bicycle facilities that encourages bicycling as a viable choice for transportation.

**OPPORTUNITIES:** Yet, the Albemarle Region has tremendous opportunity to become a "Bicycle Destination for the World." Flat roadways, scenic landscapes, and historic towns make bicycling tourism a reality today despite the challenges above, as well as a feasible boost to the region's economy if expanded. Bicycling is already prevalent in the Albemarle region, typically in two situations:

1. Lower-income centers where bicycling and walking are critical means of transportation, and
2. Tourist areas, especially along the beach, where bicycling is largely a common tourist and recreational activity.

For these reasons, the bicycle mode share in the Albemarle Region is 0.4%, twice that of the rest of North Carolina (Bicycle mode share in the Outer Banks alone is 0.8%).

### **NEEDS ASSESSMENT**

The three subregions were assessed through a combination of GIS data analysis and fieldwork. Needs varied by each subregion and settlement type. There are very few bicycle facilities, with the exception of some paved shoulder, in the North of Sound and South of Sound subregions. The Outer Banks subregion boasts the most bicycle facilities, mostly multi-use sidepaths for recreational bicyclists.

### **EXISTING FACILITIES:**

	Bicycle Facility Miles/1,000 residents	Bicycle Facility Miles/1,000 roadway miles
North of Sound	0.2	8
South of Sound	0.2	2
Outer Banks	6	299



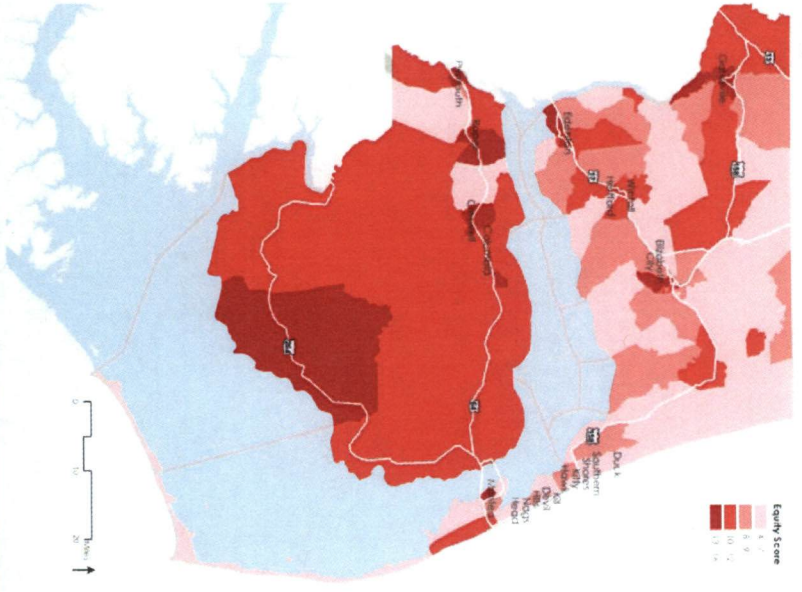
Flat roadways, scenic landscapes, and historic towns make bicycling tourism a reality today.



A regional equity analysis was conducted by layering demographic characteristics such as vehicle ownership, median household income, race, and language. The locations identified through this analysis were targeted with facility recommendations to ensure the needs of disadvantaged residents are met. Some key findings include:

- 1.8% of residents do not own a vehicle (4.9% in the South of Sound subregion)

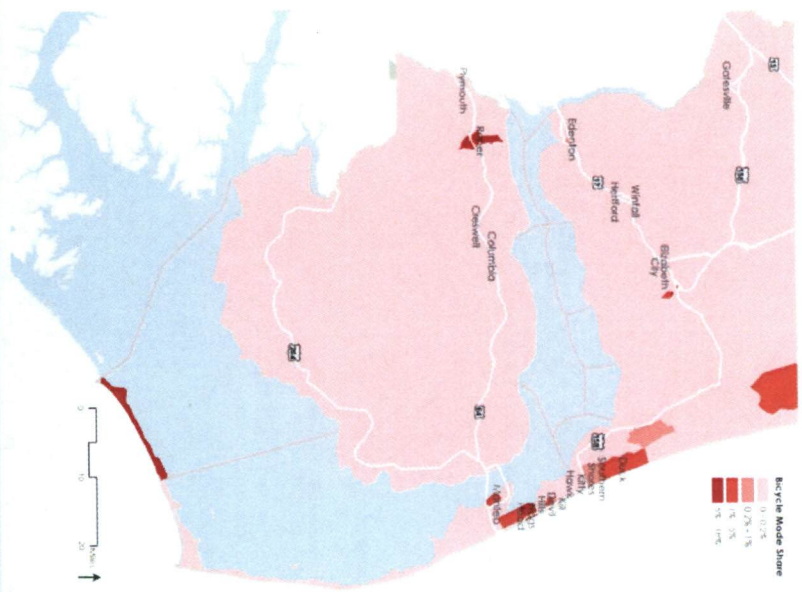
### EQUITY ANALYSIS



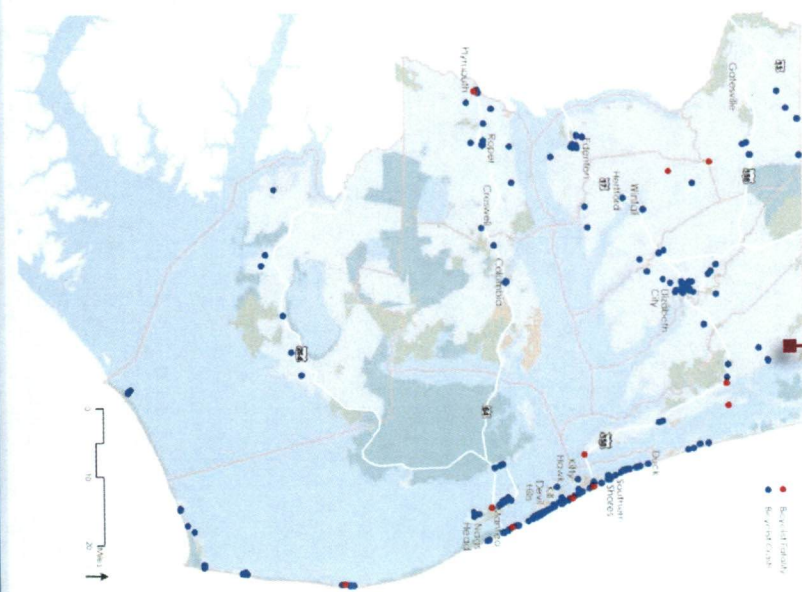
- 0.4% of residents bicycle to work (0.8% in the Outer Banks subregion)

Bicycle safety is a chief issue for this region as many bicyclists are struck by vehicles each year. Most bicycle crashes between 2005 and 2012 occurred along major roadways such as US 64, US 17, US 158, and NC 12. There are 1.6 crashes per 1,000 residents in the entire region, with higher numbers of crashes occurring in higher density areas, such as the Outer Banks and Elizabeth City.

### BICYCLE MODE SHARE



### CRASH LOCATIONS



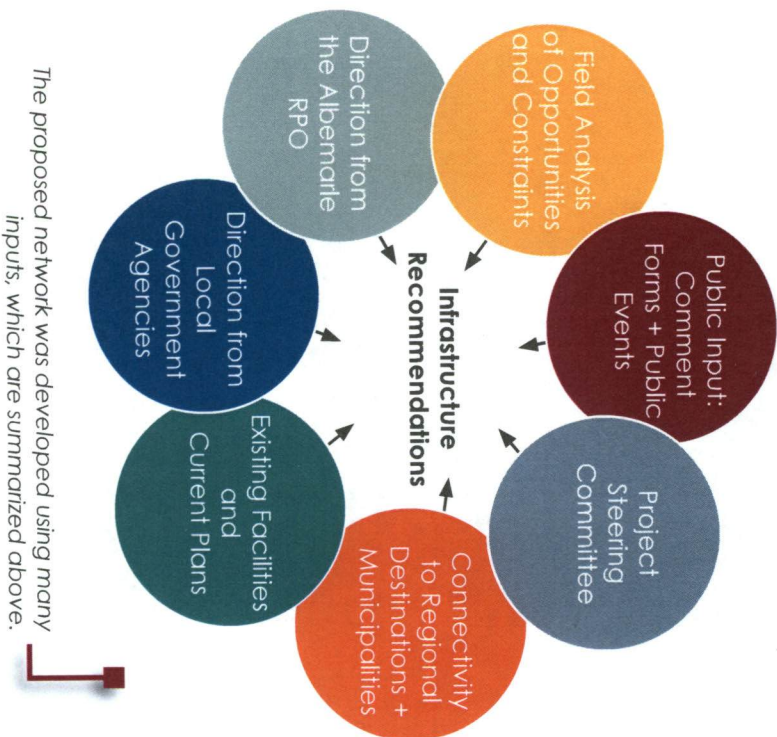
See Chapter 2 for more about these existing conditions maps.



## RECOMMENDATIONS

### BICYCLE NETWORK

In order to provide an equivalent choice for bicycle transportation, a comprehensive regionally and locally connected network of bicycle facilities is recommended. A toolbox of bicycle facility types was used to recommend appropriate treatments based upon a number of factors such as land use patterns, density, destinations, and street typology. In large part, the recommendations of this plan are geared towards the 60% of the population considered "interested, but concerned" in bicycling (see for right). Recommendations were prioritized based on safety, need, proximity to key destinations, and public input.



The proposed network was developed using many inputs, which are summarized above.

This diagram illustrates the various recommended facility types, from those that are least separated from motorized vehicle traffic, to those that are the most separated.



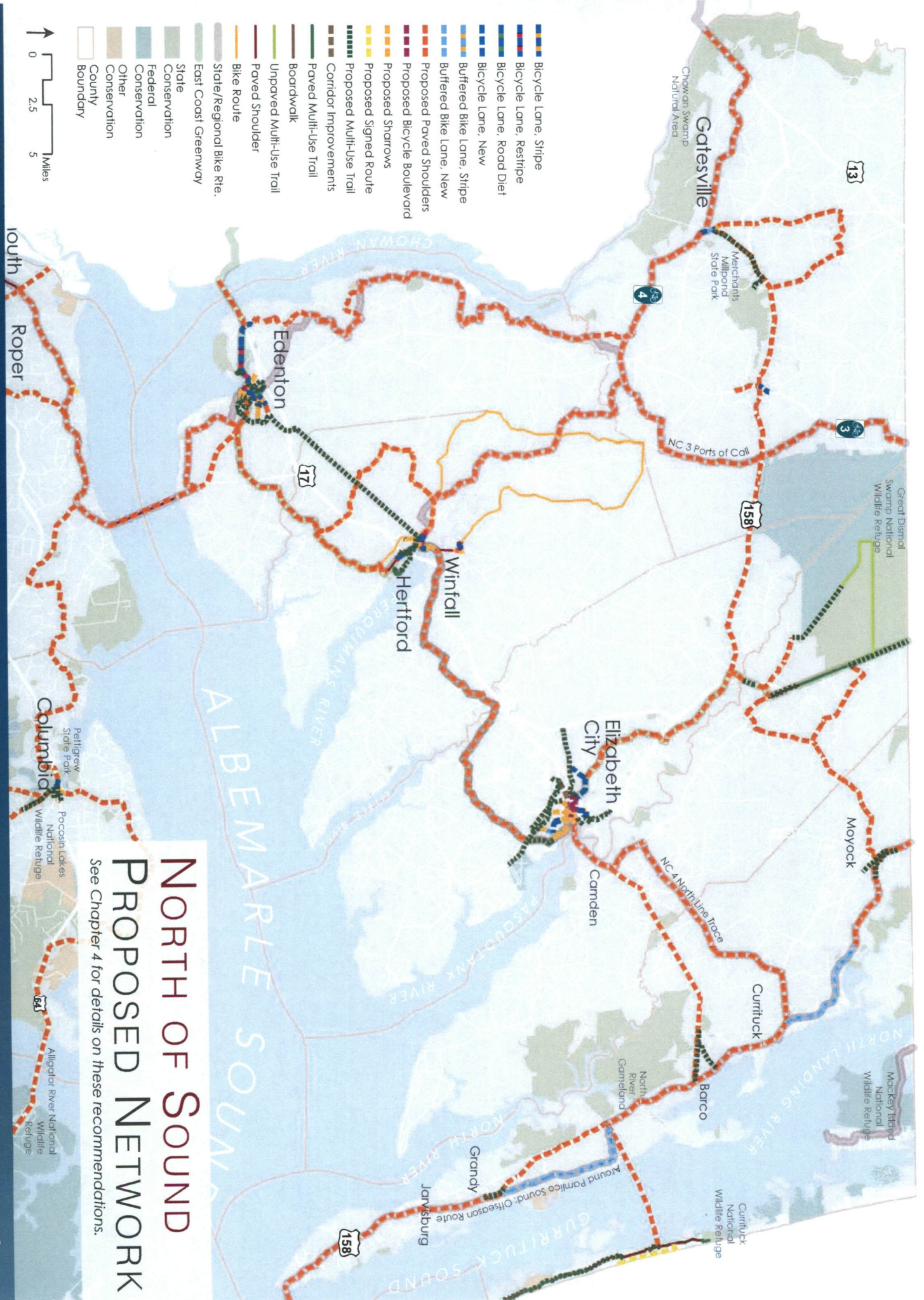
### TYPES OF BICYCLISTS

This diagram illustrates how people in the U.S. have characterized themselves in past surveys when it comes to bicycling. There are a variety of bicyclists of all skill levels in the Albemarle region. This plan seeks to meet the needs of all types, not only through infrastructure, but also through policies and programs.

- 1% Strong & Fearless**
- 5-10% Enthusiast & Confident**
- 30% No Way, No How**
- 60% Interested but Concerned**



- Bicycle Lane, Stripe
- Bicycle Lane, Restripe
- Bicycle Lane, Road Diet
- Bicycle Lane, New
- Buffered Bicycle Lane, Stripe
- Buffered Bicycle Lane, New
- Proposed Paved Shoulders
- Proposed Bicycle Boulevard
- Proposed Sharrows
- Proposed Signed Route
- Proposed Multi-Use Trail
- Corridor Improvements
- Paved Multi-Use Trail
- Boardwalk
- Unpaved Multi-Use Trail
- Paved Shoulder
- Bike Route
- State/Regional Bike Rte.
- East Coast Greenway
- State Conservation
- Federal Conservation
- Other Conservation
- County Boundary

















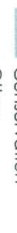
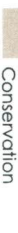
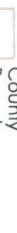
# NORTH OF SOUND PROPOSED NETWORK

See Chapter 4 for details on these recommendations.



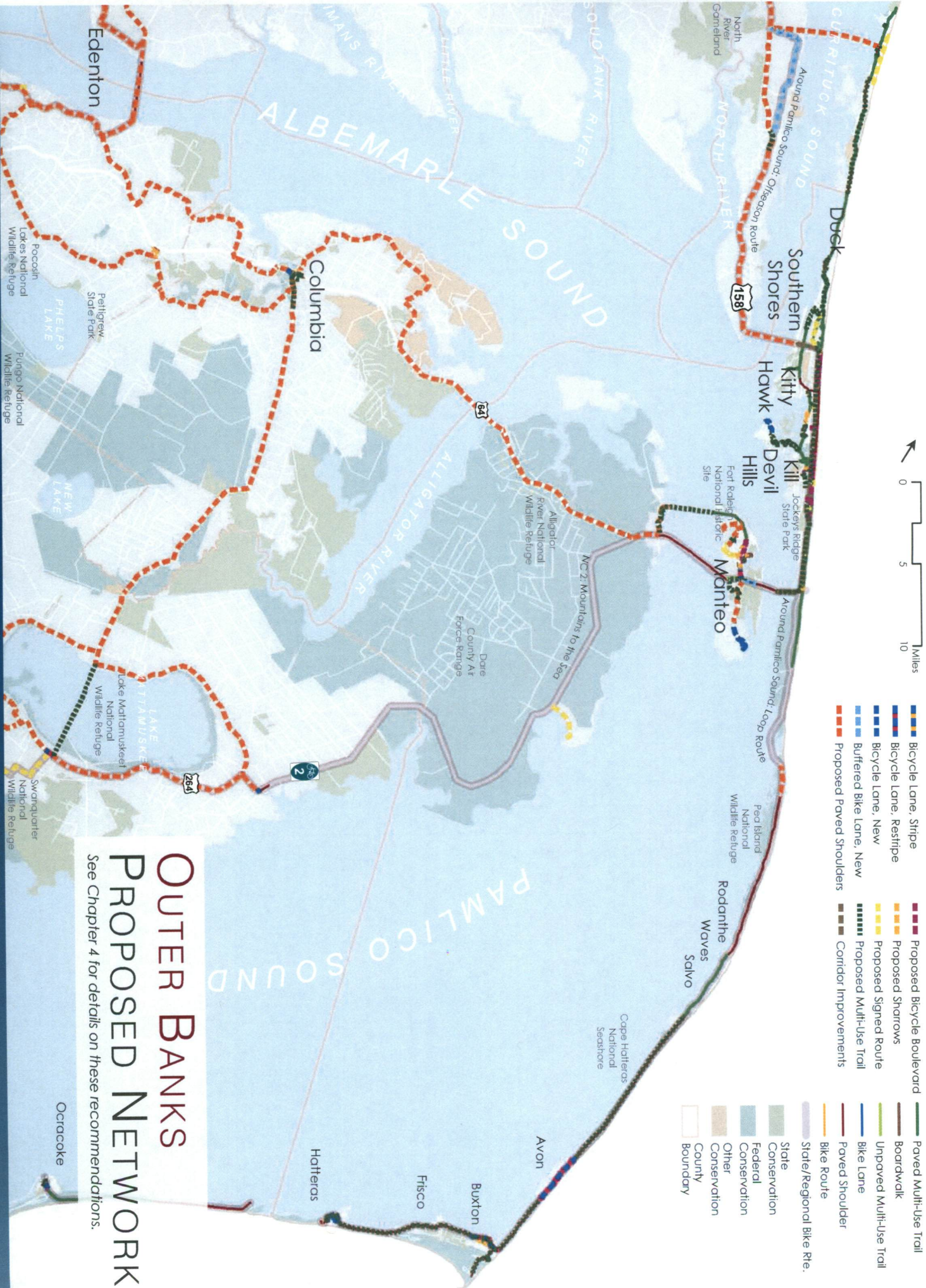
# SOUTH OF SOUND PROPOSED NETWORK

See Chapter 4 for details on these recommendations.

-  Bicycle Lane, Stripe
-  Bicycle Lane, Restripe
-  Bicycle Lane, Road Diet
-  Bicycle Lane, New
-  Proposed Paved Shoulders
-  Proposed Sharrows
-  Proposed Signed Route
-  Proposed Multi-Use Trail
-  Paved Multi-Use Trail
-  Boardwalk
-  Paved Shoulder
-  State Bike Route
-  East Coast Greenway
-  State Conservation
-  Federal Conservation
-  Other Conservation
-  County Boundary







- Bicycle Lane, Stripe
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- Unpaved Multi-Use Trail
- Bike Lane
- Paved Shoulder
- Bike Route
- State/Regional Bike Rte.
- State Conservation
- Federal Conservation
- Other Conservation
- County Boundary

# OUTER BANKS PROPOSED NETWORK

See Chapter 4 for details on these recommendations.



## POLICIES

Policies play a critical role in shaping the long-term growth and development of a community. The policy recommendations of this plan aim to improve the underlying land use and transportation conditions that fundamentally promote bicycle use at the regional and local level.

### Key Policies

- Recognize the interrelationship between land use decisions (planning and development) and transportation decisions.
- Reinforce basic urban design principles that result in the development of visually pleasing districts, neighborhoods, and corridors supportive of bicycling and walking.
- Improve the balance of protected rural areas and vibrant village, town, and city environments that make the Albemarle region special.

Policy recommendations address the transportation network, environmental protection, regional growth, and bicycle infrastructure such as on-road facilities, signage, and bicycle parking. Policy statements are organized by settlement type and may be applied to county and town comprehensive planning, land use, and development ordinances.

## PROGRAMS

While infrastructure and policies make bicycling viable, programs ensure that residents and visitors will get out and try bicycling. A program may be presented as a campaign, on-going initiative, or one-time event, depending on its purpose. In essence, these different efforts market bicycling to the general public and ensure the maximum return on investment in bicycling facilities in the form of increased mode shift to bicycling. Program recommendations are broken into four categories:

- **Education** - The focus of an educational campaign can range from information about the rights and responsibilities of road users to tips for safe behavior; from awareness of the area-wide benefits of bicycling to technical trainings for local agency staff.
- **Enforcement** - The goal of enforcement is for bicyclists and motorists to recognize and respect each other's rights on the roadway.
- **Encouragement** - These programs inspire all ages, abilities, and user groups to bike, including school age children, young adults, college students, working adults, and seniors. They address both recreational and utilitarian cycling.
- **Evaluation** - These programs ensure facilities are consistently monitored and maintained, and track progress toward plan goals.

A variety of programs are recommended within each category. These initiatives can be undertaken by local agencies, regional organizations, community organizations, or by any combination of partnerships between such agencies and organizations.



### IMPLEMENTATION

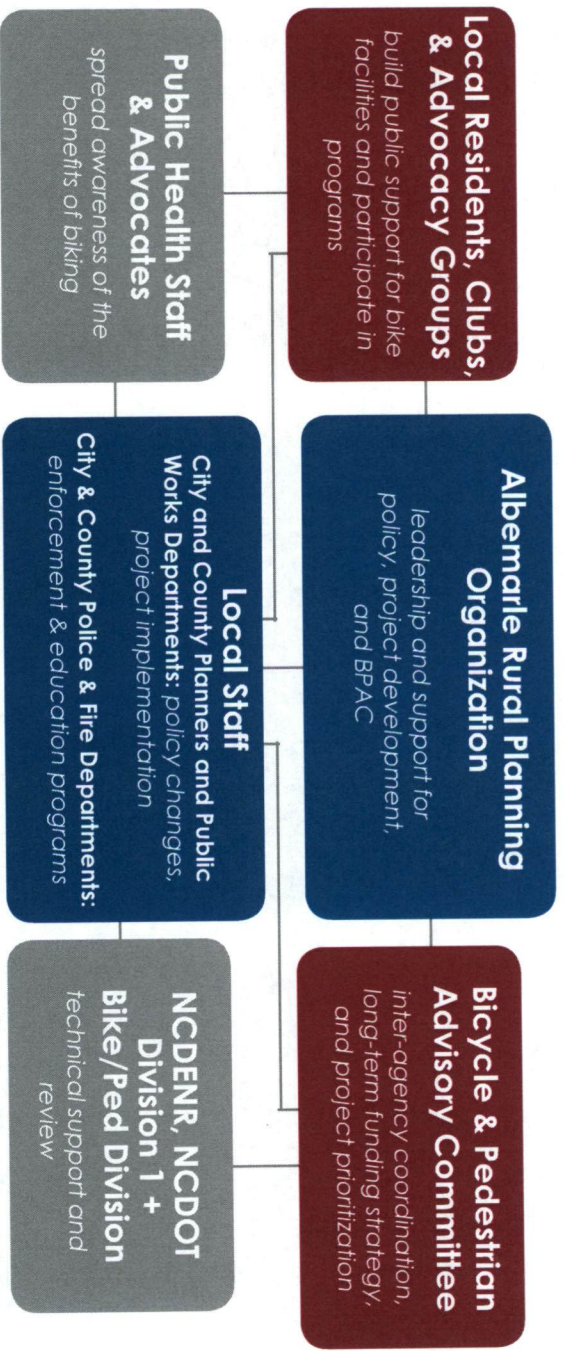
Implementing the recommendations of this plan will require a concerted, consistent effort and collaboration between NCDOT, local government agencies, stakeholders, and advocates.

#### Key Steps & Partnerships in Implementation

- Adopt the plan at regional, county, and local levels.
- Form a BPAC (Bicycle and Pedestrian Advisory Committee) to oversee the implementation of this plan.
- Build priority projects with a multi-prong approach (State TIP, local capital improvement programs, grants, private funders, development policies, and by incorporating bicycle facilities into scheduled roadway rehab projects).
- Develop bicycle maps for subregions and localities, especially within the central Outer Banks.
- Advance key priority education, encouragement, and enforcement programs.
- Implement local policy changes to address bicycle facility construction, bike parking, etc.
- Work with Community Transformation Grant staff and local SRTS programs.
- Engage lower-income communities.

See Chapter 7 for more than 30 detailed action steps, including identified lead and support agencies and phasing per task.

### ADMINISTRATIVE STRUCTURE



This figure presents an organizational structure for plan implementation. All of the groups and agencies shown in this figure will be necessary to successfully implement the extensive program, policy, and infrastructure recommendations of the plan.

Education | Enjoyment | Evaluation | Encouragement | Engineering



Roanoke Island, Dock off Eagle Point

