

# *A Conceptual Plan for North Carolina's Mountains-to-Sea Trail*



*Falls Lake Dam  
to  
Cedar Island*



# *A Conceptual Plan for North Carolina's Mountains-to-Sea Trail*

*Falls Lake Dam to Cedar Island*

*April 2004*

*Prepared for:*



*Prepared by:*





## North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary

April 26, 2004

Dear Friends:

I am very pleased to send you a copy of "A Conceptual Plan for North Carolina's Mountains-to-Sea Trail – Falls Lake Dam to Cedar Island." We are excited that this plan will serve as a guide for local governments, volunteers and state agencies in developing segments of North Carolina's Mountains-to-Sea Trail (MST).

I appreciate your participation in the working groups that have met over the past 2 years. Your hard work, and the information you have shared, has paid off in the form of this conceptual plan for a routing of the MST through Eastern North Carolina. Now it is time to move forward with the next step in making this trail a reality.

In order to advance the project, I feel it is imperative that we develop a working relationship between all the stakeholders. To that end, I am announcing the formation of the Mountains-to-Sea Trail East Task Force comprised of representatives from the departments of Environment and Natural Resources, Transportation and Commerce, as well as representatives from the local communities along the proposed trail corridor. The mission of this task force will be to develop strategies to assist local governments and volunteers to plan, acquire, construct and manage segments of the Mountains-to-Sea Trail.

Your patience in this rather lengthy process is appreciated. In order to produce a document that addressed all the various concerns and issues identified in the public meetings, we wanted to take the necessary time and develop realistic steps to foster success in implementing the plan. I want to reiterate that this plan is only the first step in a long journey to make this trail a reality. Your continued participation is vital to the success of the project.

Please take time to review this Conceptual Plan and formulate your questions and comments. The MSTE task force will be organizing some meetings in the near future for you to voice your opinions.

Sincerely,

*Bill*

William G. Ross, Jr.

P.S. At my request, Sig Hutchinson was kind enough to share his views about the keys to success for this eastern third of the Mountains-to-Sea Trail. Please review and comment on Sig's suggestions!

Attachment: March 22, 2004 Letter from Sig Hutchinson

1601 Mail Service Center, Raleigh, North Carolina 27699-1601  
Phone: 919-733-4984 \ FAX: 919-715-3060 \ Internet: [www.enr.state.nc.us/ENR/](http://www.enr.state.nc.us/ENR/)

One  
North Carolina  
*Naturally*



March 22, 2004

Secretary William G. Ross Jr.  
Secretary Department of Environment and Natural Resources  
1601 Mail Service Center  
Raleigh, NC 27699

Dear Secretary Ross:

Thank you so much for the opportunity to comment on the North Carolina Mountains-to-Sea Trail Eastern Segment Plan. I am honored at the request and naturally, I do have some thoughts on the project. First, let me say that this plan, done correctly, is a grand vision of a legacy far beyond a greenway down the Neuse River. This project could be the catalyst for transforming Eastern North Carolina towns and cities into places with healthier life styles, higher quality of life and a greater sense of community. Such a project not only represents recreation opportunities but also economic development, transportation alternatives, and tourism dollars, and could be a model for the nation. It is apparent that this plan was written with the local user in mind. The series of meetings held along the planning corridor has served to generate interest exactly where it is needed, at the local level. But to be successful, such a plan must be implemented from 1) the bottom up, 2) from the inside out and 3) funded with matching funds.

### Bottom Up

To be successful, implementation of this plan must have support from the communities that will be impacted. Better stated, this conceptual plan can be the basis for generating a master plan for each community that must originate within that community. Done correctly, I envision high levels of excitement around using this corridor and the plan as an opportunity to redesign their communities, tying the greenway corridor to the downtowns, parks, shopping, lodging, areas of interest, etc.

Such a trail corridor could then be part of revitalizing towns toward more a walkable and bikeable infrastructure, where citizens could access their entire community, as well as the Neuse corridor. With such a master plan, citizens, elected officials and staff would be totally energized and committed because it would be their plan. I predict you will hear stories of how this project has transformed towns in such a positive way that would have never been possible without the assistance of the State of North Carolina. You will hear stories of how people are moving to be closer to the greenway or moving into the town because of the unique recreational opportunities; how commerce and lodging become part of the economic culture as tourists come to visit quaint towns along the Neuse, biking their way up and down the corridor.

## Inside Out

To be successful, this corridor has to be planned from the towns outward. This is where the people live and want the corridor first, as you will see once the community master plans are completed. Out lying connectors can be done later and I even see the possibility of using state or federal funding for the connectors between cities. This framework is similar to what is happening with Chatham County for the American Tobacco Trail. We got Durham and Wake counties excited about the idea, and they are already building their corridors. In order to complete the project, we need some state or federal dollars for the final connection through Chatham County, just as these planning corridor counties will need assistance to form the final links in the trail.

## Financed by Matching Funding

One of the most synergistic things happening in government right now is matching funds. Elected officials are enthralled by matching funds because town dollars go farther, and citizens are more supportive of projects using matching funds because they see a reasonable way to realize the dreams they helped create. And you can tell the general assembly that you are building this project at 50 cents on the dollar! We have used this approach with our Open Space Fund for Wake County in partnership with municipalities, and you would not believe the level of enthusiasm for the program. We then go one step further by giving towns the resources to find their half of the match.

## Funding

The best part of the implementation of this plan would be the funding. My suggestion is that in the first year, an allocation of one million dollars or more could help fund the design of a master plan for all the towns along the corridor on a 50% matching basis. The return on this relatively small investment would be significant.

I would caution you to be sure these master plans stay local. In other words, the master plan would be done by and belong to the town, and they should be able to make the scope as large or small as they want. Naturally you can have input and set parameters but, at the end of the day, by making the master plans a local creation, you are also forming advocacy groups who will then work in subsequent years to find the funding for the projects in their plans.

Funding should be made available with matching grants based on the best designs and the most energy and most potential for each community. The process should concentrate on the communities with the most interest and allow the others to follow once they see what is happening elsewhere. Then, over time, you connect the gaps in the corridor using other grant dollars.

In this way, towns become hubs of activity for recreation, tourism and economic development. Throughout this process, everything is happening from leadership within the communities, while being empowered by state government. What a concept! We are not talking about a trail that runs

Secretary William G. Ross Jr.  
Page Three  
March 22, 2004

from the mountains to the sea. We are talking about transforming our towns into more viable, livable, desirable, healthy centers of the community. All these goals are within our grasp. With just a little bit of seed money and by releasing the creative spirit already within our communities, who are only waiting for this opportunity to become available, success is inevitable.

Thanks again for this opportunity to share my ideas. If you would like to meet in person for more details, please let me know. Also, if there is anyway I can assist in your efforts, please let me know.

Respectfully Submitted:

*Sig Hutchinson*

Sig Hutchinson

**A Special Word of Thanks!**

The North Carolina Division of Parks and Recreation, State Trails Program would like to thank the following individuals, organizations, and agencies for their contributions in support of the preparation of this Conceptual Plan for the MST-East.

The Honorable William Ross, Secretary, NCDENR  
The Honorable Lyndo Tippet, Secretary, NCDOT  
The Honorable Jim Fain, Secretary, NCDOC

Friends of the Mountains-to-Sea Trail  
Mr. John Hinners, Author “Just Around the Bend”  
Triangle Land Conservancy  
North Carolina Recreation and Park Society  
Crystal Coast Canoe and Kayak Club  
Lower Neuse RiverKeeper  
Neuse River Trails Association

**MST-East Task Force Members**

Wake County Government  
City of Raleigh  
Town of Knightdale  
Johnson County Government  
City of Smithfield  
Town of Clayton  
Wayne County Government  
City of Goldsboro  
Seymour-Johnson Air Force Base  
Lenoir County Government  
City of Kinston  
Pitt County Government

City of Greenville  
Craven County Government  
City of New Bern  
Pamlico County Government  
Carteret County Government  
City of Havelock  
Town of Beaufort  
City of Morehead City

US Forest Service, Croatan National Forest  
US Fish and Wildlife Service, Cedar Island National Wildlife Refuge  
Eastern Carolina Council  
Region P Council of Governments  
North Carolina Center for Geographic Information and Analysis  
North Carolina Department of Transportation, Office of Bicycle and Pedestrian Transportation



## **Executive Summary**

North Carolina's proposed Mountains-to-Sea Trail (MST) extends nearly 900-miles, from Clingman's Dome in the Great Smoky Mountains, to Jockey's Ridge on the Outer Banks. The route winds its way through national forests, state parks, wilderness areas and wildlife refuges, as well as farming communities, small towns and urban areas. To date, more than 300 miles of the trail have been constructed and opened for public use, mainly in the state's western region.

This Conceptual Plan proposes a route and alignment for a 246-mile, combined land and water trail that will make up the eastern section of the trail, following the Neuse River from the Falls Lake Dam (north of Raleigh) to Cedar Island in Carteret County. The purpose of the Plan is to define a program of action for acquiring the land and/or public right-of-way for the trail, and to offer specific recommendations for constructing and managing this trail.

### **Summary of Key Recommendations**

The study area was a 2000' buffer (1000' on either side) of the Neuse River, within which an alignment was to be made for the land and water trail. The navigable river already contains numerous points of access for a paddle trail, and this Plan recommends that more water access points be added in the future. The land trail is envisioned as a foot trail for hiking. Within cities and towns, the trail might be developed as a multi-use facility to serve a broader and more diverse set of users. Immediate action is needed to get the development of the MST-East on target with other state level land and water protection goals. Funding for future land acquisition and trail facility development

can come from existing State resources and can be matched with local contributions. The NC Division of Parks and Recreation and the State Trails Program will have to continue to provide leadership and serve as the champion for the early action projects.

Operating and maintaining the trail once it is opened for public use can be accomplished through a broad-based partnership. The Friends of the Mountains-to-Sea Trail has been a long standing partner of the State for completed trail segments across North Carolina. The Friends group will need to become stronger in the eastern region of the state and will need to partner with local governments and other volunteer and non-profit organizations to help oversee future management and operation of the trail system.

The implementation section of this Plan contains other specific recommendations. They include:

- Creation of a Multi-Agency Task Force comprised of representatives from the Department of Environment and Natural Resources, the Department of Transportation and the Commerce Department to assist local partners in acquiring, building and managing segments of the MST.
- Continued efforts to create the Middle Neuse River State Park.
- Adoption of this Plan's trail alignment by local governments along the route.
- Appropriation of Local government resources to be used as potential matching funds for existing state and federal grants.
- Technical assistance arrangements between project partners





for the long-term stewardship needs of the trail corridor.

- Commitment from private sector groups and volunteer groups that they will involve themselves in the development and management of the MST-East.

### Organization of this Report

This document has been organized to provide the reader with a brief history and background of the full Mountains-to-Sea Trail and a detailed explanation of the MST-East Trail route and alignment. Descriptions of alternate routes and secondary trails are then provided along with a project implementation strategy and several appendices that can be used as reference material for building, operating and managing the trail.

All mapping work was completed using Geographic Information System (GIS) technology, and represents some of the most accurate mapping that has ever been developed for the MST. Maps illustrate the route of the trail, locations of water trail access, and properties affected by the proposed land trail alignment.

More information about the Mountains-to-Sea Trail is available on two web sites. One is maintained by the State of North Carolina (<http://ils.unc.edu/parkprojects/trails/home.htm>.) The second is maintained by the Friends of the Mountains-to-Sea Trail ([www.ncmst.org](http://www.ncmst.org)).

It is the hope and intent of the State Trails Program that this report will serve as a catalyst for the future development of North Carolina's Mountains-to-Sea Trail. When completed, this trail will become one of the primary east-west spines of a statewide trail

network. One day in the not-so-distant future, North Carolinians will be able to walk, bike and/or paddle from one end of the state to the other on a publicly accessible and dedicated system of interconnected trails. Adhering to the recommendations of this Plan puts our state one step closer to this goal.



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## North Carolina's Mountains-To-Sea Trail

The concept of a cross state trail, linking Clingman's Dome in the Great Smoky Mountains National Park to Jockey's Ridge State Park on our outer banks, was first announced by Mr. Howard Lee, Secretary of the Department of Natural and Community Development, in 1977. The Division began developing a plan for this trail effort entitled "North Carolina's Mountains-to-Sea Trail" (MST). This plan identified a 20-mile wide corridor through which the proposed trail could be developed. Individual volunteers and volunteer task forces were recruited across the state to identify specific routes for this trail. The volunteers have negotiated with governmental agencies, nonprofit organizations, and private landowners for permission to cross their lands with the MST.



Today, more than 400 miles of the proposed 900-mile trail are complete, the majority being located on National Park Service and U.S. Forest Service lands. A few other sections have been opened in communities such as Greensboro; other sections traverse portions of the State Parks System. Gaining legal access to traverse private and corporate property with a public trail continues to be problematic.



During the 2000 session, the North Carolina General Assembly recognized the MST's potential for protecting riparian buffers, providing corridors of wildlife habitat, and conserving biological, scenic, and recreational resources of statewide significance. This resulted in the passage of General Statute 113-44.1 which states: 1) the Department of Administration may acquire lands or easements which are or will be allocated for management to the Division for the MST; and, 2) that the Division is to promote, encourage, and facilitate the establishment of dedicated connecting trails through lands managed by other governmental agencies and nonprofit organizations in order to form a continuous trail across the State. Although the General Assembly authorized the acquisition of land for the MST, it is important to note that no funding was provided for land acquisition or management staff.

The Division responded to this action by the General Assembly by focusing its efforts to promote, encourage and facilitate the development and management of the MST through lands managed by other governmental agencies and nonprofit organizations. The Division targeted promoting the planning, development and management of the MST through eastern North Carolina along the Neuse River corridor. This corridor was targeted because of the State's focus on the Neuse for promoting clean water and because there are a number of local governments along the route with existing or planned greenways and linear parks.

During 2001, the Division sponsored three meetings in which representatives from local governments along the Neuse River Corridor were invited to share information about the MST and to learn about the Division's new focus on efforts to promote the planning and development of the MST through Eastern North Carolina.



Local government representatives were asked to share information about existing and planned trails and greenway segments that could become a segment of the MST or that could link into this statewide trails effort.

When the participants were asked how the State can help local governments and organizations promote, encourage, and facilitate establishment of the MST through eastern North Carolina, they responded with the following:

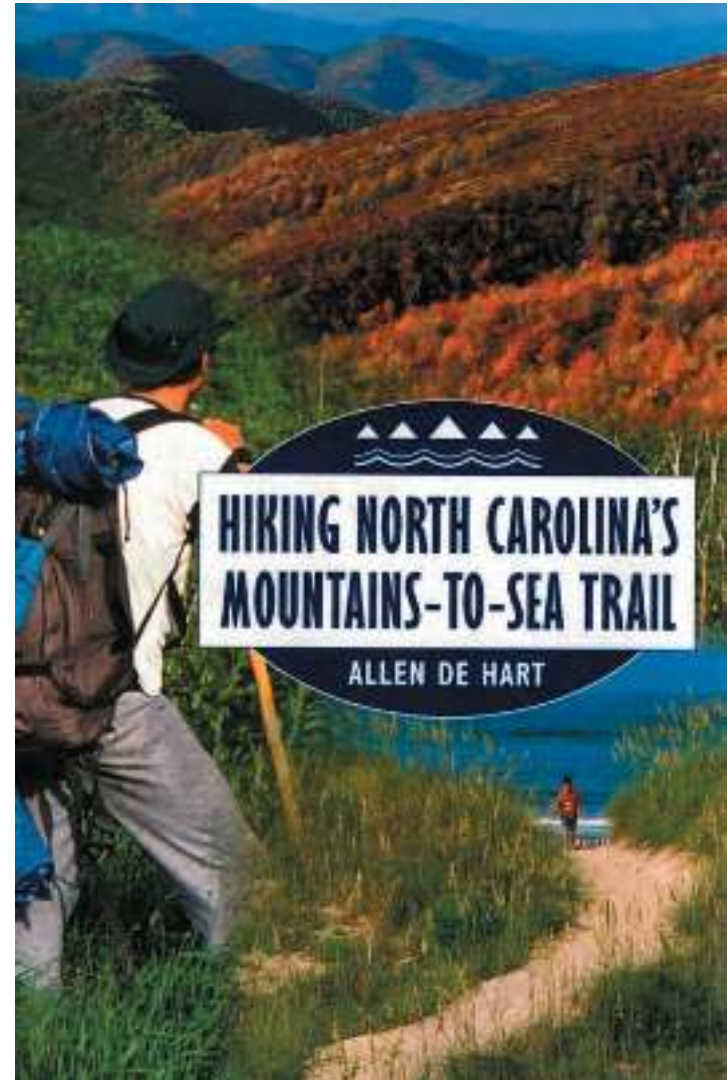
1) A conceptual plan and resource map for the MST beginning at the Falls Lake Dam in Wake County and continuing down the Neuse River Corridor through to Cedar Island in Carteret County to include:

Current public lands through which the MST could pass;  
and,

Proposed lands that have been identified in some public planning documents that in the future could serve as public lands through which the MST could pass.

Such a plan and map would serve to highlight gaps in the MST corridor and be beneficial to local, regional and state planners. Participants stated that this document would be a great asset to local government employees as they present this information to their elected officials.

2) The State could provide funding to help support the planning and development of the MST by:



Reallocating existing funds to focus on this new priority, the MST.

Giving preference for applicants applying for MST projects through the Clean Water Management Trust Fund, the Natural Heritage Trust Fund, the Transportation Efficiency Act for the 21 Century Funds, the Parks and Recreation Trust Fund and other state and federal grant programs.

Participants also suggested that the State consider providing leadership and staff time through its State Trails Program to guide and coordinate this effort.

Responding to the requests of local governments and organizations, the Division contracted with Greenways Incorporated to work with local governments and the Division to

develop a conceptual plan for the Mountains-to-Sea Trail through eastern North Carolina.

## The Vision

This conceptual plan envisions the MST-East as a land and water trail system along the Neuse River from Falls Lake Dam to Cedar Island. The land-based trail will act primarily as a footpath for hiking. However, as the trail corridor extends through towns and cities, it may be desirable for these communities to build multi-use trails for hiking, biking, and other uses. The water-based or paddle trail is essentially already in existence. However additional points of access are needed to create a more user friendly experience. Decisions about trail usage and the design of access points will ultimately be made by the agencies and organizations responsible for the long-term development and management of



trail sections. Local level participation in these discussions and efforts is critical.

Upon its completion, the MST-East will be an integrated land and water trail system where regular access points and trail heads provide safe, and convenient entry to either the hiking or paddling trail. In years to come, residents and visitors will be able to travel from the State's Capitol through natural areas, historic areas, and scenic areas to the Coast. Stops can be made along the way to shop and visit in the towns and cities that serve as hubs along the route.

The completed MST-East will also provide connections to additional trail systems that link to communities and destinations not immediately on the MST route. This will involve collaborative planning among municipal, county, regional, state and federal agencies. Some portions of the trail will serve as protected natural areas. Other areas will serve as alternative transportation corridors for walkers or cyclists. Parts of the trail will also serve bicycle riders, and the equestrian community. Further in the future, the MST-East could serve as a corridor to link to other interstate trail systems such as the East Coast Greenway.



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## Trail Description & Opportunity for a Trail Network

Few silver linings are evident from the horrific flooding that accompanied Hurricane Floyd throughout eastern North Carolina, but the opportunity to protect floodplain areas as part of the MST can certainly be counted as one. Prior to the 1999 flood, coastal plain communities along the Neuse River were already challenged economically to keep pace with communities in the Piedmont. The destruction and devastation of the flood further complicated local economic initiatives and has even prolonged the difficult economic times in some of the communities. Businesses and corporations have vacated the region leaving thousands of North Carolinians unemployed. Local government leaders have struggled to meet the demands for services.

Recent initiatives by the State of North Carolina are targeted at reversing this economic decline and positioning coastal plain communities for an improved quality of life and future economic opportunity. The MST-East can become part of these broader initiatives being spearheaded by the NC Departments of Commerce, Environment and Natural Resources, and Transportation, to improve access to community and outdoor resources, preserve and protect the natural features of the region, introduce new economic strategies, and improve water quality.

Throughout the United States, numerous examples exist that clearly demonstrate the ability of long distance trails to contribute to the economic vitality of a region. For example, the State of Missouri's 300-mile KATY Trail generates more than \$10 million in new revenues annually for regional and local communities that

are linked by the trail. The KATY has improved awareness of the Missouri River and its floodplain, and has generated hundreds of new business start-ups from wineries to bed and breakfast inns to cafes. The trail is a major source of pride for Missourians and offers an excellent model of the economic benefits that long distance trails can stimulate.

## Methodology

This conceptual plan proposes a route and alignment for a 246-mile, combined land and water trail that will make up the MST-East. The purpose of the Plan is to suggest a possible trail alignment for the land based trail, to identify needed access sites for the river trail, and to suggest an implementation strategy for



acquiring, building and managing sections of the MST through Eastern North Carolina. This information is provided only as a guide for decision making, not as a “master plan” for this trail.

This document focuses on defining a specific route and alignment for a foot trail and paddle trail through the eastern counties of North Carolina, from the Falls Lake Dam in Wake County to Cedar Island in Carteret County. Planning for the Western and Central Sections will be covered in future documents.

ONE SECTION, THREE REGIONS, & SEVEN COUNTIES

Developing a plan for the entire MST-East is a daunting task. To facilitate more focused discussion and to show an acceptable level of detail in the presentations and maps, the study area was divided into several smaller planning units, or regions. These regions follow County boundaries. From east to west, the 3 regions of the MST-East are:

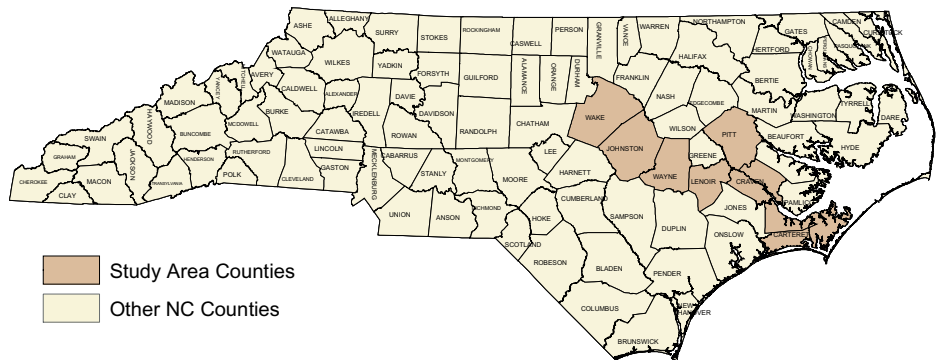
- Region 1) Wake and Johnston Counties
- Region 2) Wayne, Lenoir, and Pitt Counties
- Region 3) Craven and Carteret Counties

Each region served as the boundary for the public meetings that were part of this planning process. (See Appendix E for more information on those public meetings) They also served as boundaries for conversations about planning and project prioritization.

In addition to these regional groupings, county by county maps were created to help local jurisdictions focus in on their portion of the trail. County scale maps are presented in Appendix A. The regional maps are available in Chapter 3.

CONSOLIDATED PLANNING

Local greenway plans, farmland protection efforts, and water and land protection efforts are underway in each of the regions surrounding the proposed MST corridor. This plan was commissioned by the NC Division of Parks and Recreation in an effort to promote collaboration among these efforts, efficiency in reaching collective conservation and recreation goals, and maximized effectiveness of scarce grant assistance. The essential focus of the plan was a 2000’ corridor of land along the Neuse River (1000 feet on either side) within which a recommendation was to be made for the best location of a walking path and paddle trail with developed access points that could connect the Falls Lake Dam to Cedar Island.



## Existing Trails, Greenways, & Access Points

Local governments have been active in the planning and development of trails within the planning corridor that could become part of or connected to the MST-East. These trail systems include Falls Lake Trail, the Riverwalk in Smithfield, Stoney Creek in Goldsboro, Cliffs of the Neuse State Park, Brice Creek Trail, and the Neusiok Trail in the Croatan National Forest. These are described below in the county by county listings.

### TRAILS AND GREENWAYS

**WAKE COUNTY:** The future MST corridor will connect the 7-mile Falls Lake Segment (US 50 on south shore of Falls Lake to US 98) to the 13-mile Six Forks Road to Falls Lake Dam segment. Both trails cross state recreation lands.

**JOHNSTON COUNTY:** The Smithfield Riverwalk will become a part of the MST corridor. The Riverwalk is a paved urban trail in the Town Commons Park. It follows along the Neuse River for about a mile on the Downtown's western edge, beginning at the Smith's Ferry boat ramp, connecting to the Town Commons Amphitheater, and extending to the Kiddie Park. Plans exist for connector trails through Smithfield to connect to parks and other trail spurs.

**WAYNE COUNTY:** The Stoney Creek Greenway will connect to the MST corridor from the north. It follows along the west side of Stoney Creek, southward through Goldsboro from Quail Park (near the US 70 Bypass) to the Neuse River. This urban, historic trail extends approximately 5 miles to connect to the Eastern Segment at the Neuse River.

**WAYNE COUNTY:** The Cliffs of the Neuse State Park has several trails throughout the park connecting park offices, picnic grounds, a museum, streams, and observation areas. Trails along the Neuse exist atop the cliffs, offering exceptional views for future users of the MST corridor.

**CRAVEN COUNTY:** The 12-mile Brice Creek Canoe Trail begins at Lawson Creek Park on the Trent River (across the river and south of New Bern) and ends at the bridge on SR 1111 on the way to Havelock. It will likely become an important part of the MST corridor.

**CRAVEN COUNTY AND CARTERET COUNTY:** The 20-mile Neusiok Trail runs north to south from the Pine Cliff Recreation Area on the Neuse to the Newport River. The trail is primarily in the Croatan National Forest through varied terrain, sandy beaches, hardwood ridges, cypress-palmetto swamps, pocosins, salt marshes. This trail will connect to the MST and a portion may become part of the main MST corridor.



RIVER TRAIL ACCESS POINTS

There are 21 documented canoe access points along the Eastern Segment, according to John Hinners in the publication *Just Around The Bend: A Paddle Journey Down the Upper Neuse*. The list and mileage along the trail, starting from Falls Lake Dam, are below:

**WAKE COUNTY:**

- Falls Lake Dam. 0
- US 401 Bridge. 7.4
- Buffalo Road Ramp. 10.4
- Above Milburnie Dam. 14
- Anderson Point Park, above Gunnison Rapids. 17

**JOHNSTON COUNTY:**

- State Route 42 Bridge. 31.9
- Smithfield Town Commons Boat Ramp. 46
- Richardson's Bridge Ramp. Before State Route 1201 Bridge. 74

**WAYNE COUNTY:**

- State Route 1224 Bridge Ramp. 80.9
- US 117 Ramp. 99.9
- State Route 581 Ramp. 106.3
- State Route 111 Bridge (Canoe Outfitter-private ramp). 112.8
- Seven Springs Ramp. 121

**LENOIR COUNTY:**

- US 70 Ramp. Kinston. 142.2
- State Route 55 Bridge. Albritton's Landing. 154.2

**CRAVEN COUNTY:**

- State Route 1470. Maple Cypress Landing. 168
- State Route 1441. Cowpen Landing. 179.4
- State Route 1423. Spring Gardens Landing. 181.5
- Cool Springs Landing. One mile up Swift Creek. 185
- Glenburnie Park Ramp. New Bern. 189.7
- Union Point Park Ramp. New Bern. 193



MST EAST - A LINK TO LOCAL TRAILS AND GREENWAYS

In some areas along the corridor, much work has already been done at the local level. The MST will serve as a connector between these existing networks.

*WAKE COUNTY/RALEIGH:* The Capital Area Greenway System in Raleigh is one of the oldest and most developed greenway and trail networks in the Southeastern US. Additionally, a new network of proposed trails and greenways will be established within Wake County, connecting cities and towns with parks, residential neighborhoods, office parks and cultural sites. Both of these systems tie into the Neuse River and the proposed MST-East corridor, providing access for city and county residents.



*GOLDSBORO:* Wayne County Trail. This 8.7-mile trail begins at the mouth of the Little River where it meets the Neuse River. It follows the Neuse 2,500 feet before turning east to go through Old Waynesborough Historic Village. The trail heads east through historic Goldsboro, crossing an old stagecoach road and rail line, to Stoney Creek Park. Here it merges with the existing Stoney Creek Greenway Trail following the creek to the Neuse River.



**KINSTON:** The Town of Kinston's Green Infrastructure Plan details trails along the Neuse River on both sides. Kinston wants the MST to link to numerous, important town sites including the Nature Center, CSS Neuse, Cultural Resources Museum, Harmony Hill, Kelly's Mill Pond and Tulls (via Southwest Creek), and numerous Civil War heritage sites.

**NEW BERN:** A plan is underway for a series of urban trail segments through historic New Bern that would become a key portion of the MST.

**CROATAN NATIONAL FOREST:** Several existing and planned paddle trails exist including a 30-mile trail planned for the White Oak River.

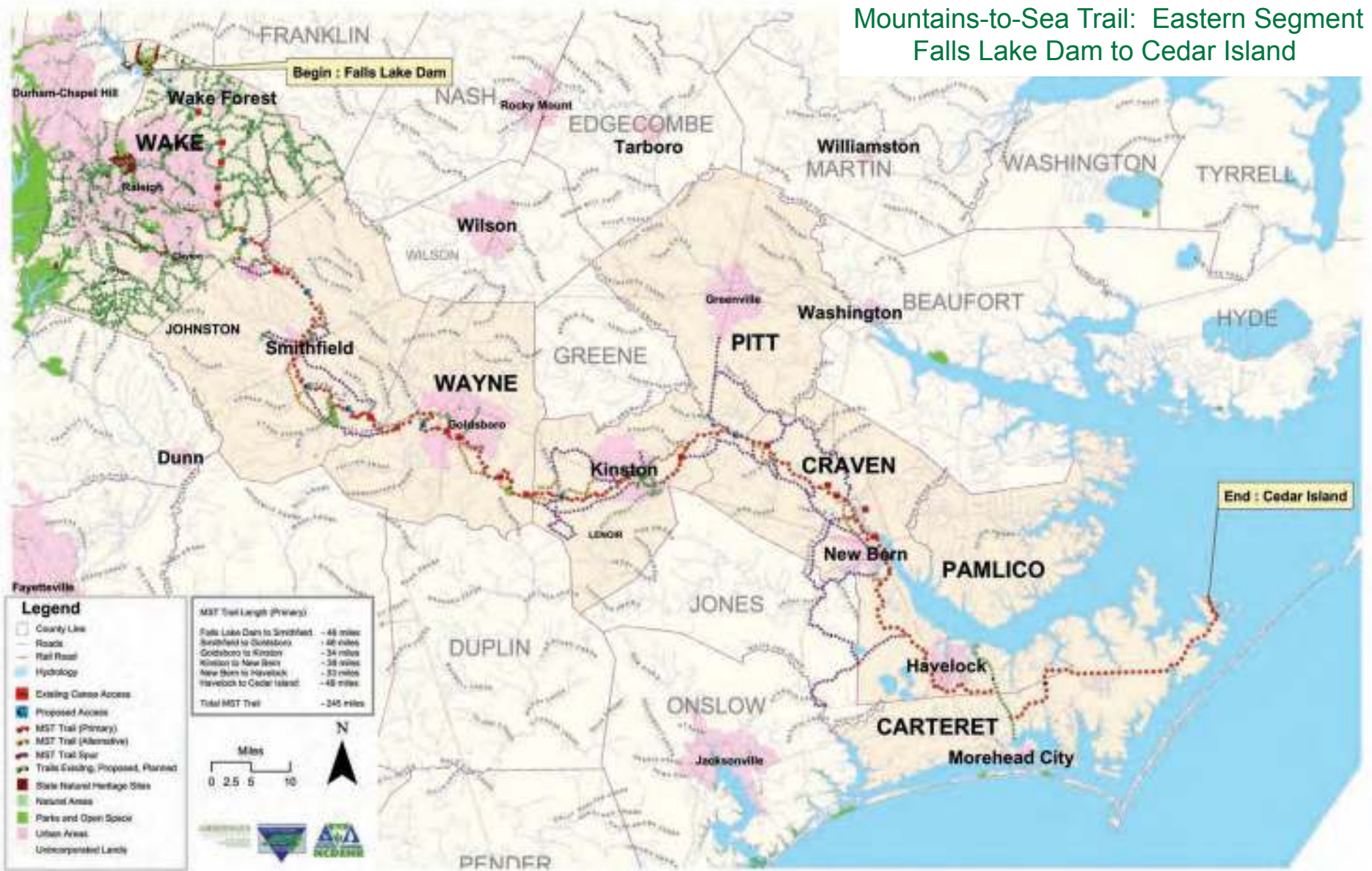
### **MST East Overall Plan**

The map on the next page shows the proposed route of the MST. Included in this image are the main foot trail as well as alternative trails that provide other options for the main trail alignment, and spur trails that link to other trails, parks and destinations. The Primary MST route is shown in RED, the Alternate routes in YELLOW, and the Spur trails in PURPLE. Also shown are the current planning efforts of local partners, which appear in GREEN. County level maps showing even greater detail can be found in Appendix A.

CD copies of this plan are available from the State Trails Program office. All text and maps are in .pdf format to allow users to view the maps in greater detail.



Mountains-to-Sea Trail: Eastern Segment  
Falls Lake Dam to Cedar Island



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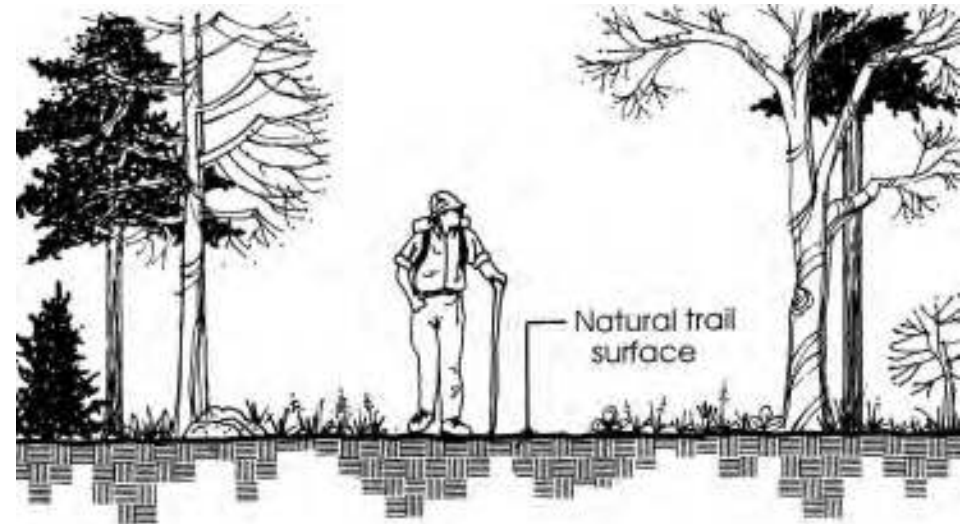
## Planning for the MST-East

As discussed earlier, the proposed MST-East is made up of a primary, land-based trail, a paddle trail, and separate spur trails that link to other areas and systems. Alternative routes have also been proposed for some sections of the corridor where it may be difficult or costly to follow the primary route. Each of these alignments is described on the following pages, and detailed maps are included at the end of the chapter as reference materials. A description of the methodology used by the consultant to develop the proposed alignment can be found in Appendix F.

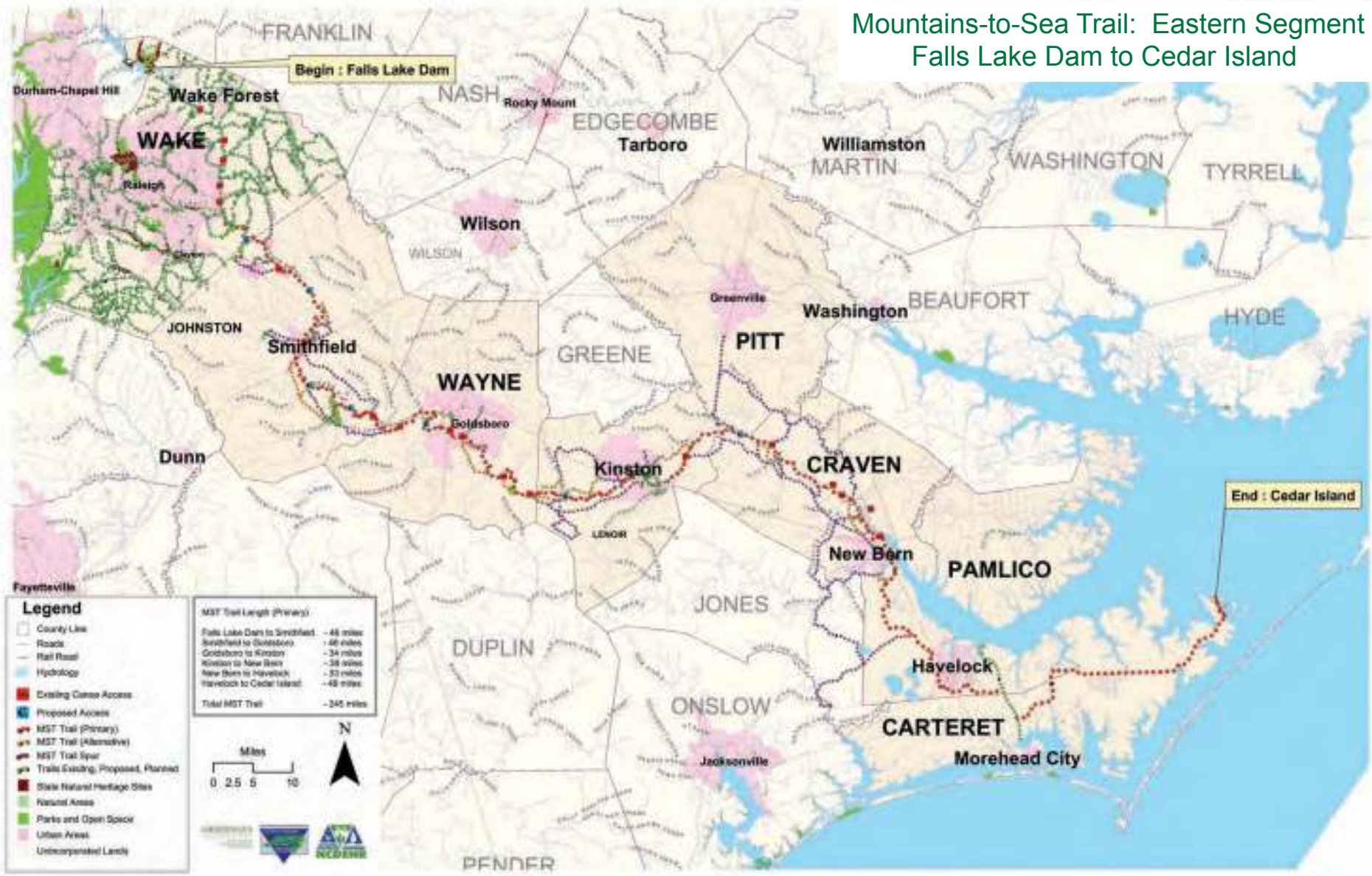
## Primary Trail

The main trail corridor (RED) extends within a 2000' corridor adjacent to the Neuse River from Falls Lake Dam to Cedar Island for a distance of approximately 246 miles. The majority of the main trail could closely follow the Neuse River, until it reaches the City of New Bern where it will follow a route through the Croatan National Forest before terminating at Cedar Island. Excluding the eastern Raleigh segment (18 miles), 88% of the corridor, or approximately 200 miles, is rural. The other 12% (28 miles) is urban and includes the municipalities of Smithfield, Goldsboro, Kinston, and New Bern.

As envisioned, the majority of the primary land-based trail adjacent to the Neuse River will be constructed as a natural surface hiking trail. The images to the right show how this footpath might be appear. The map on the following page shows all of the proposed trail alignments for the entire MST-East. More detailed maps are available at the end of this chapter.



Mountains-to-Sea Trail: Eastern Segment  
Falls Lake Dam to Cedar Island



## Alternative Routes

Establishing an alignment that primarily follows the banks of the Neuse River is problematic for several reasons. First, most of the land is currently in private ownership. Second, some of the land is perpetually or seasonally flooded and impassable. Third, some stretches of the alignment along the Neuse are very isolated and would be difficult to service. For these reasons, alternative routes (YELLOW) for the land-based trail system were investigated and mapped. The following text describes these alternative routes.

### JOHNSTON COUNTY:

NC Highway 42 – Mill Creek (2.7 miles). East of Clayton. Follows NC Highway 42 East from MST Trail to Mill Creek where it turns south to tie back into MST corridor.

Buffalo Road (5.5 miles). North of Smithfield. Follows unnamed creek to the East immediately to Buffalo Road. Follows Buffalo Road south and parallel to the Neuse into Smithfield to join the Town of Smithfield Proposed Greenway Trail system.

Devils Racetrack Road – Smithfield to Howell Woods (13 miles). Follows Brightleaf Blvd. through Smithfield to the southwest to Devils Racetrack Road. Extends along Devils Racetrack Road southeast to Howell Woods.

Guin Road Alternate Trail (2.5 miles). Extends east along Guin Road from Devils Racetrack Road Alternate Trail back to Neuse/MST corridor.

### WAYNE COUNTY:

Waynesborough (4.9 miles). Goldsboro. Runs due east from the Eastern edge of Quaker Neck Lake to the Waynesborough Park, then extends south from the park along the old Neuse riverbed back to the main Neuse/MST corridor at US Hwy 117 bridge.

Arrington Bridge Road (3.6 miles). Goldsboro. Follows Arrington Bridge Rd. South from the Neuse River and runs parallel to the Neuse. Connects to Hwy 581 back to the Neuse/MST corridor.

Arrington Bridge – Mitchell – Stagecoach (6.2 miles). Goldsboro. Turns to the West on Pecan Rd. from the Arrington Bridge Road alternate trail briefly before turning back to the Southeast on Mitchell Road. Continues on Stagecoach Road to Cabin Branch and follows Cabin Branch to the East back to the Neuse/MST corridor.

Cliffs of the Neuse (2.6 miles). Follows Mince Hill Rd South from the Neuse/MST corridor to State Highway 111 briefly before turning into Cliffs of the Neuse State Park on Park Rd. Continues through the park back to the MST corridor.



## Chapter Three - Proposed MST-East Routes

### LENOIR COUNTY:

Davis-Hardy Rd. – Hardy Bridge (5.1 miles). Entering Lenoir County. Splits South of MST corridor on Dog Pond Rd into Lenoir County where the road becomes Davis-Hardy Rd. Returns to main trail on Hardy Bridge Rd.

State Hwy 903 – Hardy Bridge (5.7 miles). Follows Hwy 903 north of MST corridor just inside Lenoir County. Turns East at Bear Creek Road, follows Jenny Lind Rd, and Hardy Bridge Road south to the MST corridor.

Hardy Bridge – Kinston (6 miles). North of Neuse/MST corridor, turns East on Pine Bush Rd from Hardy Bridge Rd. to Kennedy Home Rd to Kinston, ending at US Hwy 70.

East Kinston – Stonyton Creek (5.4 miles). Begins at Greenville Hwy (Hwy 55), railroad, and end of Town of Kinston proposed trail at the east end of Kinston. Follows Jericho Run into Stonyton Creek and meanders eastward back to the Neuse/MST corridor.

### CRAVEN COUNTY:

Biddle Road (5.4 miles). Just past Pitt/Craven border. Turns to the south of the MST corridor and Neuse River on Biddle Road. Intersects and follows NC Hwy 55 briefly and returns to the Neuse/MST corridor along Flat Branch and Core Creek.

Greens Thoroughfare (1.4 miles). Trail follows Greens Thoroughfare creek, which intersects a wide bend in the Neuse River.

Washington Post Rd (6.2 miles). North of New Bern. Turns from Neuse/MST corridor south towards New Bern on Washington Post

Rd. Returns back to the Neuse/MST corridor at north end of New Bern.

Bachelor Creek (3 miles). Turns from Washington Post Road due East along Bachelor Creek back to the Neuse/MST corridor.

Brice Creek (2.5 miles). At south end of New Bern, following wide and meandering Brice Creek into the MST corridor.



## Spur Trails

In addition to the primary and alternative routes for the Mountains-to-Sea Trail, it is also apparent that spur trails (PURPLE) would serve to link towns, cities and other “destination” sites to the primary corridor. These spur trails can be developed as off-road trails or as on-road trails. The key is develop a network of trails that would emerge from the primary corridor and could link the region together. Descriptions of these spur trail opportunities can be found in Appendix D.

## Paddle Trail and Access Points

Along with the land-based trail, the MST-East includes a paddle trail down the Neuse River with regular access points to the water. This section describes each of the newly selected points and shows some model diagrams of different types of access points.

Proposed access points were mapped strategically along the Neuse River where gaps of larger than ten miles were found between existing points. The locations of the proposed accesses were selected by GIS distance measurements and where road access was possible or a road crossing existed. Also, a canoe camp has been proposed at the Cliffs of the Neuse State Park and is included in the list of proposed access points below:

### WAKE COUNTY:

Proposed Access Point #1. Mial Plantation Road, State Route 2509 crossing. (25). Near Riverwood subdivision. In gap between existing canoe accesses Anderson Point Park and State Route 42 Bridge. 8 miles downstream from Anderson Point Park.

### JOHNSTON COUNTY:

Proposed Access Point #2. Fire Department Road, Route 1908 crossing. (38). Just above Fall Line. In gap between existing canoe accesses State Route 42 Bridge and Smithfield Town Commons Boat Ramp. 6 miles downstream from State Route 42 Bridge.

Proposed Access Point #3. Off Guin Road. (56). In gap between existing canoe accesses Smithfield Town Commons Boat Ramp and Richardson’s Bridge Ramp. 10 miles downstream from Smithfield Town Commons Boat Ramp.

Proposed Access Point #4. Off connector road from Bryant Place. (66). Also in gap between Smithfield Town Commons Boat Ramp and Richardson’s Bridge Ramp. 10 miles downstream from Proposed Access Point #3.

### WAYNE COUNTY:



## Chapter Three - Proposed MST-East Routes

Proposed Access Point #5. Stevens Mill Road Bridge, Route 1008 crossing. (90). In gap between State Route 1224 Bridge Ramp and US 117 Ramp. 9 miles downstream from State Route 1224 Bridge Ramp.

Cliffs of the Neuse State Park Proposed Canoe Camp. (110). Potential future location of access point.

### *LENOIR COUNTY:*

Proposed Access Point #6. Hardy Bridge Road, Route 1389 crossing. (128). In gap between Seven Springs Ramp and US 70 Ramp. 7 miles downstream from Seven Springs Ramp.

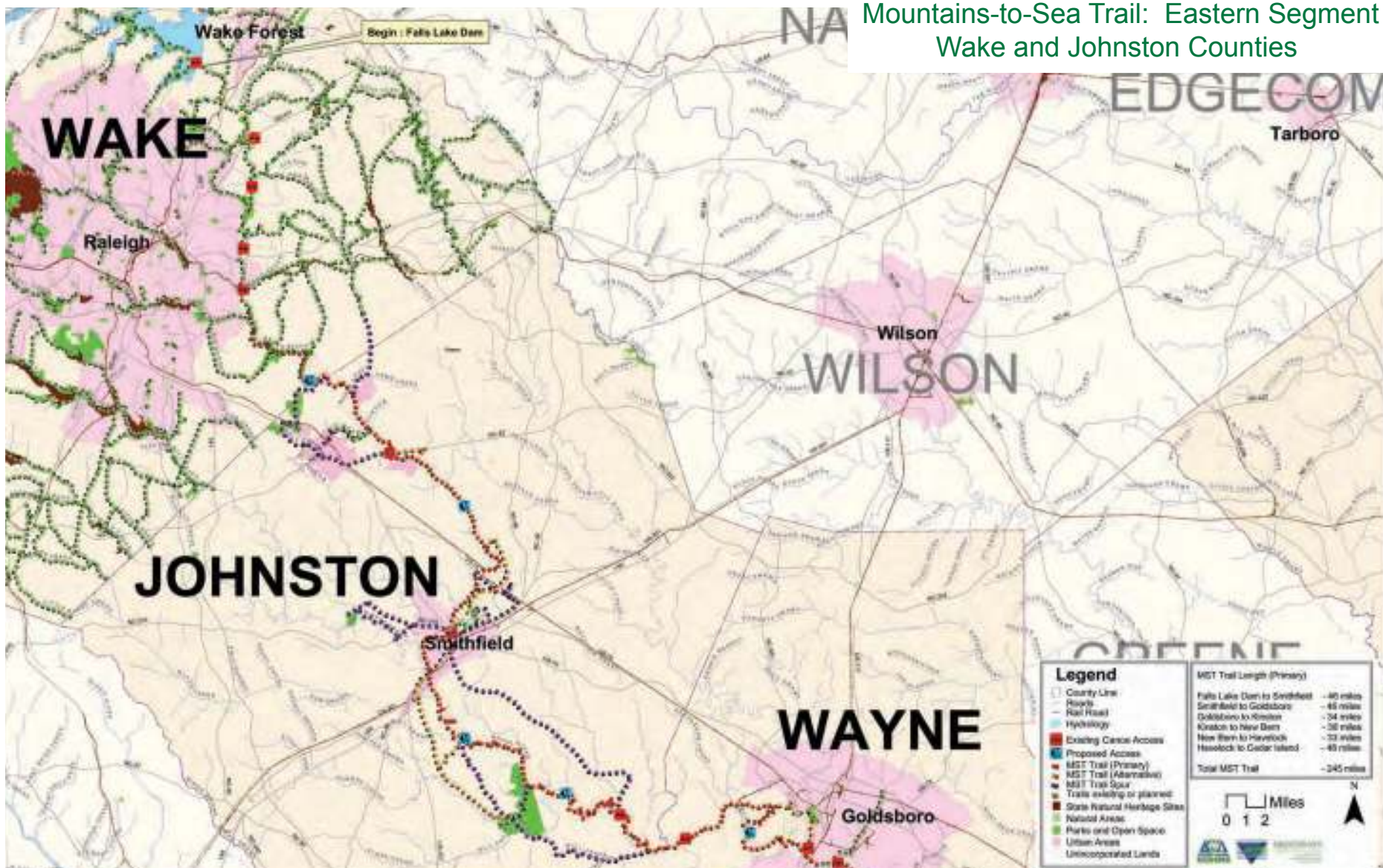
### *CRAVEN/PITT COUNTY:*

Proposed Access Point #7. Off connector road from Hwy 55. (164). Near transition from Rolling Coastal Plain to true Coastal Plain. In gap between Albritton's Landing and Maple Cypress Landing. 10 miles downstream from Albritton's Landing.

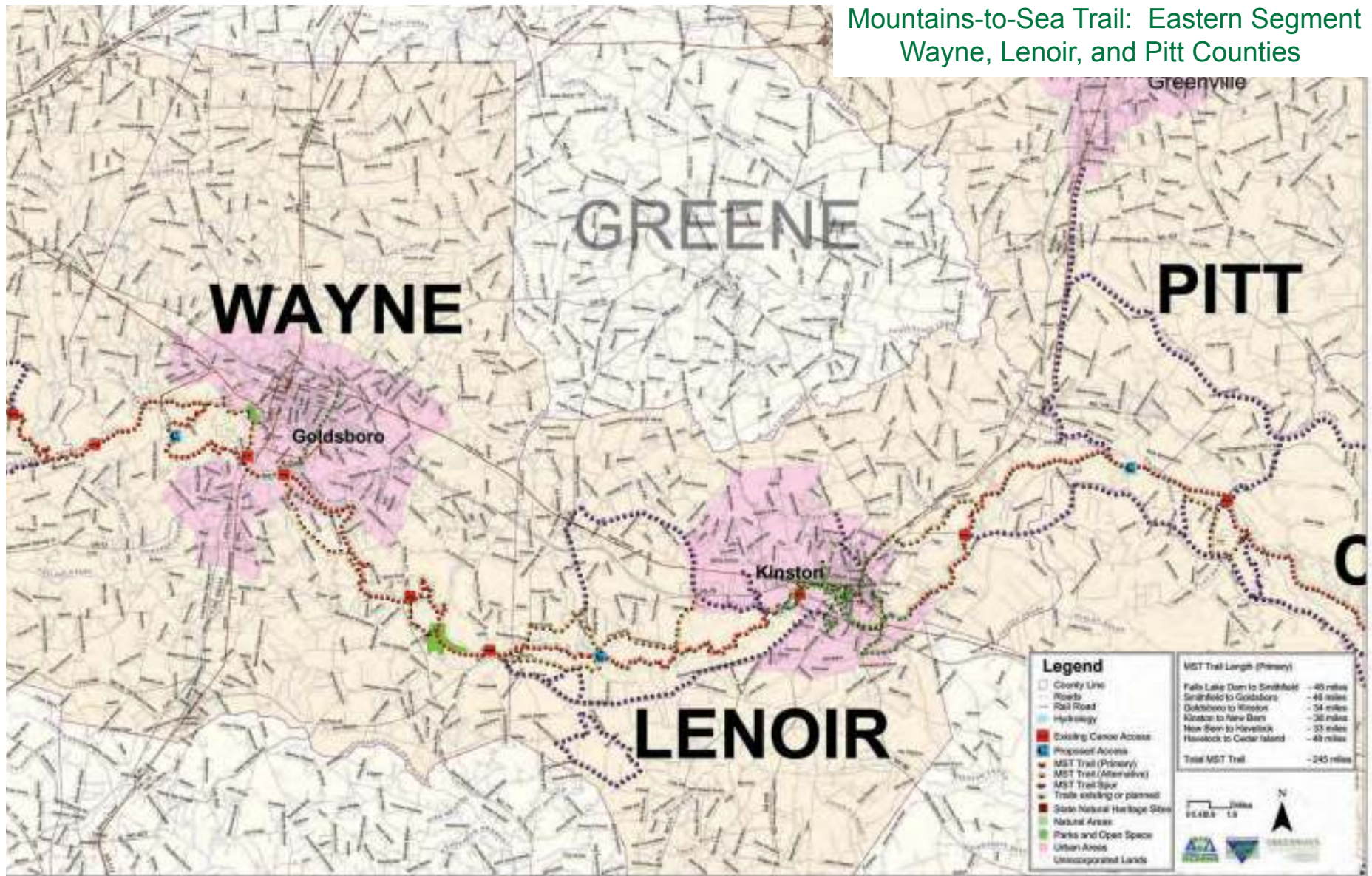
The maps on the following pages show in greater detail all of the routes outlined above, including those listed in Appendix C "Spur Trails". The Primary MST route is shown in RED, the Alternate routes in YELLOW, and the Spur trails in PURPLE. Also shown are the current planning efforts of the local partners, which appear in GREEN. County level maps showing even greater detail can be found in Appendix A.



Mountains-to-Sea Trail: Eastern Segment  
Wake and Johnston Counties

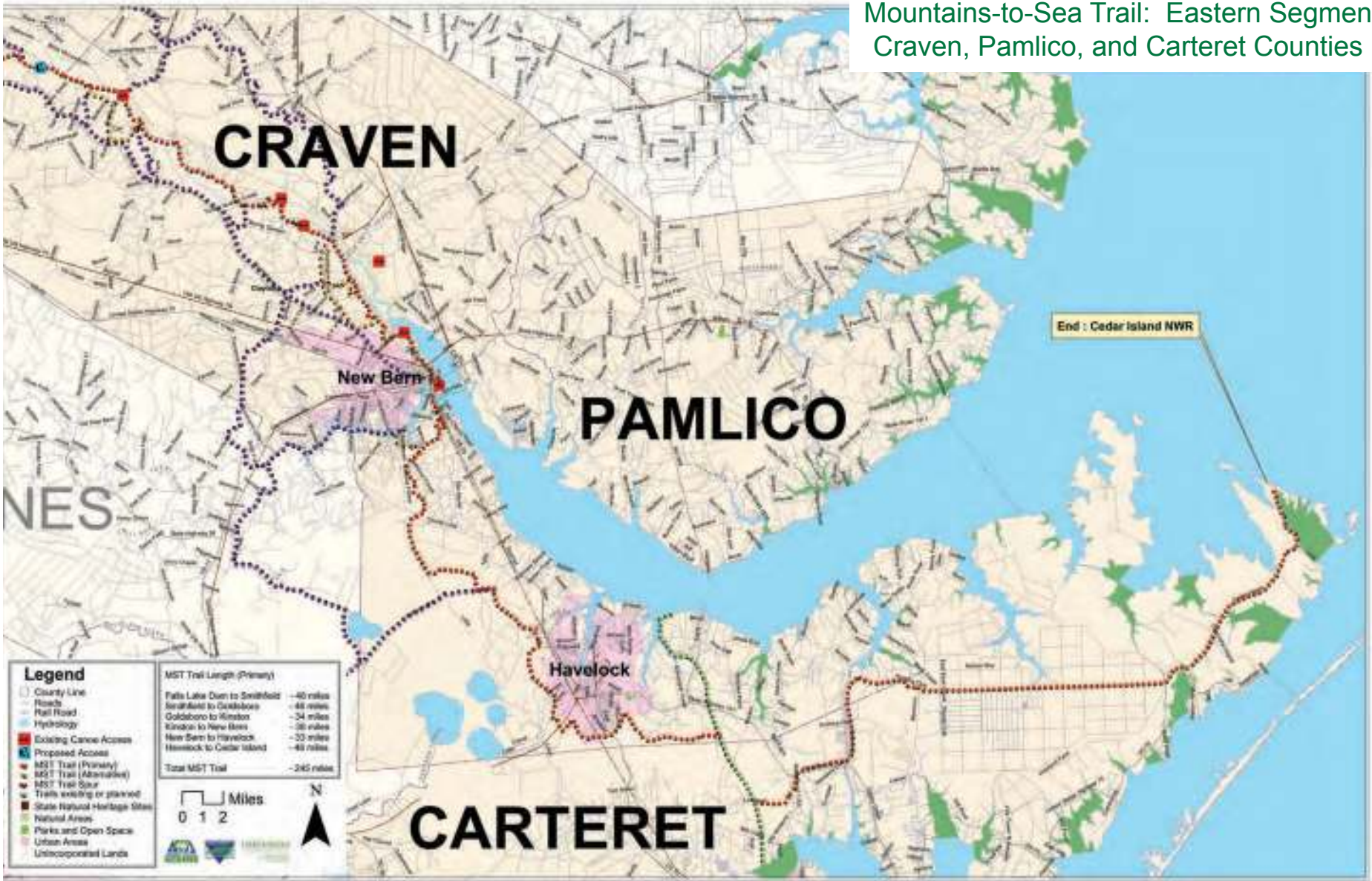


Mountains-to-Sea Trail: Eastern Segment  
Wayne, Lenoir, and Pitt Counties





Mountains-to-Sea Trail: Eastern Segment  
Craven, Pamlico, and Carteret Counties



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## Implementation Program

Constructing and managing the MST-East will require a unique partnership effort among public and private sector interests. This chapter of the conceptual plan offers recommendations for establishing a multi-jurisdictional framework and an approach for undertaking future implementation of the MST-East. In order for implementation to be successful, six inter-related steps are necessary:

- leadership
- cooperation
- decisive action
- funding
- construction
- trail dedication

Building a 246-mile land and water based trail is an ambitious and complicated undertaking. It will take time to acquire the land, and/or the public rights-of-way, along the entire corridor. Funds must be raised to build trail facilities, and operation and management agreements will have to be developed and executed in order to maintain the public trail corridor.

History has shown that it took more than two decades to assemble and open for public use the 300+ miles of the MST corridor in the west of North Carolina. A strong desire and spirit of cooperation is emerging to accomplish the same in the east, within a much shorter timeframe.

The preferred method for securing access and use rights along the corridor is through either fee-simple acquisition - where all rights associated with a property are transferred to a new owner - or through the acquisition of a perpetual easement - where certain rights are permanently transferred but the owner maintains possession of the land itself. There is much more information about these options in Appendix B. The many acquisition options that are listed there should all be considered potential tools for protecting the eastern corridor, but permanent ownership of the property or perpetual easements are the preferred strategies.

### A MULTI-JURISDICTIONAL APPROACH

Adoption of a multi-jurisdictional approach to implementing the MST-East project is the first step towards implementation. This approach will require strong leadership on the part of the State of North Carolina and a new spirit of cooperation between the State and local governments throughout the corridor and among the local governments themselves. Additionally, this approach will require the involvement and integration of private sector interests in the future planning, design, implementation and operation of the Mountains-to-Sea Trail.

The State Trails Program must be empowered and strengthened in order to continue serving its role as catalyst, facilitator and champion of the Mountains-to-Sea Trail. In this role, the State Trails Program, and specifically the State Trails Coordinator, will need to continue facilitation of the partnership program that was begun in preparation of this plan. Regular meetings of the partnership should continue to take place, with the agenda shifting from planning to project implementation and fund raising.

Local governments, including counties, cities, and towns along the



corridor, need to understand the many benefits that will be derived from having a portion of the MST corridor extending through their respective jurisdictions. Local governments will become the lead developer for most of the segments along the corridor. As such, they will work closely with State Trails Program staff to raise funds, construct trail segments, and establish operation and management programs for each segment. The resource burden, financial and otherwise, for accomplishing this will not be borne solely by local governments. State, Federal, and private interests will play a major role in offering technical assistance and financial aid. The local governments, however, will serve of the overall coordinator of the efforts necessary for the development of each segment.

The Friends of the Mountains-to-Sea Trail will need to expand its membership and influence in this area of the state and become a primary partner with local governments in developing future segments of the MST. The Friends should put themselves in a position to assist local governments with funding, design, construction and operation of the future trail.

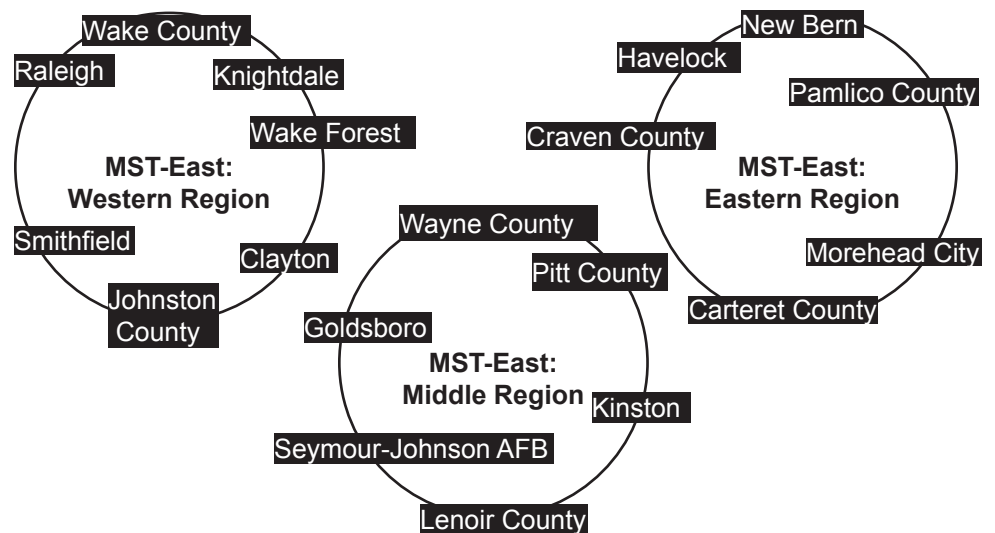
Private land trusts, such as the Triangle Land Conservancy and the NC Coastal Land Trust, will play a key role in working with both the State and local governments to secure the right-of-ways necessary to develop all the trail segments. These organizations can also play a critical role in developing long-term management strategies that best blend use and protection of individual properties along the corridor.

Private businesses within each community along the route will play a vital role in the future development of each trail segment. Again, history has shown that tremendous opportunities exist for new business start-ups and economic development related to long-

distance trails. In rural Iowa, the 60+ mile Iowa Heritage Trail has enabled farm families to diversify and expand economic activity beyond traditional agricultural operations. For example, some feed and seed supply stores now double as rest stops and convenience stores for trail users, generating significant income that extends throughout the year. There is money to be made from the future development of the Mountains-to-Sea Trail, and as more of the trail is opened for business, more business opportunities will emerge.

#### ORGANIZATIONAL FRAMEWORK

The organizational framework that is recommended groups the counties and municipalities together within a geographic region, optimizing future trail development, funding and management activities. A graphic model of this framework is illustrated below:



Through this recommended organizational framework, the counties and municipalities would work cooperatively with the State Trails Program, private sector partners, and volunteer organizations to acquire land rights or to fund, develop and manage segments of the Mountains-to-Sea Trail.

**State Government Action Steps**

The State of North Carolina must provide a substantial leadership role in the future development of the MST-East. The paragraphs below describe key implementation steps that must be undertaken by the State in order to realize full development of the trail.

**Step 1: Commit resources of state agencies and define cooperative work program to ensure success of project.** The State should commit resources from DENR’s Division of Parks and Recreation, DOT’s Office of Bicycle and Pedestrian Transportation and the Department of Commerce to work cooperatively on a short-term and long-term strategy for implementing the MST-East. To that end, a multi-agency task force should be established consisting of leaders from these agencies. They should meet on a regular basis and define a program for monitoring land acquisition and future trail facility development. Plans should be formulated for utilizing matching grant funds, and methods should be established for communicating with local governments and with trail advocates to ensure the success of the project.

*“A multi-agency task force should be established”*

**Step 2: Provide technical assistance and guidance to local governments and organizations in order to realize full development of MST-East.** The State Trails Program should continue to provide support in the form of technical assistance to local governments and trail advocates throughout the project corridor. State Trails staff in the eastern portions of North Carolina should make future development of the Mountains-to-Sea Trail a high priority, and continue to work with local governments to ensure future implementation.

**Step 3: Expand the State Park System as appropriate through acquisition of land along Neuse River.** Establishing a new or expanded state park that is part of the Mountains-to-Sea Trail can provide many benefits to the residents and to the economy of eastern North Carolina. Based on findings from the NC Division of State Parks’ new report, “New Parks for a New Century”, and the findings of this concept plan, It is recommended that the State should continue to pursue creation of the Middle Neuse River State Park in Southeast Johnson County and Wayne County.

Each of the private sector and public sector partners will be expected to do their part in acquiring land rights, building trails, and managing resources and facilities. However, the Department of Environment and Natural Resources should be prepared to make additional investments in land acquisition along the corridor in cases where local level partners are not able to meet the responsibilities laid out for them in this document.

**Step 4: Continue planning for other sections**  
State Parks should make the next planning step by beginning a similar process to this one for the MST-Piedmont. This process should also culminate in a planning document that details trail



alignment, trail head locations, funding needs, and implementation strategies.

### Local Government Action Steps

Local governments include the counties and municipalities that lie directly along or immediately adjacent to the route of the MST-East. These local governments will benefit from the future development of the trail and will also be vested with a substantial amount of responsibility for securing land, and developing and managing future trail segments. In order to accomplish these objectives, local governments should follow the steps listed below.

*“The State should continue to pursue the creation of the Middle Neuse River State Park”*

**Step 1: Incorporate MST-East routing and alignment objectives into Park and Recreation and Comprehensive Plans for your community.** Each local government along the trail route should adopt and incorporate this trail alignment as part of their comprehensive, growth management, or park and recreation plans. This will ensure that necessary land and water resources are appropriately reserved for the trail and that future land use activities take into account MST facility development. Adoption and incorporation of the plan recommendations also creates both the legal and financial basis for local governments to pursue future trail development and will make local governments eligible for matching state funding.

Within any resolution of support for this plan, local governments should stress the commitment to assist with land acquisition and funding for future trail development and their commitment to manage the resource in perpetuity.

**Step 2: Commit matching funds to MST segments and apply for State funding.** In order to construct segments of the MST-East, local governments that lie along the route are asked to appropriate funds for future construction, maintenance, and operation costs. Local funds that are appropriated can be used to leverage state and federal matching funds for future trail construction. Communities that do not appropriate funds may not be eligible for state and federal assistance. Appropriations can come from the budgets of local governments and/or can be generated from the private sector. Each local government should be responsible for managing local funds used as a match for future construction and management of the trail.

**Step 3: Acquire land for future trail development.** Local governments will need to work with land trusts and the State of North Carolina to complete the acquisition of the needed land rights to facilitate unpaved and paved land-based trails, and access areas for paddle trailheads. Appendix B of this report outlines a variety of land acquisition strategies that can be used both by landowners and by the local or state government agencies interested in securing right-of-way for the MST-East trail.

*“Each local government along the trail route should adopt and incorporate this trail alignment as part of their comprehensive, growth management, or park and recreation plans”*



Land trusts can be extremely helpful in conducting negotiations with property owners and assisting local governments with land acquisition. Land trusts will need financial contributions to employ staff and pursue negotiations with landowners.

**Step 4: Complete detailed design and engineering work for segments that are located within jurisdiction.** After land or right-of-way has been secured, design for individual trail segments can commence. Future design and engineering of multi-use paved trail segments or paddle trail access facilities will need to occur through the supervision and direction of local governments. Unpaved natural surface trail segments can be accomplished by volunteer efforts supervised by the Friends of the Mountains-to-Sea Trail. The State Trails Division staff can also be consulted for technical advice. The costs for design and engineering services can be paid from one or more of the following sources: local government budgets, private sector resources or state and federal grants. Local governments should employ licensed landscape architects and engineers with a demonstrated experience in greenway or multi-use trail development.

*“Local governments that lie along the route are asked to appropriate funds for future construction, maintenance, and operation costs.”*

**Step 5: Oversee the construction of each funded segment.** Once a segment of multi-use paved trail or paddle trail access facility has been designed and engineered, local governments will need to oversee construction. Such construction administration services can be contracted to qualified landscape architectural or engineering firms. These services can also be provided from within local governments through park and

recreation or public works departments.

**Step 6: Agree to maintain and manage each completed segment, either in partnership with other local groups, or as part of institutional framework.** With the completion of each trail segment, a maintenance and management plan should be developed and implemented. Local governments will want to partner with private sector organizations, including the Friends of the Mountains-to-Sea Trail Task Force to manage unpaved or natural surface hiking trails. In most cases, these trail segments can be managed by volunteers with minimal local government assistance.

Paved, multi-use trails and paddle access trail facilities will most likely require the attention of local governments. Maintenance programs for these facilities can be incorporated into the current operations of parks and recreation or public works departments. Additional technical assistance should be sought for the stewardship of the natural resources and habitat areas along the MST-East Corridor.

### MST Advocate Action Steps

Advocates of the Mountains-to-Sea Trail can include individuals, trail organizations, civic groups, land trusts, businesses and other private sector for-profit and non-profit groups that support the future development of the Mountains-to-Sea Trail. The following is a recommended step-by-step approach for how these groups can transform advocacy into action.

**Step 1A: Join a Regional Group.** One of the best ways for individuals and organizations to support the future development



of the Mountains-to-Sea Trail would be to join the Regional MST planning group for their area. These are the same groups that have come together to give input to this Conceptual Plan. The groups will meet on a regular basis to discuss the future design, implementation and management of trail segments within each Region of the MST-East.

**Step 1B: Join FMST and participate in activities.** In addition to joining the Regional group, individuals and organizations should also join the Friends organization that supports the entire 900-mile project. To learn more about Friends of the Mountains-to-Sea Trail visit their web site at [www.ncmst.org](http://www.ncmst.org).

**Step 2: Ask local government to adopt the recommendations of the Conceptual Plan.** Local organizations and individuals should also approach elected officials within each county and municipality in which the MST-East route traverses and request that the recommendations of this plan be incorporated and adopted as part of the comprehensive parks and recreation and land use plans. Adoption is an important step for creating the legal and financial basis for future land acquisition and trail facility development.

**Step 3: Obtain financial commitment from the local government to complete Conceptual Plan objectives.** The private sector will need to work closely with local governments to ensure that the objectives of this plan are implemented. Critical to future implementation is a financial commitment to the MST-East. State funding can be leveraged in support of local trail segments, however, local governments must generate matching dollars, both for facility construction and operation. Individuals, non-profits and local businesses can assist local governments in

generating matching funds. Direct contributions to a local fund and support for the use of local government budgets to develop the trail are two ways to demonstrate your commitment and to facilitate commitment from your local government.

*“Join the regional MST planning group for the area.”*

**Step 4: Assist local governments with application for State funding.** The private

sector can also assist local governments in obtaining state and federal grant funds by helping local governments apply for these funds. In some cases, applications require written letters of support, photos or research. Some local governments will require the assistance of able grant writers. Individuals and supporters of the MST-East should do what they can to provide assistance in obtaining these grant dollars.

**Step 5: Coordinate efforts with local governments, FMST and State Trails Division.** Private sector interests can also work with local and state governments to coordinate efforts and keep project segments moving toward completion. It may be necessary at times for private sector groups to serve as a go-between for local and state governments on certain segments of the Mountains-to-Sea Trail.

**Step 6: Assist local governments and state of NC with acquisition of priority lands defined within the Plan.** One of the most valuable services that private sector groups and individuals can offer is in the area of land acquisition. Non-profit land trusts are particularly important in this area of work and can be of great assistance to local and state governments in the area of land acquisition. Land trusts, however, need financial support in





order to provide these services. They use this support to employ staff and implement work programs. Contributions to a land trust can come from both local and state governments as well as from private sector organizations or individuals.

*“Additional technical assistance should be sought for the stewardship of the natural resources and habitat areas along the MST-East corridor.”*

**Step 7: Assist the local government with construction of trail segments and other facilities defined in your community or Region.**

For unpaved, natural trail segments, private

sector organizations and individuals can provide assistance in trail construction. The Friends of the Mountains-to-Sea Trail is experienced in building natural surface hiking trails and can assume a lead role in constructing MST-East hiking trail segments that are not sponsored by local governments. Paved, multi-use trails will most likely be constructed by local governments.

**Step 8: Agree to assist local governments with maintenance and management of completed segments and facilities.**

Private sector groups, individuals, and businesses should agree to help manage, maintain, and operate completed segments of the MST-East Trail. Completed segments can be officially adopted, either through the State Trails Adopt-a-Trail program or from similar local programs. Local groups should select miles of completed trail to adopt and contact local governments to formally assume maintenance responsibilities.

**Funding Strategy**

Local governments, private non-profit organizations, land trust organizations, and volunteers should consider applying for available State and Federal grants to assist with the acquisition, development and management of the MST. Of course in some circumstances, individual entities may act alone. For example, a land trust may choose to buy a portion of the corridor from its own members’ contributions. An individual county, municipality, or state agency may decide on its own to acquire property along the corridor for its own program purposes. In any case, securing State and Federal funds will be an essential part of this plan. The State and Federal trust funds and grant programs that might be tapped as future funding sources for land acquisition and trail development for the MST include:

- Clean Water Management Trust Fund
- Natural Heritage Trust Fund
- Parks and Recreation Trust Fund
- Farmland Preservation Trust Fund
- Forest Legacy Program Funds
- Environmental Enhancement Program
- Federal TEA3 – Enhancement Funds
- DOT Bicycle/Pedestrian Program Grants
- Recreational Trails Program Grants
- Land and Water Conservation Fund
- State Adopt-A-Trail Grants

*“Local governments should generate matching dollars for acquisition, facility construction and operations”*

Over the course of time, the State of North Carolina and its



partners will encounter a variety of issues that are important to the successful management and operation of the trail. The following operational policies are defined to assist these partners in responding to typical trail implementation issues. More specific problems and issues may arise during the long-term development of the system that result in additional policies being considered and adopted. Additional information about long-term management can be found in Appendix C: Facility Management.

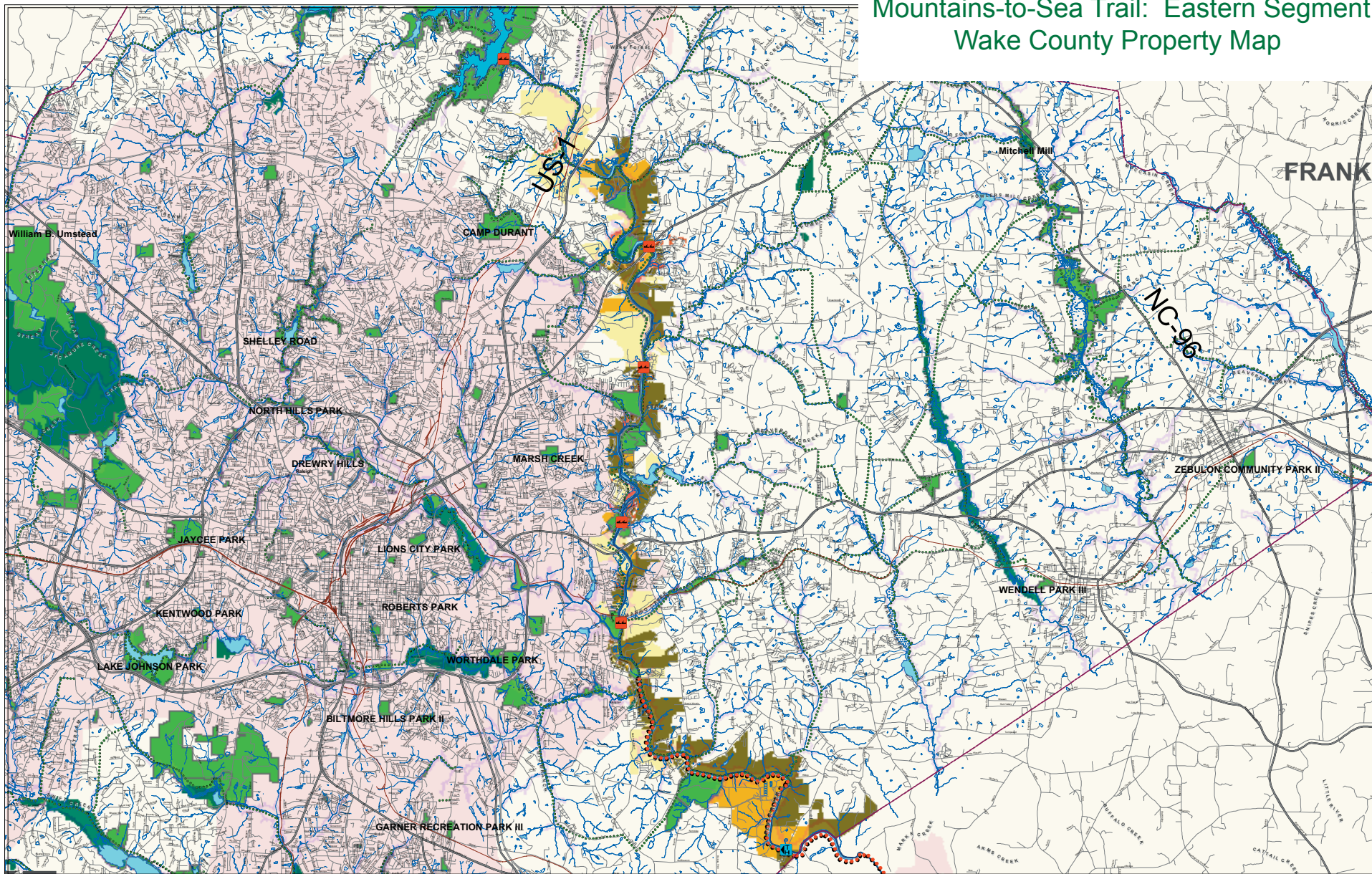
*“Private sector groups, individuals, and businesses should agree to help manage, maintain, and operate completed segments of the MST-East Trail.”*



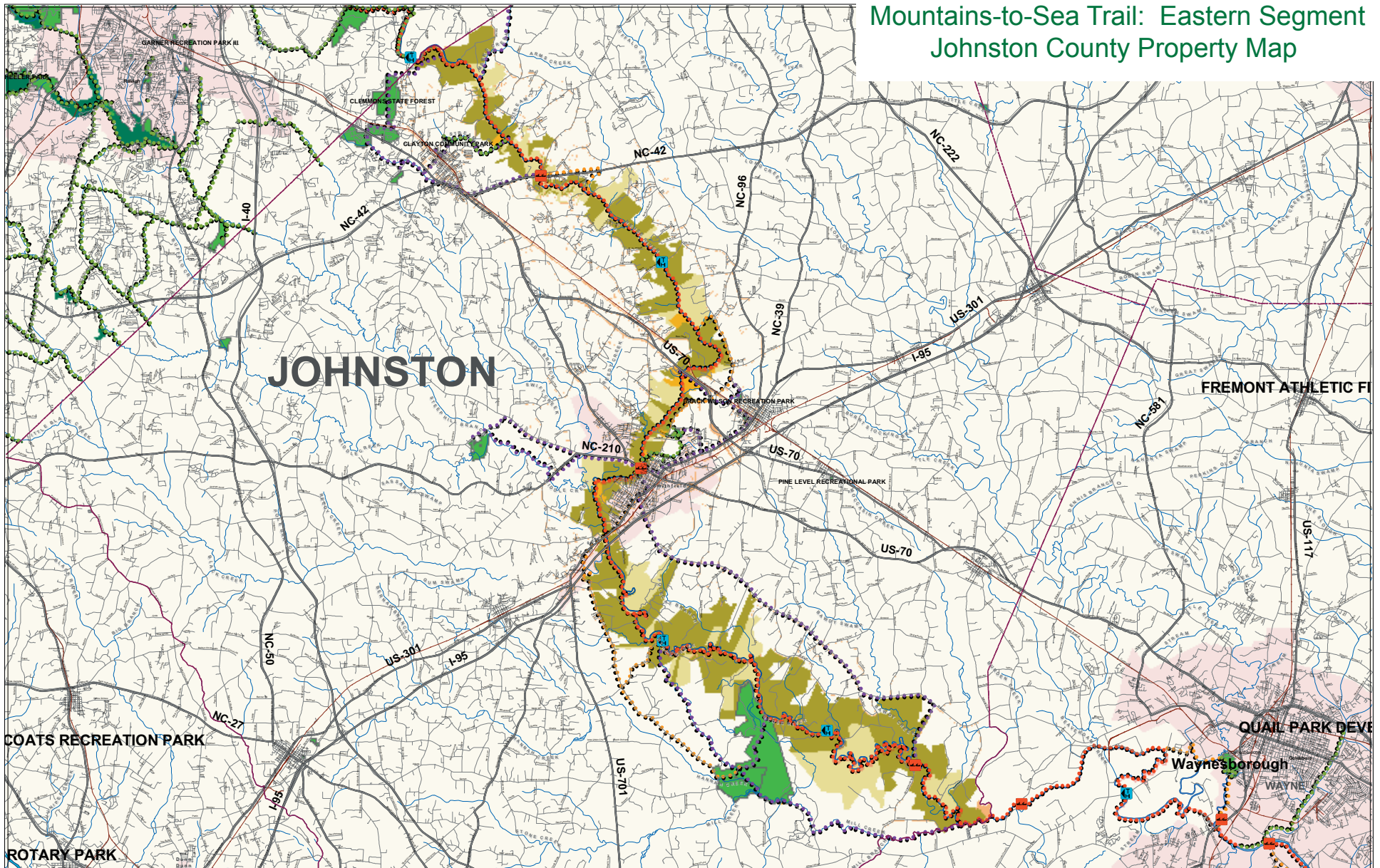
**Appendix A:  
County Level Planning Maps**



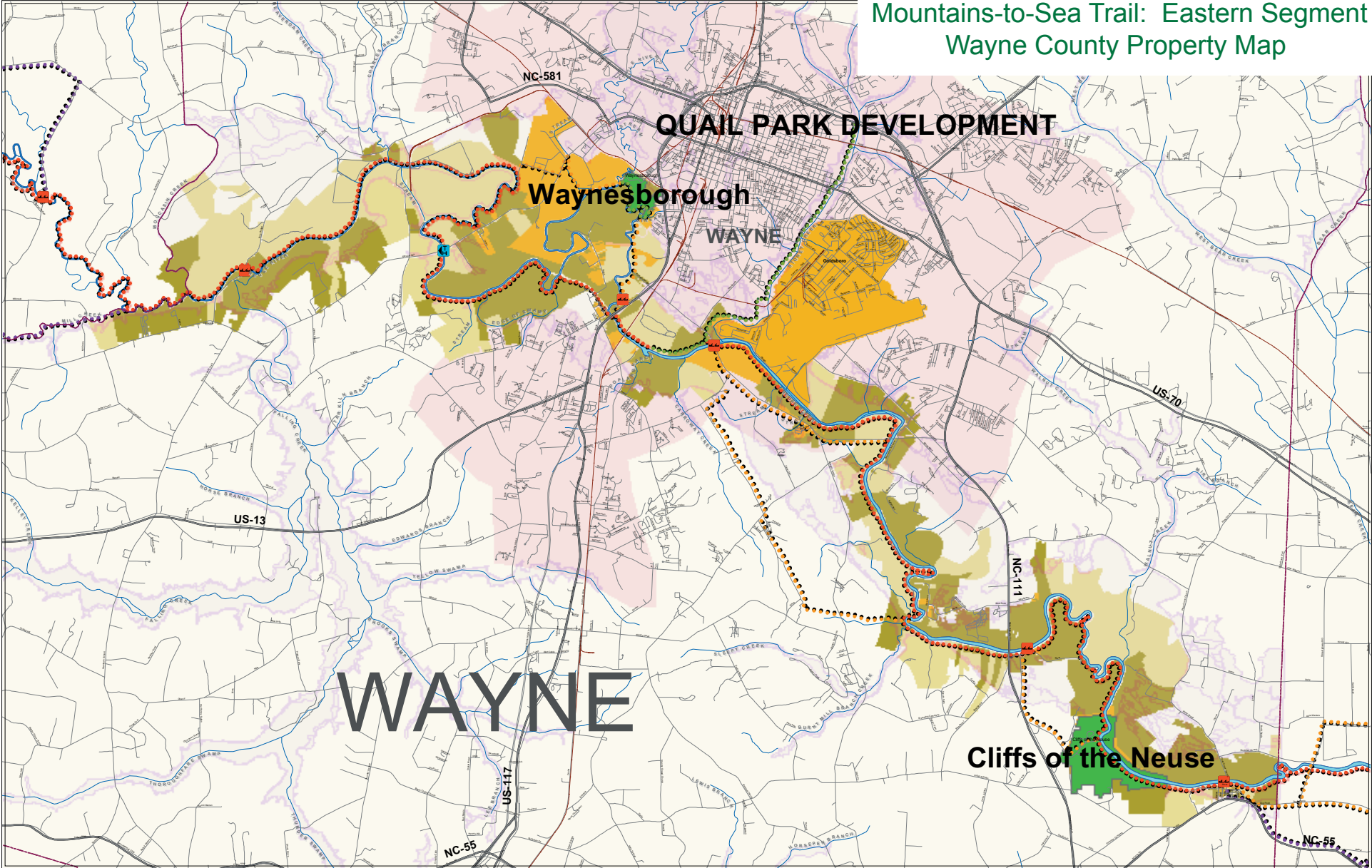
Mountains-to-Sea Trail: Eastern Segment  
Wake County Property Map



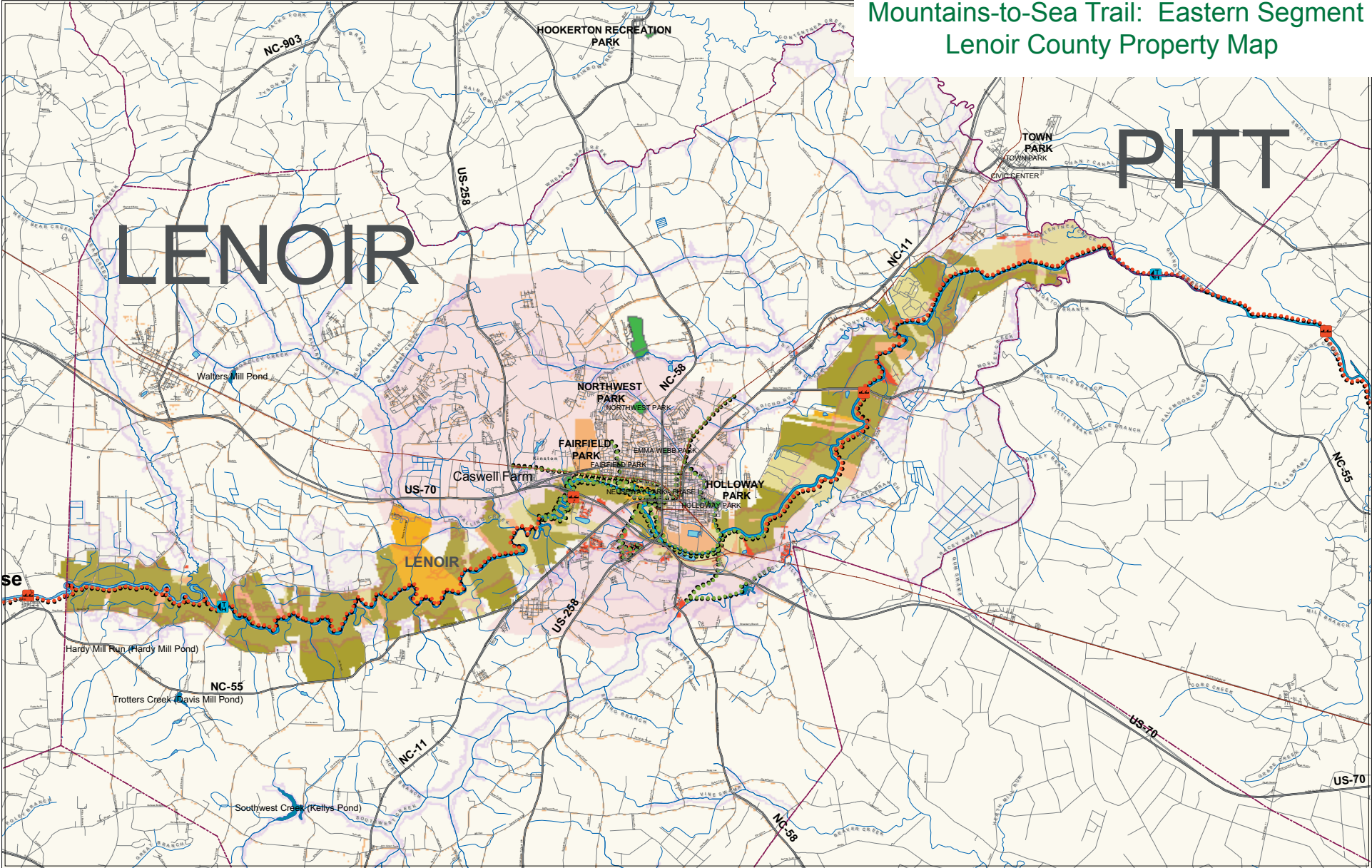
### Mountains-to-Sea Trail: Eastern Segment Johnston County Property Map



Mountains-to-Sea Trail: Eastern Segment  
Wayne County Property Map



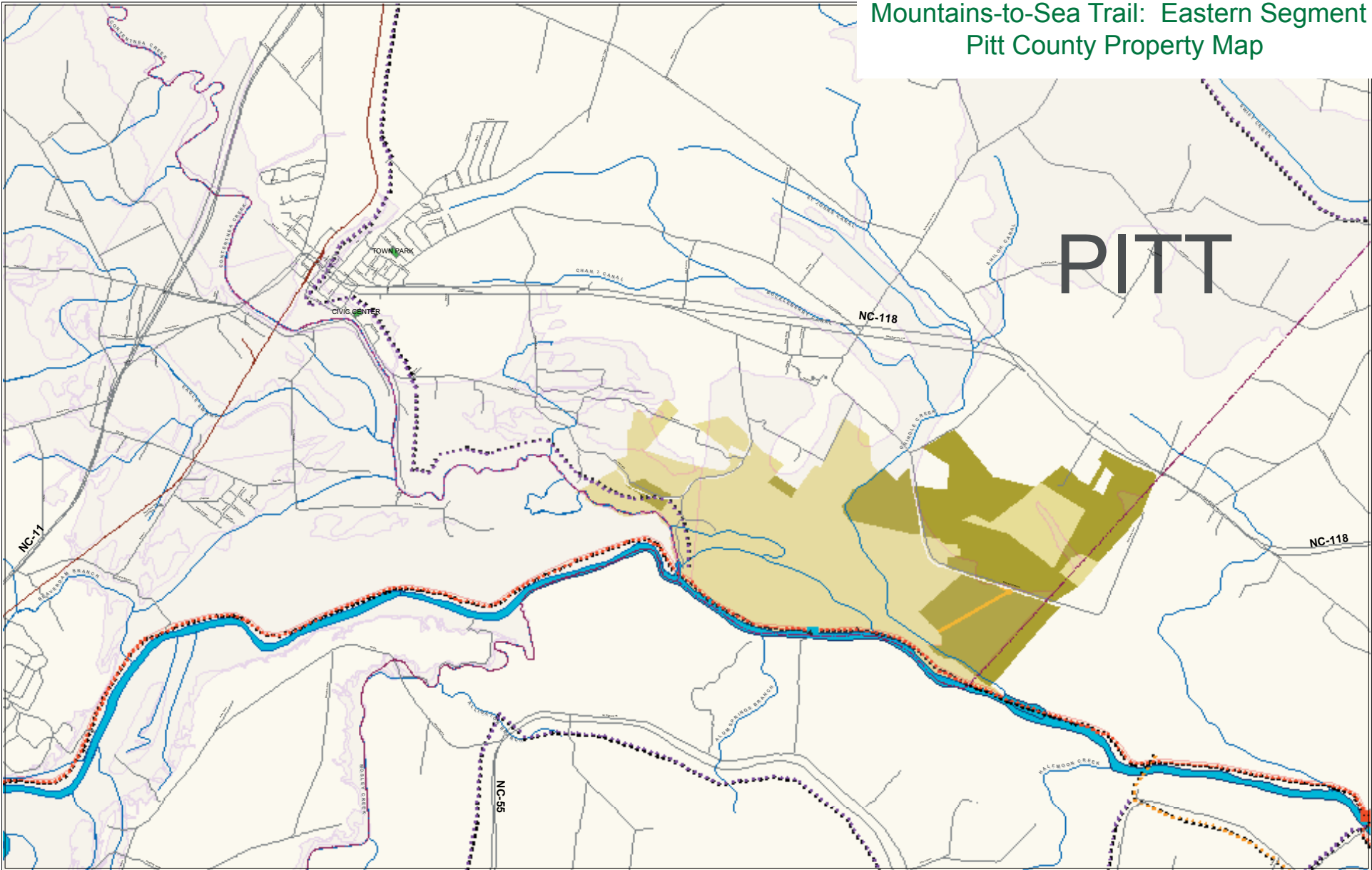
Mountains-to-Sea Trail: Eastern Segment  
Lenoir County Property Map



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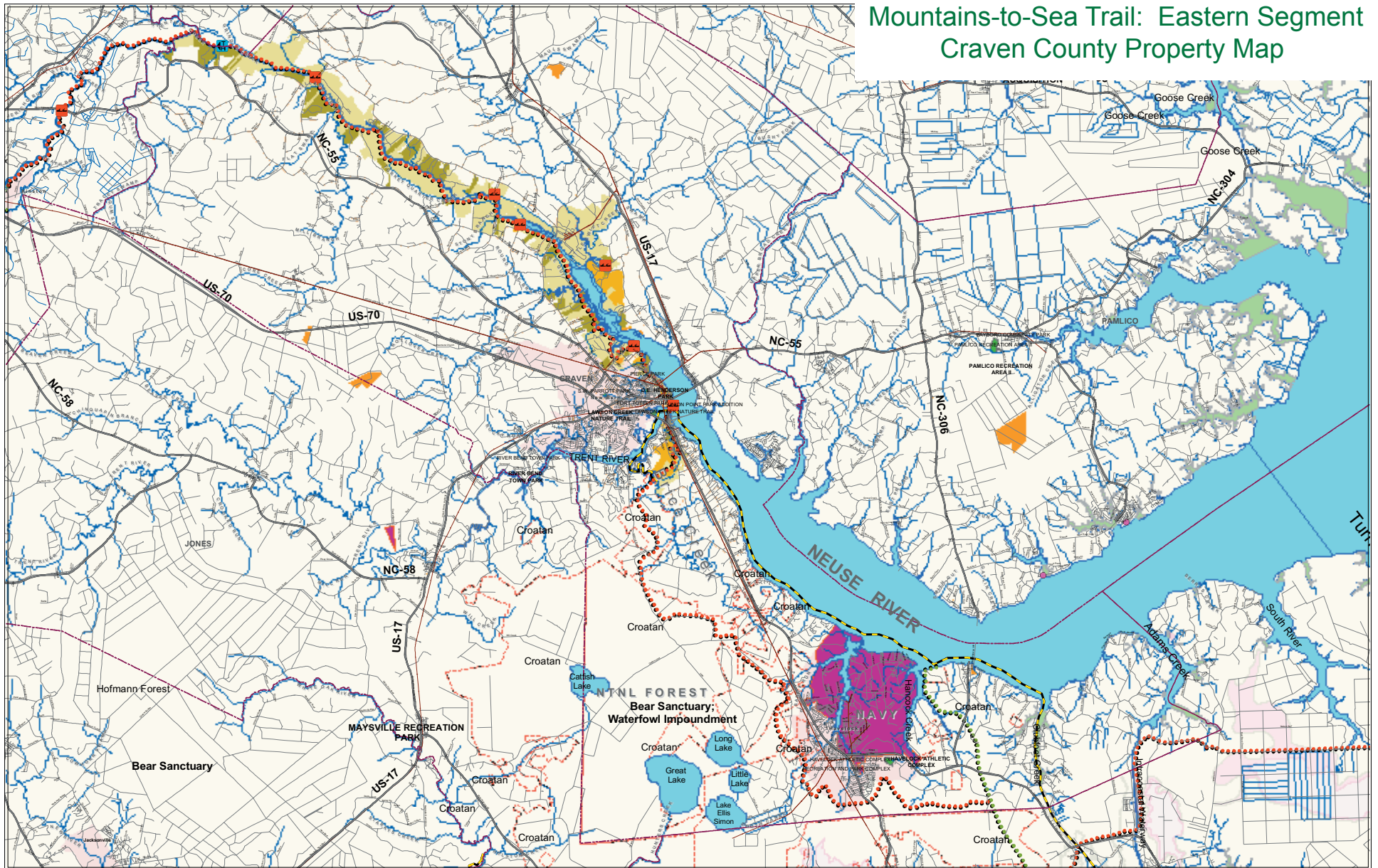


Mountains-to-Sea Trail: Eastern Segment  
Pitt County Property Map

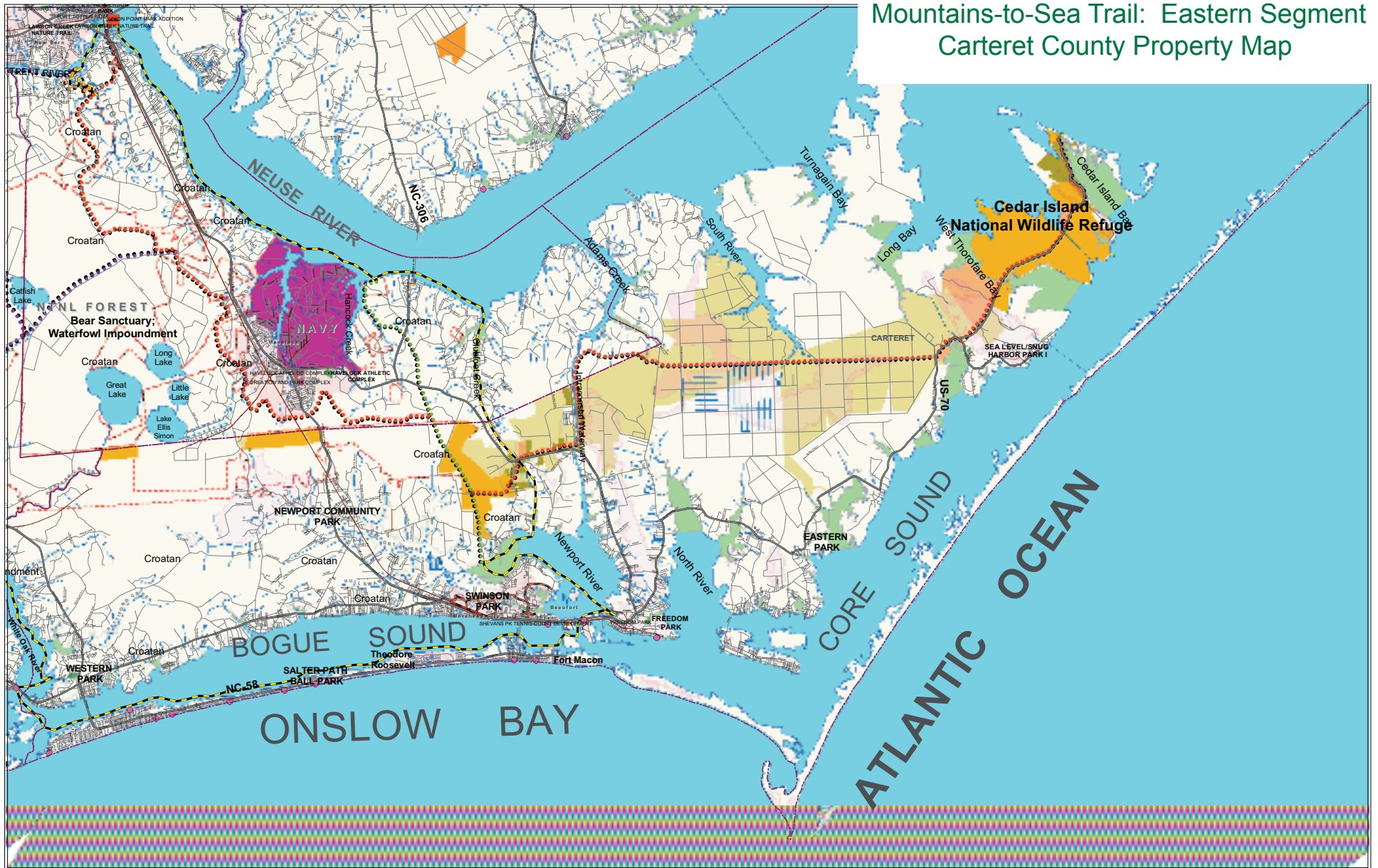




### Mountains-to-Sea Trail: Eastern Segment Craven County Property Map



Mountains-to-Sea Trail: Eastern Segment  
Carteret County Property Map



## Appendix B: Land Acquisition Options

### Mechanisms for Acquisition of Land through Management

Management is a method of conserving the resources of a specific greenway parcel through either an established set of policies called Management Plans, or through negotiated agreements or easements with private property owners.

### Management Plans

Management plans are prepared by City and County agencies for government-owned greenway lands. In addition, agencies can work together to establish management plans for lands under their control. Management plans should identify valuable resources; determine compatible uses for the parcel; determine administrative needs of the parcel, such as maintenance, security and funding requirements; and recommend short-term and long-term action plans for the treatment and protection of the resources.

### Subdivision Plans

Both City and County Subdivision Ordinances contain requirements related to public park sites, trails and greenways. Under these provisions, agency staff works with landowners of the proposed development to secure the necessary right-of-way for the trail system. The planning staff may be able to require the reservation of the site for a period of time sufficient to allow the local governments and their partners to acquire the site by dedications purchase, or other means.

Both City and County Zoning Ordinances also allow the dedication of greenway and trail lands to count as the minimum open space requirement for certain developments such as cluster and mixed use development. Planning staff can encourage the dedication of such land through the rezoning or subdivision processes.

### Easements

Land management agreements in which the local governments receives less than full interest in a parcel of land in order to protect a valuable resource. The purpose of these agreements is to establish legally binding contracts or a mutual understanding of the specific use, treatment and protection that these greenway lands will receive. Property owners who grant easements retain all rights to the property except those which have been granted by the easement. The property owner is responsible for all taxes associated with the property, less the value of the easement granted. Easements are generally restricted to certain portions of property, although in certain cases an easement can be applied to an entire parcel of land. Easements are transferable through title transactions, thus the easement remains in effect in perpetuity. Three types of greenway easements are:

### Conservation Easements

This type of easement generally establishes permanent limits on the use and development of land to protect the natural resources of that land. Dedicated conservation easements can qualify for both federal income tax deductions and state tax credits. Tax deductions are allowed by the Federal government for donations of certain conservation easements. The donations may reduce the donor's taxable income.



### Preservation Easements

This type of easement is intended to protect the historical integrity of a structure or important elements of the landscape by sound management practices. Preservation easements may qualify for the same federal income tax deductions and state tax credits as conservation easements.

### Public Access Easements

Right of public access easements provide the general public with the right to access and use a specific parcel of property. Both conservation easements and preservation easements may contain clauses for the right of public access and still be eligible for tax incentives.

### Mechanisms for Acquisition of Greenways through Regulation

A second method of protecting the corridor for the Mountains-to-Sea Trail is through government regulation. Regulation is defined as the government's ability to control the use and development of land through legislative powers. The following types of development ordinances are regulatory tools that can meet the challenges of projected suburban growth and development and, at the same time, conserve and protect greenway resources.

### Dedication/Density Transfers

Also known as incentive zoning, this mechanism allows greenways to be dedicated to local governments for density transfers on the development of a property. The potential for improving or subdividing part or all of a parcel of real property, as permitted under local government land use development laws, can be expressed in dwelling unit equivalents or other measures of development density or intensity. Known as density transfers,

these dwelling unit equivalents may be relocated to other portions of the same parcel or to contiguous land that is part of a common development plan. Dedicated density transfers can also be conveyed to subsequent holders if properly noted in transfer deeds.

### Negotiated Dedications

Local governments may ask a landowner to enter into negotiations for certain parcels of land that are deemed beneficial to the protection and preservation of the Mountains-to-Sea corridor. Local governments may ask for the dedication of land for the MST corridor when a landowner subdivides the property (a minimum size would be determined). Such dedications would be proportionate to the relationship between the impact of the subdivision on community services and the percentage of land required for dedication - as defined by the US Supreme Court in *Dolan v Tigard*.

### Fees-in-Lieu

To complement negotiated dedications, a fee-in-lieu program may be necessary to serve as a funding source for other land acquisition pursuits of the Mountains-to-Sea Trail. Based on the density of development, this program allows a developer the alternative of paying money for the development/protection of greenways in lieu of dedicating land for greenways. This money is then used to implement greenway management programs or acquire additional greenway lands.

### Reservation of Land

A reservation of land does not involve any transfer of property rights but simply constitutes an obligation to keep property free



from development for a stated period of time. Reservations are normally subject to a specified period of time, such as 6 or 12 months. At the end of this period, if an agreement has not already been reached to transfer certain property rights, the reservation expires.

#### Conditional Use Permits

Also known as conditional use rezoning, this mechanism can create public and private greenways through special restrictions placed on the rezoning of a property. Conditional use permits require the owner to perform some act or make site improvements to justify the change in zoning classification. This mechanism allows planning officials to accommodate property owners, to not conflict with the Land Use Plan and to protect greenways within the local government.

#### Buffer/Transition Zones

This mechanism recognizes the problem of reconciling different, potentially incompatible land uses by preserving greenways that function as buffers or transition zones between uses. Care must be taken to ensure that use of this mechanism is reasonable and will not destroy the value of a property.

#### Overlay Zones

An overlay zone and its regulations are established in addition to the zoning classification and regulations already in place.

#### Subdivision Exactions

An exaction is a condition of development approval that requires a developer to provide or contribute to the financing of public facilities at his own expense. For example, a developer may be

required to build a greenway on-site as a condition of developing a certain number of units because the development will create need for new parks or will harm existing parks due to overuse. The mechanism can be used to protect or preserve a greenway which is then dedicated to the local government.

#### Mechanisms for Protection of Greenways through Acquisition

The third method of protecting stream corridor/greenways is through the acquisition of property. A variety of methods can be used to acquire property for greenway purposes.

#### Donation/Tax Incentives

A local government agency agrees to receive full title to a parcel of land at virtually no cost. In most cases, the donor is eligible to receive federal and state deductions on personal income, as previously described under conservation easements. In addition, property owners may be able to avoid inheritance taxes, capital gains taxes and recurring property taxes.

#### Fee Simple Purchase

This is a common method of acquisition where a local government agency or private greenway manager purchases property outright. Fee simple ownership conveys full title to the land and the entire “bundle” of property rights including the right to possess land, to exclude others, to use land and to alienate or sell land.

#### Easement Purchase

This mechanism is the fee simple purchase of an easement. Full title to the land is not purchased, only those rights granted in the easement agreement. Therefore the easement purchase price is less than full title value.



### Purchase/Lease Back

A local government agency or private greenway organization can purchase a piece of land and then lease it back to the seller for a specified period of time. The lease may contain restrictions regarding the use and development of the property.

### Bargain Sale

A property owner can sell property at a price less than the appraised fair market value of the land. Sometimes the seller can derive the same benefits as if the property were donated. Bargain Sale is attractive to sellers when the seller wants cash for the property, the seller paid a low cash price and thus is not liable for high capital gains tax, and/or the seller has a fairly high current income and could benefit from a donation of the property as an income tax deduction.

### Option/First Right of Refusal

A local government agency or private organization establishes an agreement with a public agency or private property owner to provide the right of first refusal on a parcel of land that is scheduled to be sold. This form of agreement can be used in conjunction with other techniques, such as an easement, to protect the land in the short term. An option would provide the agency with sufficient time to obtain capital to purchase the property or successfully negotiate some other means of conserving the greenway resource.

### Rezoning Petitions

Petitions for rezoning that are adjacent to or include areas identified as potential park or greenway site are sent to the Park and Recreation Department staff for their comments. Planning

staff encourage the dedication of those areas as part of the rezoning process.

### Purchase of Development Rights

Purchase of Development Rights (PDR) programs are often used to protect agricultural lands. PDR involves purchasing the development rights from a private property owner at a fair market value. The landowner retains all ownership rights under current use, but exchanges the rights to develop the property for cash payment.



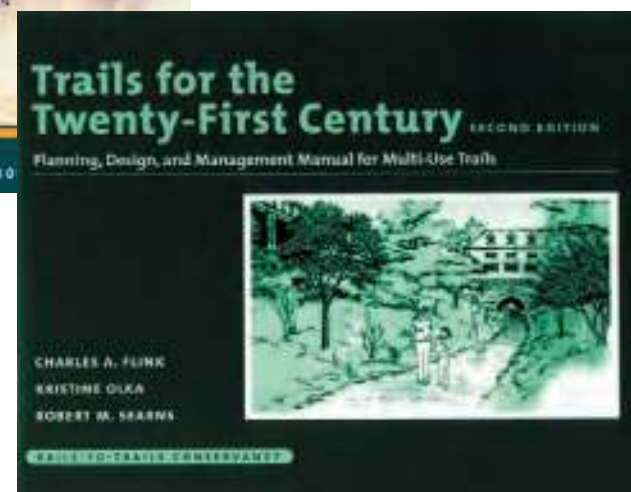
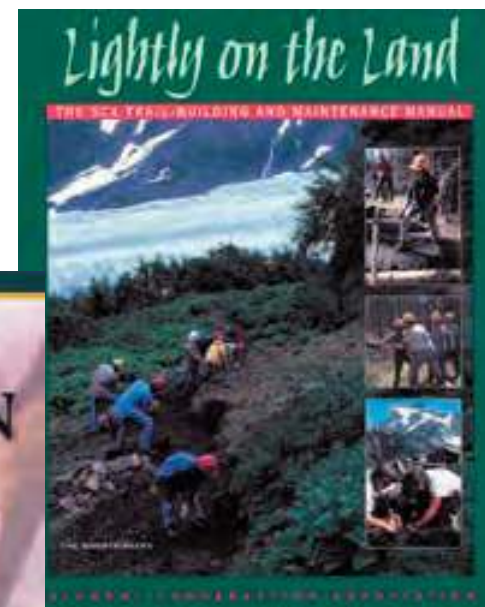
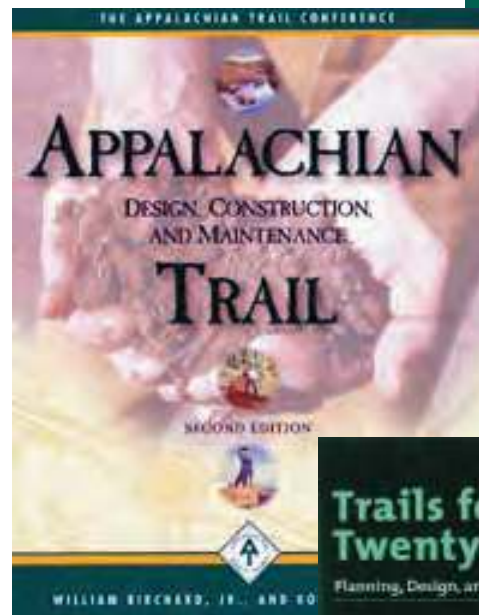
## Appendix C: Facility Management

Mountains-to-Sea Trail facilities shall be maintained in a manner that promotes safe use. All trail facilities should be managed by local governments or their designee. Trail maintenance should include the removal of debris, trash, litter, obnoxious and unsafe man-made structures, and other foreign matter so as to be safe for public use. Trail heads, points of public access, rest areas and other activity areas should be maintained in a clean and usable condition at all times. The primary concern regarding maintenance should always be public safety.

All trail surfaces should be maintained in a safe and usable manner at all times. Rough edges, severe bumps or depressions, cracked or uneven pavement, gullies, rills and washed out treads should be repaired immediately. Volunteer vegetation occurring in the tread of the trail should be removed in such a manner so that the trail surface is maintained as a continuous, even and clean surface.

### Right of Public Access and Use of Trails

The general public should have free access to and use of those MST lands that support public use, and that are owned by local or state government agencies or on land that a local entity has secured the right of public access and use. All access and use is governed by existing local government public land policies and should also be governed by a new MST Trail Ordinance (found in this chapter). The use of all trails is limited to non-motorized uses and may include hiking, bicycling, running, jogging, wheelchair use, skateboarding, rollerblading, equestrian use, mountain biking, and other uses that are determined to be compatible with the Mountains-to-Sea Trail system and local goals and interests.



### **Fencing and Vegetative Screening**

Local governments should work with individual landowners on a case-by-case basis to determine if fencing and screening is required and appropriate along the MST corridor. Local governments and the State may agree to fund the installation of a fence or vegetative screen; however, it should be the responsibility of the adjacent property owner to maintain the structure in perpetuity, including the full replacement of such fence or screen in the event of failure or deterioration due to any circumstances.

### **Adopt-A-Trail Program**

An Adopt-a-Trail Program has already been established by the State of North Carolina Trails Program to encourage community groups, families, businesses, school groups, civic clubs and other organizations to join in developing and managing the greenway system. The State should continue and expand this program for every trail segment in the MST corridor, and work closely with local organizations to ensure that these groups manage and maintain trails in a manner that is consistent with local government objectives. Each local government should develop written agreements for each Adopt-a-Trail entity and keep a current record of this agreement on file. Adopt-a-Trail entities should be assigned a specific section of the MST-East trail system, defined by location or milepost. The activities of each organization should be monitored by the local government or its designee. Agreements for management can be amended or terminated at any time by either party, giving a written notice in sufficient time for a replacement agreement to be arranged.

### **Management Agreements**

Management Agreements can also be established between local

governments and other public or private organizations wishing to assist with the management of designated segments of the MST system. The objective of these agreements is to define areas of maintenance and management that are compatible with existing land management activities, especially where the MST intersects with public or private properties and/or rights-of-way. Management agreements spell out specific duties, responsibilities and activities of the local government and its partnering public or private organization that wishes to assist with management activities. They can be amended or terminated at any time by either party, giving 30 days written notice.

### **Cross Access Agreements**

Local governments can use cross access agreements to permit private landowners that have property on both sides of the MST corridor access to and use of a MST corridor to facilitate operation and land use activities.

Cross access agreements are based on case law of the United States and specific experiences from other greenway trail systems throughout the United States. Adjacent landowners generally have the right to use the access at any time. However, access cannot block the right-of-way for trail users, other than for temporary measures such as permitting livestock to cross, or transporting equipment. Adjacent landowners are responsible for acts or omissions which would cause injury to a third party using the trail. If a landowner must move products, materials, livestock or equipment across the trail on a regular basis, appropriate signage should be installed to warn users of the trail to yield for such activities.

Crossing of abandoned or active rail lines, utility corridors and/or roads and highways will require the execution of agreements with





companies, local, state or federal agencies and organizations that own the rights-of-way. These crossings must provide clearly controlled, recognized, and defined intersections in which the user will be warned of the location. In accordance with the American Association of State Highway Transportation Officials (AASHTO) and the Manual on Uniform Traffic Control Devices (MUTCD), the crossing will be signed with appropriate regulatory, warning and information signs.

### **Trail Construction Practices**

Construction of the MST-East should strictly adhere to the most sound principles and practices of trail design. Several publications are available to guide the State Trails Program, local governments and private sector groups as trail development proceeds. Some of these publications are illustrated on this page. The Friends of the Mountains-to-Sea Trail and the North Carolina State Trails Program maintain up-to-date lists of design and construction guides that support state-of-the-practice trail development.

### **Naming of Trail Segments**

One good way to name trail segments is to base the name on the significant natural features that are found within the area. For example, the Crabtree Creek Greenway in Raleigh, NC is so named because it follows Crabtree Creek. Greenways can also be named after an individual or individuals. Generally these people are distinguished local or statewide figures or they have contributed a substantial financial gift for the protection of the corridor or development of the trail. In some cases, existing local or state level guidelines will take precedence in how segments are named.

### **Land Management**

Property owned or used by local governments for the MST system should be maintained in a condition that promotes safety and security for trail users and adjacent property owners. To the extent possible, the property should also be maintained in a manner that enables the corridor to fulfill multiple functions (i.e. passive recreation, alternative transportation, stormwater management and habitat for wildlife). Property that is owned or managed by other entities should be managed and maintained in accordance with the policies of that particular public body.

Vegetation within each greenway corridor should be managed to promote safety, serve as wildlife habitat, buffer public trail use from adjacent private property (where applicable), protect water quality, and preserve the unique aesthetic values of the natural landscape. Removal of native vegetation shall be done with discretion, removal of exotic species should be accomplished in a systematic and thorough manner.

Vegetation adjacent to trails shall be managed as necessary to maintain clear and open lines of sight along the edge of the trail, and eliminate potential hazards that could occur due to natural growth, severe weather or other unacceptable conditions. To promote safe use of any greenway trail, all vegetation should be clear cut to a minimum distance of three (3) feet from each edge of a trail. Selective clearing of vegetation should be conducted within a zone that is defined as being between three (3) to ten (10) feet from each edge of a trail. At any point along a trail, a user should have a clear, unobstructed view, along the centerline of a trail, 300 feet ahead and behind his/her position. The only exception to this policy should be where terrain or curves in a trail serve as the limiting factor.



Local governments or their designated agents should be responsible for the cutting and removal of vegetation. Removal of vegetation by an individual or entity other than the local government or its designee shall be deemed unlawful and subject to fines and/or prosecution.

### **Safety and Security**

Safety is a duty and obligation of all public facilities. In order to provide a standard of care that offers reasonable and ordinary safety measures, a Safety and Security Program should be developed for the MST's land and water trail system. This program should consist of well defined safety and security policies; the identification of trail management, law enforcement, emergency and fire protection agencies; the proper posting, notification and education of the trail user policies; and a system that offers timely response to the public for issue or problems that are related to safety and security. The safety and security of the greenway system will need to be coordinated with local law enforcement officials, local neighborhood watch associations, and Adopt-a-Greenway organizations.

Important components of the safety and security program include the following. Local governments should:

- 1) work with law enforcement agencies to establish a MST Trail Safety and Security Committee that can meet periodically to discuss management of the MST system.
- 2) prepare a MST Trail Safety Manual and distribute this to management agencies and post it at all major trail heads.
- 3) post User Rules and Regulations at all public access points to MST trails.

- 4) work with the management agencies to develop Trail Emergency Procedures.
- 5) prepare a Safety Checklist for the MST system, and utilize it monthly during field inspection of greenway facilities.
- 6) prepare a Greenway User Response Form for complaints and complements and provide copies at all trail heads.
- 7) work with management agencies to develop a system for accident reporting analysis.
- 8) conduct a regular Maintenance and Inspection Program, and share the results of these investigations with all management agencies.
- 9) coordinate other Public Information Programs that provide information about greenway events and activities that residents can participate in.
- 10) Have an ongoing evaluation of MST program objectives.
- 11) Keep Pets on Leashes: All pets must be kept on secure and tethered leashes. Keep pets off of adjacent private property. Failure to do so will result in a fine.
- 12) Prohibition on Camp Fires: Fires, for any purpose, are prohibited within the MST Trails System. Any person caught lighting a fire for any purpose will be prosecuted to the fullest extent of the law.

### **User Rules and Regulations**

The Mountains-to-Sea Trail should be operated in a manner consistent with other local government parks along the route and should generally be open for public use from sunrise to sunset, 365 days a year. If this is not feasible in all locations, the alternate schedules of some sections should be posted broadly so that through hikers and local users are aware of these exceptional circumstances. Individuals who are found to be using unlighted facilities after dusk and before dawn should be deemed in violation



of these hours of operation and treated as trespassers. Where trails are lighted for nighttime use, special rules established within local or state level governing ordinances should be followed.

Local governments should always discourage the general public from using any segment of a greenway trail that is under construction. Trail segments should not be considered officially opened for public use until such time as a formal dedication ceremony and official opening has been completed. Individuals who use greenway segments that are under construction, without written permission from local governments should be deemed in violation of this access and use policy and treated as a trespasser. Remember to always recycle your trash.

### **Emergency Response Plan**

In order to effectively patrol the MST Trail system and respond to the potential for fire, floods and other natural or human-caused disasters, local governments should adopt a trail emergency response plan. This plan defines a possible cooperative law enforcement strategy for the MST Trail based on services that are typically provided by police, sheriff, fire and EMS agencies. Specifically, the MST trail should be provided with an address system that denotes specific locations along the length of a trail corridor. A site plan that illustrates points of access to each trail corridor should be produced and kept on file at the local government and provided to each EMS agency. Typically, inter-governmental agreements are executed for this. A system of cellular-type emergency phone should be located in remote sections of the MST Trail system if possible, providing users with access to the area 911 Emergency System. All emergency phones should be placed above the flood elevation to ensure long term usage.

The emergency response plan should also define the agencies that should respond to 911 calls, and provide easy to understand routing plans and access points for emergency vehicles. Local hospitals should be notified of these routes so that they may also be familiar with the size and scope of the project. The entire MST Trail system should be designed and develop to support a minimum gross vehicle weight of 6.5 tons.

### **Risk Management Plan**

The purpose of a Risk Management Plan is to increase safety for the users of the MST Trails System and reduce the potential for accidents to occur within the system or on lands adjacent to the system. While it is impossible to guarantee that all risk will be eliminated by a Risk Management Plan, implementation of a plan is in fact a critical step to reduce liability and improve safety. A Risk Management Plan establishes a methodology for greenway management that is based on current tort liability and case law in the United States related to the development, operation and management of public use greenway lands and facilities.

The ultimate responsibility for managing the greenway system, as defined within this Plan, rests with local governments. The Risk Management Plan has as its major goals:

- 1) Risk Identification: determining where risk (threat to safety or potential loss) exists within the corridor.
- 2) Risk Evaluation: conducting appropriate examination of areas defined as a risk and determining the factors that contribute to risk.
- 3) Risk Treatment: defining and implementing an appropriate solution to the area of risk in accordance with one of the four options:



- a) risk avoidance: prohibiting use of a risk area.
- b) risk reduction: limit use of area and repair risk area immediately.
- c) risk retention: obtain waivers from all potential users of the risk area.
- d) risk transfer: transfer risk area (property) to an agency better suited to manage the area.

The following sixteen step plan should be implemented by local governments for the MST Trails system.

- 1) Develop a policy statement about risk management.
- 2) Conduct a needs assessment for the greenway program.
- 3) Determine goals and objectives for risk management - what are acceptable and not acceptable management levels.
- 4) Develop specifications for site and facility development.
- 5) Establish a clear and concise program for risk management.
- 6) Define supervision and responsibility for risk management.
- 7) Define appropriate rules and regulations that govern the use of the trail system.
- 8) Conduct routine/systematic inspections and investigations of the trail system.
- 9) Develop an accident reporting and analysis system.
- 10) Establish procedures for handling emergencies.
- 11) Develop appropriate releases, waivers and agreements for use and management.
- 12) Identify best methods for insuring against risk.
- 13) Develop a comprehensive in-service training program for employees of the County.
- 14) Implement a public relations program that can effectively describe the risk management program and activities.

- 15) Conduct periodic reviews of the Risk Management Plan by outside agents to ensure that the Plan is up to date.
- 16) Maintain good legal and insurance representation.

### **Liability**

The design, development, management, and operation of the MST Trails System must be carefully and accurately executed in order to provide a resource that protects the health and welfare of the public. To reduce the possibility and exposure to liability, local governments should have in operation the following measures prior to opening the first segment of greenway:

- 1) a thorough Maintenance Program that provides the appropriate duty or level of care to greenway users;
- 2) a Risk Management Plan that appropriately covers all aspects of the greenway system, and as necessary adjacent landowners;
- 3) a comprehensive working knowledge of public use laws and recent case history applicable in North Carolina.

Local governments existing self-insurance programs may be adequate to protect these governments from financial loss that might occur through the development and operation of the MST Trail system. The MST Trail System presents no greater liability to local governments than existing park and recreation resources. Local governments should review their current policies and check coverages to be certain that all aspects of its policies are up to date.



## Appendix D: Spur Trails

### WAYNE COUNTY:

Proposed Access Point #5. Stevens Mill Road Bridge, Route 1008 crossing. (90). In gap between State Route 1224 Bridge Ramp and US 117 Ramp. 9 miles downstream from State Route 1224 Bridge Ramp.

Cliffs of the Neuse State Park Proposed Canoe Camp. (110). Potential future location of access point.

### LENOIR COUNTY:

Proposed Access Point #6. Hardy Bridge Road, Route 1389 crossing. (128). In gap between Seven Springs Ramp and US 70 Ramp. 7 miles downstream from Seven Springs Ramp.

### CRAVEN/PITT COUNTY:

Proposed Access Point #7. Off connector road from Hwy 55. (164). Near transition from Rolling Coastal Plain to true Coastal Plain. In gap between Albritton's Landing and Maple Cypress Landing. 10 miles downstream from Albritton's Landing.

### Spur Trails

#### WAKE COUNTY AND JOHNSTON COUNTY:

Marks Creek to Lake Myra (4.8 miles). Trail runs North from Neuse River/MST corridor in Johnston County up Mark's Creek to Lake Myra in Wake County.

Clayton Loop (11.6 miles). Near Wake and Johnston County border, runs West from the Neuse along Beddingfield Creek, follows Little Creek South to Clayton, and back to the East on NC Hwy 42 to the Neuse/MST corridor, 5.7 miles downstream from origin.

Clayton East (3.8 miles). Trail runs directly from East (Neuse) along unnamed creek into downtown Clayton and ends at the Clayton Loop, proposed spur trail.

Smithfield NE Loop (6.9 miles). Follows US Hwy 70 South, Mill Creek, and Noble St. to Brightleaf Blvd (US Hwy 301). Runs WSW on Brightleaf Blvd into Smithfield, turns on Bridge St back to the Neuse/MST corridor, 3.4 miles downstream.

Smithfield NE Loop Mill Creek Extension (1 mile). Extends along Mill Creek past Noble St. Turns North on River Rd. and ends at Buffalo Rd.

Smithfield NE Loop Booker Dairy Rd. Extension (1.2 miles). Follows Booker Dairy Rd. North off Brightleaf Blvd. Ends by tying into proposed Smithfield Greenway system at NE corner of Smithfield.



NC Hwy 210 Smithfield West (6.2 miles). Follows NC Hwy 210 West from Neuse/MST corridor in Smithfield and turns NW along Middle Creek.

NC Hwy 210 Smithfield West Cleveland-Crantock Rd. Extension. (4.1 miles). Extends WNW along Cleveland-Crantock Rd. from Hwy 210 split.

Brogden Rd. Parallel (15.6 miles). Extends from Smithfield Riverwalk, SE along Brogden Rd, parallel to the Neuse (to the North and East), before eventually turning South to the Neuse/MST corridor on Richardson's Bridge Rd.

Mill Creek Parallel (14 miles). Begins at unnamed creek about 5 miles South of Smithfield, runs parallel to the Neuse (to the South and West), joins Mill Creek, and follows Mill Creek back to the Neuse at the Johnston/Wayne County border. Rejoins the Neuse/MST corridor 20 miles downstream.

Neuse to Mill Creek Parallel Connector (2.3 miles). Follows unnamed creek from Neuse south to Mill Creek Parallel spur trail.

*LENOIR COUNTY:*

NC Hwy 55 – NC Hwy 11 Parallel – Kinston (16 miles). Drops South from Neuse/MST corridor at Piney Grove Rd to NC Hwy 55 near the Wayne/Lenoir County line. Follows NC Hwy 55 east, running parallel to the Neuse from the South. Extends to Kinston where it begins to follow NC Hwy 11 until its end into a Town of Kinston proposed trail.

NC Hwy 55 Parallel Hardy Mill Extension Loop (3.1 miles). Follows Hardy Mill Run North to Trotter's Creek where it loops

back down to the NC Hwy 55 Parallel spur trail.

Follows Trotter's Creek South from NC Hwy 55-NC Hwy 11 Parallel Spur Trail. Continues along Jack's Branch until Liddell Rd where it turns southeast. Turns north on Southwest Creek to Smith-Grady Road. Follows Smith-Grady Road back West where it comes to the trails origin at Trotters Creek.

Falling Creek-Mosely Creek Trail (15.7 miles). Follows Falling Creek NW from Kinston. Meets and follows Mosely Creek to the West and the town of La Grange. Meets with State Highway 903 and turns South through La Grange.

Falling Creek-Mosely Creek Extension (2 miles), Kinston. Turns North along unnamed creek immediately after start of Falling Creek-Mosely Creek Trail and runs to railroad right-of-way near a Town of Kinston proposed trail.

Yadkin Branch/Airport Extension Trail (2.9 miles). Extends Town of Kinston proposed trail north along Yadkin Branch beyond railroad to Airport Road for access to the northern side of Kinston and the airport area.

*CRAVEN, PITT, AND JONES COUNTIES:*

NC Hwy 55 Parallel - New Bern (33.9 miles). Begins at NC Hwy 55 bridge crossing over Neuse about 4 miles Northeast of Kinston. Crosses into Craven County and runs along NC Hwy 55 parallel to the Neuse to the South to New Bern. Rejoins Neuse/MST corridor 39 miles downstream.

Biddle Road Spur Extension (1.6 miles). Follows Biddle Road North off NC Hwy 55 Parallel South back towards the Neuse.



Core Creek Extension (3.7 miles). Follows the meandering Core Creek North off NC Hwy 55 Parallel South back towards the Neuse.

McCoy Branch-Mill Run Extension (2.3 miles). Follows McCoy Branch to Mill Run back North to the Neuse.

Greenville Spur Trail (14.9 miles). Runs Northwest from Neuse/MST corridor along Contentnea Creek and the Lenoir/Pitt County border. Turns North at railroad-right-of-way to its completion in Greenville.

Swift Creek Parallel (32.3 miles). Runs from Greenville Spur Trail, parallel and North of the Neuse, along Swift Creek to its intersection with the Neuse/MST corridor. Follows the Pitt/Craven County border for a few miles before completely entering Craven County.

Beaver Dam - Maple Cypress Extension (4.7 miles). Extends South from Swift Creek Parallel at Beaver Dam Rd. crossing. Follows a series of roads (State Hwy 118, Bay Bush Rd., Nelson Rd.) until it reaches Maple Cypress Rd. where it meets the Neuse/MST corridor.

Bachelor Creek Trail (16.3 miles). Trail begins at Bachelor Creek entrance to the Neuse River about 3 miles North of New Bern. Crosses the NC Hwy 55 Parallel - New Bern Trail. Loops around the western side of New Bern, entering Jones County. Meets and briefly follows State Route 1330 to Scott Creek where it ends at the Trent River – Mill Creek Trail.

Trent River – Mill Creek Trail (23.6 miles). Trail begins at the

southern end of New Bern at the Trent River. Follows the Trent River West and along the Jones/Craven County border. Meets the Bachelor Creek Trail and moves South to Mill Creek. Follows Mill Creek south and back to the east along unnamed creeks to its end into the Catfish Lake Rd. Trail.

Catfish Lake Rd. Trail (19.2 miles). Begins at Catfish Lake Rd. crossing of the main MST Trail, 4 miles north of Havelock. Runs WSW along Catfish Lake Rd. into Jones County and just past State Highway 158.



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## Appendix E: Trailhead Design Standards

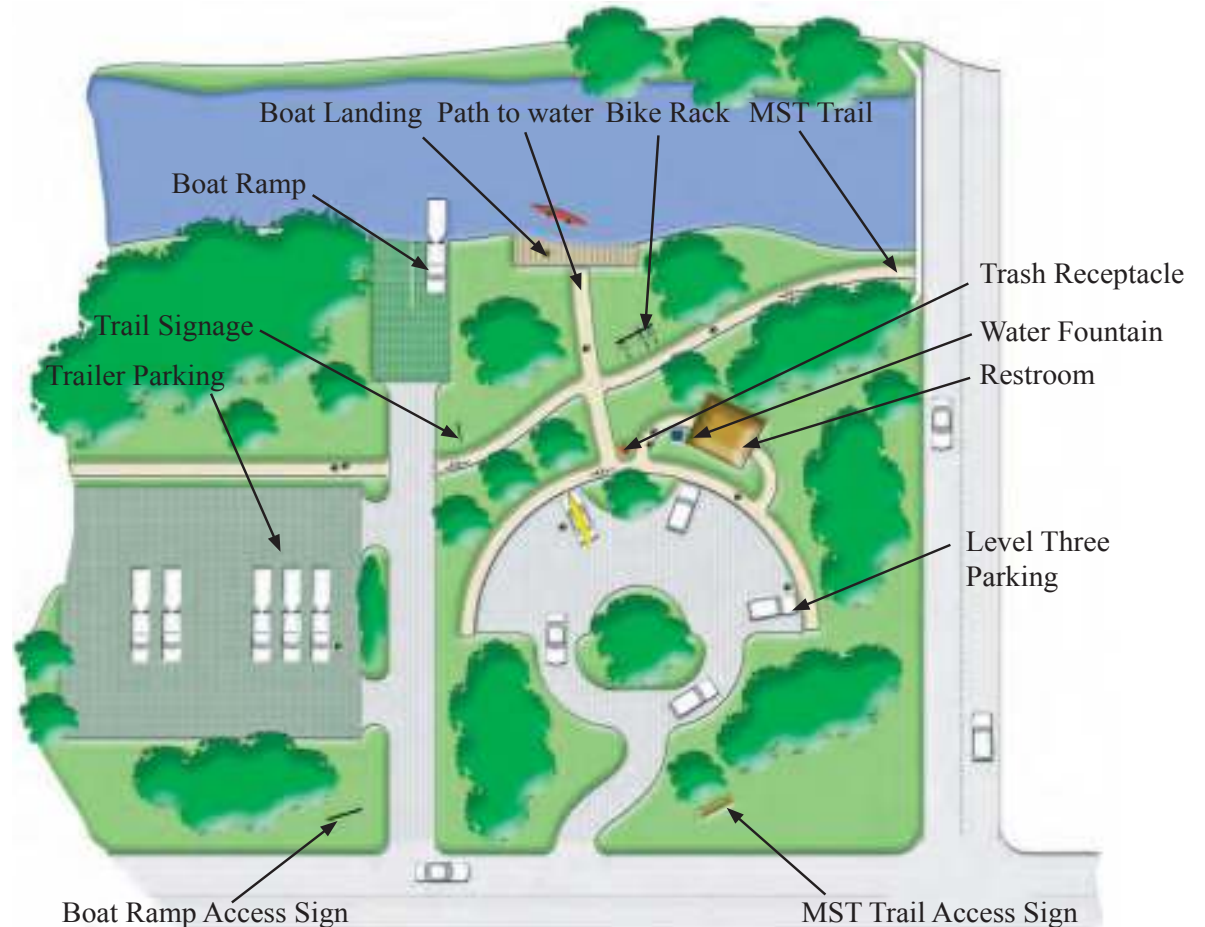
The illustrations on the following pages should be used as design standards for the development of the MST-East trailheads. These facilities serve as staging areas and rest areas for trail users and should be developed in a manner consistent with the trail type and the terrain that is being traveled. The size of each facility, its land requirements, parking spaces and utility requirements will depend on projected use for each specific area. The following are descriptions of 3 trailhead types and, as a minimum, what facilities each one should include.

### LEVEL III: HIGHLY DEVELOPED

A level III trailhead is designed for placement at the beginning and end of the most highly used segments. Many portions of the MST-East will not receive the level of use that warrants this degree of facility development. In general, level III trailheads should be used on routes that connect major destination points such as Cliffs of the Neuse State Park and the City of Kinston. Level III trailheads are also desirable on routes that are likely to accommodate public events such as races or charity walks. The facilities that are provided at a level III trailhead are:

1. Restrooms.
2. Accessible Parking. (Special considerations should be given to how horses are accommodated on multi-use trails and where

- users may park trailers. Conflict with other trail users should be minimized.)
3. Designated improved boat and/or canoe launch that includes a paved boat ramp.
4. Drinking fountains and (watering device for horses on



Level Three

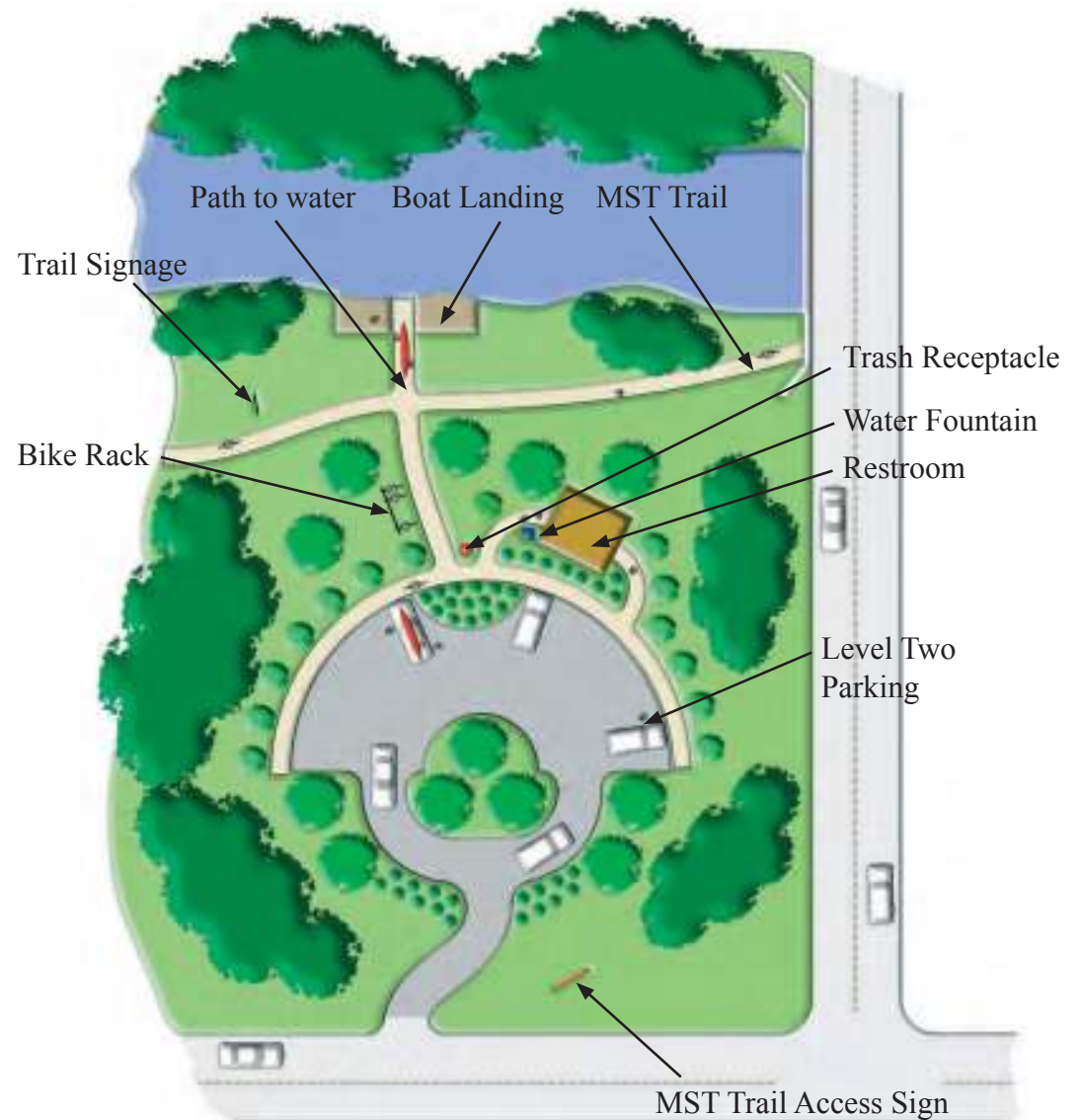


- equestrian routes)
- 5. Telephone(s) for emergency and coordination of events
- 6. Seating (benches)
- 7. Lighting
- 8. Trail and Informational signage (i.e. wall mounted on freestanding kiosk)
- 9. Bicycle racks
- 10. Shade (i.e. structures/ plant material)
- 11. Waste receptacles
- 12. Landscaping
- 13. Overflow parking allowances
- 14. ADA accessibility

**LEVEL II - MODERATELY DEVELOPED**

The level II trailhead provides fewer accommodations than the level III facility, but is still designed to accommodate fairly heavy use. Level II trailheads should be located at major trail connections or intersections. The facilities that are provided at these trailhead are:

- 1. Permanent or portable restrooms.
- 2. Accessible Parking. (Conflict with other trail users should be minimized.)
- 3. Designated boat launching area, paved when feasible.
- 4. Seating
- 5. Trail and Informational signage (i.e. wall mounted kiosk)
- 6. Bicycle racks
- 7. Shade (i.e. structures/ plant material)
- 8. Waste receptacles
- 9. Landscaping



Level Two



LEVEL I: MINIMALLY DEVELOPED

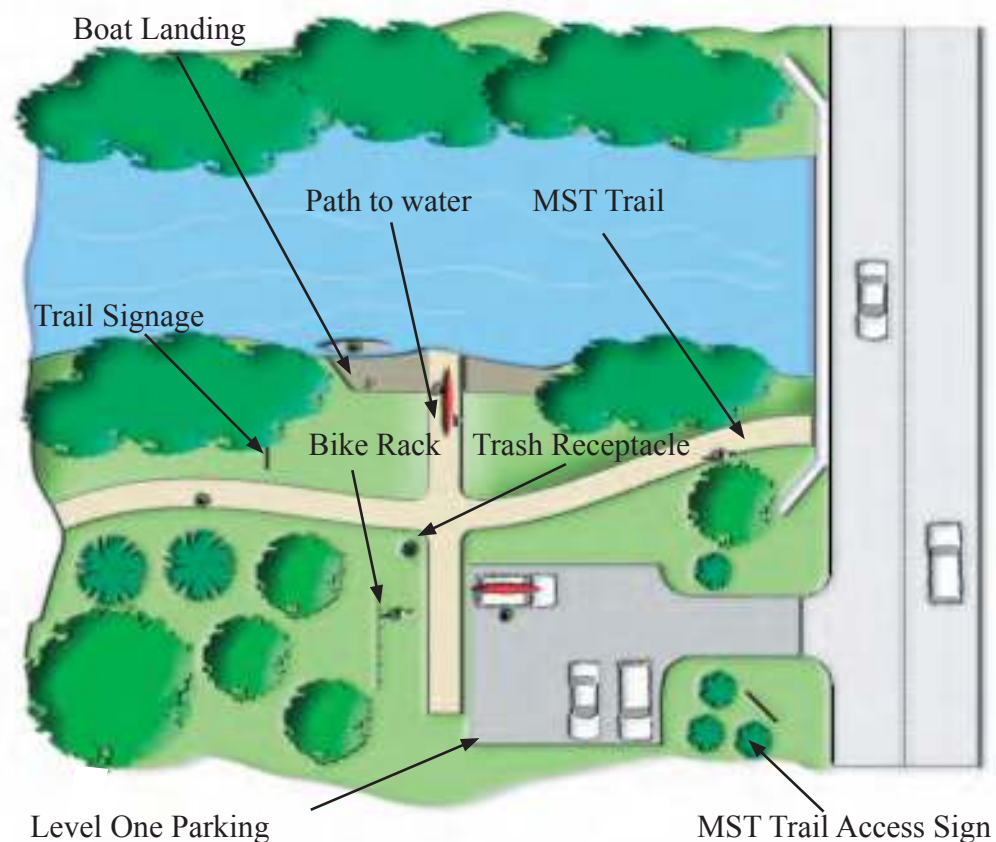
This type of trailhead provides a minimum level of facility development and should be located at minor trail connections. If the site conditions are appropriate, 4-10 parking spaces may be included. The exact number of spaces should be based on the expected use. The facilities that are provided at a level I trailhead are:

1. Accessible Parking (where warranted)
2. Designated Canoe launching area (unimproved)
3. Trail signage
4. Waste receptacle
5. Minimal landscaping

All trailhead design criteria must comply with the following:

- The American Association of State Highway and Transportation Officials (AASHTO);
- Americans with Disabilities Act (ADA)
- Local Building Codes;
- Trailhead Ingress/ Egress geometric designs compliant with the Federal Highway Administration and AASHTO; and
- NCDOT standards based on Annual Average Daily Traffic

At any developed trail head, the parking lots should be placed at least 50' from the rivers edge to minimize runoff and thermal pollution. All parking areas should be gravel or, if permanently surfaced, should be made of permeable materials. Finally, the potential for flooding and the impacts of such an event should be considered when determining the location of any trailhead near the river.



Level One



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## Appendix F: Trail Alignment Methodology

The consultant was contracted to provide a suggested trail alignment for the MST-East. The trail alignment was to run within 1000 feet on either side of the Neuse River. The steps below were used to determine the alignment proposed in this document and were approached in a cyclical fashion, often jumping from one step to another, and then back a step or two before moving ahead again.

### Methodology

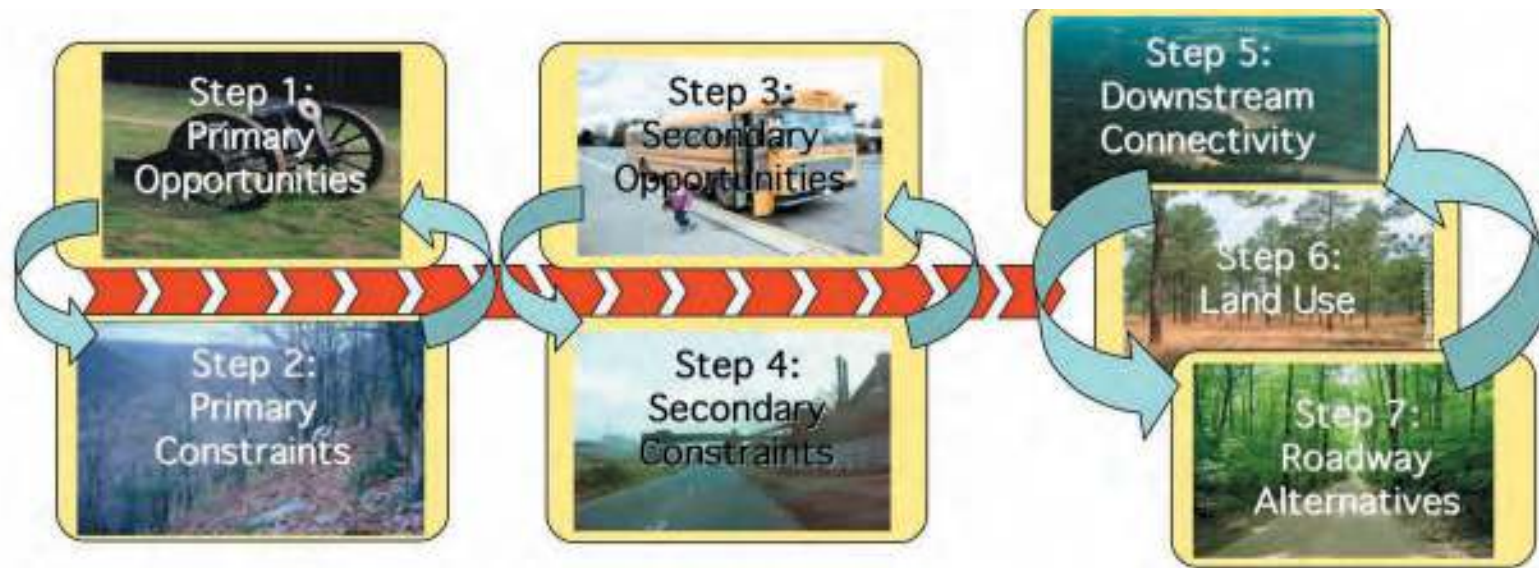
#### Step 1: Primary Opportunities

Our first goal was to create connectivity between existing protected open spaces. Examples include State Parks, local parks, and planned trail segments. GIS-data was collected from each of the counties whose jurisdiction falls within the study area.

#### Step 2: Primary Constraints

It is clear to all that some areas simply will not be acceptable locations for the trail. Some examples include military bases, airports, and obstructive topography such as steep slopes or wetlands.

#### Step 3: Secondary Opportunities/Constraints



*The diagram above is presented to help the reader visualize how this 6-step decision process was used. It shows that the process was not always linear. In most circumstances the steps looped back upon themselves.*



Following a review of primary opportunities and constraints and initial determinations based on those assessments, we reviewed secondary opportunities and constraints. The secondary items are generally not items that must be connected or must be avoided, but tend more toward preferred sites and preferred areas to avoid. Some examples include: Opportunities – Large/single-owner tracts, Schools; Constraints – Subdivisions with small parcels, Industrial areas.

### Step 4: Downstream Connectivity

As decisions were made regarding ideal location, we tried to also keep eventual downstream connectivity in mind, often looking several miles downstream to see where idea crossings were or where interesting spur trails could be located. These downstream decisions helped affect the upstream locations.

### Step 5: Land Use

In decisions not made clear through earlier steps, a hierarchy of preferred land use was created. In order of preference, the land uses are: Undeveloped land, Institutional/Public land, Light Residential/Light Commercial lands, Heavy Residential areas, Heavy Industrial areas.

### Step 6: Roadway Alternatives

In areas where it seemed highly unlikely that either side of the buffer area would offer an acceptable route, we chose to look for an alternative route that would take the user along a nearby roadway for a short distance.



## Mountains to Sea Trail Eastern Segment

### Notes from the First Meeting

As part of a series of three scheduled task force meetings, our first meeting was held November 20 with great success. We had some excellent comments and shared enthusiasm! Below are a list of comments we received and discussed as part of the Western Section Task Force Meeting (Wake and Johnston Counties).



Dr. Phil McEachels, Director of NC Division of State Parks addresses the MST Western Section Task Force at its November 20 meeting in Raleigh.

#### NC Division of State Parks:

- MST will become the back-bone of the State Trail system and will serve as a spine that other municipalities will want to link into.
- Most of MST has been built in the western part of NC, with public property acquisitions.
- Envision MST Eastern Segment as a true multi-use trail system that parallels the Neuse River corridor as a land-based and water-based system of trails.
- There is a need for public and private support. This includes partnerships with volunteers, land trusts, local and county governments, in conjunction with state and federal agencies.
- State's role is as a facilitator for funding and partnerships with local governments.
- Funding help can come from State and Federal sources: i.e. Division of State Parks, Clean Water Management Trust Fund, TEA-21, etc.
- Raising MST State Act is a part of the NC State Park System - because of the size of the project, this will only serve where local and county plans have to reach or are so called "droughted holes."
- MST will primarily be in local and county ownership.
- The State can help both local and County governments with securing easements.
- People want trails within a 15 minute walk of populated areas.
- The NC One Naturally Project (formerly the Million Acre) sees the MST corridor as a source for its program.

#### Wake County:

- Raleigh has already acquired a large amount of land along the Neuse River corridor.
- Raleigh's Neuse River corridor is broken into two sections a northern and middle that begins at Falls Lake Dam and ends at Paele Road for a total trail system of 16 miles. Raleigh wants to see trail development on both sides of Neuse River throughout this length.
- Raleigh does not have plans to change current foot path surface on south side of Falls Lake.
- There is a need to identify users types and accommodate as many users as possible.
- Need for a trail on both sides of the corridor for different users (especially near Falls Lake).
- Acquisition of property for the trail is being pursued on Honeycutt Creek.
- Neuse River corridor has become a major trail project for Raleigh.
- Wake Forest and Knightdale would like to tie into the trail system.
- Wake County as part of their Open Space and Greenways Plan is has linked into the Neuse corridor through local and a County wide plan. County wants a shared regional park with Johnston County.
- There are planned and existing boat (canoe) put ins and take outs.
- The City of Raleigh will provide GIS information on their greenway trail system for the MST project.

## Mountains to Sea Trail Eastern Segment

### Notes from the First Meeting

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- State's role is as a facilitator for funding and partnerships with local governments.
- Funding help can come from State and Federal sources: i.e. Division of State Parks, Clean Water Management Trust Fund, TEA-21, etc.
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- Wake County as part of their Open Space and Greenways Plan is has linked into the Neuse corridor through local and a County wide plan. County wants a shared regional park with Johnston County.
- There are planned and existing boat (canoe) put ins and take outs.
- The City of Raleigh will provide GIS information on their greenway trail system for the MST project.



## Mountains to Sea Trail Eastern Segment

### Notes from the Second Meeting

As part of a series of three scheduled task force meetings, our second meeting was held December 4 with great input. We had some excellent comments and shared enthusiasm! Below are a list of comments we received and discussed as part of the Middle Section Task Force Meeting (Wayne, Lenoir and Pitt Counties).



The MST Middle Section Task Force at its December 4 meeting in Blount.

#### NC Division of State Parks (issues raised for second writing attendees):

- MST will become the backbone of the State Trail system and will serve as a spine that other municipalities will want to link into.
- Howard Lee championed the MST idea in the early 1970s.
- Current MST eastern segment was identified through a series of three meetings held last year with the purpose to gain interest and folks willing to become part of its current task force sections.
- Envision MST Eastern Segment as a true multi-use trail system that parallels the Neuse River corridor as a land-based and water-based system of trails.
- There is a need for public and private support. This includes partnerships with volunteers, land trusts, local and county governments, in conjunction with state and federal agencies.
- State's role is as a facilitator for funding and partnerships with local governments.
- Pending help can come from State and Federal sources; i.e., Division of State Parks, Clean Water Management Trust Fund, TEA-21, etc.
- Existing MST State Act is a part of the NC State Park System - because of the size of the project, this will only serve where local and county plans have no reach or are so called "doughnut holes."
- MST will primarily be in local and county ownership.
- The State can help both local and County governments with securing easements.
- People want trails within a 15 minute walk of residential areas.
- The NC One Naturally Project (formerly the Million Acre) sees the MST corridor as a source for its program.

#### Wayne County:

- Neuse Trails Association (NTA) has been very active in the Goldsboro area, and they continue to work with FMST.
- NTA has found that Neuse River private property owners in Goldsboro are favorable to MST.
- There are a small number of private homes along the Neuse River that will have to be accommodated or worked around for the primary MST.
- A foot trail has been cut for along Stony Creek which links to the Neuse River via Arrington Bridge Road, where it links into a 0.8 mile foot trail along the Neuse River.
- Cherry Hospital has trails and they now can link into the Stony Creek foot trail.
- There is a need to link the main Neuse River Trail into the existing Civil War Battlefield sites.
- Themes can become an important venue to pay homage to each section or local segment of the overall MST trail system.
- Local outfitters should be contacted in help with trail segments, which could include sponsorship, trail maintenance and promotion.

#### Lenoir County:

- Kinston-Lenoir County was used as a case study for innovative floodplain management as part of a FEMA study for the Neuse River. A copy of the CD was made available that contains excellent information for this section of the River as it flows through Kinston.
- Kinston-Lenoir County also provided a copy of their 2002 Lenoir County Green Infrastructure Plan.
- The Green Infrastructure Plan details trails along the Neuse River on both sides in Kinston, and other important links. This type of planning effort is a prime example of how the Cities of Kinston and Raleigh have worked with their Counties to plan an important segment of the MST corridor.
- Lenoir County has agreed to provide GIS information for the MST Plan.
- Over 1,100 flood prone properties have been identified and will become available due to buy out program.
- The County is currently working with DNR in flood clean-up and moving existing damaged property owners out of floodplain.
- Existing Sewer Plant in Kinston will be closed, and land will become available.
- The County is looking at ideas of what to do with the buy out properties. One idea is to turn buy out properties into an Educational State Forest.
- A 300 acre ATV park is being planned for area it and around the Nature Center in Kinston. (See Green Infrastructure Plan for details).
- There is a need to link the minor league baseball stadium via Adkin Branch (a tributary of the Neuse).
- Spur trails are needed to link the historic millparks such as Kellys, and Tulls via Southwest Creek, and the CSS Neuse.



Recent GIS information in Lenoir, important information of the MST corridor.

#### Pitt County:

- Provide Link to Greenville area via the MST.
- Important to link to areas outside of MST 1000 foot plan boundary.
- There is a need for a wayfinding system for the whole MST system.

#### Friends of the Mountains to Sea Trail (FMST):

- There is a need for locating places where users can go for food and overnight stays while using the trail.
- Through hikers can spend up to \$3,000 trip - which can be viewed as an economic boost.
- NC Bike routes 2 & 7 currently mirror the proposed Eastern Segment of the MST.

## You Are Invited!

Be a part of a series of three MST Task Force member information meetings that feature the presentation of data collected in the corridor for review and comment. We had some excellent comments from our first and second meetings. Please come to the third meeting! The Third meeting will be held at the Eastern Carolina Council of Governments in New Bern, located in New Bern on Monday, December 16, 2002 from 9:30 am to 12:00 noon. A brief presentation will be given at each meeting, followed by a question and answer, and workshop session. We hope to see you all there!

#### Need More Information?

Contact: Chuck Pink, President, Greenways Inc.  
E-mail: [clm@gsd.com](mailto:clm@gsd.com)  
or: David Josephus, Project Manager, Greenways Inc.  
E-mail: [David.josephus@greenways.com](mailto:David.josephus@greenways.com)



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## Mountains to Sea Trail Eastern Segment

### Notes from the Third Meeting

As part of a series of three scheduled task force meetings, the third meeting was held December 16 with great input and attendance. We had some excellent information on what is currently planned and in place in this section. Below are a list of comments we received and discussed as part of the Eastern Segment Task Force Meeting (Craven, Pamlico and Currituck Counties).



The MST Eastern Segment Task Force at its December 16 meeting in New Bern.

#### NC Division of State Parks (views received for third meeting attendees):

- MST will become the back-bone of the State Trail system and will serve as a spine that other municipalities will want to link into.
- Howard Lee (completed the MST idea in the early 1970s).
- Current MST eastern segment was identified through a series of these meetings held last year with the purpose to gain interest and folks willing to become part of the current task force sections.
- Envision MST Eastern Segment as a mix multi-use trail system that parallels the Neuse River corridor as a hard-based and water-based system of trails.
- There is a need for public and private support. This includes partnerships with volunteers, local, local and county governments, in conjunction with state and federal agencies.
- State's role is as a facilitator for funding and partnerships with local governments.
- Funding help can come from State and Federal sources: i.e. Division of State Parks, Clean Water Management Trust Fund, TESA-21, etc.
- Existing MST State Act is a part of the NC State Park System - because of the size of the project, this will only serve where local and county plans have no reach or are so called "throughput holes."
- MST will primarily be in local and county ownership.
- The State can help both local and County governments with securing easements.
- People want trails within a 15 minute walk of populated areas.
- The NC One Natively Project (formerly the Milliken Act) sees the MST corridor as a source for its program.

#### Craven County:

- There are a number of existing boat ramps that currently serve users of the Neuse River.
- Rice's Creek has an excellent paddle trail and ramp.
- Creekside Park has some existing trails and a planned canoe launch.
- Primitive camping is needed along the paddling/hiking trails.
- There are existing trails at Glenbrook Park.
- There is a trail along Lawson Creek.
- City of New Bern has a canoe launch at Harbor Drive.
- The City of New Bern has a greenway and trail Master Plan under way, no time line has been set for completion.
- The City of New Bern has an existing Waterfront Park along the Neuse.
- North Carolina Coastal Land Trust has been working with private land owners along the Neuse River north of New Bern; Duxey Boy peccan restoration and Cool Springs (a Weyerhaeuser property), and Turkey Island.

#### Pamlico County:

- Three paddle trail maps have been produced with over 300 miles available in the county.

- Some areas feature primitive camping.
- The county is working on a cycling plan with trails (no time line has been determined for completion).
- NC 55 widening project will include 4 foot wide bike lanes.
- History and heritage are very important.

#### Currituck County:

- There are 39 miles of land based walking and hiking trails planned or existing as part of the Mombasa City Alternative Transportation (MATAS).
- Sugar Loaf Island has hiking trails.
- There are now boat ramps at 10th Street.
- Mombasa City and Beaufort are working together to have a water-based trail system. Funding is coming through CAMA.
- The Crystal Coast Kayak Club has produced two excellent maps with a third one on the way for paddle trails. They include map one: the Western Currituck Co. White Oak River Area and Bear Island Trails, map two: the Western Currituck Co. Bugae Sound and Newport River Trails, and map three: (not yet printed) Pamlico Currituck Co.
- The maps are very easy to read and provide excellent information on intricacies and distances.



Attend table discussion to identify important attributes of the MST corridor.

#### Pitt County:

- There is interest in greenway expansion along the Tar River that could link into the MST.
- They are developing the Coastal Carolina Rail -Trail.
- Buy-out of flood-prone properties continues along the Tar River.
- In Grifton Park there are primitive camping sites and boat access along the creek and trails.

#### Onslow County:

- The County is very interested in the MST corridor and would like to link to important areas such as Jacksonville and Hoffman Forest.
- Richland Creek has a paddle trail in place.
- Jacksonville is developing a Woodfront Park with trails.
- There is an acquisition of an additional 372 acres for the northern section of Hoffman Forest, and there exists the possibility of trails in this section that could link into the MST.

#### The Conservation Reserve Enhancement Program

- The Conservation Reserve Enhancement Program, or CREP, is a joint State-Federal land retirement conservation program that addresses State and national significant environmental issues related to agriculture. The North Carolina CREP was developed to help protect the Albemarle-Pamlico Estuarine System (APES) from the effects of excessive nutrient and sediment loading due to agricultural runoff.
- CREP can also help with getting agricultural easements in place; water quality (the Neuse could be patterned after the very successful Roanoke River program).
- The Clean Water Management Trust Fund provides funding for CREP programs.
- Farms have the opportunity to lease farm buildings for the use as overnight accommodations to help promote Agri-tourism.
- The Eastern Carolina Council RPO's (Rural Planning Organization) have formed 4 and 5 county planning commissions have been organized to represent the rural areas, and they are interested in the MST.

Need More Information?  
Contact: Cindy Plink, President, Greenways Inc.  
E-mail: [Plink@greenwaysinc.com](mailto:Plink@greenwaysinc.com) or David Josephson,  
Project Manager, Greenways Inc.  
E-mail: [dave.josephson@greenwaysinc.com](mailto:dave.josephson@greenwaysinc.com)



# Mountains to Sea Trail

## Eastern Segment

### Notes from the Second Spring Meeting 2003

As part of a series of three scheduled spring task force meetings, our second meeting was held March 17. This meeting was the first chance for members of the task force to review the MST trail alignment. Below are a list of comments we received and discussed as part of the Middle Section Task Force Meeting (Wayne, Lenoir, and Pitt Counties).

#### NC Division of State Parks: (Recap on Priorities)

- The MST trail will become the backbone of the State Trail System and will serve as a spine that other municipalities will want to link into.
- There is a need for both public and private support to make the vision of the MST a reality. This includes partnerships with volunteers, land trusts, local and county governments, in conjunction with state and federal agencies.
- The State of North Carolina's role is as a facilitator for funding and partnerships with local governments.
- Funding sources and help can come from the State and/or Federal sources; i.e. Division of State Parks, Clean Water Management Trust Fund, TEA-3 (formally TEA-21), etc...
- The existing MST State Act is a part of the NC State Park System - because of the size of this project, this will function where local and county plans have no reach or are the so called "doughnut holes."
- The State can also help both local and county governments with securing easements.
- The NC One Naturally Project sees the MST corridor as a source for its program.



#### General Discussion:

- The need to accommodate equestrian users for some sections of the primary (if possible) and/or secondary trails is desired. There are a lot of horse enthusiasts in the three county area of the Middle Section.
- Kinston has planned a heritage tourist trail that would be ideal to connect into the MST trail system.
- A common theme from both the first meeting (Western Section) and this meeting was the need to connect to historic battlefields sites and markers. Many Civil War enthusiasts have already volunteered a lot of time and effort in planning a Civil War Historic trail that could link into the MST trail system.

- Schools should remain a focal point when looking at links to the MST trail system.
- The Town of Grifton is an ideal link by a canoe trail or a possible land trail by land they are currently hoping to purchase near Town Park.
- Southwest Creek that flows out of Tulls Mill Pond and empty's into the Neuse River, would provide an excellent canoe trail and possible hiking link into the future Kinston trail system, while providing a link into the primary MST trail.
- There is interest into linking the main MST trail into Greenville via Little Contentnea Creek.
- The success of the meeting was like the first meeting, task force members helped to make additional suggestions to the trail alignment and for some additional options or uses.



#### Three Pilot Projects have been identified for the initial first phase of the MST trail:

- From Poole Road (Wake County) to Smithfield (Johnston County)
- Cliffs of the Neuse State Park to Kinston (Lenoir County)
- New Bern to Croatan National Forest (Craven County)



MST Trail (Primary) Length (miles)	
Falls Lake Dam to Poole Road	18.0
Poole Road to Smithfield	28.0
Smithfield to Goldsboro	46.0
Goldsboro to Kinston	34.0
Kinston to New Bern	38.0
New Bern to Havelock	33.0
Havelock to Cedar Island	48.0
<b>Total Length ( approx.)</b>	<b>245.0</b>

## You Are Invited!

Be a part of the last meeting that will feature the presentation of data collected and MST trail alignment in the corridor for review and comment. Please come and give us your comments! The meeting will be held in New Bern on Monday March 31, at the Eastern Carolina Council of Governments from 9:00am to 12:00 noon. A brief presentation of the methodology will be given, followed by a question and answer/ workshop session. We hope to see you there!



## Mountains to Sea Trail Eastern Segment Eastern Zone Task Force Section

### Why a Mountains to Sea Trail?

The Mountains to Sea Trail (MST) will allow users to safely walk or canoe from Falls Lake Dam in Wake County to Cedar Island in Carteret County. The trail will generally follow the Neuse River as both a land-based and water-based trail system.

The Mountains to Sea Trail, Eastern Segment Eastern Zone includes Craven, Pamlico and Carteret Counties, and is envisioned as a high quality recreational facility and community amenity.

The trail will provide a safe and enjoyable option for hikers and water-based users to access area community parks and greenways, residential neighborhoods, businesses and amenities. The trail is a piece of the Mountains to Sea Trail Master Plan that will one day connect the western mountains and communities with their eastern counterparts along the North Carolina coast. This Master Plan is funded by the North Carolina Division of Parks and Recreation, State Trails Program.

### You Are Invited!

A MST Task Force member information meeting will feature the presentation of data collected in the corridor for review and comment. The meeting will be held on Monday, December 16, 2002 at the Eastern Carolina Council of Governments, located in New Bern from 9:30 am to 12:00 noon. A brief presentation will be given, followed by a question-and-answer, and workshop session.



The map below locates the Eastern Section of the Mountains to Sea segment and shows the Trail from the Pitt County limits with the ending point near Cedar Island in Carteret County.



Overall Map of the proposed Mountains to Sea Trail System from Falls Lake Dam in Wake County to Cedar Island in Carteret County North Carolina.

### Project Outline

**2001** - A vision is formulated for a trail segment of the Mountains to Sea State Trail system that would connect Falls Lake Dam to Cedar Island.

**July 2002** - Consultant Greenways Incorporated selected to begin work on trail system that will focus on both a land-based and water-based trail system generally along the Neuse River.

**Present** - A methodology for evaluating land trail options and paddle trail access route for a land and water trail that follows the Neuse River Corridor beginning at the Falls Lake Dam in Wake County to Cedar Island in Carteret County continues. Criteria includes, but is not limited to the:

- Identification of governmental agencies and jurisdictions along the corridor.
- Parks and Recreational facilities and their capacity to support and participate in the trail system.
- Identification of all land uses and land coverage within the 100-year flood plain of the Neuse River (up to a maximum of 1000 feet from the river banks).
- Identification of planned, proposed, and existing trails, and potential linkages between systems.
- Identification of topography and water bodies associated with the study corridor.

### Need More Information?

Contact: Mr. Chuck Flint, President, Greenways Inc.  
E-mail: [flintc@gnw.com](mailto:flintc@gnw.com)  
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## Appendix H: Using GIS Technology

GIS (Geographic Information Systems) provides an excellent means of capturing important natural and human made features across a large regional landscape. The layering of this information into one map shows the spatial relationships between these features. Knowing where these exist allows a more informed, detailed planning process that can highlight, connect, target, or avoid particular landscape features. In the preparation of an accurate map for the MST-East, geographic data important to the trail routing and alignment process were layered and examined to determine suitable and unsuitable areas for the potential MST trails.

At the outset of this project, it was determined that the ArcView GIS platform would be used to plan the regional development of the trail system. First, MST corridor local governments were asked to supply GIS files (shapefiles) such as parcels/land use, trails (existing and proposed), etc. that could aid in the identification of preferred greenway routes. The counties varied in the amount and quality of data available and provided. Next, an exhaustive GIS data search was conducted at such Internet data clearinghouse sites as the United States Geologic Survey, GIS Data Depot, U.S. Fish and Wildlife Service, TIGER 2000, Federal Emergency Management Agency, North Carolina county search engines, and county and city sites. The GIS data were chosen based on necessity, availability and quality (being current and accurate). All data gathered were organized and developed further when necessary. Data development included adjusting the map projection of each file for overlay purposes, clipping to the study area, joining or adding attribute data, and creating new

shape files by either selecting features of an existing shape file or digitizing information and adding it to an existing shape file.

The data were then assembled to produce large, informative, base maps for public meetings, input, and planning. These base maps were created for MST corridor segments and included roads, railroads, streams, town boundaries, existing trails, facilities, parcels/land use and other community assets.

The proposed trail alignments were digitized in the GIS environment, using streams, roads, existing/proposed trails, and key facility locations, as well as parcel/land use information for logical placement of the main trail, along with alternates and spurs.

It is anticipated that each of the local governments will incorporate the MST-East into their various planning efforts and coordinate trail development with neighboring jurisdictions. The result will be a network of greenways and trails that serve eastern North Carolina.



### Data Sources

The GIS map layers collected effectively portray topography, hydrology, land use, road networks, parks, municipality boundaries, and existing trails. The data layers, and accompanying data sources, that were collected and/or derived are as follows:

- North Carolina Center for Geographic Information and Analysis (NCCGIA)
- North Carolina Department of Transportation
- TIGER 2000
- Wake County GIS
- Johnston County GIS
- Wayne County GIS
- Lenoir County GIS
- Pitt County GIS
- Craven County GIS
- Carteret County GIS
- Town of Clayton GIS
- Town of Kinston GIS
- City of Raleigh GIS
- Federal Emergency Management Agency
- United States Geologic Survey

