

Brunswick County Greenway, Bikeway, & Paddle Trail Plan

January 2017

What is a Greenway Trail?

A long, narrow piece of land, where vegetation is encouraged, which is managed for public recreational and pedestrian travel.



What is a Bikeway Trail?

*A designated route for bicyclist travel typically along a roadway
In some places bike lanes are added to provide safer experience.*



What is a Paddle Trail?

A long, water path that is developed with interconnected launch points for canoeists, paddle boarders and kayakers. May include camping locations and other points of interests along the path.



PROJECT SCOPE

- County-wide
- Identify existing Greenway, Bikeway, & Paddle Trail Network
- Not a typical plan – very usable to everyone!
- Two components of the Plan
 - Existing Map
 - Proposed Map



PROJECT SCOPE

1. Existing Trail Map

- Show Existing Locations for Walking, Biking, & Paddling
- Existing Paddle Trail Access Sites
- Its County-wide Promotional Tool that will function as the County-wide Plan
- Show existing trail networks as well as water access sites and trailheads
- Printed hard-copy, Full-color, & outdoor-friendly
- 20,000 copies to be printed
- Show connects between municipalities and other important destinations
- Available Online

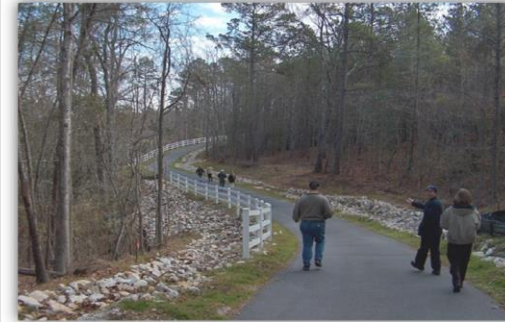
2. Proposed Trail Map

- Conceptual Map
- Identifies Future Trails Needs
- Connect Missing links
- A vehicle to conserve wildlife habitats and open spaces in Brunswick County
- Promote recreation
- Help fund Walking, Biking, & Paddling Facilities



Where have we been

- Started April 2015
- Secured Funding
- Hired Consultant
- Public Input Component
- Reach Out to Stakeholders & Large Land Owners & Special Interest Groups
- Research and vetting trail routes
- Drafted Maps



Brunswick County Greenway & Blueway Public Input Meetings

We want to hear from you!

Are you interested in biking, walking, kayaking, wildlife or preserving our natural resources? Brunswick County Planning Department is embarking on a project that will create a network of trails, preserve our natural resources, and provide a tool to find trails and water access sites. Join us and give us your thoughts and ideas on creating a Greenway & Blueway network throughout Brunswick County at either of the two convenient public input meetings.

**MARCH 1, 2016
6:30PM – 8:00PM**

**Town Creek Elementary School
6330 Lake Park Drive SE
Winnabow, NC 28479**

**MARCH 2, 2016
6:30PM – 8:00PM**

**Shalotte Town Hall
110 Cheers Street
Shalotte, NC 28470**



**BRUNSWICK COUNTY
PLANNING DEPARTMENT**

PO Box 249
Bolivia, NC 28422

www.brunswickcountync.gov

For more information contact Kirstie Dixon
at Kirstie.Dixon@brunswickcountync.gov
or 910-253-2027

Working Together & Creating Partnerships



Town Participation

❑ Large Population Center

- Neighborhoods
- Commercial Center
- Large Residential Population Base

❑ Great Destination

- Example: Brunswick RiverWalk at Belville & Shallotte Town Center
- Landmarks
- Schools
- Commercial Areas
- Water Accesses/Piers
- Parks/Nature Parks
- Community Garden
- Cultural Arts Center

❑ Existing Facilities and Trails

- Water Access
- Parks
- Residential Neighborhoods
- Birding Trails



Project Revealed



- Most Existing Routes are On-Road
 - East Coast Greenway Routes
 - NC State Bike Route #3
 - Existing local bike routes
- Limited Existing Hard Surface Off-road Facilities
 - Brunswick Forest Multi-Use Trail
 - Brunswick Riverwalk at Belville
 - Carroll Street Bike Trail
- Need to Widen Focus to includes Nature Trails
- Need for comprehensive source for Paddle Access Sites.
- Large Community Interest in Trails
- Exciting Destinations
- Variety of Existing Trail Types Exist
- Variety of User Types
- Variety User Needs

Plan Theme & Branding

More

THAN A

Trail

What is a Trail Network?

AKA Greenway, Bikeway, Off Road Trail, Multi-use trails

An system of routes for walking and biking for the traveling public that connects designations together



EXISTING MORE THAN A TRAIL MAPS

- 2 Maps
- Existing Routes
 - NC Port of Call (Bike Route 3)
 - East Coast Greenway
 - Town Bike Routes
 - Holden Beach
 - Leland
 - Identified Places Regularly Biked
 - Boiling Spring Lakes
- Off-road Facilities
 - Brunswick Multi-Use Trail
 - Carroll Street Bike Trail
- Identified Parkland & Preserves with Walking Trails
- Ensure Routes that Connected Communities & Destinations

EXISTING MORE THAN A TRAIL MAP

COUNTY WIDE MAP

Side #1

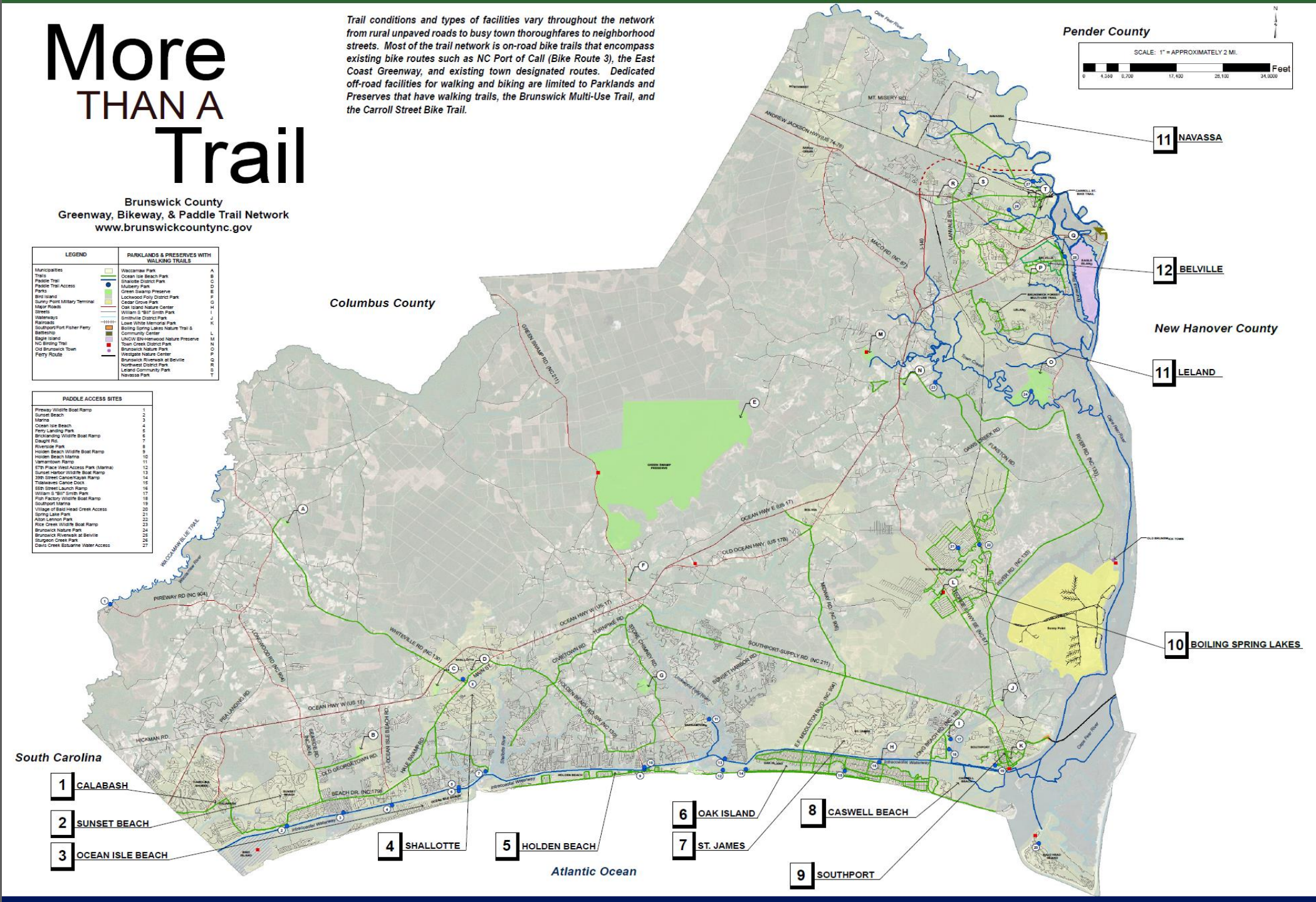
More THAN A Trail

Brunswick County
Greenway, Bikeway, & Paddle Trail Network
www.brunswickcountync.gov

LEGEND	
Municipalities	Walden Park
Trails	Ocean Isle Beach Park
Paddle Trail	Shades Creek Park
Paddle Trail Access	Mulberry Park
Parks	Green Swamp Preserve
Bird Island	Lockwood-Folly District Park
Survivor/Military Terminal	Cedar Grove Park
Major Roads	Oak Island Nature Center
Streets	William S. "Bill" Smith Park
Waterways	Smithville District Park
Railroads	Low White Memorial Park
Southport/Fisher Ferry	Boiling Springs Lakes Nature Trail & Community Center
Battleship	UNCW Environmental Nature Preserve
Island	Town Creek District Park
NC Biking Trail	Brunswick Nature Park
Old Brunswick Town	Westgate Nature Center
Ferry Route	Brunswick Riverside at Beville
	Northwest District Park
	Leland Community Park
	Navassa Park

PADDLE ACCESS SITES	
Pineau Wildlife Boat Ramp	1
Sunset Beach Marina	2
Ocean Isle Beach Ferry Landing Park	3
Brickland Wildlife Boat Ramp	4
Doughty Rd	5
Riverside Park	6
Holden Beach Wildlife Boat Ramp	7
Holden Beach Marina	8
Vanderhook Farm	9
57th Place West Access Park (Marina)	10
Sunset Harbor Wildlife Boat Ramp	11
20th Street Canalboat Ramp	12
Tidewater Canal Dock	13
15th Street Launch Ramp	14
William S. "Bill" Smith Park	15
Plant Factory Wildlife Boat Ramp	16
Southport Marina	17
Village of Easthead Creek Access	18
Spring Lake Park	19
Abbot Lottum Park	20
Rice Creek Wildlife Boat Ramp	21
Brunswick Nature Park	22
Brunswick Riverside at Beville	23
Southport Marina	24
Davis Creek Estuarine Water Access	25
	26
	27

Trail conditions and types of facilities vary throughout the network from rural unpaved roads to busy town thoroughfares to neighborhood streets. Most of the trail network is on-road bike trails that encompass existing bike routes such as NC Port of Call (Bike Route 3), the East Coast Greenway, and existing town designated routes. Dedicated off-road facilities for walking and biking are limited to Parklands and Preserves that have walking trails, the Brunswick Multi-Use Trail, and the Carroll Street Bike Trail.



Pender County
SCALE: 1" = APPROXIMATELY 2 MI.
Feet
0 1,588 3,176 4,764 6,352 7,940 9,528 11,116 12,704 14,292 15,880 17,468 19,056 20,644 22,232 23,820 25,408 26,996 28,584 30,172 31,760 33,348 34,936

South Carolina

Atlantic Ocean

- 1 CALABASH
- 2 SUNSET BEACH
- 3 OCEAN ISLE BEACH
- 4 SHALLOTTE
- 5 HOLDEN BEACH
- 6 OAK ISLAND
- 7 ST. JAMES
- 8 CASWELL BEACH
- 9 SOUTHPORT
- 10 BOILING SPRING LAKES
- 11 LELAND
- 11 NAVASSA
- 12 BELVILLE

IMPORTANT CAUTION INFORMATION

Trail conditions and types of facilities vary throughout the network from rural unpaved roads to busy town thoroughfares to neighborhood streets. Most of the trail network is on-road bike trails that encompass existing bike routes such as NC Port of Call (Bike Route 3), the East Coast Greenway, and existing town designated routes. Dedicated off-road facilities for walking and biking are limited to Parklands and Preserves that have walking trails, the Brunswick Multi-Use Trail, and the Carroll Street Bike Trail.

EXISTING MORE THAN A TRAIL MAP

INSET MAP

Side #2

More THAN A Trail

Brunswick County
Greenway, Bikeway, & Paddle Trail Network

SHALLOTTE

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

4

CASWELL BEACH

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

8

BELVILLE

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

12

CALABASH

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

1

HOLDEN BEACH

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

5

SOUTHPORT

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

9

CONSERVING WILDLIFE THROUGH TRAILS

Trails are a great way that communities can protect wildlife habitats as well as promote water and air quality. In North Carolina, over one-third of our 1,000 wildlife species are declining. Brunswick County is considered an ecological gem with many areas of high environmental importance and a diverse landscape that offers a dynamic mix of vegetation, wildlife, ecosystems, vernal wetlands, and waterways. Brunswick County and the Cape Fear Region are part of a unique geologic region called the Cape Fear Arch (http://capefeararch.org/about/) with over 50 endemic species of plants and animals found nowhere else in the world and home to the tenth highest diversity of bird and reptile species in the nation. Most conservation lands in Brunswick County work to preserve and manage the largest pine ecosystem which has transitorily declined along the western edge of the Brunswick County river the mighty Waccamaw River that is home to 19 endemic aquatic species (http://www.enr.com/). People that all over come to experience and enjoy Brunswick County's beautiful and unique landscape. This has led to tremendous growth over the last few decades. With this growth, Brunswick County is balancing population growth and the need for new development to be sensitive to the environment. Several endangered plant and animal species are located in Brunswick County such as the Venus Fly Trap, Pitcher Plant, and the rare Pine Barrens Tree Frog.

Brunswick County uses various tools to achieve this balance. Among the newest tools is the creation of a network of proposed greenways and water trails that incorporate various restrictions that could aid in conservation and increase the overall quality of life for residents and visitors. This trail network will serve the needs of bicyclists, pedestrians, and paddlers. To maintain important habitats along the trails, it is ideal to encourage conservation of wild areas through the use of wide trail corridors, native plantings, trail placement on the edge of natural areas, tree canopy across the trail, and minimize disturbance along the trail. Through foresight in the planning and design, an excellent network of connected facilities as well as habitats for natural areas is provided. It will also provide better protection for waterways. Another tool that Brunswick County has is the Unified Development Ordinance (UDO) that promotes quality development by providing flexibility with site design requirements that encourage conservation of natural features, the use of Best Management Practices (BMPs) techniques such as Low Impact Development (LID), tree conservation, and wildlife-friendly development practices and the Green Growth Tool Box (http://www.nowildlife.org/ConservingPrograms/GreenGrowthToolbox.aspx).

Another important component of this network planning effort is the identification of future trails for planning purposes. Persons interested in information concerning the location of future trails, including developers or environmental groups are encouraged to contact the Brunswick County Economic Development and Planning Department at 910-253-2025.

SUNSET BEACH

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

2

OAK ISLAND

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

6

BOILING SPRING LAKES

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

10

BICYCLE LAWS OF NORTH CAROLINA

In North Carolina, the bicycle has the legal status of a vehicle. This means that bicyclists have full rights and responsibilities on the road and are subject to the law and regulations governing the operation of a motor vehicle.

NORTH CAROLINA TRAFFIC LAWS REQUIRE BICYCLISTS TO:

- Ride on the right in the same direction as other traffic.
- Obey all traffic signs and signals.
- Use hand signals to communicate intended movements.
- Equip their bicycles with a front lamp visible from 300 feet and a rear reflector that is visible from a distance of 200 feet when riding at night.

IN ADDITION THE CHILD BICYCLE SAFETY ACT OF 2001 REQUIRES THAT:

- All bicycle operators under 10 years of age wear a bicycle helmet on public roads, public paths and public right-of-ways.
- All child passengers under 40 pounds or 40 inches must be seated and secured in a child seat or a bicycle trailer.

OCEAN ISLE BEACH

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

3

ST. JAMES

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

7

LELAND & NAVASSA

LEGEND

- Coastal Municipality
- Public Trail
- Private Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access
- Coastal Municipality
- Public Center
- Public Trail
- Public Access

11

PADDLE SAFETY TIPS

SAFETY EQUIPMENT CHECKLIST:

- Flotation Gear (Paddlers require Coast Guard approved Type 1, 11, 111, or IV personal flotation device for each passenger)
- First Aid Kit (Add insect repellent and sunscreen)
- Life jackets
- Low and stern lines
- Fluoright and extra blades
- Sound distress signal (i.e. whistle or horn)
- Chart or map of the area

KNOW THE WATER:

- Check recent and predicted weather conditions
- Find out about river conditions (i.e. flooded, low, or normal)
- A flooded river is often dangerous and should not be paddled
- A low river may expose logs and stumps, requiring many lift-overs or portages, which make it slower and more difficult
- Coastal streams are affected by wind tides which can create flow in both directions
- Windy conditions can affect watercraft, especially on wide coastal rivers

PLAY IT SAFE:

- Secure your car and take keys with you
- Paddle in a group or with a buddy
- Watch for motorboats and swimmers. Stay to the right and turn the bow into the wake
- Let someone know your plans (i.e. where you are paddling and when you plan to be back)
- Have food and gear in water-tight containers and be secure in the watercraft
- Carry drinking water
- Be paddling at night or in limited visibility, use a light to make your vessel more noticeable to other boat traffic

RESPECT PROPERTY:

- Don't litter or pollute the water with trash or other waste
- Don't tug trees or bushes around
- Access to private land should be by invitation only
- Camp only in designated areas to avoid trespassing

Existing Greenway, Bikeways, & Blueways Facilities in Brunswick County

○ Greenways

- Brunswick Forest Multi-Use Trail
- Brunswick Riverwalk at Belville

○ Parkland & Preserve Trails –

- Brunswick Nature Park
- Boiling Spring Lakes Preserve
- UNCW Ev-Henwood Nature Preserve
- The Nature Conservancy Green Swamp Trails
- Oak Island Trail

○ Bikeway Routes

- NC Ports of Call (Bike Route 3)
- East Coast Greenway
- Sunset Beach
- Southport
- Oak Island
- Leland
- Navassa

● Blueways

- Town Creek Blueway
- North Brunswick Blueway

● Waccamaw River Blue Trail

- Eagle Island Trails
- Oak Island Davis Canal
- Sunset Beach
- Rice Creek
- Bald Head Island

● Festivals

- Oak Island Ride the Tide: Kayak Race & Float (May 13, 2017)
- Nature Fest Southport (April 29, 2017)
- Sunset Beach Paddle Fest (TBD)

PUBLIC EDUCATION COMPONENT

CONSERVING WILDLIFE THROUGH TRAILS

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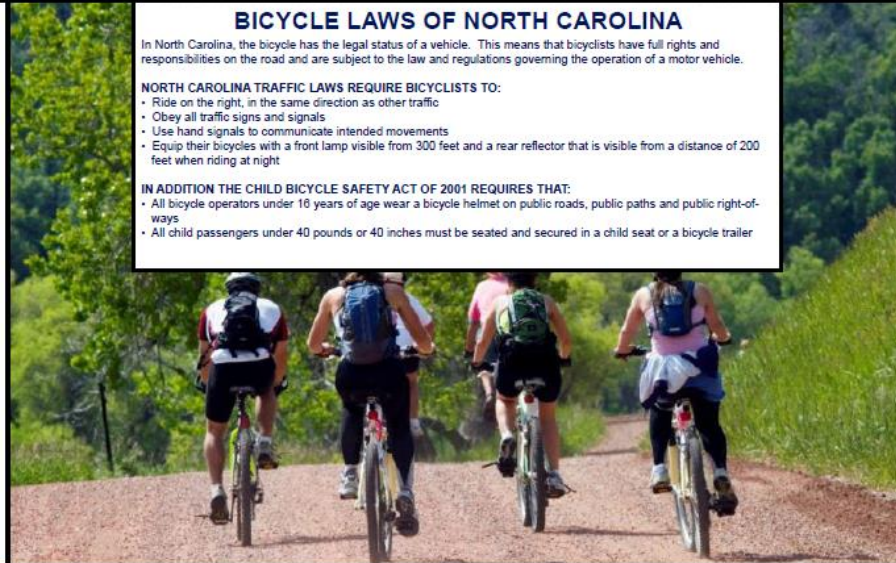
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- All child passengers under 40 pounds or 40 inches must be seated and secured in a child seat or a bicycle trailer



PADDLE SAFETY TIPS

SAFETY EQUIPMENT CHECKLIST:

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- First Aid Kit (Add insect repellent and sunscreen)
- Extra paddle
- Bow and stem lines
- Flashlight and extra bulbs
- Sound distress signal (i.e. whistle or horn)
- Chart or map of the area

KNOW THE WATER:

- Check recent and predicted weather conditions
- Find out about river conditions (i.e. flooded, low, or normal)
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PLAY IT SAFE:

- Secure your car and take keys with you
- Paddle in a group or with a buddy
- Watch for motorboats and yachts. Stay to the right and turn the bow into the wake
- Let someone know your plans (i.e. where you are paddling and when you plan to be back)
- Place food and gear in water-tight containers and tie them securely to the watercraft
- Carry drinking water
- If paddling at night or in limited visibility, use a light to make your vessel more noticeable to other boat traffic

RESPECT PROPERTY:

- Don't litter or pollute the water with trash or other waste
- Don't cut living trees or harass animals
- Access to private land should be by invitation only
- Camp only in designated areas to avoid trespassing



PROPOSED MORE THAN A TRAIL MAPS

- Conceptual Map
- Not funded
- Exact locations, layouts and the routing of all trails and access sites will be designed and built on a case-by case basis and are subject to changes based upon on-the-ground surveys, agreements with private land owners, and local jurisdiction approvals as well as funding availability.
- Off-road trail facilities with a hard surface encouraged
- The use of on-road bike lanes and natural surfaces are viable alternatives when hard surface off road facilities are not feasible
- Native plantings and wide corridors are encouraged
- Camping along paddle trails encouraged.

IMPORTANT INFORMATION FOR FUTURE TRAIL DEVELOPMENT

This map is for conceptual purposes only and not funded at this time. Exact locations, layouts and the routing of all trails and access sites will be designed and built on a case-by case basis and are subject to changes based upon on-the-ground surveys, agreements with private land owners, and local jurisdiction approvals as well as funding availability. Off-road trail facilities with a hard surface are desired and encouraged for all trail routes. The use of on-road bike lanes and natural surfaces are viable alternatives when hard surface off road facilities are not feasible. Native plantings and wide corridors are encouraged along the entire trails network especially in Conservation Focus Areas. Camping along paddle trails are also desired and encouraged.

Next Steps.....



Questions, Thoughts, Feedback



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