French Broad River Paddle Trail
Blueway Planning and Design in Western North Carolina

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Summary

The French Broad River is an important part of the Western North Carolina region, serving as a source of water and recreation for residents and visitors. Though some portions are popular for paddling, as a whole the river is under utilized for boating and lacks connection to the surrounding communities. Through the concept of a water trail, or blueway, the French Broad River could become an additional recreation destination for the region allowing boaters to create short or long trips. This report looks at the existing conditions along the river and proposes enhancements in wayfinding and facilities to help guide users and allow for longer, overnight trips on the river. An additional focus on the towns along the French Broad River is suggested to both tap into river usage and increase the connection between these hub towns and the waterway.
Background

The Upper French Broad watershed encompasses a large portion of Western North Carolina, including Buncombe, Henderson, Madison and Transylvania counties. The river itself begins at the junction of the North and West Forks of the French Broad, just west of Rosman. Along its 116 mile course the French Broad flows past the towns of Rosman, Brevard, Asheville, Marshall and Hot Springs before entering Tennessee.

The river has been paddled in sections from its headwaters to the confluence with the Holston River and beyond. In North Carolina the majority of the river is class I or II whitewater with the exception of section 9, from Barnard to Hot Springs, which is the most difficult whitewater with class III-IV rapids.

Area: 2,830 square miles

Watershed Population:
344,472 (2000)
453,013 (2020 est.)

The watershed contains the regional hub of Asheville. Development in the area has been driven by the scenic and lifestyle amenities available in the mountains. Currently it is development that poses the greatest threat to the water quality of the French Broad. Sedimentation and stormwater issues will require a greater involvement from developers and citizens to help ensure protection of the region’s water resources.
Water trails, paddle trails, canoe trails, blueways—these names refer to rivers or lakes that have been designated as amenities for boaters. Most are aimed at human-powered craft such as canoes or kayaks. While many water bodies have been traditionally used as paths for transportation, today many communities are reconnecting with their waterways for a variety of benefits. One good definition comes from the National Park Service:

A water trail or blueway, is a stretch of river, a shoreline, or an ocean that has been mapped out with the intent to create an educational, scenic, and challenging experience for recreational canoers and kayakers. RTCA Program, NPS

A key concept is that the trail has many facets beyond just recreation. Education on watershed issues and impacts can be a part of such trails. For small towns along rivers the economic benefits can also be a large part of establishing a water trail.

Water trails have risen in popularity as a means to enhance the connection between waterways and communities. In addition is the concept that engaged users are more involved in water quality efforts.

For the French Broad River Paddle Trail a large number of projects were looked at to investigate issues and methods used in establishing and managing water trails. No one project captured all the facets, but by looking at many examples a more complete picture was found regarding how different groups have created and managed their water trails.

Rivers and lakes that have had a long history of paddling were some of the first formal water trails. The Northern Forest Canoe Trail, at 740 miles, is one of the longest trails, drawing comparisons to long distance hiking trails. Along the East Coast an active paddling community has established extensive water trails through the many coastal wetlands and estuaries.

What is water trail?

Water trails have risen in popularity as a means to enhance the connection between waterways and communities. In addition the concept that engaged users are more involved in water quality efforts.

Studies have been done in New England, North Carolina, Virginia and South Carolina to identify characteristics of river users. The typical water trail participant closely matches the profile of tourists to the region. While this type of user is able to travel and spend more, there is also a need to engage with those living in the watershed regardless of income and education.

Typical Water Trail Participant:

- Male
- 35-40 year old
- Yearly income: $75,000-$100,000
- College Educated

Studies have been done in New England, North Carolina, Virginia and South Carolina to identify characteristics of river users. The typical water trail participant closely matches the profile of tourists to the region. While this type of user is able to travel and spend more money there is also a need to engage with those living in the watershed regardless of income and education.

Research done on the Northern Forest Canoe Trail and in North Carolina found that trail users travelled up to 3.5 hours to the destination river. Applied to the French Broad River this range would capture a number of population centers in the Southeast. Within the shaded area on the map live approximately 22 million people.
A number of studies have been done to try and evaluate what impacts on the local economy might originate from river recreation. While the direct spending from rafters, canoeists, and kayakers is not enough to solely support a hub town, the additional impact can help diversify the local economy and be a significant part of some businesses. Spending has been found to typically fall in a few categories such as travel, food, and supplies. The amount that a group might spend on a trip can vary between $250 and $500. Some of these findings are summarized below.

**North Carolina Paddle Tourism Study 2008 (NC)**
When traveling out of their home area (50 miles+), river users spent $504 per trip. When traveling in their home area, river users spent $144 per trip.

**Economic Impact on Rural Communities, Northern Forest Canoe Trail (ME, NH, VT, NY)**
The median paddler group spent $215 per trip, primarily at lodging establishments, restaurants, grocery stores, and service stations. Non-locals spent an average of $414–498, or $46 per person per day. The most common expenses were lodging (54%), restaurants (59%), groceries (56%), and transportation (45%). 9.4% of paddlers used guides or outfitters. 31% reported other retail purchases.

**Use and Economic Importance of the Lower Farmington River and Salmon Brook (CT)**
Assuming that they spend $24.76 per person per visit, the economic impact of this would be conservatively between $493,000 and $669,000 per year.

**New River State Park Study (VA)**
Based on an average expenditure of just over $30.46 per person per visit, non-local spending in the surrounding four-county economy related to using the New River was just over $2 million annually.

Overall economic impact can take into account all of the spending related to river activities. While users of a water trail cannot solely support a local economy, the added income helps to diversify economies in small towns along the trail.

Water trails can be managed by a variety of groups or agencies. In some cases state departments of natural resources head up efforts to establish and maintain trails. More often there are community groups that initiate the water trails and take on the long term management. "Friends of..." groups are a common way of creating a non-profit entity that can rally volunteers and organize work to maintain and promote the water trail.

In establishing and managing facilities, most trail follow the "Leave No Trace" philosophy to minimize impact and maintenance requirements. Primitive facilities for camping and access require fewer resources and meet the expectation of many outdoor enthusiasts. A few trails do provide more developed camping options in the form of cabins, shelters, or tree houses. On longer trails, particularly in New England and on the Suwanee River in Florida, an effort has been made to connect river users to accommodations in towns along the trail. This can provide a greater range of options for trail users who may not seek wilderness experiences.
Today the French Broad River has become a usable resource for the people of Western North Carolina. Boating and fishing are both viable uses. This has come about due to many efforts of individuals and groups to improve the quality of the river. Much of this work started when the French Broad was severely degrade during the 20th century. Wilma Dykeman, with her book “The French Broad”, rose awareness of the harm that had been done to the river by industry and mismanagement. While the water quality has improved since the 1960s and 1970s, the French Broad still faces threats.

Major threats:
• Sedimentation
• Streambank erosion
• Loss of riparian vegetation
• Urban and agricultural runoff
• Development

RiverLink and other local and regional conservation organizations are leading efforts to improve water quality. Much of this work focuses on stormwater runoff and stream rehabilitation. Low Impact Development strategies are also encouraged for new construction to reduce the negative impacts of development.

Efforts:
• Streambank restoration
• Stormwater Best Practices
• Riparian Easements
• Land Conservation
River Characteristics

In traveling through the French Broad watershed different characteristics of the landscape were seen, which fall into 3 categories.

Agricultural

Found in Transylvania and Henderson Counties, this landscape type is characterized by a broad flood plain and an incised stream channel. The banks of the river are 6 to 8 feet above normal water level.

Urban

As the French Broad approaches Asheville and Buncombe County there is more development that occurs within sight of the river. Interstates 40 and 26, along with other secondary roads, cross over on large bridges. At Asheville the concentrated industrial development of the River District appears, followed by businesses and junkyards near Woodfin. This section ends at Craggy Dam, the first impediment in 75 miles of free flowing river.

Mountain

In Madison County the character changes again as the French Broad passes through the mountains to Tennessee. The river speeds up and more whitewater is encountered. Outside of the town of Marshall, the riverbanks are forested and within the Pisgah National Forest the most difficult section of river is found. It is a much more confined and wild part of the French Broad before reaching Douglas Lake in Tennessee.
Gap Analysis

Access to the river is generally good along its length. Distances are short enough to allow for short half-day trips to full day excursions. There is only one stretch, from Blantyre to Westfeldt Park, that presents an unusually long journey. Access points fall into a number of jurisdictions ranging from local towns to Federal agencies.

Access points listed here are developed areas and do not include informal accesses such as bridge crossings.
The majority of land along the river is in private ownership. Public lands are concentrated in the Pisgah National Forest in Buncombe and Madison Counties. Current access points fall on small public lands maintained local city or county departments.

The issue of public lands impacts those wishing to camp along the French Broad. Outside of the Pisgah National Forest, no public access points allow camping. Existing campgrounds along the French Broad are all private businesses. Only one, Asheville Outdoor Center, is geared toward river users with access facilities and boat rentals.
Obstacles

The primary navigational obstacle comes from dams on the river. There are only 3 but none currently have adequate portages that provide safe and clear routes around the dams. The Capitola Dam, just upstream of Marshall, presents the most difficult obstacle due to walls along river right that prevent reentry. A possible access in this area could allow portaging of this dam.

All of the dams are in active use. Due to concerns over infrastructure security strategies to negotiate portages require greater cooperation from paddlers and utilities. Currently informal portages have been used by those who paddle longer stretches of the river, but promotion of a formal water trail will require safe, developed routes around dams.

Current Conditions Summary

Information
Lack of comprehensive information to promote and identify river facilities

Overnight Options
Few options for extended river trips

Land ownership
Private land ownership restricts options for long trips, requires more negotiation in establishing facilities

Economic Benefit
Paddlers can help to diversify local economy

Hydroelectric Dams
(1) Craggy Dam 10' (MSD)
(2) Capitola Dam 8' (FBEMC)
(3) Redmon Dam 25' (Progress Energy)
Wayfinding

Facilities

There are many facets to creating a paddle trail on the French Broad River, from promotion to politics. Design focus for this report is on elements that will improve visibility and allow for variety of trips to be assembled. These recommendations respond to observations made in the area and are ones that could be easily implemented.
Wayfinding

Currently there is a lack of information on the ground to lead potential boaters to different sections of the water trail and allow them to assemble trips easily. To help address this a unified system of wayfinding is proposed that can guide the public to access points and campsites along the river.

Key elements of the overall system are to give guidance at decision points along roadways and the water trail. Communicating where to go, what’s ahead, where you are at and safety information are important for ensuring that a level of uncertainty might be removed from the trip. For the French Broad Paddle Trail a hierarchy is setup from major interstates and highways down to the riverside access point. On the river certain information can be given to aid in navigation and clearly indicate camping areas and private lands.

Signage can be seen as falling into six categories:

- **DIRECTIONS**: showing the way, where to go
- **IDENTIFICATION**: name of parks/access, camping sites, area amenities
- **WARNING**: dams, hazards, portages
- **REGULATORY**: “leave no trace” camping, private land, hours of operation
- **OPERATIONAL**: river safety, visual river gauge
- **INTERPRETIVE**: significant sites along the way

A standard symbology is used starting at the interstate. Size and color of signs are limited along Federal and State roads, but within these parameters a system could be put in place to trail users entering western North Carolina to access points.

In the example above, at Hominy Creek, the existing conditions lack any signage to aid in getting to the park access. This proposed scenario would address all points where decisions have to be made, from the exit off of I-240 to the parking lot.
To the left is a sample of signage types for the paddle trail. These would follow standardized methods of manufacturing currently used for roadway signs.
Roadways
Signage in context on roadways.

On the water
Signage in context on the river.
In addition to standard signage, there could be a need for a simple, durable visual identifier to communicate that the trail user is in the right place.

This proposed signage is made from Corten steel with the canoeing icon cut out. Corten steel is commonly used for exterior applications. It has a surface rust which protects the material and would give an appearance that is not obtrusive within the surrounding environment but has a unique look that can indicate areas associated with the French Broad River Paddle Trail.
Online material can serve as a timely point of information for planning trips and learning about current conditions. Online media can also be used as a means of promotion, hosting trip reports and news of events. Most water trails have a corresponding website that provides information on both the trail and the organization maintaining it.

With the growing number of smartphone users, GPS and location technologies are becoming widespread. Applications could be created that connect information to users as they travel the river and interact with hub towns along the way.

The system of planning river trips begins before heading out on the water. Through the internet comprehensive information can be communicated about the trail, hazards and other resources. Part of this element could be simple section maps/guides that could be downloaded and printed. These guides can communicate vital information about location of access points, accommodation options and area amenities such as restaurants and outfitters.

Example: Download & Print Section Guide
The number of camping options currently hinders trips longer than one day on the French Broad. To create more sites will require cooperation from local landowners. Typically low impact campsites involve a minimal amount of maintenance and would occupy land along the river that cannot be developed due to flood risk. Liability is a common concern for landowners approached about creating campsites. This issue has been dealt with by the state and defined in North Carolina Statute to limit liability of landowners who allow recreational use of their lands.

In the proposal new campsites would be added on the upper reaches of the river where there are no existing sites. Some landowners in this stretch have already expressed interest in placing camping along the French Broad, in addition to lands held by groups like RiverLink. In Madison County new sites could be developed on National Forest land in areas already used for camping.

The overall aim is to create camping options spaced at 10-12 mile intervals. This would allow for a variety of multi-day trips to be put together.
Current Campsite:
- Picnic table
- Simple fire ring (where appropriate)
- Clearing for tent

Bankfull elevation:
Point where more permanent vegetation starts, where flooding is considered to begin.

Improved access:
Ramp or steps to improve ease of access. Can be constructed of timbers, stone, or concrete depending on location. All efforts should be made to create resilient access point.

The model for campsite design would be “Leave No Trace” practices. This method provides minimal amenities, such as tent pad, table and fire ring (if appropriate). Sites would be design to accommodate 2-3 parties. Signage would be used to indicate the site and where private property was located. Additional information could be indicated such as fire restrictions and distances to the next access/campsite.

Prototypical arrangement of campsite elements. Varies with local conditions.

One aspect of the camping site would be to have space that could accommodate larger groups or higher than expected numbers at the site.
Access Points

Existing spectrum from river bank to constructed with facilities

Access points are the other facility on the river that allow users to take advantage of trips on the French Broad. Currently the quality of access varies from nonexistent to highly developed. Maintaining these facilities is a challenge due to the streambank environment. To help create a recognizable system of access on the paddle trail a spectrum is proposed that locates more developed access points at hub towns and high use areas. Two examples will be presented to illustrate some of the improved elements.

**Proposed River Access Quality**
- **Developed - Hub towns**
- **Developed - Parking/Restrooms**
- **Developed - Parking and access**
- **Semi-primitive - some improved access**
- **Unimproved**

**Hub Town Location:**
Site with developed parking and access, restroom facilities on-site or nearby, picnic tables and grills. Signage kiosk indicating trail, location and area information. Site should be integrated with area amenities.

**Developed I:**
Sites that have parking for greater than 4 vehicles and an improved, hardened access. Signage indicating trail and location.

**Developed II:**
Sites that have parking for greater than 10 vehicles and improved and hardened access, and restroom facilities. Signage indicating trail, location and area information.

**Semi-primitive:**
Sites that have some parking and minimally improved access to provide safe transfer to the river. Signage indicating trail and location.
The key to developing access points is to create resilient places that allow for ease of entry/exit to and from the river. Due to fluctuations in water levels much has to be done to fortify improvements to keep them in place. Also part of the access points is a plan for long-term maintenance so that repairs are made as needed and that the overall quality of the paddle trail does not suffer.

Materials for access points. While each site requires a specific solution, using durable materials will be key to maintaining high quality access.

New access point on Coosawatee River, GA
Ledges Park is used as an example of an existing access that could be improved and made a starting point for day trips down river to Marshall - a 11 mile trip.

The park is popular with area kayakers as a park and play spot. It is also a starting point for cyclist riding Highway 251 to Marshall. This typically results in heavy use on weekends and afternoons. Ledges is close to the population center of Asheville and is the first access below Craggy Dam.

Key elements for the site would be improving boat access from the parking lot, hardening pathways and creating a defined launching point. Additionally, vegetation could be planted throughout the site to help prevent erosion of the streambank.

**Existing condition**
- No defined launching point
- Eroded condition of landscape
- Poor condition of picnic fixtures

**Proposed condition**
- Enhance plant materials
- Harden pathways
- Repair existing picnic facilities
- Create boat launch from natural stone
- Create wider stairs and boat slide to aid in transporting boats from parking to water
Hub towns can provide services for boaters and connect communities to the river. This can help these towns tap into the economic benefits possible from river trips. The region is already a popular destination for outdoor activities and the paddle trail could be a major part of the active lifestyle in the region.

Also, by making the paddle trail and the French Broad River more visible within the local community a greater awareness of the river can be instilled in residents and visitors.
Example: Jean Webb Park

The Jean Webb Access in Asheville serves as a prototypical example of how improvements could enhance the river experience and increase the connection between river and town. Currently the access point is in marginal condition, heavily impacted by the river and erosion. Being under the Haywood Street bridge has the benefit of creating a unique urban location. The small park is the most accessible to Asheville residents on foot, but has a marginal feel due to its isolated location within the River Arts District.

Jean Webb has great potential to be a key part of the riverside and future greenway plans. By developing the access point there is the possibility of creating a major point of interest in the River Arts District and a place where river travelers can be guided to amenities in the immediate area and in Asheville.

These hub town access points can serve as more than just a stop along a river trip. Many of the French Broad towns have a poor connection to the river they are built on. Developing facilities for paddlers and residents can help increase the interface between city and river and increase open space resources.

The hub town access can also incorporate information about local businesses that are nearby. This could expand the river trip beyond a primitive, nature-based experience to allow users to visit shops, restaurants and accommodations in the riverside towns.

Shown are examples of developed waterside areas. The access points at hub towns can be places that celebrate the river and foster the interaction between people and the water. Using materials that can hold up to both changing river conditions and greater use can create areas ideal for open space within the adjacent towns.
Proposed view of improved Jean Webb Access

Enhancing these access points can create open space destinations within hub towns. Rather than marginal spaces, the riverside can become a place for both river users and residents to experience the French Broad River.
Conclusion

The French Broad River is a feasible candidate for an organized paddle trail that could be of great value to the region. Already portions of the river are active and provide economic impact to the surrounding communities. Increasing the visibility of short and long trips on other parts of the French Broad could add to the diversity of activities available in the watershed and increase the public's awareness of water quality issues. Greater involvement on the river would create a connection between water quality and each individual's impact within the watershed.

With small steps such as wayfinding, the various sections can begin to be linked together and make it easier for locals and visitors to use the river with confidence in where they are and where they are going. Creating a paddle trail on the French Broad will be an ongoing process, but with foresight the entire river can be made a recreational amenity for the region.

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