

# **LUMBER RIVER**

2(a)(ii) Wild & Scenic River  
Study Report

**DRAFT**



United States  
Department of the Interior

National Park Service

Southeast Region

January 1998





IN REPLY REFER TO:

## United States Department of the Interior

NATIONAL PARK SERVICE  
Southeast Regional Office  
Atlanta Federal Center  
1924 Building  
100 Alabama St., S.W.  
Atlanta, Georgia 30303

April 17, 1998

Dear Interested Party:

The National Park Service is extending the public comment period for the draft *Lumber River 2(a)(ii) Wild & Scenic River Study Report* and Environmental Assessment through June 12, 1998.

If you have any questions regarding this extension or the draft report and environmental assessment, please contact Mary Rountree at 404-562-3175.

Sincerely,

Mary K. Rountree  
Landscape Architect



## Executive Summary

On April 15, 1996, North Carolina Governor James Hunt petitioned the Secretary of the United States Department of the Interior to designate the Lumber River in North Carolina a national wild and scenic river. The National Park Service is conducting the assessment of North Carolina's application according to Department of the Interior guidelines. The National Park Service is conducting the environmental analysis required by the National Environmental Policy Act. This document represents the draft of both those analyses and is being released in order to solicit public and agency comment.

The state of North Carolina and the Lumber River fully met three of four requirements for designation as a National Wild and Scenic River. The requirements that were fully met include: 1) designation of the river into a State wild and scenic river system; 2) management of the river by a political subdivision of the State; and 3) possession of eligibility criteria common to all national wild and scenic rivers, that is, the river is free-flowing and possesses one or more outstandingly remarkable values.

However, 51 miles of the 115-mile nomination failed to fully meet the fourth requirement for wild and scenic river designation -- the existence of effective local and State mechanisms and regulations to protect the Lumber River without federal management. The section of the Lumber River from the Scotland/Robeson County lines at the end of Airport Swamp (River Mile 22) to Jacob Branch (River Mile 73) does not meet protection standards at this time. The National Park Service recommends that this reach be designated when the state of North Carolina and local jurisdictions develop a management plan that affords future protection of the river in accordance with the National Wild and Scenic Rivers Act.

Most of the river did meet all requirements for designation. Therefore, the National Park Service recommends that the following segments of the Lumber River be included in the National Wild and Scenic Rivers System: the segment from State Route 1412/1203 (River Mile 0) to the Scotland/Robeson County lines at the end of the Maxton Airport Swamp (approximately River Mile 22) and the segment of the Lumber River from Jacob Branch (River Mile 73) to the North Carolina/South Carolina border (River Mile 115). The National Park Service recommends that these segments be classified as scenic, with the exception of the section of the Lumber River flowing through the town of Fair Bluff, which is classified as recreational.

Finally, the National Park Service found that designation of the Lumber River into the National Wild and Scenic Rivers System would not significantly impact the quality of the environment and that an environmental assessment fulfills the requirements of the National Environmental Policy Act.

For a complete discussion of the National Park Service's conclusions and recommendations, please turn to page 57.

## *Acknowledgments*

*The National Park Service gratefully acknowledges the support and assistance of the North Carolina Division of Parks and Recreation in the writing of this report; their assistance was critical in its development. Much of this document was taken directly from, based on, or summarized from, the Lumber River State Park Master Plan: Columbus, Hoke, Robeson and Scotland Counties, North Carolina. That plan was written by the Department of Parks, Recreation and Tourism Management at North Carolina State University for the North Carolina Division of Parks and Recreation and written in July 1995. Copies of the Master Plan are available through the North Carolina Division of Parks and Recreation, 12700 Bayleaf Church Road, Raleigh, North Carolina 27614.*

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S.R. 1412/1203 Boat Access

## Segment 1

WAGRAM

Scotland/Robeson County Line

Mile 22

## Segment 2

MAXTON

LUMBER RIVER

PEMBROKE

Back Swamp Mile 56.3

Jacob Branch Mile 73

## Segment 3

LUMBERTON

## Segment 4

NORTH CAROLINA  
SOUTH CAROLINA

Fair Bluff City Limits Mile 111

Fair Bluff City Limits Mile 112

## Segment 5

## Segment 6

North Carolina/ South Carolina Stateline Mile 115

FAIR BLUFF

NICHOLS

# LUMBER RIVER

N.T.S



# INTRODUCTION

## Purpose

On April 15, 1996, North Carolina Governor James Hunt petitioned the Secretary of the Interior (Secretary) to exercise his authority under Section 2(a)(ii) of the national Wild and Scenic Rivers Act (WSRA; Public Law 90-542, as amended) to designate a segment of the Lumber River in North Carolina as a national wild and scenic river. This application was forwarded to the National Park Service (NPS) for evaluation as required by the WSRA and Department of the Interior guidelines. This document presents the findings of this evaluation, as well as an assessment of the impacts to the environment as required by the National Environmental Policy Act (NEPA; Public Law 91-190).

For a river to qualify for the National Wild and Scenic Rivers System (National System) through Section 2(a)(ii) of the WSRA, four requirements must be met.

- 1) The river must first have been designated as a component of a state's wild or scenic rivers system by, or pursuant to, an act of the legislature of that state.
- 2) Management of the river must be administered by an agency or political subdivision of the state, except for those lands already administered by an agency of the federal government.
- 3) The river must meet eligibility criteria common to all national wild and scenic rivers, that is, the river must be free-flowing, as determined by standards set by the Departments of the Interior and Agriculture, and possess one or more outstanding resources of significance to the region or nation.
- 4) There must be effective mechanisms and regulations in place -- local, state or federal -- to provide for the long-term protection of those resources for which the river was deemed eligible.

In addition, if designated, the river is given one of three classifications. Each classification carries with it different responsibilities in management and protection. A designated river may be divided into several different segments, with each segment having a different classification. As defined by the WSRA, the three classes of national wild and scenic rivers are:

- 1) *Wild river areas* -- Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

- 2) *Scenic river areas* -- Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- 3) *Recreational river areas* -- Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Finally, before the Secretary can take action, a proposed wild and scenic river designation must be evaluated for potential impacts to the environment as required by the NEPA, and both the proposal and the NEPA documentation must be circulated to appropriate federal agencies for review as required by both the NEPA and the WSRA. The NPS also releases the report and NEPA documentation for extensive public review and comment.

## Report Structure

This first section of the report presents a summary of the WSRA, provides a description of the river segments being considered for designation, and identifies the principal assessments and documents that are referenced in this report.

The second section of the report describes the Lumber River's status as a state-protected river and provides an overview of existing State protection mechanisms, which are more fully considered in the Resource Protection Section. This section of the report, and most sections to follow, concludes with findings on whether the requirements for designation have been met.

In the third section, the river's eligibility and classification are evaluated. The question of free flow is addressed, and natural, cultural and recreational resources are evaluated to determine their significance to the nation or region.

Section four provides a summary of the protection mechanisms already in place, determines if they are sufficient to protect the river's resources in perpetuity, and considers if they provide an adequate framework for future management.

Section five is the environmental assessment for this proposed action as outlined in the National Park Service's National Environmental Policy Act Compliance Guidelines (NPS-12). This section also includes a description of the area and resources as required by the NEPA.

The final section summarizes the report and includes the NPS's preliminary recommendations on the state of North Carolina's application for wild and scenic river designation for the Lumber River.

## Wild & Scenic Rivers Act -- Criteria and Process

Enacted in 1968, the WSRA was intended to preserve selected free-flowing rivers in their natural condition for the use and enjoyment of the public. This alternative to dam construction was intended to balance the nation's water resources development policies with river conservation and recreation goals. Designated rivers receive protection from new hydropower projects, federal water projects, and other federally assisted water-resource projects -- defined as grants, licenses, permits or funding -- that would alter the river's free-flowing characteristics, or have a direct and adverse effect on the river's outstanding resources.

The WSRA established two processes by which a river can enter the National System. One is through direct congressional designation. This is frequently preceded by a congressional amendment to Section 5(a) of the WSRA, authorizing a study to assess a river's qualifications for the National System before Congress takes action to designate the river. Management of these rivers is then usually handled by a federal agency, although there are instances of local management of congressionally designated rivers.

Rivers can also be added to the National System through an administrative action by the Secretary. Section 2(a)(ii) of the WSRA allows the governor of a state to apply to the Secretary for national designation.<sup>1</sup> The NPS then evaluates whether the requirements of Section 2(a)(ii) have been met and prepares a draft report and an assessment of the environmental impacts of designation. The NPS also publishes a notice of proposed administrative designation in the *Federal Register* and notifies the Federal Energy Regulatory Commission (FERC) and other affected federal agencies of the pending action. Following a 90-day comment period for federal agencies and a concurrent 45-day comment period for the public, the NPS advises the Secretary of its findings. If the NPS finds -- and the Secretary agrees -- that the application meets the requirements, the Secretary publishes a notice of administrative designation in the *Federal Register*, and the river is added to the National System.

Rivers designated through Section 2(a)(ii) receive the same protection afforded all rivers in the National System. Rivers designated through this process are managed by the state, or political subdivision of the state, rather than the federal government, except for those lands owned by the federal government. Section 2(a)(ii) is ideally suited to rivers where there is a strong tradition of state or local management and protection of the river.

When a river is added through Section 2(a)(ii), it is done with the condition that it be administered without cost to the federal government. This means that there can be no condemnation or other acquisition of lands or water rights by the federal government related to wild and scenic river designation. These prohibitions do not extend to state and local governments.

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<sup>1</sup> If a river passes through more than one state, the governors of those states could submit a joint application for designation.

## Lumber River Segment Proposed For Designation

The Lumber River is located in south-central North Carolina in the relatively flat physiographic region known as the Coastal Plain. The river's headwaters are in Montgomery, Moore and Scotland Counties, where the river is known as Drowning Creek. The waterway known as the Lumber River extends from State Route 1412/1203 along the Scotland County-Hoke County border 115 miles downstream to the North Carolina-South Carolina border. Soon after crossing the State line, the Lumber River flows into the Little Pee Dee River, which eventually flows into the Great Pee Dee River and on into Winyah Bay and the Atlantic Ocean. It is the 115-mile river reach from Drowning Creek to the State border that the state of North Carolina has nominated for wild and scenic river designation.

## Lumber River Segments Considered for Designation

Under the WSRA, rivers are often divided into different segments. Segmentation may be based on a number of factors related to a river's natural or cultural resources, management, and future protection goals, which may differ along the river. These factors may include: management jurisdictions, adjacent land management objectives, river access, topography, level of land or shoreline development, communities, suitability analysis, and eligibility assessment. Due to the existence of communities and differences in topography, State acquisition goals, levels of development, levels of access, degrees of protection along the river, the NPS has divided the nomination into six segments, summarized in the table below.

<i>Lumber River Segments Considered</i>		
<i>Segment</i>	<i>Segment Description</i>	<i>State Classification</i>
1	State Route 1412/1203 (River Mile 0) to the Scotland/Robeson County border at the end of the Maxton Airport Swamp (RM 22).	Scenic
2	The Scotland/Robeson County border at the end of the Maxton Airport Swamp (RM 22) to Back Swamp (RM 56).	Scenic
3	Back Swamp (RM 56) to Jacob Branch (RM 73).	Recreational
4	Jacob Branch (RM 73) to the upstream city limits of Fair Bluff (RM 99).	Natural
5	The upstream city limits of Fair Bluff (RM 99) to the downstream city limits of Fair Bluff (RM 103).	Recreational
6	The downstream city limits of Fair Bluff (RM 103) to the North Carolina/South Carolina border (RM 115).	Natural

In some instances, it was appropriate to consider the river in its entirety. This was done primarily when considering the physical eligibility of the river and when assessing the river's inclusion in a state river system. Addressing the entire nomination is appropriate when considering the river as an ecosystem and a recreational resource; this is also in keeping with the Department of the Interior's philosophy of considering rivers in the context of their watersheds.

However, the social requirement that the river must meet to be eligible for the National System -- protection by the state, local jurisdiction, or existing federal laws -- is the primary reason the NPS considered different segments of the Lumber River separately. This will be discussed in detail in the Resource Protection Section of this report.

## **Existing Assessments and Reports**

The North Carolina section of the Lumber River has been studied several times. In 1980, the river's outstanding resources were noted in the NPS's *Nationwide Rivers Inventory* (NRI). In January of 1989, the North Carolina Division of Parks and Recreation (NCDPR) assessed the river's eligibility for the North Carolina Natural and Scenic Rivers System (State System) in the *Lumber River Natural and Scenic River Designation: A Report to the Governor and General Assembly*. In July of 1995, following the establishment of the Lumber River State Park, the NCDPR released the previously mentioned *Lumber River State Park Master Plan: Columbus, Hoke, Robeson and Scotland Counties, North Carolina* (Master Plan). Much of this report has been taken from, or is based on, this Master Plan. The Master Plan is important to the analysis of the State's ability to ensure permanent protection of resources, and will be addressed later in greater length. Following is a brief description of these prior reports.

### ***Nationwide Rivers Inventory***

When the WSPA was passed in 1968, it included a provision to identify possible additions to the National System. Section 5(d) states:

*The Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic and recreational river areas within the United States shall be evaluated in planning reports by all federal agencies as potential alternative uses of the water and related land resources involved.*

In 1980, the NPS released the NRI, which is a listing of rivers that, at first analysis, are potential candidates for study and/or inclusion into the National System. In the NRI, the Lumber River was identified as one of the possible future additions to the National System. The significant resources noted by the NRI included the river's heavily forested cypress swamps -- some of which are old growth -- and the exceptional diversity and abundance of plants and animals.

The NRI review team also noted the Lumber River provided excellent boating and fishing opportunities and had numerous historical and archeological resources. Finally, the NRI review team noted the unusual lack of development for most of the river's length.

### ***Lumber River Natural and Scenic River Study Report***

In 1989, the Lumber River was added to the State System established by the North Carolina Natural and Scenic Rivers Act of 1971 (NCNSRA). Prior to this action by the General Assembly of North Carolina, the NCDPR had assessed the abundant and varied resources of the Lumber River and outlined various designation options in a report to the Governor and General Assembly.

### ***Lumber River State Park Master Plan***

As a result of the Lumber River being added to the State System, and subsequent to its becoming a State park, the NCDPR developed the Master Plan. Written by the North Carolina State University Department of Parks, Recreation and Tourism Management for the NCDPR, and funded in large part by Carolina Power and Light, the Master Plan describes the river's setting, resources and people. The Master Plan also sets forth the development of the Lumber River State Park's infrastructure, management goals, and plan for implementation of these goals. Of critical importance to the NPS assessment are the protection priorities, development goals, and land acquisition plans outlined in the Master Plan. These components will be examined in greater detail under the Resource Protection Section of this document.



# STATE DESIGNATION & MANAGEMENT FRAMEWORK

There are two requirements relating to state policy and management that must be met before the Secretary can take action to designate a river under Section 2(a)(ii) of the WSRA. The first is that the river must be designated as a component of a state wild, scenic, or recreational river system by, or pursuant to, an act of the state legislature. The second requirement is that the river be administered by an agency or political subdivision of the state at no cost to the federal government, except for those lands already in federal ownership. This requires that the state has an adequate framework in place through which to manage the river and has the legal and administrative resources with which to accomplish these goals. The purpose of this section is to determine whether the state of North Carolina's application meets these requirements.

## State Scenic River Designation

The NCNSRA was passed to preserve, protect and maintain certain free-flowing rivers and adjacent land for their outstanding natural, scenic, educational, geological, recreational, historic, fish and wildlife, scientific and cultural values. These rivers are protected for the present and future benefit of the people of North Carolina. In 1989, the Lumber River was added to the State System. However, even before this action by the General Assembly, the NCDPR had assessed the abundant and varied resources of the Lumber River and outlined various designation options in a report to the Governor and General Assembly.

Under the NCNSRA, there are three classifications that a river can receive -- *natural*, *scenic*, and *recreational*. The Lumber River has all three classifications at some point along its State-designated course. The uppermost part of the river from State Route 1412 (Turnpike Bridge) to Back Swamp is the narrowest section of the river, measuring an average of 40 feet in width. This section is classified as *scenic*, which is defined by the Act as largely primitive, undeveloped, and free of impoundments, but accessible by roads. This classification lends itself to wilderness-type experiences, such as solitude and wildlife viewing. The middle portion from Back Swamp to Jacob Branch is wider, averaging 75 feet, and is classified as *recreational* because it offers outstanding recreational and scenic values and is largely free of impoundments, but has development and an extensive road system along its banks. The segment downstream of Jacob Branch to the border with South Carolina varies in width from 30 to 75 feet and is classified as *natural*, with the exception of the portion within the Fair Bluff city limits, which is designated *recreational*. A *natural* river segment is defined by the NCNSRA as unpolluted, surrounded by lands in an essentially primitive condition, free of man-made impoundments, and generally inaccessible except by trail.

Based on the provisions and character of the NCNSRA, the NPS has concluded that all segments of the Lumber River meet the first requirement for designation as a national wild and scenic river.

## State and Local River Management Framework

The second requirement for wild and scenic river designation, that the river be managed by a state agency, or some other unit of state government, is directly addressed in the NCNSRA. Section 113A-36(a) states that *“the Department of Natural Resources and Community Development is the agency . . . with the duties and responsibilities to administer and control the North Carolina natural and scenic rivers system.”* In addition, in 1989, the North Carolina General Assembly created the Lumber River State Park, and directed the NCDPR to *“prepare a general management plan for the Lumber River State Park to include a master plan which shall recognize and provide for State and local government protection of the various parts of the river so as to preserve its outstanding character in perpetuity.”* The NCNSRA acknowledges this possibility in Section 113A-40, which states, *“Any component of the State natural and scenic rivers system that . . . become[s] a part of any State park . . . shall be subject to the provisions of this Article and the Articles under which the other areas may be administered . . .”*

The NCNSRA even provides for federal designation. Section 113A-41 reads:

*Nothing in this Article shall preclude a river or segment of river from becoming part of the national wild and scenic river system. The Secretary of the Department is directed to encourage and assist any federal studies for the inclusion of North Carolina rivers in the national system. The Secretary may enter into cooperative agreements for joint federal-state administration of a North Carolina river or segment of river: Provided, that such agreements relating to water and land use are not less restrictive than the requirements of this Article.*

Based on the articles of North Carolina law, and on direct involvement with agencies of the state of North Carolina, the NPS concludes that this requirement has been fulfilled for all segments of the Lumber River.

## Conclusions

Based on the designation of the Lumber River as a State natural and scenic river according to the provisions of the NCNSRA, the first Section 2(a)(ii) criterion has been fulfilled for all segments of the river. Further, a framework for the State management of the Lumber River has been established through the NCNSRA and the North Carolina State Parks System; the second Section 2(a)(ii) criterion has been established for all segments of the river.

# EVALUATION OF ELIGIBILITY & CLASSIFICATION

## Eligibility Findings

The WSRA requires that, to be eligible for inclusion in the National System, a river or river segment must be free-flowing (as defined by the Departments of Agriculture and the Interior) and, with its immediate environment, must possess one or more “outstandingly remarkable” scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values (i.e., it must have at least one resource important to the region or nation).

### *Free-Flowing Condition*

Free-flowing, as defined in Section 16(b) of the WSRA, is applied to “any river or section of a river,” and means:

*. . . existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures . . . shall not automatically bar its consideration for inclusion: Provided, that this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the National Wild and Scenic Rivers System.*

The entire Lumber River, which contains no dams, major diversion structures, significant channel or other modifications, or excessive rip-rapping was found to be free-flowing.

### *Outstandingly Remarkable Values*

The second criterion that a river must meet to be eligible for inclusion in the National System is that it must possess one or more outstandingly remarkable resources important to the region or nation. The term “outstandingly remarkable” is not precisely defined in the WSRA. As directed by 1982 interagency guidelines, the determination of whether or not a river area contains outstandingly remarkable resources is based on the professional judgement of the study team. However, the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM) in the Pacific Northwest have developed standards for certain categories of values; these standards have become widely accepted by both agencies. As these standards have been consistently upheld and are widely used, the NPS frequently applies them to Section 2(a)(ii) evaluations; we have elected to use them in evaluating the Lumber River for designation into the National System. Under the USFS/BLM criteria, the river is judged on eight different classes of resources -- scenic, recreational, geological, fish, wildlife, prehistoric, historic, and a catch-all category, “other” -- as described below.

## Recreation Resources

The USFS/BLM criteria:

*Recreational opportunities are, or have the potential to be, unique enough to attract visitors from outside the region of comparison. Visitors are willing to travel long distances to use the river resources for recreational purposes. River-related opportunities could include, but are not limited to, sightseeing, wildlife observation, camping, photography, hiking, fishing, hunting and boating/rafting.*

*Interpretive opportunities may be exceptional and attract, or have the potential to attract, visitors from outside the region of comparison.*

*The river may provide, or have the potential to provide, settings for national or regional usage or competitive events.*

The Lumber River has regional recreational value for canoeing and sightseeing opportunities. The river offers visitors an opportunity to experience multi-day canoe trips on an unusually long and meandering blackwater river in a natural and uncrowded setting. The Lumber River is one of few rivers in the region that travels through two distinct physiographic regions -- starting in the Sandhills Region and flowing through the Coastal Plain -- providing a diverse canoeing setting. Currents and obstructions by fallen trees provide additional variety and offer navigability challenges.

The Lumber River's significance as a canoe trail was formally recognized in 1978 when the upper river was designated the State's first recreational water trail. In 1981, this segment of the river was designated a National Water Trail, the first such trail in the southeastern United States. In 1984, the lower river was included in the list of National Canoe Trails.

While no visitor-use studies have been conducted, Lumber River State Park staff do have evidence of considerable recreational use from outside the geographic region. Within the North Carolina State Park System, approximately one-fourth of visitors are from out of state. With easy access from I-95, the Lumber River receives visitation from across the United States. NCDPR records indicate that the average one-way visitation to North Carolina's parks is 139 miles, indicating that the Lumber River State Park is a "destination location."

It is likely that boating use of the Lumber River will continue to grow. The city of Lumberton actively promotes recreational use of the river. The NCDPR conducts natural and cultural interpretive canoe trips and is planning to increase this activity. New outfitters have made inquiries about providing additional boating concessions along the river. The Lumber River has the potential to be used for canoe or kayak flatwater racing. Nearby family camping facilities provide the infrastructure for family-based recreation opportunities. According to Lumber River State Park personnel, there is already considerable boating use from off-duty military personnel at nearby Fort Bragg, and this number could grow as marketing by the NCDPR and local communities increases.

The Lumber River also provides numerous recreation opportunities besides canoeing. Sandbars, fallen logs, overhanging branches, and an abundant food supply provide excellent habitat and structure for fish; fishing from the banks and from small boats is popular along most of the river. The species most frequently sought include sunfish (bluegill, warmouth, redbreast), largemouth bass, catfishes, pickerel, and yellow perch. Unusual deposits of fossils and sharks teeth provide a unique fossil hunting activity, although collecting is discouraged and is prohibited on State lands. Other recreation opportunities along the Lumber River include excellent wildlife observation, hiking, photography and hunting.

Continuing development of the Lumber River State Park will provide additional facilities for camping, nature study, hiking, and picnicking. These facilities, which will attract additional visitors, are being designed to be compatible with protection of the river's natural resources and the river's designation as a State natural and scenic river. Additional recreational facilities for picnicking, river access, hiking, and nature study are provided by local governments.

Twelve State Natural Heritage Priority Areas have been identified along the river. These contain high-quality natural communities or habitat for rare species; six natural community types are found in these 12 areas. These, as well as other areas along the river, offer excellent opportunities for environmental interpretation and education. Opportunities also exist for interpretation of Native American culture and the importance of lumber and naval store industries in the early development of the region. Natural sites for developing and providing interpretation with easy access exist within the communities of Lumberton and Fair Bluff and at the interim Lumber River State Park headquarters at Princess Anne.

Based on the Lumber River's value as a destination site for canoeing, the all-round opportunities for recreation, and the high-quality locations to provide interpretation on the river and the area's history, recreation is an outstandingly remarkable resource.

## *Fish*

The USFS/BLM criteria:

*Fish values may be judged on the relative merits of either fish populations or habitat or Native American cultural use -- or a combination of these river-related conditions. Consideration shall be given for potential as well as existing values.*

*The river is internationally, nationally or regionally an important producer of resident and/or anadromous fish species. Of particular significance is the presence of wild stocks and/or federal or state listed threatened, endangered and sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.*

The Lumber River is a popular fishing stream and receives considerable fishing pressure from anglers across the State. The river has historically provided excellent fishing for various

sunfish (*Lepomis* spp.), largemouth bass (*Micropterus salmoides*), catfishes (*Ictalurus* spp.), chain pickerel (*Esox niger*), and yellow perch (*Perca flavescens*). The river supports a diverse fish assemblage and a high quality sport fishery, especially for redbreast sunfish (*Lepomis auritus*) and largemouth bass. Sampling conducted by the North Carolina Wildlife Resources Commission (NCWRC) categorizes the redbreast sunfish population in the Lumber River as a high quality fishery; many southeastern anglers rate the Lumber River as the premier riverine sport fishery for bluegill, redbreast, and redear sunfish in the State. American shad (*Alosa sapidissima*), an anadromous species, has also been collected from the Lumber River.

The Lumber River supports two unique fish species designated of “special concern” by the state of North Carolina. These species are the pinewoods darter (*Etheostoma mariae*) and the sandhills chub (*Semotilus lumbee*).

Based on the regional importance of the Lumber River fishery, and the large, continuous, highly productive habitat the river provides, the NPS has determined that the fishery should be considered an outstandingly remarkable resource under the WSRA.

## Wildlife

The USFS/BLM criteria:

*Wildlife values shall be judged on the relative merits of either wildlife populations or habitat or Native American cultural use -- or a combination of these conditions.*

**Populations** -- *The river or area within the river corridor contains nationally or regionally important populations of indigenous wildlife species. Of particular significance are species considered to be unique, or populations of federal or state listed or candidate threatened, endangered and sensitive species. Diversity of species is an important consideration and could in itself lead to a determination of outstandingly remarkable.*

**Habitat** -- *The river or area within the river corridor provides exceptionally high quality habitat for wildlife of national or regional significance, or may provide unique habitat or a critical link in habitat conditions for federal or state listed or candidate threatened, endangered and sensitive species. Contiguous habitat conditions are such that the biological needs of the species are met. Diversity of habitats is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.*

The Lumber River provides habitat for several species listed as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS). The headwaters of the Lumber lie in the Sandhills Region which is considered one of the best red-cockaded woodpecker habitats north of Florida; the red-cockaded woodpecker is listed as a federally endangered species. The Lumber River also provides habitat for the federally threatened bald eagle. American alligators, a federally threatened species in the state of North Carolina, can be found in the river. Other species that are included in the federal listing of “Species of Special Concern” include: Carolina crawfish, river frog, black vulture, Cooper’s hawk, glossy ibis, snowy egret, golden-



crowned kinglet, loggerhead shrike, Keen's bat, southeastern bat, Rafinesque's big-eared bat, and the star-nosed mole. The Lumber River is also home to an elipteo freshwater mussel which is currently being evaluated as a new genus.

The Lumber River functions as a corridor of dispersal for a diversity of species in addition to those having national significance listed above. Black bear have been documented as far west as Lumberton in Robeson County. The NCWRC, with support from the National Wild Turkey Federation and private landowners, has stocked wild turkeys within its native habitat of the Lumber watershed. The riverine bottomland forested areas of the river are also important to a variety of species of neotropical migrant birds. Many of these species, which are provided with an exceptional habitat in the watershed of the Lumber, are declining and may receive federal listing in the future.

Based on the presence of numerous endangered or threatened species, or species of concern; the wide diversity of wildlife, both common and rare; and the long, continuous forested riverine habitat, the NPS has concluded that wildlife is an outstandingly remarkable resource of the Lumber River, warranting protection under the WSRA.

### *Scenic/Aesthetic Resources*

The USFS/BLM criteria:

*The landscape elements of landform, vegetation, water, color and related factors result in notable or exemplary visual features and/or attractions. When analyzing scenic values, additional factors such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed may be considered. Scenery and visual attractions may be highly diverse over the majority of the river or river segment.*

The study corridor possesses a high level of scenic integrity (i.e., the landscape character is remarkably intact and natural in appearance) for most of its 115 miles. The river is predominately bottomland hardwood swamp, which is rare in the National System. Only the upland pine forest areas of Pembroke, Lumberton, and Fair Bluff are comprised of significantly developed land. Though other rivers within the region, such as the Black, South and Waccamaw, rival the Lumber's scenic attractiveness, the Lumber River is unique in providing scenic integrity over such a long reach.

The corridor contains some visual features which detract from the river's natural scenic attractiveness, primarily in the Pembroke, Lumberton, and Fair Bluff areas. Visual intrusions include homes and small businesses, a few canals, farms, and several bridge and power line crossings. Within the vicinity of Lumberton there is a dike, buildings to the water's edge, parks, one significant water intake structure, very short stretches of bank hardening, and a small junkyard. However, the duration of these intrusions as the river is being traveled is very short; many of the intrusions, such as the dike, are well screened and/or set well back from the river; and many of the features, such as parks, are attractive in their own right. None of

the intrusions significantly alter the river's overall scenic integrity or landscape character; only the junkyard is a significant visual detraction.

The Lumber River has a significant litter problem along much of its course. While this litter problem does not disqualify scenery as an outstandingly remarkable resource, the NPS recommends that the NCDPR and local jurisdictions establish a river clean-up program in order to ensure a high-quality scenic and recreational experience.

Outside population centers, remnants of cypress logging railroad trestles hidden along the river and intermittent bridges are among the very infrequent reminders that man ever played a role in the bottomland swamp of the Lumber River. Violent winds from Hurricane Andrew have made parts of the river almost impassable due to tree blow-downs, contributing to the natural character and a sense of remoteness on the river. Expansive views through a baffle of cypress, Spanish moss, and cypress knees add to the river's swamplike character. The slow-moving, tea-colored water reflects the vegetation of the surrounding banks, yet is clear enough to allow a glimpse of vigorous aquatic life. Light and dark contrast as sunlight filters through the dense forest canopy and dances on the smooth water surface. Colorful flowering plants and wildlife add variety of scenery.

Seasonal variation contributes to interesting color changes, including the burnt-orange colored leaves of the cypress and the red to yellow colors of the swamp red maple in the fall, as well as the bright red seed pods of the maple and the light green foliage of cypress in the early spring. These spectacular colors are accentuated by reflections on the dark water surface. In winter months, areas of the forest not visible in spring and summer open to deeper recesses of the forests and swamps.

In addition to the topographic and vegetative variation from the upland to swamp areas, variety of landform is provided by tight meanders, varying channel width, white sand point bars, low natural levees, islands, sloughs, and the backwaters of abandoned river channels. A few steep outcrops along the riverbank expose Coastal Plain formations and abundant marine fossils, providing additional scenic variation and complexity.

Other sensory perceptions contribute to the unique swamplike character of the Lumber River, such as the sounds of a variety of wildlife and insects. These include a surprising slap of the water surface by wood ducks taking flight, the crash of the beaver's tail at an approaching boat, or the rare grunt of an alligator. Cicadas, frogs and birds add more variety to the recreational and aesthetic experience visitors enjoy. Smells of fragrant flowering plants such as the native wisteria add a pleasant touch to the aesthetic experience.

Based on the variety of experiences described above, the exceptionally long natural setting, the diversity of wildlife, and the relaxing character of the Lumber River, the NPS has concluded that scenery is an outstandingly remarkable resource as defined under the WSRRA. As stated, the National System is seriously lacking in blackwater, bottomland hardwood forest rivers. If the National System is to be truly representative of the rivers in the United States, then rivers like the Lumber and the setting they provide need to be included in greater numbers.

## Geological Resources

The USFS/BLM criteria:

*The river or the area within the river corridor contains an example(s) of a geologic feature, process, or phenomena that is rare, unusual, or unique to the region of comparison. The feature(s) may be in an unusually active stage of development, represent a "textbook" example, and/or represent a unique or rare combination of geologic features (erosional, volcanic, glacial and other geologic structures).*

Though they are not unique to the region, several geologic features exhibited in the river corridor are noteworthy. As Drowning Creek emerges from the Sandhills Region and becomes the Lumber River, it crosses a regional physiographic feature known as the Orangeburg Scarp. This feature is commonly thought to have developed as a paleo-shoreline feature during the upper Pliocene Epoch (approximately 3 million years ago) as the sea reached a point of relative standstill and wave action cut into the highland now known as the Sandhills. The Orangeburg Scarp can be traced from Florida to Virginia, but it is particularly well developed through North and South Carolina, where it marks the boundary between the upper and middle Coastal Plain. As a result of this geologic occurrence, fossil shells and shark teeth have been deposited in sand deposits in bluffs, ridges and banks along the Lumber River.

As the Lumber River flows across the relatively low-relief surface of the middle Coastal Plain Region, its valley cuts into a surface marked by a great number of northwest-southeast oriented elliptical depressions known as Carolina Bays. Since their discovery in the Carolina's in the 1800's, these swampy or sometimes water-filled features with unique floral assemblages have been the object of debate and controversy as to their origin. Although now known to number in the tens of thousands throughout the Atlantic Coastal Plain, and to occur in several other regions of the world, the middle Coastal Plain area of Bladen and Robeson Counties, North Carolina, exhibit particularly well-developed and numerous Carolina Bays.

There are several other interesting features of the Lumber River. The river possesses a greater amount of meanders than other rivers in the region. The high bluff at Princess Anne is atypical for blackwater rivers in the area. Unusual sand ridges were formed along the river when the Ice Ages dried the area, allowing sand to be blown from the riverbed onto the banks. However, while these features contribute much to the character and wildlife diversity of the river, they are not outstanding geologic features, or exceptionally important.

While many geologic features of the Lumber River and its surrounding landscape are interesting and worthy of study, there is nothing that is unique or exemplary about these features when considered in a regional context. Geology is not considered an outstandingly remarkable resource under the WSRA.

## Prehistoric Resources

The USFS/BLM criteria:

*The river or area within the river corridor contains a site(s) where there is evidence of occupation or use by Native Americans. Sites must have rare or unusual characteristics or exceptional human interest value(s). Sites may have national or regional importance for interpreting prehistory; may be rare and represent an area where a culture or cultural period was first identified and described; may have been used concurrently by two or more cultural groups; or may have been used by cultural groups for rare or sacred purposes.*

The Lumber River has long been used by Native Americans for travel and subsistence. The earliest Native Americans, who may have lived in the region from as early as 20,000 B.C., were nomadic and subsisted through food-gathering and hunting (Matois and Gardner, 1986). By the 18th century, the river and its associated swamps had become a melting pot for several Indian tribes, some of them refugees who had fled to the backwoods and swamplands from the coastal regions to escape the attacks of other tribes as well as the advance westward by Europeans. It has been speculated that members of Sir Walter Raleigh's "Lost Colony" may have been among these Native American immigrants to the area (Dial and Eliades, 1975). The earliest European settlers in Robeson County found several thousand Indians already on the scene who spoke broken English and farmed as Europeans did. Some of them were blue-eyed and bore familiar English names (Sharpe, 1954). Because of a lack of recorded history and a loss of linguistic identity, however, the history of these people has been shrouded in mystery, conjecture and myth; their true origins will probably never be known. Having survived the encroachment of their lands, they established rural communities on the banks of the river where their descendants, known as the Lumbee, live today. They adopted their tribal name officially in 1953 from the Indian name for the river.

A number of archaeological sites are found on high ground along the river. Most of these areas have been disturbed by the agricultural and forestry practices of the post-Columbian era, however. Isolated artifacts and fossils that have been discovered include a dugout canoe estimated at over 1,025 years old, an indication that pre-Columbian peoples navigated the river for trading, fishing, hunting, and other cultural activities. Accounts of finding stone artifacts in the Riverton area likely indicates the area was inhabited by Native Americans (Wright, 1991).

While the prehistory of the Lumber River is interesting in its own right, there is nothing unique or exemplary about it. All of the major river systems in the region supported Native Americans and were used in essentially the same manner. There are no known sacred sites along the river. While the archaeologic sites are, of course, important -- and the NCDPR plans to provide interpretive programs within the Lumber River State Park -- they do not qualify as outstandingly remarkable according to the WSRA.

## Historic Resources

The USFS/BLM criteria:

*The river or area within the river corridor contains a site(s) or feature(s) associated with a significant event, an important person, or a cultural activity of the past that was rare, unusual, or one-of-a-kind in the region. An historic site(s) and/or feature(s) in most cases is 50 years or older.*

According to poet John Charles McNeill (1874-1907), the Indian name of Lumbee was originally used for the river, from an Indian word that means "black water." Early European surveyors and settlers called it Drowning Creek. This name appears in Colonial records of 1749, which identify the river as a branch of the Little Pee Dee River. The name was changed by legislative action in 1809 to the Lumber River, most likely because of the river's heavy use by the lumber industry.

In the late 18th and the 19th centuries, the lumbering and naval stores industries were very important to the region, and the river was a vital route for transporting products of these industries. One-hundred-foot logs were rafted downriver in the late 1800's to Georgetown, South Carolina. Lumberton itself was an important turpentine and timber town. Unfortunately, no standing structure related to these industries has been found that could be considered of historic value. The few existing structures are from this century and are in a state of decay. Remnants of bridge abutments, tram bridges, and dock pilings in the Net Hole area are reminders of the lumbering and naval stores industries.

While the area around the Lumber River has been settled for almost 300 years, the history along or associated with the river is not unique nor exemplary compared to other rivers in the region. History is not an outstandingly remarkable resource under the WSRA.

## Other Values -- Botany

While most river values of regional or national significance can be described under one of the other categories, sometimes there is a resource or traditional use of the river that is unique and does not fit any of the standard categories. An example can be found on the Klamath River in Oregon. There, the BLM and the NPS found that the river had been used continuously by three different Native American tribes for religious and spiritual purposes for at least the last 7,000 years. The agencies determined this to be a unique, nationally significant value, and Native American Traditional Use was determined to be an outstandingly remarkable resource. Under USFS and BLM guidelines, the criteria for an outstandingly remarkable rating are:

*While no specific national evaluation guidelines have been developed for the "other similar values" category, assessments of additional river-related values consistent with the foregoing guidance will be completed -- including, but not limited to, hydrologic, paleontologic, ecologic and botanic resources.*

The NPS has determined that the Lumber River has one additional resource that should be considered outstandingly remarkable -- its plants. A more complete discussion of the river's common vegetation can be found in the Environmental Assessment Section; it is the broad range of uncommon plants and the high-quality natural habitats that make botany an exceptional value of the Lumber River.

A preliminary natural heritage inventory of the river corridor was conducted in 1989 (Ash, 1990). Twelve Natural Heritage Priority Areas were identified, containing high quality natural communities or habitat for rare species. There are six natural community types (Schafale and Weakley, 1990) represented in these 12 areas: sand and mud bar, coastal plain levee forest (blackwater subtype), cypress gum swamp (blackwater subtype), coastal plain bottomland hardwoods (blackwater subtype), pine savannah, and xeric sandhill scrub. Sixty percent or more of these areas are represented by coastal plain bottomland hardwoods, 20 percent by cypress gum swamp, and 15 percent by coastal plain levee forest.

One of the results of this wide variety of habitat types and substratum is that numerous rare and sensitive plants exist throughout the river corridor, particularly in the unique Natural Heritage Priority Areas. Among the rare and endangered plants is sarvis holly (*Ilex amelanchier*), a distinctive blackwater river plant that grows mainly along the river banks and is distributed along the river's entire length. This plant is on the State endangered species list as being "significantly rare" and is a candidate for the federal list of threatened or endangered plants. Comfortroot (*Hibiscus aculeatus*) is another uncommon plant found mainly below the Carolina Power & Light cooling lake; comfortroot is a candidate for State listing. On the 700-acre Big Sandy Ridge located north of Fair Bluff, there are two significant species: woody goldenrod or chrysoma (*Chrysoma pauciflosculosa*) and threadleaf sundew (*Drosera filiformis*). Woody goldenrod is listed as endangered by the state of North Carolina, and threadleaf sundew is listed as "significantly rare." Three final scarce plant species known to occur in the river corridor are: Carolina bog mint (*Macbridea caroliniana*), which is in the process of being listed by the State as "threatened" and is a "species of concern" at the federal level; savannah yellow-eyed grass (*Xyris flabelliformis*), which is a State candidate species; and southern bog button (*Lachnocaulon beyrichianum*), which is listed by North Carolina as being "significantly rare."

Based on the wide variety of habitat types supporting a diversity and abundance of wildlife -- found in an unusually long, largely unbroken, riverine corridor -- and the presence of large numbers of rare, threatened or endangered plant species at both the State and federal level, botany is considered an outstandingly remarkable value under the WSR.

A synopsis of the "outstandingly remarkable resources" of the Lumber River can be found in the table on the next page.



<i>Outstandingly Remarkable Values Of The Lumber River, North Carolina</i>	
Resource	Characteristics
Recreation	Heavily used canoeing and fishing river. One of the first National Water Trails. One of the best warm-water sport fisheries in the Southeast. Sight-seeing is exceptional due to diverse scenery and wildlife. Opportunities for family-based recreation, covering a wide spectrum of activities. Environmental and cultural interpretation possible. State park.
Fish	Prolific fishery considered to be one of the best for sunfishes. Highly intact, exceptionally long habitat providing for a high diversity of species. Presence of two "species of concern" in North Carolina.
Wildlife	Several threatened and endangered species, both in North Carolina and at the federal level. Numerous other "species of concern." High diversity of wildlife. Important habitat for several declining passerine species. Possible new species of mussel.
Scenery/ Aesthetics	Exceptionally long blackwater bottomland hardwood forest, a river type conspicuously lacking in the National System. Near-wilderness experience possible in a highly scenic setting. Seasonal changes, topography, geologic features and diverse plants and wildlife provide a highly varied and interesting landscape.
Botany	High diversity of plant communities. Habitat supporting many rare wildlife species. Numerous rare plant species, both in North Carolina and at the federal level; one species listed by North Carolina as being endangered and another will probably soon be listed.

## Classification

After determining a river's eligibility for inclusion in the National System, it must be classified according to the category -- wild, scenic or recreational -- that best fits each eligible segment. Classification is based on the degree of naturalness and extent of development of the river and its adjacent lands as they exist at the time of the study.

As mentioned at the onset, there are three classification categories for designated rivers as defined in Section 2(b) of the WSRA. In designing the State System, the North Carolina General Assembly used the national WSRA as the model. As a result, the three North Carolina classifications (natural, scenic and recreational) are virtually analogous to the national classifications (wild, scenic and recreational), respectively. The national classifications are:

*Wild river areas* -- Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

*Scenic river areas* -- Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely undeveloped, but accessible in places by roads.

*Recreational river areas* -- Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

According to national classifications, a wild river is an undeveloped river with limited access by trail. The existence of a few inconspicuous roads leading to the boundary of the river area at the time of study would not necessarily bar wild river classification. To qualify for scenic classification, the river segment should not show substantial evidence of human activity. The portion of the watershed within the boundary of a scenic river may have some discernible existing development. A recreational classification is appropriate in developed areas, such as where a river runs parallel to roads or railroads, with adjacent lands that have agricultural, commercial, or other developments -- provided that the waterway remains generally natural and riverine in appearance.

Water resource development, shoreline development, accessibility, and water quality are the criteria that are considered when determining classification. Each criterion is important, but their collective intent is more important. Although each classification permits existing development, the criteria do not imply that additional inconsistent development is permitted in the future. Developments that are compatible with designation would be allowed, provided they are carried out in an environmentally sound manner. The classification of the river, or individual segment, prescribes the appropriate management plans and prescriptions. In other words, the classification will help to determine the compatible, appropriate activities that could occur on the river.

In providing a classification for the Lumber River, the NPS chose to break the Lumber River into smaller units to consider different classifications for each (as well as to consider the adequacy of State protection, as discussed later). This is often done for rivers in the National System. For example, a river might be wild in its mountainous headwaters, scenic through multiple-use lands, and recreational in its more populous lower valley. Factors considered in deciding whether to classify the Lumber River in its entirety or to segment it included: 1) management strategies for administering the river area; 2) the effect of landownership patterns on management strategies; 3) the acquisition plans of North Carolina; 4) the current levels of development and access along the river; and 5) the desire to avoid excessive segmentation of the river area. The segments the NPS, in consultation with the NCDPR, decided on are:

*Segment 1* -- State Route 1412/1203 (River Mile 0) to the Scotland/Robeson County lines at the end of the Maxton Airport Swamp (River Mile 22).

*Segment 2* -- The Scotland/Robeson County lines at the end of the Maxton Airport Swamp (River Mile 22) to Back Swamp (River Mile 56).

*Segment 3 -- Back Swamp (River Mile 56) to Jacob Branch (River Mile 73).*

*Segment 4 -- Jacob Branch (River Mile 73) to the upstream city limits of Fair Bluff (River Mile 99).*

*Segment 5 -- The upstream town limits of Fair Bluff (River Mile 99) to the downstream town limits of Fair Bluff (River Mile 103).*

*Segment 6 -- The downstream town limits of Fair Bluff (River Mile 103) to the North Carolina/South Carolina (River Mile 115).*

As mentioned, there are four factors considered when determining the classification of a river for the National System. These are water resource developments, shoreline development, accessibility, and water quality. Following are brief discussions of how these factors were considered by the NPS in providing classification for segments of the Lumber River.

### ***Water Resource Developments***

Currently, there are no impoundments on the Lumber River. Numerous segments have bridge crossings, or are defined by bridges, and the waterway is modified by bridge abutments. For the most part, with the exceptions of development in Lumberton and Fair Bluff, the banks of the river are natural in appearance. Even through Lumberton, where a dike parallels portions of the river, the banks are natural in appearance, since the dike is set back from the river and is relatively well screened. In the vast majority of the river, the natural processes of the river creating and changing its channel are allowed. Rip-rapping is very limited, although unplanned rip-rapping occurs along the junkyard near Lumberton due to its presence on the river. There is only one significant water intake structure. Canals are very limited in frequency and scope. The few docks and piers that are present are small and unobtrusive. While these water-related projects have led to some modifications of the waterway, the impacts are not overpowering, and the river essentially retains its natural character.

### ***Shoreline Development***

As discussed previously, the river is predominantly natural in appearance. The only areas of significant shoreline development are in Lumberton and Fair Bluff, although the area around Pembroke exhibits some levels of development. Most of this development is limited to single family homes or small businesses, and much of this is screened. Several City parks, while considered development, are in reality attractive and contribute to the recreational character of the river. While there are several powerline crossings, these primarily follow existing road crossings, so impact is minimal. Away from roads and population centers, the evidence of human intrusion is slight, limited primarily to the structures described earlier in this section

under “History” and “Water Resource Developments.” The only significant detrimental shoreline development is the presence of a moderately sized junk yard near Lumberton.

### *Accessibility*

The Lumber River is accessible in several places by road. However, even in Lumberton, these roads cross the river, and there are no reaches with significant paralleling of the river by road. Thick vegetation screens much of the visual impacts from these roads. The only other access to the river is at parks or by foot on private property, and most of this is within the areas of population centers. Private dirt roads do reach the river; however, they tend to dead end at the river and do not parallel it for any significant stretch. In general, the Lumber River is not easily accessible outside of population centers, except for infrequent road crossings and recreational put-ins.

### *Water Quality*

Water quality is a factor only in considering a segment for a wild classification. Water quality criteria do not differentiate between scenic and recreational river areas; water must simply be of sufficient quality to support the resources for which the river was designated, which it clearly is here. Since none of the segments being considered qualify for a wild classification either as a result of development or as a conscious choice due to management considerations, the NPS has eliminated water quality as a factor in classifying the segments of the Lumber River.

## **Lumber River Classifications**

The table on page 24 summarizes the classifications given to each of the segments of the Lumber River. The lowest ranking under each segment for any one of the four factors determines the highest possible classification for that segment. For example, if a river qualified as scenic for water resource development, water quality, and accessibility, but qualified only as recreational for shoreline development, the highest possible classification in the National System would be recreational. It should be noted that segmentation of the Lumber River could have been done so as to find “wild” segments. However, this would have placed severe limits on the state of North Carolina on the development of park and recreational facilities, while providing no additional benefits to the river or North Carolina. For this reason, the NPS and the NCDPR decided that none of the segments would receive a wild classification; hence, water quality was eliminated as a mandatory consideration in classification since it is a factor only in wild classifications.

### *Segment 1*

In segment 1, there are no water resource developments. There are several road crossings and boat access points, which prevent a wild classification. However, development is not so prevalent that a scenic classification is precluded, and access is quite restricted and limited to select points along the river. The NPS has classified this segment as scenic, which is consistent with the State classification.

### *Segment 2*

The justification for classifying segment 2 as scenic is identical to that of segment 1, although segment 2 exhibits more access points and higher levels of shoreline development. However, access and development are still consistent with a scenic classification, which is identical to the State classification. Segment 2 is classified as scenic.

### *Segment 3*

Segment 3 encompasses the city of Lumberton. Access is relatively easy through public and private property, including streets and developed parks. Numerous houses, small businesses, power line crossings, water intakes and outfalls, a parallel dike, etc., while not intrusive, are not consistent with a scenic classification. The level of shoreline hardening is consistent with a recreational classification, which coincides with the State classification. Segment 3 is classified as recreational.

### *Segment 4*

Segment 4, 5 and 6 are considered to be the most beautiful by many canoeists. Segment 4 is one of the least developed of all the segments. This is the segment that contains the potential "wild" segments had the NPS and NCDPR redefined the segmentation as discussed above. There are no water resource developments. However, the river is crossed in several places by roads, precluding a wild classification within the defined segmentation. Some channeling and the presence of a few homes likewise preclude a wild classification. However, access is very limited, and the presence of man is seldom seen throughout this segment, and then only for very brief spans of time. Development and access in this segment are consistent with a scenic classification, which is different from the State's natural classification. The National System has a different definition for "wild" than does the State, which is understandable considering the extent of the National System and the rivers it includes -- rivers which travel through vast wilderness areas in Alaska, Idaho and Oregon and are essentially untouched by man. Segment 4 is classified as scenic.

### *Segment 5*

Segment 5 includes the community of Fair Bluff. Again, there are homes and small businesses along the river. Some bank hardening has occurred. Access is limited, but certainly easier than along most of the other segments. There is a road crossing, and a secondary road parallels the river for a short distance. However, the river retains its natural character, and these intrusions do not preclude eligibility. Development and access are consistent with a recreational classification, which is consistent with the State classification. Segment 5 is classified as recreational.

### *Segment 6*

Segment 6 is exceptionally natural in appearance. Access is very limited. The presence of small farms is the only real preclusion from a wild classification. The NPS classification of scenic is consistent with the State classification of scenic. Segment 2 is classified as scenic.

<i>Classification of the Lumber River, North Carolina</i>		
<b>Segment</b>	<b>State Classification</b>	<b>Federal Classification</b>
Segment 1	Scenic	Scenic
Segment 2	Scenic	Scenic
Segment 3	Recreational	Recreational
Segment 4	Natural	Scenic
Segment 5	Recreational	Recreational
Segment 6	Scenic	Scenic

## **Conclusions**

The Lumber River meets or exceeds all of the physical eligibility requirements for designation into the National System. It is free flowing as defined by the Departments of the Interior and Agriculture and possesses at least one outstandingly remarkable resource value; in fact the Lumber River possesses five classes of resources found to be important to the region or nation -- recreation, fish, wildlife, scenery and botany.

With regard to classification, none of the segments considered meet the criteria for a wild classification. Shorelines are not primitive, and access is often available by road. However, with the exception of population centers, the river is remarkably undeveloped. Access, while

available, is limited, and the river is natural in appearance. Few water resource developments impact the river. Even within the population centers of Pembroke, Lumberton and Fair Bluff, the river is very natural in appearance, access is restricted, and water development is almost nonexistent. Water quality is sufficient to support the outstandingly remarkable values of the Lumber River. As a result, the NPS finds that the entire nominated segment is physically eligible for the National System with classifications of scenic for segments 1, 2, 4 and 6 and recreational for segments 3 and 5. However, please see the Evaluation of Protection and Management Section for a further discussion of eligibility.

# EVALUATION OF PROTECTION & MANAGEMENT

The final condition that must be met before a state application can be approved is that of state/local protection. This is by far the most challenging -- and most critical -- aspect of the assessment of North Carolina's application for wild and scenic river designation. Section 2(a)(ii) rivers are managed by state or local governments at no cost to the federal government. Since the federal government is not and **cannot** be involved in the day-to-day management and protection of the river, as mandated by the WSRA, it is imperative that the NPS take a critical look at the protections provided by the state. These protections must be sufficient to provide for the long-term protection of the river and its resources. These mechanisms may be federal or state laws and regulations, special designations, local zoning, or any other land use and resource protection overlay. Various protection mechanisms are in effect for the Lumber River. These include federal and State laws and regulations; NCDPR management guidance from the *Lumber River State Park Master Plan: Columbus, Hoke, Robeson and Scotland Counties, North Carolina*; and local zoning, as described below.

## State and Local Laws and Regulations

### *North Carolina Natural and Scenic Rivers Act*

On its face, the NCNSRA is a fairly strong act with regard to control of State actions impacting, or potentially impacting State-designated rivers. The NCNSRA is designed to preserve, protect and maintain designated rivers and adjacent lands for their outstanding natural, scenic, educational, geological, recreational, historic, fish and wildlife, scientific and cultural values. Under §113A-44,

*The State Utilities Commission may not permit the construction of any dam, water conduit, reservoir, powerhouse transmission line, or any other project works on or directly affecting any river that is designated as a component or potential component of the State Natural and Scenic Rivers System. No department or agency of the State may assist by loan, grant, license, permit, or otherwise in the construction of any water resources project that would have a direct and adverse effect on any river that is designated as a component or potential component of the State Natural and Scenic Rivers System . . . No department or agency of the State may recommend authorization of any water resources project that would have a direct and adverse effect on any river that is designated as a component or potential component of the State Natural and Scenic Rivers System, or request appropriations to begin construction of any such project, regardless of when authorized, without advising the Secretary in writing of its intention to do so at least 60 days in advance. Such department or agency making such recommendation or request shall submit a written impact statement to the General Assembly to accompany the recommendation or request specifically describing how construction of the project would be in conflict with the purposes of this act and how it would affect the component or potential component.*



Although this provision of NCNSRA does not have a long and proven track record in North Carolina court and regulatory systems, the provisions would appear to be clear cut, and the NPS believes that the river is fairly well protected from State agency actions that would threaten the free-flowing nature or the outstandingly remarkable resources of the Lumber River.

### ***North Carolina State Parks Act and the Lumber River State Park***

Under §113A-40 of the NCNSRA,

*Any component of the State natural and scenic rivers system that is or shall become a part of any State park, wildlife refuge, or state-owned area shall be subject to the provisions of this Article and the Articles under which the other areas may be administered, and in the case of conflict between provisions of these Articles the more restrictive provisions shall apply.*  
(Emphasis added)

The North Carolina State Parks Act defines the mission of the North Carolina State Parks System as managing representative examples of the unique natural and cultural heritage of North Carolina, including its archeological, geological, biological, scenic and recreational resources. This reflects the North Carolina Constitution which declares that State policy is to conserve and protect lands and waters for the benefit of the people of North Carolina through the acquisition and preservation of parks, recreation areas and scenic vistas. North Carolina does this through the control and limitation of air and water pollution, excessive noise, and uses all other appropriate methods to preserve North Carolina forests, wetlands, estuaries, beaches, historic sites, open spaces, and scenic areas as part of the State's heritage. Specifically, the mission of the North Carolina State Parks System is:

*The North Carolina state parks system exists for the enjoyment, education, health, and inspiration of all our citizens and visitors. The mission of the state parks system is to conserve and protect representative examples of the natural beauty, ecological features and recreation resources of statewide significance; to provide outdoor recreation opportunities in a safe and healthy environment; and to provide environmental education opportunities that promote stewardship of the state's natural heritage.*

In 1989, the North Carolina General Assembly created the Lumber River State Park (Section 156(c) of Chapter 752 of Sessions Laws) to be managed as a Natural and Scenic River "to preserve its outstanding character in perpetuity." In addition, the NCDPR was directed to "prepare a general management plan for the Lumber River State Park to include a master plan which shall recognize and provide for State and local government protection of the various parts of the river . . . ." While it is not feasible for the state of North Carolina to purchase and manage the entire river corridor, much of the protection provided to the non-developed areas of the Lumber River will be through planned purchases of fee title or conservation easements, as discussed below.

## ***Lumber River State Park Master Plan and Acquisition Goals***

The Master Plan (July 1995) calls for the protection of segments of the river corridor where the highest biologic, scenic, geologic, archaeologic and recreation resources values are concentrated. The main objective of the Master Plan was *"to identify the river segments where state government action is most appropriate. State ownership and management of the entire corridor is neither practical nor feasible because of such factors as the length of corridor, fiscal resources, conflicting land use, large number of landowners, and municipal boundaries."* Lands are being acquired to: protect Natural Heritage Priority Areas; provide river corridor buffers between the Natural Heritage Priority Areas; and provide recreational access and facility areas. Where lands cannot be purchased, the Master Plan states that protection would be encouraged by working with: 1) landowners to create conservation or scenic easements; and 2) local governments through existing and future land use and zoning regulations.

In order to accomplish acquisition and management goals, two major management areas were established, north and south of Lumberton. The upstream area stretches from State Route 1412/1203 (RM 0) to Airport Landing (RM 18.8), roughly coinciding with Segment 1 as defined in this report. The downstream area runs from State Route 2121 (RM 82.8) to Fair Bluff (RM 99), which encompasses most of Segment 4 as defined in this report.

Within these two management areas, there are different acquisition schedules. Phase I, the most immediate acquisition priority, reaches from State Route 2121 to Princess Ann. Phase II includes the upstream management area and the river from Princess Ann to Fair Bluff. After these acquisition phases are completed, Lumber River State Park needs will be reassessed to determine if there are other critical needs (Phase III). This reassessment is not expected to take place for years.

In addition to the purchase of Natural Heritage Priority Areas and recreation sites, the Master Plan calls for the purchase of stream corridor lands, an especially important component of protecting the Lumber as a wild and scenic river. The Master Plan sets a goal for vegetative buffers of at least 250 feet from each shoreline, with a preferred width of 400 feet. Given the flat terrain, corridors this wide would provide for substantial screening and would generally protect most of the outstandingly remarkable resources of the Lumber River.

To date, State acquisition efforts have focused on access and natural areas along the river. The Lumber River State Park currently includes 2,364 acres located in Robeson County south of Lumberton. A total of 463 additional acres are currently under option or have been approved for acquisition. This proposed land acquisition is composed of seven different tracts in three

<b><i>Conservation Lands Ownership</i></b>	
<b>Landowner</b>	<b>Acres</b>
N.C. State Parks - owned	2364
N.C. State Parks - under acquisition	2733
City Parks	167
Private Conservation	190
<b>Total</b>	<b>3155</b>

counties: two tracts totaling 200.5 acres in Scotland County, three conservation easements covering 26 acres in Columbus County, and two tracts totaling 236 acres in Robeson County. An additional 2,270 acres, comprised of 12 tracts in Robeson County south of Lumberton, are currently in the acquisition process, with closure expected by the summer of 1998.

### ***Best Management Forest Practices in North Carolina Wetlands***

The "North Carolina Forest Practices Guidelines Related to Water Quality" requires a "best-management practices" buffer near rivers in order to qualify for cost-share assistance in reforestation. Logging within this buffer would result in forfeiture of cost-share assistance. Within wetland areas (slopes of 0-5°), the "North Carolina Forest Practices Guidelines" recommends a minimum streamside management zone of 50', although this may be greater depending on the circumstances. This would include the entire length of the Lumber River in North Carolina, except for sections within the city limits of Lumberton and Fair Bluff. Additional issues addressed by these mandatory standards include prohibition of debris entering streams and water-bodies; access roads and skid trail stream crossings; access road entrances; prohibition of waste entering streams, waterbodies and groundwater; pesticide application; fertilizer application; stream temperature; and rehabilitation of project sites.

### ***City of Lumberton Parks and Recreation Master Plan***

State law provides local governments the authority to make land use regulations, including those related to floodplains. The *City of Lumberton Parks and Recreation Master Plan* (1991), although not codified, recommends that the Lumber River through Lumberton be used for canoeing, camping and other related activities as per the Statewide Comprehensive Outdoor Recreation Plan. This plan also recommends establishment of greenways and trails for hiking, walking and bicycling to meet citizen's recreation and leisure needs. The City currently owns five parks adjacent to the river which have been developed for active and/or passive recreation. The total of 167 acres represents 5,787 linear feet of river frontage. Unfortunately, this plan only applies to the Lumber River within City limits, leaving the area upstream (between Phase II and the City limits) uncovered.

### ***Town of Fair Bluff Zoning***

As mentioned, North Carolina law provides local jurisdictions the power to set land use ordinances. Since urban areas are readily susceptible to resource degradation -- at least as far as wild and scenic rivers are concerned -- it is important to look closely at local regulations. Zoning ordinances for Fair Bluff were last updated in November of 1991. Under these ordinances, the majority of the Lumber River within the incorporated limits of Fair Bluff lies within a 'light density residential-agricultural' district. A small segment is zoned 'moderate density residential,' and an even smaller segment is zoned 'central business-office.' Light

density residential-agricultural districts are intended to “preserve the light density/agricultural character of areas which are removed from readily available urban services.” Medium density residential districts “provide for the retention and creation of residential areas with a maximum density of seven units per acre.” Central business-office districts “permit land development for a concentrated business-office complex in the central portion of town.

As all of the permitted uses are readily apparent in the Fair Bluff zoning ordinances, it is not necessary to spell out those uses here. Based on comparisons with other designated rivers, the NPS has determined that, with the exception of a few uses within the central business-office district, all of the zoned uses are compatible with a recreational wild and scenic river classification. Given the extremely limited area of the central business-office district, and the overall character of the Lumber River as a whole, these few, minor deviations should not be considered an impediment to designation.

## **Federal Laws and Regulations**

There are no federal lands within Lumber River corridor; however, the waters and lands in the river corridor do receive some protection from federal programs, apart from the WSRA. For example, the Army Corps of Engineers (ACOE) is charged with regulating waters of the United States. By definition these waters include coastal and navigable inland waters, lakes, rivers and streams; other intrastate lakes, rivers and streams (including intermittent streams); mudflats; sandflats; wetlands; sloughs; wet meadows; and certain impoundments.

### ***Statutes and Regulations Common to All Lands***

American Indian Religious Freedom Act  
Antiquities Act  
Archaeological Resource Protection Act  
Bald and Golden Eagle Protection Act  
Clean Water Act  
Clean Air Act  
Electric Consumers Protection Act  
Endangered Species Act  
Federal Power Act  
Fish and Wildlife Coordination Act  
Historic Sites Act

Historic Preservation Act  
Land and Water Conservation Fund Act  
Migratory Bird Treaty Act  
Migratory Bird Conservation Act  
Mineral Leasing Act  
Mining Law  
Mining and Minerals Policy Act  
National Environmental Policy Act  
Sikes Act  
Soil and Water Resources Conservation Act  
Wild and Scenic Rivers Act

## ***Section 7 of the Wild & Scenic Rivers Act***

Section 7 is one of the most important and powerful parts of the WSRA. This key provision directs federal agencies to protect the free-flowing condition and other values of designated rivers and congressionally authorized study rivers. Through the language of Section 7 of the WSRA, Congress expressed the clear intent to protect river values from the harmful effects of federal water resources projects.

More specifically, the WSRA prohibits the FERC from licensing the construction of hydroelectric facilities on rivers that have been designated as components of the National System. Further, the WSRA prohibits other federal agencies from assisting in the construction of any water resources project that would have a direct and adverse effect on a designated river. The WSRA also includes a standard that governs federal water resources projects below or above a designated river. Determinations under Section 7(a) or 7(b) of the WSRA as to the severity of the impacts of federal water resource projects are made by the river-administering agency; in the case of the Lumber River, this would be the NPS.

The USFS has developed definitions for “water resources projects” that are accepted by the other wild and scenic river administering agencies. Water resources projects include any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act, or other construction of developments which would affect the free-flowing characteristics of a wild and scenic river. In addition to projects licensed by the FERC, water resources projects may also include: dams; water diversion projects; fisheries habitat and watershed restoration or enhancement projects; bridges and other roadway construction or reconstruction projects; bank stabilization projects; channelization projects; levee construction; recreation facilities such as boat ramps and fishing piers; and, activities that require a 404 permit from the ACOE. It is important to note that Section 7 review is limited solely to federal water resources projects. For a complete description of Section 7 of the WSRA, please refer to the *Interagency Wild and Scenic River Council Reference Guide* available through any of the four river-administering agencies.

## ***Section 10 of the Rivers & Harbors Act and Section 404 of the Clean Water Act***

The Secretary of the Department of Army, acting through the Chief of Engineers of the ACOE, is authorized to issue permits for specified activities on the waters of the United States through Section 10 of the Rivers and Harbors Act and Section 404 of the Federal Water Pollution Control Act (Clean Water Act).<sup>2</sup> These permits are issued only after notice and opportunity for public hearings (to evaluate the impact of the proposed work on the public interest). Typical activities that would require permitting by the ACOE include:

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<sup>2</sup> The ACOE’s regulations are found at 33 CFR 320-330. The scope of the ACOE jurisdiction pursuant to these regulatory authorities is defined at 33 CFR 328-329.

- Construction of structures such as piers, wharves, docks, dock houses, boat hoists, boat houses, floats, marinas, boat ramps, marine railways, and bulkheads;
- Construction of revetments, groins, breakwaters, levees, dams, dikes, berms, weirs and outfall structures;
- Placement of wires, cables or pipes in or above the water, including intake and outfall pipes;
- Dredging, excavation and depositing of fill and dredged material; and
- Construction of fill roads and placement of riprap.

Section 10 of the Rivers and Harbors Act of 1899 gave authority to the ACOE to regulate obstructions (both structures and activities) to navigable waters of the United States. "Navigable waters" under Section 10 include those subject to the ebb and flow of the tide and those used for interstate commerce in the past, in the present, or (potentially) in the future. Dredging and disposal, filling, placement of in-water structures, and bank stabilization are regulated in navigable waters up to the ordinary high water line. These activities would require a permit from the ACOE.

Section 404 of the Clean Water Act requires the ACOE to regulate disposal of dredged or fill material in "waters of the United States" -- a much broader term than the "navigable waters" of Section 10 jurisdiction. Section 404 covers traditionally navigable waters, tributary streams, and wetlands. Most major activities on these lands would require a permit from the ACOE.

As defined by the river-administering agencies, ACOE permits are considered to be "federal assistance" under Section 7 of the WSRA. As such, ACOE permit applications for activities in wild and scenic rivers are subject to the provisions of Section 7. A permit from the ACOE will require a Section 7 determination by the river-administering agency when the proposal occurs in a designated river and is a water resources project, i.e., affects the river's free-flowing condition. The ACOE process requires a written determination from the river-administering agency for such projects.

Of particular interest to protection of the Lumber River is the protection of wetlands under Section 404. The ACOE and the U.S. Environmental Protection Agency (EPA) jointly define wetlands as:

*Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include [forested and shrub] swamps, marshes, bogs, and similar areas.*

Much of the Lumber River study area meets the classification requirements for wetlands. Through the city of Lumberton, a substantial percent of the land through which the Lumber flows has been shown to meet the requirements for wetland designation. In practicality, most **major** actions within the river corridor that could alter the free-flowing character of the river, or negatively impact the outstandingly remarkable resources, would require a permit from the ACOE, which would trigger a review by the river-administering agency for compliance with Section 7 of the WSRA.

### *Nationwide Permits and Wild and Scenic Rivers*

It is critical to note that certain types of activities are typically exempted from requiring Section 404 permits. Normal farming, forestry, and ranching activities, structure maintenance, and other actions with minimal adverse effects may be exempted under the 1977 amendments to the Clean Water Act.

In addition to activities exempted by the 1997 amendments, other minor activities, including fills placed as minor stream crossings, utility line crossings, or limited bank protection are often covered by what is known as a Nationwide Permit, provided certain standard conditions are met. On most waterways, these activities are usually of limited consequence; on wild and scenic rivers, they usually have insignificant impacts as well. However, these activities occasionally have significant impact on a wild and scenic river, or cumulatively impact the character of the river. To accommodate this very real possibility, ACOE rules (61 FR 47726-47728, September 10, 1996; Nationwide Permit Conditions, General Conditions, Subsection 7) provide that:

*No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designated by Congress as a "study river" for possible inclusion in the system, while the river is in an official study status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely effect the Wild and Scenic River designation, or study status.*

This allows the administering agency the opportunity to evaluate the impacts of an activity before the activity is authorized under the Nationwide Permit. In principle, this should protect the Lumber River from the cumulative impacts of a long series of minor activities, or the inadvertent impacts of what normally would be a minor project on most rivers.

### *Section 10 and Section 404 Permits and Fish and Wildlife*

While the ACOE is ultimately responsible for issuance of permits under Section 10 and Section 404, the Fish and Wildlife Coordination Act requires that the ACOE consult with the USFWS and state fish and wildlife agencies about possible adverse impacts to aquatic life from waterway development. The National Marine Fisheries Service (NMFS) is also involved in this

permit review, to ensure that fish and wildlife are considered equally with other factors when determining the suitability of waterway projects. The USFWS also makes broad-ranging recommendations on mitigation needed to compensate for unavoidable adverse impacts. While recommendations of these agencies have significant influence on permit decisions, the ACOE has final authority.

The ACOE is also required to consult with the USFWS if an endangered species may be impacted by an activity. The USFWS prepares a separate biological opinion, and the activity may not be authorized unless it is determined that the project is not likely to jeopardize the continued existence of the species or result in the destruction of the habitat of the species.

## **Other Resource Classifications and Protections**

The classifications, land use protections, and laws described below also provide protection to the natural and cultural resources of the Lumber River. These other factors either directly protect, set standards for protection, or influence management decisions for the Lumber River Basin.

### ***Endangered Species Act***

As mentioned in the Eligibility Section, the Lumber River provides habitat for several species listed as threatened or endangered by the USFWS, including the red-cockaded woodpecker (endangered), bald eagle (threatened), and American alligator (threatened). Other species which are included in the federal listing of "Species of Special Concern" include: Carolina crawfish, river frog, black vulture, Cooper's hawk, glossy ibis, snowy egret, golden-crowned kinglet, loggerhead shrike, Keen's bat, southeastern bat, Rafinesque's big-eared bat, and the star-nosed mole. The Lumber River is also home to an elipteo freshwater mussel which is currently being evaluated as a new genus. Under the Endangered Species Act, the federal government must develop restoration plans for listed species and must take no actions to further endanger these species. This, in theory, should preclude federal actions which would harm these outstandingly remarkable resources, and should provide for further habitat protection, which is consistent with wild and scenic river designation.

## **Conclusions**

At present, the Lumber River has sufficient mechanisms in place to protect the outstandingly remarkable resources and the free-flowing character found within the State-owned segments of the Lumber River. These same protections will be afforded to lands designated for State



park acquisition under Phases I and II. Other areas of the Lumber River lie within broad floodplains and wetlands; these areas are protected by both natural means -- i.e., they are unsuitable for development due to flooding -- and regulatory means through State and federal wetlands protections. These segments are also generally inaccessible by current road systems.

Within higher (drier) segments of the river, protection varies. Within the incorporated town limits of Fair Bluff, zoning is generally sufficient to protect the character of the river. This protection is bolstered by the geographic location of the community. Fair Bluff is a quiet, historic community somewhat off the beaten path. No major highways go through the area, so it is unlikely that there will be any great developmental pressure on the river, at least in the foreseeable future. Based on the protections in place, the lack of threats facing the river, and the limited length of river within the urban environment, it would be acceptable and desirable to include the Fair Bluff segment of the Lumber River in the National System.

The Pembroke-Lumberton area of the Lumber River, however, is a different matter. Zoning, community planning, and the floodplain within the city limits of Lumberton are probably sufficient to protect the river; 5,787 linear feet of river frontage are protected within the city of Lumberton by virtue of City ownership. However, just upstream of Lumberton, the NPS cannot find any real protection in place to warrant wild and scenic river designation. In addition, this area sits adjacent to a major interstate highway (I-95), and it is readily apparent that the area is experiencing growth and development. While it would be desirable to include this segment of the river due to its natural, scenic and recreational qualities, the lack of protection in the area precludes designation at this time. The NPS would recommend, however, that the local community develop a plan for protecting the river and present it to the NPS for approval. If such a plan were developed and found to be acceptable, the NPS would recommend to the Secretary that those segments be added to the National System at that time.

It is the conclusion of the NPS that segments 1 (State Route 1412/1203 to the Scotland/Robeson County lines at the end of the Maxton Airport Swamp), 4 (Jacob Branch to the upstream town limit of Fair Bluff), 5 (upstream town limit of Fair Bluff to the downstream town limit of Fair Bluff), and 6 (downstream town limit of Fair Bluff to the North Carolina/South Carolina border) are sufficiently protected by State or local governments to warrant inclusion in the National System. Segments 2 (Scotland/Robeson County lines at the end of the Maxton Airport Swamp to Back Swamp) and 3 (Back Swamp to Jacob Branch) are not sufficiently protected at this time to warrant national wild and scenic river designation. Further planning by the local community and/or the state of North Carolina could result in this conclusion being reversed, and these segments of the Lumber River being added in the future. Protection of the upper and lower portions could well serve as an impetus for development of protection mechanisms for the remaining segments.

# ENVIRONMENTAL ASSESSMENT

In addition to meeting the Section 2(a)(ii) requirements discussed in earlier sections of this report, an application for designation must be considered from the perspective of the NEPA. The NEPA requires federal agencies to review any proposed actions to determine whether their actions could cause significant environmental impacts. The required review includes an analysis of alternatives, including measures that would reduce or mitigate adverse impacts. For actions that appear likely to cause significant impacts, an environmental impact statement (EIS) is usually prepared by the administering agency. In those instances where significant impacts are less likely, a more concise environmental assessment (EA) is prepared. If the EA discloses major impacts to physical resources, an EIS is developed. In most instances, the NEPA evaluation of the potential impacts of federal wild and scenic river designation under Section 2(a)(ii) is initiated through an EA rather than an EIS.

This section of the report evaluates the likely impacts of wild and scenic river designation on the Lumber River and its environs. Included in the assessment is a description of the area, an identification of possible alternative actions, an analysis of the potential impacts of the reasonable alternatives (environmental consequences), and an identification of the preferred alternative. Some redundancy exists between the EA section and earlier portions of this report. This is to provide clarity and completeness for the EA.

## Purpose and Need

Without the designation of the Lumber River into the National System, the nationally significant resources associated with the river are at risk from federal water resource projects. Designation will preserve these resources for current and future enjoyment and use. It is in the public interest to consider wild and scenic river designation as a means to protect these nationally important resources. Therefore, the development of this EA is necessary.

## Description of the Area

This section provides a description of the natural and human environment surrounding the section proposed for designation. As the proposed designation could potentially impact an area greater than the designated area, the following analysis is expanded beyond the designation boundaries when appropriate. Even though the NPS has found only some of the segments are eligible for designation at this time, we are covering all of the segments with this EA in the anticipation of the appropriate jurisdictions developing a management plan or other protection standards acceptable to the NPS and the Secretary in the near future. This will allow for a shortened NEPA process to add those additional segments to the National System.

## *Physiography and Hydrology*

The Lumber River is surrounded by a broad floodplain. Except for some adjacent raised terraces, the topography is relatively flat, with a gradual slope from the river's source at Drowning Creek to its southern limit 115 miles downstream at the North Carolina-South Carolina border. Elevations vary from 245 feet above mean sea level in the Sandhills to 110 feet in Lumberton to 55 feet at the North Carolina-South Carolina border. On a landscape scale, the land has slopes of five percent or less.

Paralleling the east bank of the river downstream from U.S. 74 to the border with South Carolina is a series of sand ridges. Typically, the ridges are surrounded by poorly drained depressions, wherein diverse pocosin-type vegetation occurs. The Big Sandy Ridge is an outstanding example of these sand ridges; it is secluded and relatively undisturbed.

Many tributaries of varying volume and length drain into the river, increasing its flow and width. Notable among these are Back Swamp, due west of Lumberton, and Big Swamp, flowing from east of the Net Hole area. Stream evaluation data are collected at the Highway 71 bridge at Maxton and the U.S. 74 bridge at Boardman. The drainage area at Maxton is 365 square miles, and the one at Boardman is 1228 square miles. Data for the Maxton drainage area is available only for the period 1987-1991. Data collected for the Boardman drainage area for the period from October 1990 to September 1991 show the average daily discharge to be 1167 cubic feet per second (cfs). Mean monthly flows based on data collected over the period of 1930-1991 showed the flows to be lowest during the months of June-November and highest in February-March as illustrated in the table below.

<i>Mean Daily Flows in Cubic Feet Per Second</i>		
<b>Month</b>	<b>Maxton (1987-1991)</b>	<b>Boardman (1930-1991)</b>
January	556	1791
February	498	2179
March	614	2349
April	543	1905
May	426	1014
June	283	763
July	304	821
August	332	949
September	294	980
October	406	795
November	419	869
December	440	1293

## Socioeconomics

Information cited here was obtained from the Master Plan and is somewhat dated. However, the intent is to provide a picture of the area. Because the NPS does not believe there will be any significant environmental impacts if the Lumber River is designated as a wild and scenic river, as will be explained throughout this EA, these figures are sufficient for the purpose intended.

**Population.** Four counties make up the Lumber River Basin. The populations of the four counties differ significantly. Robeson County ranks 17th of North Carolina's 100 counties in population (105,179) and is therefore among the most populous counties in the State. The populations of Columbus, Scotland, and Hoke counties are 49,587, 33,754, and 22,856 respectively. Three percent (211,376) of the State's population lived within the four counties in 1990, which reflected net out-migration of 7,619 individuals (3.4 percent) from the previous year. In general, the population of the four-county region is fairly dispersed and rural, with a density that varies from 52.9 to 110.8 people per square mile. This density is well below the State's average population density of 136.1. The population is ethnically diverse (47 percent white, 30 percent black, 22 percent Native American, and just over 1 percent other races) and fairly young (over 70 percent of the population of the four counties is under the age of 45).

<i>Population Characteristics of the Lumber River Drainage</i>				
	Hoke County	Scotland County	Robeson County	Columbus County
Population (1990)	22,856	33,754	105,179	49,587
Land Area (Square Miles)	391.2	319.2	948.9	936.8
People Per Square Mile	58.4	105.7	110.8	52.9
Total Households	5,794	8,971	27,429	13,754
Married Households	3,847	6,225	18,451	10,381
Female Head of households	1,605	2,338	7,353	2,757
Individuals Living Alone	342	408	1,625	616
Race: White	9,635	19,025	37,986	32,897
Black	9,878	12,176	26,185	15,181
Native American	3,176	2,430	40,511	1,370
Hispanic	218	318	704	242
Asian	85	83	239	53
Other	82	86	258	86
Male	11,448	15,764	49,714	23,379
Female	11,408	17,990	55,465	26,208

**Employment and Personal Income.** Over one third of the workforce (37 percent, 1989 figures) in the Lumber River drainage was employed in manufacturing, followed by retail trade (16.3 percent); government (14.7 percent); service industries (12.9 percent); agriculture, forestry and fishing (4.5 percent); construction (3.6 percent); finance, insurance and real estate (2.4 percent); and transportation and public utilities (1.9 percent). Various non-agricultural workers made up the remaining 6.7 percent. Unemployment rates in 1990 ranged from 5.8 percent to 8 percent (Economic and Statistical Administration, State Data Center Management and Information Services).

<i>Employment and Wage Characteristics of the Lumber River Drainage</i>				
	Hoke County	Scotland County	Robeson County	Columbus County
Occupation (1990 Estimates)				
Agriculture, Forestry, Fishing	220	250	1,960	1,460
Construction	170	410	1,670	840
Manufacturing	3,610	7,640	14,980	5,950
Transportation, Utilities	60	410	860	310
Trade	670	2,900	7,070	3,530
Finance, Insurance, Real Estate	8	290	1,020	720
Services & Miscellaneous	680	2,670	4,880	2,460
Government	1,460	1,810	6,610	2,850
Non-Agricultural	750	850	2,630	1,550
Average Annual Wage (1988)	\$15,044	\$16,873	\$14,934	\$16,554
Estimated Family Income (1990)	\$26,900	\$30,900	\$24,800	\$24,100
Unemployment Rate (1990)	5.8	8.0	6.9	5.8

## *Access*

The Lumber River is accessible by interstate and other highways and by State and county roads. Of particular significance is Interstate 95, the most traveled north-south highway in the eastern United States, carrying an enormous number of potential State park visitors. Interstate 95 crosses the river in Lumberton. Many other State roads cross, run parallel to, or provide access to the river. Highway 74 roughly parallels the river for about 30 miles, running in a southeasterly direction from Maxton to Pembroke and past Lumberton and then to the southeast from Lumberton to Boardman.

## *Land Uses*

The four county region that surrounds the river (2,596 square miles) is composed of forests, farms, and small townships; Lumberton is the only major city. The character of the region is predominately rural.

### *Agriculture*

In 1987, there were 59,284 farms in North Carolina comprising 9,447,705 acres. Of this total, 5.3 percent of the State's farms, 5 percent of the State's farmland, and 4 percent of the State's cropland were found within the combined counties of Hoke, Scotland, Robeson, and Columbus. The primary crops grown in this region include soybeans (147,492 acres), corn (100,567 acres), wheat (29,567 acres), tobacco (23,387 acres), cotton (18,428 acres), and hay and alfalfa (6,682 acres). The market value of crops, including nursery and greenhouse products, totaled \$112,394,000, or 7.8 percent of the State's total. Livestock and poultry products totaled \$52,249,000 or 3.6 percent of the State's total (Bureau of the Census).

Hog production is also a major agricultural activity. The Carolina Food Processors' plant near Lumberton has a peak operating capacity of 28,000 hogs processed per day. The plant's location has encourage increased hog production in the Lumber River region, with a significant increase in the amounts of water needed and the waste generated. While there have been concerns that both of these factors would have negative impacts on the rivers water quality, quantity, and flow, to date the river has not been significantly impacted.

### *Forestry*

About 60 percent (989,354 acres) of the total land area in the Lumber River counties of Hoke, Scotland, Robeson, and Columbus is forested. Of this, nearly 88 percent (877,300 acres) is controlled by private land owners. These private lands account for 73 percent of the total harvest. Both natural and plantation pines account for more than 50 percent of total forest land, 35 percent is hardwood, and 13 percent is oak-pine. About 80 percent of these forests, both private and public, are considered fully or medium stock. Approximately two-thirds of the pine stands are loblolly pine, with the rest made up of slash, longleaf, shortleaf, Virginia, and pond pines. Net annual growth of softwood is 43,614,000 cubic feet. The volume of hardwood growing stock was 835,357,000 cubic feet, made up mainly of tupelo, black gum, oak species, hickory, cypress, and sweetgum. Net annual growth of hardwood is 23,648,000 cubic feet. The net annual growth of hardwoods and softwoods is nullified, however, by an equivalent amount removed by harvesting and by mortality.

Forestry and its related industries -- furniture, paper, lumber, and wood -- employ approximately 4,670 people (1990 figures). Lumber and wood account for the employment of 3,120 persons. Columbus County employs the largest number of people (2,700), followed by

Robeson (1,400), Scotland (520), and Hoke (50; Civilian Labor Force Estimates for North Carolina, 1990).

<i>Forest Types By Acre (1990)</i>				
	Hoke County	Scotland County	Robeson County	Columbus County
Loblolly/Shortleaf Pine	30,099	22,525	76,533	166,783
Longleaf/Slash	30,262	45,959	3,098	25,400
Oak-Pine	58,403	22,525	40,278	31,789
Oak-Hickory	16,028	19,545	35,063	46,471
Oak/Gum/Cypress	28,141	4,864	125,977	150,327

## *Description of Resources*

### *Recreation*

The Lumber River is one of the most highly prized recreation sites in North Carolina; recreation varies from active outdoor recreation, to festivals, to passive activities. Among the most popular activities are canoeing and boating, fishing, hunting, picnicking, camping, nature study, swimming, biking, jogging, crafts and fossil and artifact hunting.

**Canoeing.** One of the best way to experience the unique characteristics of the Lumber River is by canoe. The visitor experiences miles of natural settings that one would normally expect in highly isolated areas. The visitor can choose between a variety of canoeing challenges and trip lengths. Trips can vary from one hour along some river sections to several days navigating the entire river.

The river has been divided into recreation water trails and has 24 canoe access points at road intersections. (The uppermost segment between U.S. 15-501 and State Route 1412/1203, however, is Drowning Creek and is not a part of the proposed wild and scenic river designation.) Under a system used by the state of North Carolina, most of the river is classified as "A," which is smooth water with a velocity of less than two miles per hour; the remainder is classified as "B," which has flows of between two to four miles per hour. The most popular portion of the river for canoeists is the Lower Lumber River Recreational Trail, a part of the North Carolina Trails System, which has 17 segments. Intensive canoeing activity can take place within the eight-mile stretch of river through Lumberton in Robeson County, ranging from N.C. 72 at McNeill's bridge to its intersection with N.C. 72 at High Hill. This area is not subject to significant degradation by boaters and has good accessibility.

In Scotland County, the Lumber River Canoe Regatta took place between 1976 and 1986 on the Lumber River Canoe Trail. This annual event was discontinued because fallen trees had made that section of the river impassable. The regatta was a popular event, and local officials are interested in reviving it now that most of the obstructions have been removed. The Lumber River Canoe Trail is the designation of the upper Lumber River between the intersection of U.S. 15-501 with the river and N.C. 71 and the river. The Lumber River Canoe Trail was made a part of the North Carolina Trails System in 1978. It was the first official canoe trail in North Carolina. In 1981, the Lumber River Canoe Trail was designated as one of the first national water trails in the southeastern United States.

The Lumber River provides a variety of flatwater canoeing opportunities. The upper sections of the river require greater canoeing skills than in lower sections because of fallen trees, narrow stream widths, and somewhat swifter water. There are serious impediments to passage on the upper portion of the river; the lower river has few obstructions. The meandering nature of the river and the force of unseen currents provide challenging variations in navigability to boaters. The NCWRC tries to maintain a small boat passageway along the lower river by cutting up to a six-foot-wide opening where downed trees cross the river.

The popularity of canoeing is reflected by the number of canoe rental operators in the Wagram, Burnt Island, and Fair Bluff areas, as well as at Pembroke and Lumberton, the Robeson County Recreation Department being among them. In addition, canoeing enthusiasts who live along the river have organized clubs such as the Upper Lumber River Association and the Lumber River Canoe Club.

**Fishing.** Bank, small boat and canoe fishing occur all along the river. Sandbars and fallen logs provide suitable habitat for fish and various river biota on which the fish feed. Common species fished are catfish, bass, jack and bluegill bream. For a complete description of fishing, see the Outstandingly Remarkable Resources Section.

**Hunting.** Hunting for survival and for sport has always been an important activity in the region. All along the river there are opportunities for hunting deer, squirrel and other game. The NCWRC manages three boating access areas along the river, which provide access for hunters. In addition, the Sandhills Game Lands are located in the upper watershed of the river. An 18,191-acre portion is found in Scotland County, composed of a number of tracts of land. One tract occupying about 580 acres is located in the upper region of the river around its intersection with State Route 1412. Hunting also takes place at the 231-acre Bullard and Branch Hunting Preserve in Robeson County.

State park regulations do not permit hunting on State park property. Hunting may be permissible on lands along the river that are not acquired as State park lands. Hunting on these non-State park lands is subject to normal regulations by the NCWRC and the control of private landowners.



**Picnicking, Camping and Recreation Sites.** A number of points along the river, accessible by canoe or road, are ideal for family and group picnicking and camping. The towns of Maxton, Pembroke, Lumberton and Fair Bluff offer opportunities for picnicking and provide playgrounds for children. In Lumberton, recreational opportunities are afforded at Luther J. Britt Park and James Stephens Park, which are categorized as Open Space Areas; Turner Gore Park, Bicentennial Park, and Noir Street Playground are categorized as Neighborhood-Serving Areas. In addition to these public recreation areas, a number of private recreational sites exist along the river.

**Biking and Jogging.** Hiking and walking along the river are popular recreational pursuits for residents in the Lumberton area. Jogging and bicycling are activities associated with these hiking trails. McMillan Beach has the potential to be incorporated into the open space trail system of the City.

**Swimming.** Swimming takes place at many areas along the river, particularly by local residents who are familiar with the river. The black appearance of the water, swirling undercurrents, fallen trees, and underwater snags can make swimming unsafe.

**Fossil and Artifact Hunting.** Many amateur and professional paleontologists enjoy finding fossils and artifacts in North Carolina, particularly in the eastern part of the State, which is rich in locations. A diverse number of species of fossilized plants and animals ranging from a few thousand to millions of years old can be seen on the State's river banks and exposed geologic areas.

One particular area on the banks of the Lumber River near Lumberton has been singled out due to ease of access, abundance and diversity of fossils, and historical and geological significance. It is on the east bank of the river about one-quarter of a mile upriver from the N.C. 72 intersection with the river. The location has a basal oyster-rich bed, a middle bed with abundant and diverse open marine mollusks and a few estuarine mollusks, and an upper bed with mostly fragmented shells. Such fossil areas are important for resource interpretation and education. It should be noted that fossil collecting is not permitted on State park property under State park regulations.

## *Wildlife*

The Lumber River supports a diverse wildlife community. Most of the species are common to eastern hardwood forests and swamps (whitetail deer, raccoon, beaver, mink, turkey, ducks, etc.); however, there are several notable rare and endangered animal species within the river system. The American alligator (*Alligator mississippiensis*) is foremost among these; the alligator is rare at this latitude this far from coastal waters. It ranges along the entire river floodplain, but its numbers are few. A unique fish, the cape fear chub (*Cyprinella zamema*), previously unknown in the Lumber River, has been identified in both the river's upper and lower reaches. Rare invertebrates also can be found, including lepidopterans, among which

is the giant yucca skipper (*Megathymus yuccae*), whose larvae depend on the Yucca plant. The endangered red cockaded woodpecker (*Picoides borealis*) is found in the uppermost reaches of the river. The pine barrens treefrog (*Hyla andersonii*) and the river frog (*Rana heckscheri*), two rare amphibian species, have also been identified in the uppermost portions of the river.

### *Cultural Resources*

Most of the archaeological work in the Lumber River region has been done in Robeson County but is thought to be representative of the general archaeology of the area.

Four hundred and twenty-nine archaeological sites have been recorded in Robeson County. Of these, 115 sites were studied over a 100-year period preceding 1988. Recent research has been done on 314 new areas. Research was based on topographic variables, such as elevation and proximity to a water source, as well as from information provided by local residents acquainted with areas in which artifacts have been found. Each site was classified under one of four categories: Paleo-Indian, Archaic Woodland, Mississippian and Historic. There are 47 sites with potential archaeological importance, 20 of which have been nominated to the National Register of Historic Places.

The Paleo-Indian Period, dating possibly to 20,000 B.C., is characterized by nomadism, hunting and food-gathering. The most distinctive tools had lanceolate projectile points.

The Archaic Period, from about 8,000 B.C., saw a slight climatic warming and a consequent increase in human population and deciduous trees. It was characterized by a reliance on smaller animal species and the collection of flora as well as fishing and shell-fishing. An inventory of tools found from this period shows adaptation to the forest environment. Among the implements found are stemmed and notched projectile points, atlatl (spear-throwing) weights, knives, axes, scrapers, choppers, drills, and grinding and nutting stones.

The Woodland Period began between 2,000 B.C. and 1,000 B.C. and continued into the time of European settlement. It was characterized by the further development of subsistence agriculture and ceramics, although hunting and gathering continued. In the early part of this period, the bows and arrows using small projectile points, or true arrowheads, were first used. These Native Americans abandoned the nomadic lifestyle for village life.

The Mississippian Period began in 900 A.D. and coexisted with cultures of the former three periods as well as with the next, the Historic Period. It was a period characterized by subsistence agriculture in areas near sizeable villages; corn was the major crop. Native Americans constructed flat-topped earthen mounds as part of their ceremonial activities. Projectile points were small and triangular or pentagonal. Ceramics bore decorations of stamps of rectilinear or curvilinear forms, or they were highly polished.

The Historic Period began with the arrival of European explorers, the earliest of which were Italian, Spanish and Portuguese. The period of written history of Native Americans began with the English colonists on Roanoke Island in 1585. A number of different Native American groups speaking different languages (Siouan, Iroquoian, Algonkian and Muskogean) were in the area. It was from these indigenous groups that the present Native American population descended. Artifacts of interest from this period include kaolin and other pipes (items of European influence) for tobacco smoking, gunflints, and ceramics of plain whiteware, pearlware and creamware, together with the traditional types. Also found were colored salt-glazed stoneware and various types of porcelain. Dark green bottle fragments from the 19th century are included in these artifacts found along the Lumber River (Knick, 1988).

### *Vegetation*

The Lumber River floodplain is largely a second-growth oak-cypress-gum swamp forest of the blackwater subtype. Most of the species present are indicators of the perennially wet nature of the river floodplain. The major canopy species are cypress, tupelo, red gum, black gum, and water oak; the understory is dominated by river birch, water elm, red maple and hackberry. Along the river banks are abundant pines, cypress, poplar, bays, juniper, gums and wisteria. Equally abundant are poison ivy, poison oak, and poison sumac. Virginia creeper and Spanish moss are common on trees bordering the river. Fern species and the insectivorous Venus flytrap grow along the stream banks.

The swamp forests grade to bottomland forests and then to first terrace hardwood forests, which are found on slightly higher elevations. Flooding in these forests is seasonal and occurs typically in winter or early spring. Common trees in these bottomland and first terrace hardwood forests are water hickory, overcup oak, laurel oak, willow oak, red maple, persimmon, cottonwood, green ash, American elm, loblolly pine, and river birch. Common shrubs found are black willow, buttonbush, winterberry, hazel alder, swamp privet, and American holly. Lizard's tail and sedges are also prevalent.

The next broad forest type is the second terrace hardwood forests. Although found in the floodplains of the river, flooding is temporary. Common trees are green ash, American elm, red maple, sweet gum, water oak, cherrybark oak, swamp chestnut oak, shagbark hickory, ironwood, sycamore, yellow poplar, and loblolly pine. In the understory are spicebush, sugarberry, poison ivy, jack-in-the-pulpit, Virginia creeper, hawthorns, American holly, greenbrier, mayapple, sedges, and blackberry.

The many low ridges in the floodplain are dominated by loblolly pine and mixed hardwoods. Typically, these ridges are surrounded by poorly drained depressions within which occurs diverse pocosin-type vegetation. Paralleling the east bank of the river, between U.S. 74 to the border with South Carolina, are a series of these sand ridges. The 700-acre Big Sandy Ridge located north of Fair Bluff is an outstanding example of these sand ridges. The area is secluded and composed of relatively undisturbed pine-scrub oak sandhill community.

## *Climate*

**Temperature.** Temperatures are mild, with warm summers and cool winters. The Lumber River four-county region has daily winter temperatures averaging between 32 and 55 degrees. Average daily summer temperatures range between 68 and 89 degrees. Both spring and autumn temperatures show a average low around 48 degrees and a high around 74 degrees.

**Precipitation.** There are four recording stations in the region: Laurinburg, Red Springs, Lumberton and Whiteville. Data from these stations indicate that total rainfall for the area averages between 46 to slightly over 49 inches per year. There are no dry months, with the lowest rainfall in the month of April and from October to December; the wettest periods are in March and from June to August. Rainfall is evenly distributed over the region. Precipitation for all communities in the region is relatively consistent, with November receiving the least rainfall and July the highest; rainfall in November averages between 2.63 and 2.86 inches, while July rainfall averages over five inches per year.

Average annual snowfall for the four recording stations in the region is low, ranging from between 2.06 inches for Red Springs and 2.58 inches for Lumberton. Most snowfall is evenly distributed over the region, and almost all snow falls between January and March.

Most of the precipitation received by this region of North Carolina comes from the Gulf of Mexico or the Atlantic Ocean. Most floods are caused by rains resulting from tropical storms. The record flood occurred in September, 1928, with a peak flow reading of about 25,000 cubic feet per second. Such an occurrence can take place on a 25-100 year cycle.

Significant droughts occurred in 1930-1934, 1950-1957, 1966-1971, 1980-1982, and 1985-1988. During the drought of 1930-1934, a record minimum annual discharge of zero on the river was recorded in 1934. Such a drought is rare, but can occur on a 15-60 year cycle.

**Storms and Tornadoes.** The four-county region of the Lumber River is relatively sheltered from hurricanes. By the time most hurricanes reach the area, they are downgraded to tropical storms (39-73 miles per hour) or tropical depressions (less than 39 miles per hour). Since 1750, records show 14 such storms or depressions that have had some limited impact on the area. Among these are Hurricanes Hazel in 1972 and Hugo in 1989. Tornadoes are frequently recorded in the region. A comparison of the average number of tornadoes for the period 1953-1990 shows Robeson County to have the highest incidence of any county in the entire state of North Carolina, with 20 tornadoes annually. Scotland and Columbus counties each have an average of seven tornadoes annually, while Hoke has five.

## *Geology and Soils*

The Lumber River cuts through four major geological formations within the Coastal Plain physiographic province. The Middendorf Formation extends from the source of the river to

the Scotland-Robeson County line just above Maxton. This formation originated in the Cretaceous Period, 63 million to 138 million years ago. It is characterized by sedimentary deposits of sand, sandstone, and mudstone. Clay balls and iron-cemented concretions are common. The sedimentary beds are laterally discontinuous, with cross-bedding commonly found.

The Black Creek Formation is found in stretches downstream from the Scotland-Robeson County line. This formation also originated in the Cretaceous Period, 63 million to 138 million years ago. It is characterized by lignitic clay, gray to black in color. It contains thin beds and laminae of fine-grained micaceous sand and thick lenses of cross-bedded sand. The upper part has lenses of glauconitic, fossiliferous clayey sand.

Originating in the younger Tertiary Period, two million to 63 million years ago, is the Yorktown-Duplin Formation. This formation extends around the cities of Pembroke and Lumberton and from the Lumber River Conservancy lands-Burnt Island area to the town of Fair Bluff. The Yorktown Formation is composed of fossiliferous clays with varying amounts of fine-grained sand, bluish-gray in color, with shell material commonly concentrated in lenses. The Duplin Formation is composed of shelly, medium- to coarse-grained sands, sandy marl, and limestone, with soils that are bluish-gray in color.

The soils in the river basin are generally poorly drained. The soils of the flooded swamps are organic. In the less-wet bottomland and first terrace hardwood forests, the soils are mainly entisols without development of a soil horizon because of frequent deposits of alluvium. In the second terrace hardwood forests, the soils are somewhat poorly drained to moderately well drained, with less alluvial deposition than the other types discussed. The main soil types are Muckalee, Meggett, Bibb and Johnston.

## **Alternatives**

The NEPA requires that the full range of reasonable alternatives must be considered. The range must be developed with a recognition of the options that are realistically available given the authority of the agency taking the action and the scope of the proposed action. In the case of the state of North Carolina's application for wild and scenic river designation for the Lumber River, the scope of the Department of the Interior's inquiry is extremely narrow. The only question possible is whether or not the segment under consideration should be designated pursuant to Section 2(a)(ii) of the WSRA. The possibility of other designations -- for example, designating the Lumber River and its surrounding land base as a wilderness area or as a national park -- are not within the purview of the present evaluation or the NPS. Consideration of non-designation options -- other than the status quo or 'no action' -- is likewise, beyond the purview of the evaluation.

It is, however, within the scope of the evaluation to consider alternative forms of wild and scenic river designation. For example, thought might be given to designation of only a portion

of the Lumber River under consideration or, alternatively, to extend the designation to encompass a greater area. Likewise, consideration could be given to an alternative classification, as, for example, a recreational rather than a scenic classification. In the case of the Lumber River, the most realistic and feasible option -- and the one most in keeping with the state of North Carolina's wishes -- was to conduct a NEPA evaluation of the entire river with the classifications outlined earlier.

After giving consideration to the range of possibilities allowed under Section 2(a)(ii) of the WSRA, two reasonable alternatives were identified: **Alternative A -- No Action** and **Alternative B -- National Scenic River Designation**.

### ***Alternative A: No Action***

Under this alternative, no action would be taken by the Department of the Interior to designate the Lumber River as a national wild and scenic river under Section 2(a)(ii) of the WSRA. The NCDPR would continue as the principal administrative agency for State land. There would be no change in management of county, municipal and private lands. All current State and local water pollution and land use regulations that protect the river and its adjacent lands would continue to be in effect. The river would continue to be a State-designated natural and scenic waterway; the river would be administered under the provisions of the NCNSRA and the North Carolina State Parks Act. The Master Plan and existing local land management provisions would continue to define the intensity of protection, or development allowed, according to the State classification of the river segment.

Alternative A would not provide permanent protection from federally licensed water resource projects having a direct and adverse effect on the Lumber River's outstanding natural, cultural and recreational resources.

### ***Alternative B: National Wild and Scenic River Designation***

Under this alternative, the Lumber River -- or portions thereof -- would be designated as a state-administered component of the National System. The state of North Carolina would administer the river in accordance with the NCNSRA and other applicable State laws. The NCDPR would continue as the principal management agency, in cooperation with the appropriate State and local agencies and private landowners. Long-term protection and enhancement of nationally significant resources would be realized. In accordance with the NCWRC and the WSRA, the Master Plan would be implemented for protection and enhancement of resource values. All future management decisions affecting the area would be directed by a consideration of the outstanding values of the river.

Most land uses and activities on public lands would continue at their current intensity, but could be prohibited from increasing in either intensity or amount if they adversely affect the

outstanding resource values. Federal designation would not affect private lands. Existing and future land uses and activities on private lands would be allowed, subject to State and local laws, restrictions, and land use plans.

Under Alternative B, the FERC would be prohibited from granting a license for any new dam or other hydroelectric facilities within the protected river corridor. In addition, other federally sponsored, licensed, or funded water resource projects that would result in an adverse impact to the river's free-flowing condition, or any of the outstanding resources described earlier in this report, would be prohibited.

## **Environmental Consequences**

This section includes an evaluation of the impacts of the two alternatives on natural, scenic, recreational and cultural resources/activities. Note that under both alternatives, existing protection mechanisms and management agreements would persist. These mechanisms were described earlier in the Resource Protection Section.

### ***Alternative A -- No Action***

#### *Access*

Alternative A would not alter access to the river and surrounding lands. On public lands, access would continue to be established by the state of North Carolina or other appropriate land managing entity. Private landowners would continue to be able to allow access or post their lands against access as they wish.

#### *Agriculture*

Under Alternative A, there would be no impacts to agriculture, including livestock (primarily hogs), cotton, soy beans and tobacco. All agricultural activities would continue to be subject to State and local jurisdictions.

#### *Hunting and Fishing*

Hunting and fishing would continue as before under Alternative A. State agencies -- and where appropriate, federal agencies -- would continue to establish seasons and bag limits. Landowners would continue to decide whether to allow these recreational activities, or to post their lands.

### *Fish and Wildlife*

There would be no impact to fish and wildlife under this alternative. On State lands, the NCDPR and NCWRC would continue to have responsibility for management of wildlife habitat. The NCWRC, and where appropriate the USFWS, would be responsible for the wildlife populations. The NMFS would continue to share responsibility for management of anadromous fish populations.

### *Floodplains, Wetlands and Water Quality*

There would be no impact to floodplains, wetlands, or water quality. The existing appropriate State and federal agencies would continue to assess activities that could affect water quality. All existing standards and management controls would continue. Protection against federal water projects would not be realized, and the river could be degraded through federal preemption for certain types of projects.

### *Historic and Prehistoric Resources*

There would be no impacts to these cultural resources under Alternative A. Any existing monitoring and protection programs for historic and prehistoric values on public land would continue. Unintentional damage to cultural resources on public and private land could occur from increases in recreation and other activities.

### *Recreation*

There would be no impact from Alternative A on recreation. The NCDPR would continue to manage the river for low-impact recreational opportunities as outlined in the Master Plan. Increased growth in recreational use might diminish recreation experiences and opportunities for solitude. Degradation of recreation sites could be accelerated from an increase in use. The Master Plan includes provisions for improvements in access and interpretive facilities and could offset or negate these impacts.

### *Scenic Resources*

Public lands in the river corridor would continue to be managed according to State and local laws and regulations. Alternative A would not provide long-term protection from the negative impacts on the scenic resource values from federally assisted water resources projects.



### *Shoreline Development/Construction*

No impact to shoreline development and construction would result under Alternative A. Development would continue to be subject to State and local standards and regulations and the Master Plan. A lack of stringent zoning in many areas could result in degradation of the natural appearance of the river, as well as other degradations of the riverine ecosystem. There would be no protection from federal water resource projects.

### *Threatened and Endangered Species*

No impact would occur to threatened and endangered species. Existing monitoring and protection of known threatened and endangered species would continue. Recovery planning would continue. The level of monitoring of threatened and endangered species and their habitats could increase or decrease as appropriate and new management goals could be developed.

### *Timber*

Timber would not be affected under Alternative A. Timber harvest would continue to be subject to existing State and local laws and land use plans. Timber harvest activities are regulated by, and subject to the management guidelines of, the North Carolina Division of Forest Resources and other appropriate State agencies. No effects on the timber industry in the area would result under Alternative A.

### *Traditional Uses*

There would be no impact to long-standing, traditional uses of the Lumber River under Alternative A. All uses would remain subject to North Carolina and local laws and regulations.

### *Water Rights and Withdrawals*

Water rights and water withdrawals would not be impacted under Alternative A. Current standards, practices, regulations and laws of State and federal agencies would continue to dictate management of water on the Lumber River.

## *Alternative B -- Federal Wild and Scenic River Designation*

### *Access*

Alternative B would not alter access to the river and surrounding lands; wild and scenic river designation through Section 2(a)(ii) does not alter public or private access to the river. On public lands, access would continue to be established by the state of North Carolina. Private landowners would continue to be able to allow access or post their lands against access.

### *Agriculture*

Under Alternative B, there would be no impacts to agriculture, including livestock (primarily hogs), cotton, soy beans and tobacco. All agricultural activities would continue to be subject to State and local jurisdictions.

### *Hunting and Fishing*

Hunting and fishing would continue as before under Alternative B. State agencies -- and where appropriate, federal agencies -- would continue to establish seasons and bag limits. Landowners would continue to decide whether to allow these activities on their lands. However, since recreation -- and specifically, fishing -- is considered to be an outstandingly remarkable resource under the WSRA, the state of North Carolina would be obligated to plan and provide for its continued high level of quality.

### *Fish and Wildlife*

No significant impacts to fish and wildlife populations would occur as a result of designation. Fish and wildlife are already protected under numerous State and federal laws, regulations and programs. The NCWRC, USFWS and other State and federal agencies would continue to be responsible for management of habitat and populations. Since fish and wildlife populations are considered to be outstandingly remarkable resources under the WSRA, designation would help to provide the state of North Carolina a framework to ensure long-term protection of fish and wildlife habitat.

Increased visitor use could potentially result in increased fishing pressure. Disturbance of riparian zones could result in erosion, loss of vegetation, and siltation, which in turn could effect fish habitat. However, these impacts, if they occur, are not expected to be significant and would be localized in nature.

## *Scenic Resources*

No significant impacts to scenic resources would result from wild and scenic river designation. Designation would ensure long-term protection for scenic resources on State lands. Again, this would not be a new management procedure, but would be, instead, the solidification of management and classification practices already present. The river would be protected against land uses, or activities on public lands along the river, that could impair the outstandingly remarkable scenic resources. Existing land uses and activities could still occur; however, it be recommended some new activities might be set back from the river. New land uses and activities along the river would be subject to review by the NCDPR. All federally sponsored water resources projects would be reviewed by the NPS and the state of North Carolina to ensure that no adverse impacts on the river's outstanding scenic values would result.

Developments on private land within sight of the river that could impair the scenic quality in the river corridor are subject to State and local standards, and the WSRA would not add new regulatory conditions beyond those already existing.

## *Shoreline Development/Construction*

No significant impact to shoreline development and construction on private lands would result from Alternative B. Development would continue to be subject to State and local standards and regulations and the Master Plan; the federal government does not have the authority to zone private lands. A lack of stringent zoning in many areas outside of State lands could result in degradation of the natural appearance of the river, as well as other degradations of the riverine ecosystem. Protection from incompatible federal water resource projects would be realized.

## *Threatened and Endangered Species*

Long-term protection of threatened and endangered species dependent on current conditions would be augmented under the WSRA as these are identified as outstandingly remarkable resources. Designation would enhance the existing laws, policies and classifications of fish and wildlife habitat on the river by providing management direction. The NCWRC, USFWS and other agencies would continue to have management authority. The construction and maintenance of minor structures for protection, conservation, rehabilitation, or enhancement of fish and wildlife habitat would be acceptable, provided they do not affect the free-flowing characteristic of the river, nor conflict with the outstanding resources.

Possible increases in visitor use stemming from designation could result in localized disturbances of threatened and endangered species; however, these disturbances would be minor given current and proposed management.

## *Timber*

Department of the Interior Management Guidelines and Standards for the WSRA state that agricultural and forestry practices on public lands should be similar in nature and intensity to those present in the area at the time of designation. Timber harvesting would be conducted so as to avoid adverse impacts on the river area values. However, these restrictions are already in place on State lands as a result of NCDPR management guidelines. Designation as a wild and scenic river would not add further constraints beyond those in currently in effect.

Designation would have no impact on timber harvest on private lands, which is regulated by the Division of Forest Resources. No additional effects on the timber industry in the area would result from designation of the Lumber River.

## *Traditional Uses*

There would be no impact to long-standing, traditional uses of the Lumber River under Alternative B. Generally, those uses present at the time of designation are considered to be compatible. However, substantial increases in these activities -- which is unlikely -- could be subject to control on State lands. All uses would remain subject to North Carolina and local laws and regulations.

## *Water Rights and Withdrawals*

Designation would have no impact on existing water rights and usage. Existing water developments and diversions would not be affected by designation. Any new water diversion proposed within or upstream of the designated river segment would require evaluation to determine if it would conflict with the protection and enhancement of the values that caused the Lumber River to be included in the National System.

## **Preferred Alternative and Conclusions**

The Preferred Alternative is B -- National Wild and Scenic River Designation. However, as discussed in the Resource Protection Section and in the next Section, the NPS is only recommending designation for four of the six identified segments of the Lumber River at this time. These segments are 1, 4, 5 and 6.

Designation of the Lumber River into the National System will enhance many of the protections already in place for the these segments and will fill the gaps in those protections. Specifically, designation will preclude federal water resource projects that would alter the free-flowing condition of the river or degrade the outstanding resources present. The No-Action

Alternative would allow for the possibility of federal projects which could seriously degrade these resources. Also, without long-term protection, gradual, negative impacts on the river's natural, recreational and cultural values could result. Designation would slow or stop environmental damage with few potential restrictions on future land uses, developments, or activities. In addition, increased attention to the river by local, State and federal governments could lead to actual enhancement of the natural environment.

Designation into the National Wild and Scenic Rivers System would constitute a continuation and confirmation of existing conditions. Impacts to resources would not be significant, and there would be little, if any, changes in management of the river and its resources. Wild and scenic river designation is compatible with existing uses. Many future changes in river use will be compatible with wild and scenic river designation (although not necessarily with other laws and regulations) provided they do not significantly and negatively impact the outstanding resources or the free-flowing condition of the river. For these reasons, the NPS finds that designation of segments 1, 4, 5 and 6 of the Lumber River into the National System will have no significant impacts to the quality of the human and natural environments. An EIS is not required.

## **List of Documents, Persons and Agencies Consulted**

The documents, persons and agencies consulted by the NPS in the preparation of the EA are included in the bibliography (Appendix C).

## CONCLUSIONS AND RECOMMENDATIONS

In evaluating Governor Hunt's request to designate the Lumber River into the National Wild and Scenic Rivers System, the National Park Service finds that:

- The river is free flowing as defined by the Departments of the Interior and Agriculture.
- The Lumber River possesses outstandingly remarkable recreational, fish, wildlife, botanic and scenic resources that are valuable to the region and the country.
- The Lumber River is designated into a state wild and scenic rivers system as required by Section 2(a)(ii) of the national Wild and Scenic Rivers Act.
- North Carolina has the management framework and resources necessary to implement protective laws and regulations.
- North Carolina has adequate protection mechanisms in place to protect the free-flowing character of the river; however, at present, these protections mechanisms can only guarantee the protection of the outstandingly remarkable resources in four of the six identified segments of the Lumber River (see discussion below). These segments are:

*Segment 1* -- State Route 1412/1203 (River Mile 0) to the Scotland/Robeson County lines at the end of the Maxton Airport Swamp (River Mile 22).

*Segment 4* -- Jacob Branch (River Mile 73) to the upstream city limits of Fair Bluff (River Mile 99).

*Segment 5* -- The upstream town limits of Fair Bluff (River Mile 99) to the downstream town limits of Fair Bluff (River Mile 103).

*Segment 6* -- The downstream town limits of Fair Bluff (River Mile 103) to the North Carolina/South Carolina (River Mile 115).

- The Secretary of the Interior should not designate two of the six identified segments at this time. However, as discussed below, the Secretary should consider designating these segments when and if the state of North Carolina and/or local jurisdictions develop a management/protection plan considered adequate by the National Park Service. The two segments on which action should be delayed are:

*Segment 2* -- The Scotland/Robeson County lines at the end of the Maxton Airport Swamp (River Mile 22) to Back Swamp (River Mile 56).

*Segment 3* -- Back Swamp (River Mile 56) to Jacob Branch (River Mile 73).

- The environmental assessment concludes that designation will have no significant adverse effects on any existing water or land use; will not have any significant impact on the quality of the environment; and will add significantly to the long-term protection of important river values.

It is the recommendation of the National Park Service that the four segments identified above are sufficiently protected through State mechanisms to be included in the National Wild and Scenic Rivers System at this time. While the entire river as is physically eligible (i.e., it is free flowing and exhibits 'outstandingly remarkable resources'), and would make an excellent addition to the National Wild and Scenic Rivers System, the National Park Service finds that the river outside of these segments lacks sufficient mechanisms to ensure long-term protection without federal involvement.

However, the National Park Service recognizes the outstanding nature of the Lumber River, and, as noted, the river would make an outstanding addition to the National Wild and Scenic Rivers System. The National Park Service also notes the pride and dedication that local residents and the state of North Carolina have exhibited in trying to protect this national treasure. This report was written with the goal of eventual inclusion of the entire river in the National Wild and Scenic Rivers System; this report and environmental assessment covers the entire length of the nomination. The National Park Service recommends that segments 1, 4, 5 and 6 be designated at this time, and when the State and/or local governments develop a plan or zoning acceptable and compatible with wild and scenic river designation, that the remaining segments of the Lumber River be added to the National Wild and Scenic Rivers System. The National Park Service also stands ready to provide assistance in developing such a plan.

Based on the above findings, the National Park Service concludes that all requirements of Section 2(a)(ii) of the national Wild and Scenic Rivers Act and Department of the Interior guidelines have been met, and in most cases exceeded, for the segments identified as 1, 4, 5 and 6. Designation of these segments of the Lumber River into the National Wild and Scenic Rivers System is in the public interest. The National Park Service therefore recommends that the state of North Carolina's application for wild and scenic river designation for the Lumber River be approved for these segments. These segments are recommended for designation as scenic for segments 1, 4 and 6 and recreational for segment 5.

## **APPENDICES**

- A -- Glossary & Abbreviations Used*
- B -- Distribution List For The Draft Report*
- C -- Documents, Persons & Agencies Consulted*
- D -- Report Preparers & Reviewers*





## *Appendix A -- Glossary & Abbreviations Used*

<b>2(a)(ii)</b>	Section 2(a)(ii) of the National Wild and Scenic Rivers Act, allows a state to petition the Secretary of the Interior to add a river to the National Wild and Scenic Rivers System with state management
<b>ACOE</b>	United States Army Corps of Engineers
<b>BLM</b>	United States Bureau of Land Management
<b>EA</b>	Environmental Assessment
<b>EIS</b>	Environmental Impact Statement
<b>EPA</b>	United States Environmental Protection Agency
<b>FERC</b>	United States Federal Energy Regulatory Commission
<b>FONSI</b>	Finding of No Significant Impact
<b>Master Plan</b>	<i>Lumber River State Park Master Plan: Columbus, Hoke, Robeson and Scotland Counties, North Carolina</i>
<b>National System</b>	National Wild and Scenic Rivers System
<b>NCDPR</b>	North Carolina Division of Parks and Recreation
<b>NCNSRA</b>	North Carolina Natural and Scenic Rivers Act
<b>NCWRC</b>	North Carolina Wildlife Resources Commission
<b>NEPA</b>	National Environmental Policy Act
<b>NMFS</b>	National Marine Fisheries Service
<b>NPS</b>	National Park Service
<b>NPS 12</b>	National Park Service National Environmental Policy Act Compliance Guidelines
<b>NRI</b>	Nationwide Rivers Inventory, a listing of potential additions to the National Wild and Scenic Rivers System released in 1980 by the National Park Service

<b>RM</b>	River Mile
<b>Secretary</b>	Secretary of the Interior
<b>State System</b>	North Carolina Natural and Scenic Rivers System
<b>USFS</b>	United States Forest Service
<b>USFWS</b>	United States Fish and Wildlife Service
<b>WSRA</b>	National Wild and Scenic Rivers Act

## ***Appendix B -- Distribution List For The Draft Report***

The draft report was distributed to the heads of the following federal departments and agencies for comment.

United States Department of Agriculture  
United States Department of Agriculture, Forest Service  
United States Department of Agriculture, Natural Resources Conservation Service  
United States Department of Commerce, National Marine Fisheries Service  
United States Department of Commerce,  
National Oceanic & Atmospheric Administration  
United States Department of Energy  
United States Department of Energy, Federal Energy Regulatory Commission  
United States Department of the Army, Corps of Engineers  
United States Department of the Interior, Bureau of Indian Affairs  
United States Department of the Interior, Bureau of Land Management  
United States Department of the Interior, Bureau of Mines  
United States Department of the Interior, Bureau of Reclamation  
United States Department of the Interior, Fish and Wildlife Service  
United States Department of the Interior, Geological Survey  
United States Department of Transportation  
United States Environmental Protection Agency

The following libraries received copies of the draft report to be placed in general readership. Where appropriate, multiple copies were sent for distribution to branch libraries.

Columbus County Library  
Hoke County Library  
Mary Livermore Library

Robeson County Library  
Scotland County Library

In addition, the North Carolina Department of Parks and Recreation and the National Park Service compiled an extensive list of all known persons, agencies, elected officials, businesses and organizations having an interest in the designation of the Lumber River into the National Wild and Scenic Rivers System. The draft report was distributed in accordance with the following lists.

### ***Federal Officials***

Senator Lauch Faircloth  
Senator Jesse Helms  
Representative Cass Ballenger  
Representative Richard Burr

Representative Eva Clayton  
Representative Howard Coble  
Representative Bob Etheridge  
Representative William Hefner

Representative Walter Jones, Jr.  
Representative Mike McIntyre  
Representative Sue Myrick

Representative David Price  
Representative Charles Taylor  
Representative Melvin Watt

### ***State Officials***

Senator Robert Charles Soles, Jr.  
Senator David Weinstein  
Representative Donald Bonner  
Representative Dewey Lewis Hill

Representative David Redwine  
Representative Ronnie Sutton  
Representative Yongue

### ***Local Officials***

Columbus County Administrator  
Columbus County Commissioners  
Hoke County Commissioners  
Hoke County Manager  
Fair Bluff Mayor  
Laurinburg Mayor  
Lumberton Mayor

Maxton Mayor  
Orrum Mayor  
Pembroke Mayor  
Robeson County Commissioners  
Robeson County Manager  
Scotland County Commissioners

### ***Federal, State, Local Agencies and Affiliated Organizations***

#### **Federal Agencies**

National Park Service -- Anchorage  
National Park Service -- Boston  
National Park Service -- Boston  
National Park Service -- Denver  
National Park Service -- Milwaukee

National Park Service -- Philadelphia  
National Park Service -- San Francisco  
National Park Service -- Santa Fe  
National Park Service -- Washington, DC  
National Park Service -- Washington, DC

#### **North Carolina State Agencies**

Lumber River State Park  
North Carolina  
    State Cooperative Extension Service  
North Carolina Dept. of Cultural Resources  
North Carolina Dept. of  
    Environment and Natural Resources

North Carolina Div. of Parks & Recreation  
North Carolina Geologic Survey  
North Carolina  
    State Historic Preservation Office  
North Carolina  
    Wildlife Resources Commission

## **Local Agencies and Organizations**

Lumbee Region Development Association  
Lumberton Recreation Commission  
Lumber River Association  
Lumber River Basin Committee

Scotland County Complex  
Upper Lumber River Association  
Whiteville Parks & Recreation Department

## ***Businesses, Environmental Organizations, Farm Organizations, Others***

America Outdoors  
American Canoe Association  
American Rivers  
American Whitewater Affiliation  
Carolina Canoe Club  
Carolina Wilderness  
Chapel Hill Newspaper, Chapel Hill  
Columbus County News, Chadbourn  
Conservation Trust of North Carolina  
Fayetteville Observer-Times, Fayetteville  
Fort Bragg Paraglide, Fayetteville  
Kimley Horne & Associates  
Nantahala Outdoor Center  
National Wildlife Federation  
North Carolina Association of  
County Commissioners  
North Carolina Council of Trout Unlimited  
North Carolina Farm Bureau Federation  
North Carolina League of Municipalities  
North Carolina Leopold Wildlife Club  
North Carolina Outward Bound School  
North Carolina Sierra Club Chapter  
Pembroke State University  
River Management Society  
River Network -- Eastern Office  
Rock Rest Adventures

Save Our Rivers  
Sierra Club  
Southeastern Community College  
The Carolina Indian Voice, Pembroke  
The Carolinian, Raleigh  
The Chronicle, Durham  
The Daily Tar Heel, Chapel Hill  
The Herald-Sun, Durham  
The Laurinburg Exchange, Laurinburg  
The Nature Conservancy  
The News and Observer, Raleigh  
The News Reporter, Whiteville  
The Public Post, Laurinburg  
The Robesonian, Lumberton  
The Times-Messenger, Fairmont  
WAGR-AM 1340, Lumberton  
WENC-AM 1220, Whiteville  
WFMO-AM 860, Fairmont  
WFNC-AM 640, Fayetteville  
WJSK-FM 102.3, Lumberton  
WKFT-TV, Fayetteville  
WSTS-FM 100.9, Fairmont  
WTSB-AM 580, Lumberton  
WTXY-AM 1540, Whiteville  
WYNA-FM 104.9, Whiteville  
Z. Smith Reynolds Foundation

## ***Local Landowners***

Jon Zella Bailey  
Charles Wallace  
Bill Brewington

Bo Biggs  
Carr Gibson  
Virgil Britt

## ***Individuals***

Gilbert Anderson  
Andy Ash  
Jon Zella Bailey  
Ron Beasley  
Bo Biggs  
John Bourman  
Bill Brewington  
Virgil Britt  
Everett Davis  
Haynes Deese, Jr.  
Rudolph Floyd  
Bob Gaddy  
Carr Gibson  
Adam Hall  
Linda Hall  
Charles Hubman  
Danny Isom

Marjorie Johnson  
Lonnie Maynor  
Joe McDonald  
John McLaurin  
Dickson McLean, Jr.  
Mary Odon  
Colin Osborne, III  
Alex Powell  
Paschal Stewart  
Chandler Stewart  
Marshall Thompson  
John Thompson  
Jimmy Turner  
Peter Vandenberg  
Charles Wallace  
Larry Ward  
Richard Willis

**The availability of the draft report was announced in the *Federal Register*.**

## ***Appendix C -- Documents, Persons & Agencies Consulted***

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## ***Appendix D -- Report Preparers & Reviewers***

### **Report Preparation**

Wallace Brittain

- *National Park Service, Southeast Regional Office, Atlanta, Georgia*

Joe Cooley

- *National Park Service, Southeast Regional Office, Atlanta, Georgia*

Dan Haas

- *National Park Service, Pacific West Regional Office, Seattle, Washington*

Mary Rountree

- *National Park Service, Southeast Regional Office, Atlanta, Georgia*

### **Report Review & Contribution**

Chris Abbett

- *National Park Service, Southeast Regional Office, Atlanta, Georgia*

Kim Huband

- *North Carolina Division of Parks and Recreation, Raleigh, North Carolina*

Charlene McLeod

- *National Park Service, Southeast Regional Office, Atlanta, Georgia*

James Sessoms

- *Lumber River State Park, Lumberton, North Carolina*

### **Report Maps, Graphics**

Joe Cooley

- *National Park Service, Southeast Regional Office, Atlanta, Georgia*

Catherine Farmer

- *National Park Service, Southeast Regional Office, Atlanta, Georgia*

Bill Lane

- *National Park Service, Southeast Regional Office, Atlanta, Georgia*

Finally, the NPS and the Interagency Wild and Scenic Rivers Coordinating Council maintain a World Wide Web site on wild and scenic rivers. The address is:

**<http://www.nps.gov/rivers>**