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Department of
Agriculture

Forest
Service

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Environmental Assessment

Chattooga River Boating Access

Sumter National Forest

Oconee County, South Carolina

Chattahoochee-Oconee National Forest

Rabun County, Georgia

Nantahala National Forest

Jackson and Macon Counties, North Carolina

Location of Action: Sumter National Forest, Andrew Pickens Ranger District, South Carolina
Chattahoochee-Oconee National Forest, Chattooga River Ranger District, Georgia
Nantahala National Forest, Nantahala Ranger District, North Carolina

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Lead Agency: U.S. Forest Service

Responsible Officials: Jen Barnhart, Acting Andrew Pickens Ranger District
Ed Hunter, Chattooga River Ranger District
Mike Wilkins, Nantahala Ranger District

Contact Person: Jim Knibbs
U.S. Forest Service
Francis Marion and Sumter National Forests
4931 Broad River Road, Columbia, SC 29212
Phone: (803) 561-4078

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Table of Contents

Chapter 1 – Purpose and Need for Action.....	4
1.1 Introduction	4
1.2 Proposed Action.....	4
1.3 Forest Plan Direction	5
1.4 Public Involvement.....	5
1.5 Issues	5
Chapter 2 – Alternatives	7
2.1 Alternative 1: No Action	7
2.2 Alternative 2: Proposed Action	7
2.3 Design Criteria	16
2.4 Alternatives Considered but Not Developed.....	17
2.5 Comparison of Alternatives	17
Chapter 3 – Affected Environment and Environmental Consequences	18
3.1 Introduction.....	18
3.2 Outstandingly Remarkable Values (ORVs)	21
3.2.1 Recreation	21
3.2.2 Biology (Fisheries, Wildlife and Botany Components)	30
3.2.3 Scenery	65
3.2.4 History	66
3.2.5 Geology	67
3.3 Other River Values	67
3.3.1 Free-flowing Condition	67
3.3.2 Water Quality	68
3.4 Other Physical Resources	72
3.4.1 Soils	72
3.4.2 Wetlands, Floodplains and Riparian Corridors.....	78
3.4.3 Air	81
3.4.4 Climate Change	82
3.5 Other Biological Resources: Vegetation.....	83
3.6 Social Environment	96
3.6.1 Human Health and Safety.....	96
3.6.2 Social Impact Analysis	97
3.6.3 Economics.....	104
3.7 Wilderness and Roadless Areas	105
Chapter 4 – List of Preparers and Agencies/Persons Consulted	110
Appendix A – Comments Received During the 30 Day Notice and Comment Period and Forest Service Responses.....	117

Chapter 1 – Purpose and Need for Action

1.1 Introduction

In January 2012, the U.S. Forest Service released three Decision Notices and Findings of No Significant Impact for the Environmental Assessment, *Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor* (USFS, 2012), hereafter referred to as the 2012 EA. These decisions selected Alternative 13A to accomplish the following specific purposes and needs for action:

1. Respond to an appeal decision on the Sumter Land and Resource Management Plan;
2. Provide consistent management of the upper segment of the Chattooga Wild and Scenic River (WSR) on all three national forests; and
3. Preserve the upper segment of the Chattooga WSR's free flowing condition, protect its water quality and protect and enhance its Outstanding Remarkable Values (ORVs), as well as preserve the wilderness character of the Ellicott Rock Wilderness.

The 2012 EA and Decision Notices are available at:

<http://www.fs.usda.gov/detail/scnfs/landmanagement/planning/?cid=STELPRDB5253595>.

As described on p. 39 of the 2012 EA, boaters are permitted to put-in and take-out near the following locations:

1. Green Creek confluence (put-in only);
2. Norton Mill Creek confluence;
3. Bullpen Bridge;
4. Burrells Ford Bridge; and
5. Lick Log Creek (take-out only).

Pursuant to Alternative 13A in the 2012 EA, put-ins and take-outs, and access routes to and from, will be designated after site-specific analysis under the National Environmental Policy Act (NEPA). In addition, both the North Carolina and South Carolina decisions (p. 5) and the Georgia decision (p. 7) state, “[t]he appropriate District Ranger will designate the specific put-in and takeout locations after site-specific NEPA analysis is completed.”

1.2 Proposed Action

The U.S. Forest Service proposes to construct, reconstruct, designate and maintain trails and boater access sites pursuant to the 2012 EA decisions at the following access locations:

1. Green Creek confluence (put-in only);
2. Norton Mill Creek confluence;
3. Bullpen Bridge;
4. Burrells Ford Bridge; and
5. Lick Log Creek (take-out only).

1.3 Forest Plan Direction

This project would adhere to standards and guidelines as outlined in the following land management plans (Forest Plans) including all amendments:

1. *Revised Land and Resource Management Plan, Sumter National Forest* (2004)
2. *Nantahala and Pisgah National Forests Land and Resource Management Plan* (1987)
3. *Revised Land and Resource Management Plan Chattahoochee-Oconee National Forest* (2004)

The proposal is consistent with the Decision Notices signed by the forest supervisors for the Sumter, Chattahoochee and Nantahala national forests including:

1. Amendment #1 to the *Revised Land and Resource Management Plan, Sumter National Forest*;
2. Amendment #22 to the *Nantahala and Pisgah National Forests Land and Resource Management Plan*; and,
3. Amendment #1 to the *Revised Land and Resource Management Plan Chattahoochee-Oconee National Forest*.

This EA tiers to the 2012 EA. In addition, the Chattahoochee-Oconee National Forest is proposing to amend their forest plan to provide protection to the Indiana bat (federally listed as an endangered species) that was recently discovered on the forest. Equivalent protection measures are proposed in this EA.

1.4 Public Involvement

Public involvement began with pre-scoping field trips to the proposed access sites hosted by the ranger districts in summer 2012. The three rangers initially decided to scope their respective boater access sites individually with the intent of completing separate decisions. However, the U.S. Forest Service decided to complete one EA and that the three district rangers would sign three separate Decision Notices. The agency prepared a consolidated proposal and began scoping on July 24, 2013.

1.5 Issues

Many of the comments received pertain to previously made decisions documented in the 2012 EA (Decision Notices signed in January 2012). Please refer to the following court opinions relative to the 2012 EA: Civil Action No.: 8:09-2665-MGL, Amended Order and Opinion, 7/30/2013 and US Court of Appeals for the Fourth Circuit, No. 13-1960, 11/05/2014.

Comments received during scoping related to boating access on the upper segment of the Chattooga WSR have been evaluated and are located in Appendix A.

Issues are summarized below.

Comment 1:

There is concern that trail construction/reconstruction could increase soil erosion since some of the trails are on steep and sensitive soils. There is concern that recreation use could impact riparian areas and potential, endangered, threatened and sensitive species (PETS). In addition, sedimentation into the river could impact trout habitat.

Response:

Effects on soils, water, riparian areas, PETS and trout will be considered in Chapter 3.

Comment 2:

There is concern that improved/designated boating access would decrease the recreation experience of non-boaters and create conflicts with other recreation users.

Response:

The first boating season began in December of 2012 and use has been tracked by the Forest Service. Effects on existing recreation are analyzed in Chapter 3 of the EA.

Comment 3:

There is concern that improved/designated access would adversely impact the river's ORV (including plants) and Ellicott Rock Wilderness values.

Response:

The impacts of the proposed action on ORVs and Ellicott Rock are analyzed in Chapter 3 of the EA.

Chapter 2 – Alternatives

2.1 Alternative 1: No Action

No new trails would be constructed or designated and current access points to the river would continue to be used by boaters and other recreational users.

2.2 Alternative 2: Proposed Action

The U.S. Forest Service proposes to identify and designate trails and boater access points to facilitate boating on the upper segment of the Chattooga WSR during the designated boating season. The trails would also provide foot access for other forest visitors. Trails generally follow existing routes; however, some short trail segments would be constructed to facilitate access to existing trail systems. All trails would be constructed, reconstructed and maintained as needed to enhance or protect physical, biological and social resources (see maps 1 - 6). The proposed action would require boaters to start or complete their trip only at specific boater access points to facilitate boating on the Upper Segment of the Chattooga Wild and Scenic River during the designated boating season. The proposed action would authorize use of national forest system lands only and boaters would be required to adhere to the conditions as stated in the Chattooga Wild and Scenic River Self-Registration Floating permit.

Nantahala Ranger District, Nantahala National Forest

Green Creek¹

This site would provide access for paddlers wishing to experience this segment of the Chattooga WSR (see map 2). A foot trail would be constructed on an old existing road bed that connects the Chattooga Trail to the river. The old road bed intersects the river approximately 700 feet downstream of the confluence of Green Creek and the Chattooga WSR. The trail length would be approximately 0.28 miles. The old road bed would require some construction and minor realignment to produce a sustainable trail. The designated trail would continue to be used for fishing access to the Chattooga WSR. The put-in location would be designated as within 200 feet of the trail and river intersection and would provide access for other recreation along the river. This trail also would provide an exit for anglers who have fished upstream towards Greens Creek. Parking at this location can safely accommodate approximately eight vehicles.

Norton Mill Creek

The proposed County Line Trail (old road bed) would provide a second access location for paddlers wishing to experience this segment of the Chattooga WSR (see map 3). The old road bed would be designated as a 1.2 mile trail and maintained for recreationists to access the Chattooga WSR at Norton Mill Creek. Hikers and anglers currently use the trail; the U.S. Forest Service signed and maintained it in the past. Public parking on the road shoulders near the earthen berm would continue. Parking along this road can safely accommodate approximately five to eight vehicles. The old road bed connects Whiteside Cove Road (State Route 1106) with the Chattooga River Trail and follows the Chattooga River Trail north to a flat area along the river with numerous rocks and eddies that would facilitate put-in. The old road bed is open, relatively free of brush and receives regular use by anglers, hunters and hikers; however,

¹ Locally this route is also known as Greens Creek. Both Greens Creek and Green Creek will be used interchangeably throughout this document.

it would require some reconstruction to produce a sustainable trail. Paddlers would be authorized to put-in along a 300-foot stretch of the Chattooga WSR below Norton Mill Creek.

Bull Pen Bridge

Bull Pen Bridge would provide access for paddlers wishing to run this segment of the Chattooga WSR to South Carolina (see map 4). A pull off west of the bridge provides parking for approximately six vehicles.

The existing Upper Bull Pen access is a designated short trail of less than 100 feet in a good location and provides easy access along river right (the Macon County side), upstream of Bull Pen Bridge. For boaters that do not wish to put-in and immediately experience a highly technical section of whitewater, the U.S. Forest Service would construct a foot trail (less than 300 feet in length) below the bridge to the Lower Bull Pen put-in on river left to get paddlers off Bull Pen Road (Forest Service Road 1128), down the road bank to the river.

Chattooga River Ranger District, Chattahoochee National Forest

Burrells Ford Bridge

The Burrells Ford Bridge access areas would be located on the Georgia side of the Chattooga WSR in Rabun County and would be accessible from an existing parking area off Burrells Ford Road near the bridge (see map 5). Parking can safely accommodate up to 12 vehicles.

Presently, three user-created trails lead from the trailhead at this parking area to the Chattooga WSR. The proposed action would include the following:

1. Harden the proposed route from the parking area to the river bank with gravel or other natural and sustainable materials on approximately 200 feet of trail;
2. Decommission two of the undesignated routes by placing large woody debris across the current tread and re-establishing native vegetation as needed;
3. Widen the proposed route by removing all non-merchantable woody vegetation within six feet of the existing tread and treating the area to eliminate the spread of non-native invasive plants;
4. Armor and stabilize the river's bank with felled trees and large materials;
5. Remove hazard trees within the project area and place them in the river when possible to improve aquatic conditions; and
6. Add gravel and signage, as well as replace old timbers currently being used as barriers in the parking area.

Andrew Pickens Ranger District, Sumter National Forest

Lick Log

The proposed take-out, located near Mountain Rest, SC, would be accessible from SC State Highways 28 and 107 (see map 6). Two existing parking areas can accommodate six and ten vehicles. The total distance from the parking areas to the take-out is approximately one mile.

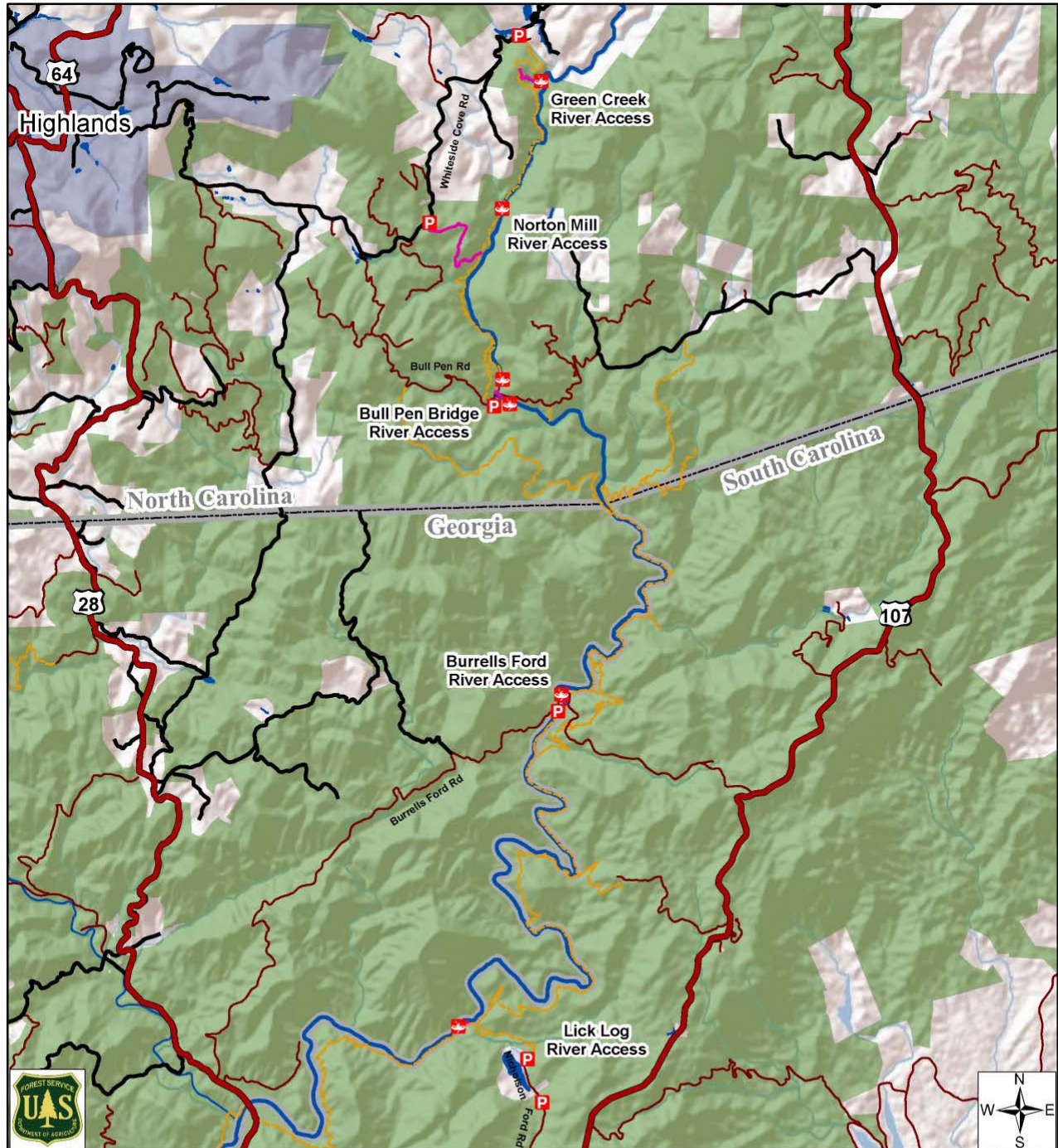
A new approximately 500-foot section of trail would be constructed and available for hikers and boaters taking out at Lick Log Creek. The new section would intersect with the Chattooga River Trail. Trail construction would consist of clearing and minor excavation with hand tools.

A sustainable pitch, downhill and cross-slope trail would be created with minimum ground disturbance using hand tools where practical. Trail construction down to the shore would not be necessary. New construction would begin approximately 25 yards away from the water's edge, on the uphill edge of a small plateau. The trail would then rise to the north until it meets the existing Chattooga River Trail.

During trail construction, vegetation would be removed within the trail corridor, primarily including thinning, limbing or removing rhododendron, mountain-laurel and trees under 6" in diameter. Existing large trees would be avoided. Some hazard trees may be cut along the new trail during construction. Two or three new signs, modeled after existing signs, would be installed along the trail to help forest visitors find their way from the river to the parking lot (see Lick Log Access Parking 1 on map 6).

Routine methods to prevent soil movement would be used, including physical barriers such as water bars and stabilization measures through vegetation.

Map 1: Proposed Boater Access Points on the upper segment of the Chattooga WSR



Proposed Chattooga River Boat Access

0 1 2 4 Miles

- | | | |
|-----------------------|----------------|-----------------|
| Boater Access Site | System Trail | Chattooga River |
| River Access Parking | Highway | State Line |
| Proposed Access Trail | State/Co. Road | City Limit |
| | FS Road | National Forest |

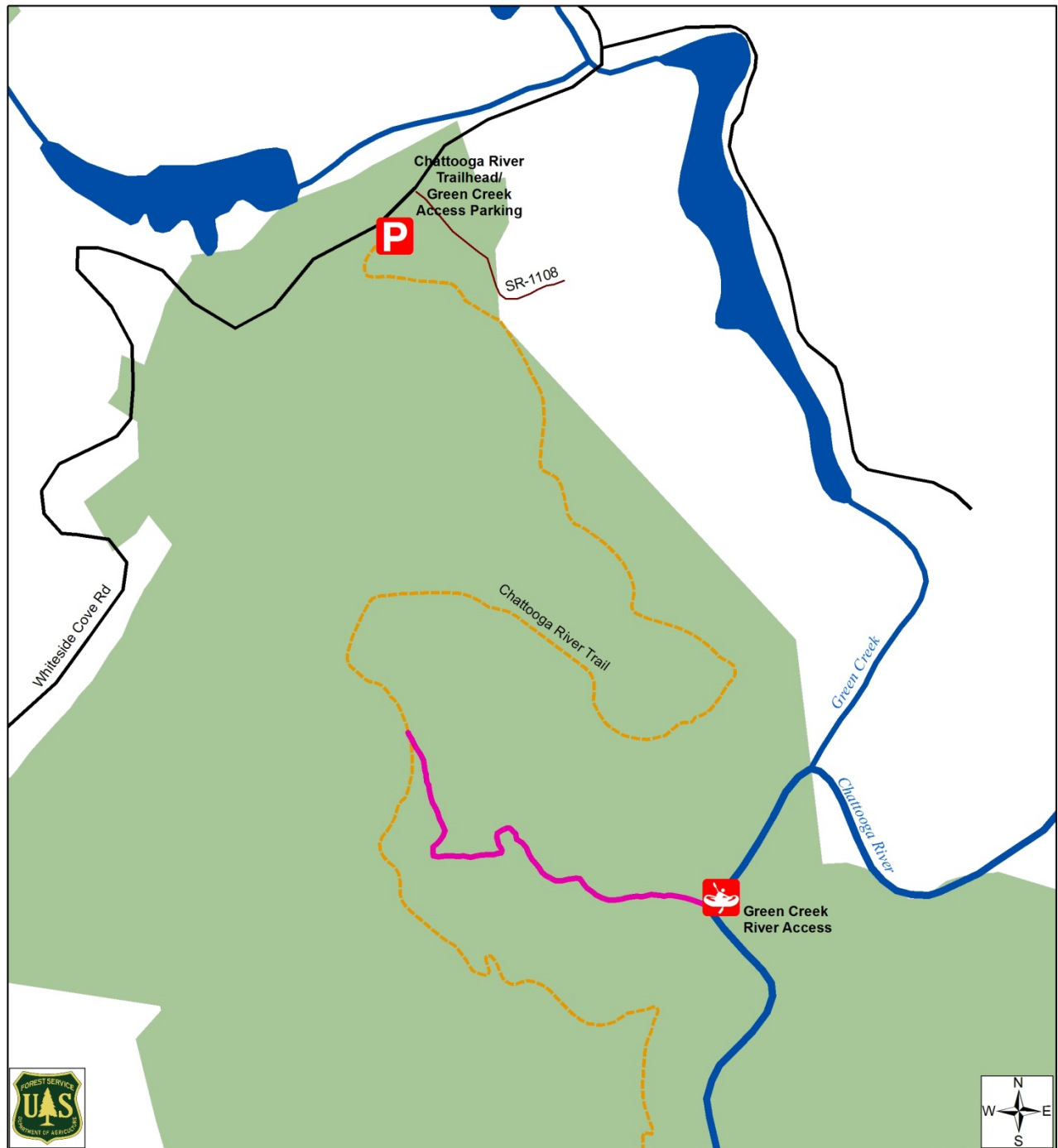
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Vicinity Map



Map 2: Proposed Boater Access Points—Green(s) Creek (Nantahala RD)



Proposed Chattooga River Access - Green Creek

0 0.05 0.1 0.2 Miles



River Access Parking

Boater Access Site



Proposed Access Trail



System Trail



FS Road



Stream



City Limit



State Line



National Forest

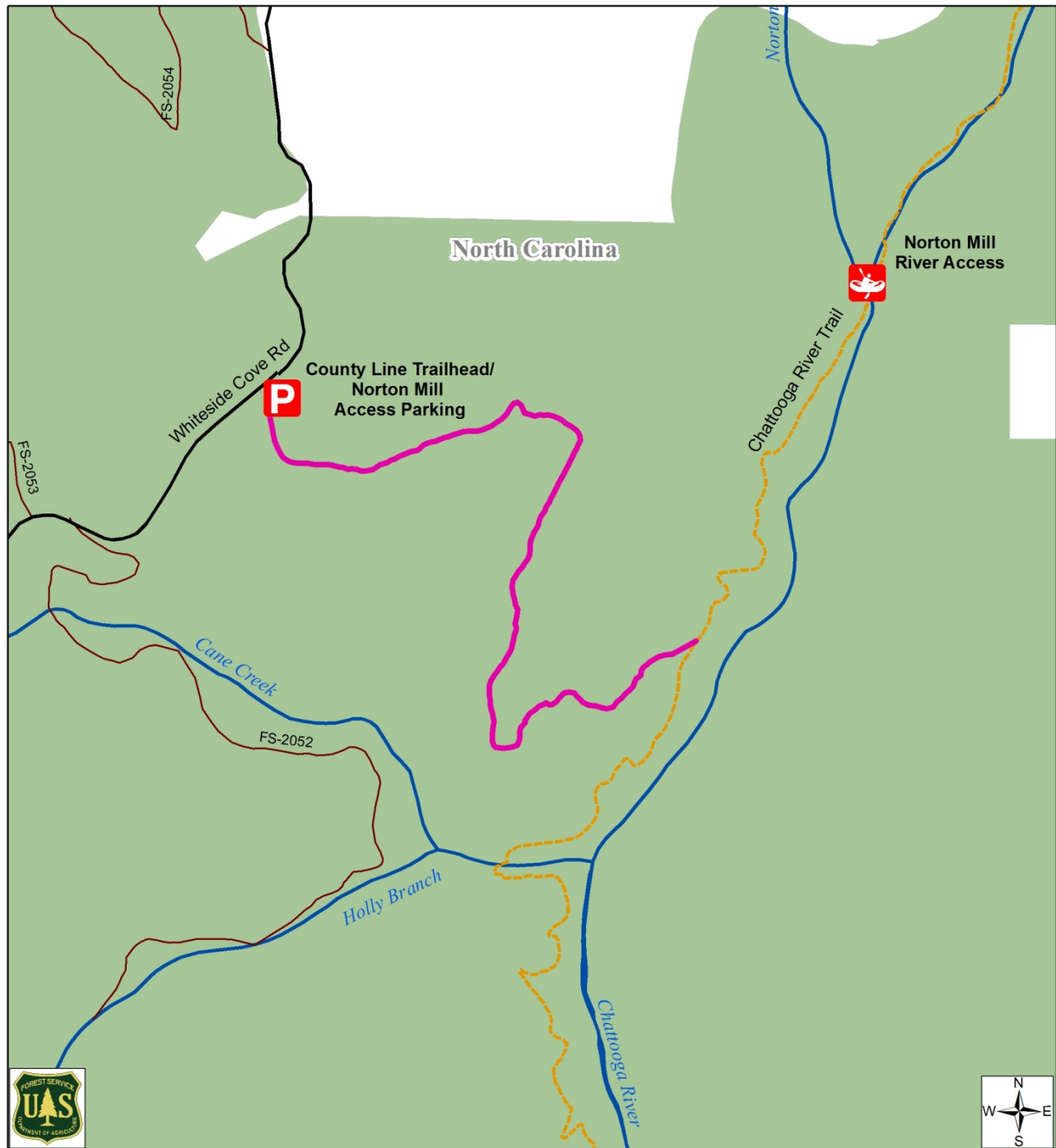
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Vicinity Map









Map 3: Proposed Boater Access Points—Norton Mill Creek (Nantahala RD)



Proposed Chattooga River Access - Norton Mill

0 0.125 0.25 0.5 Miles

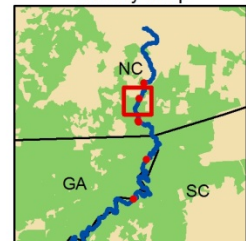
-  River Access Parking
-  Boater Access Site
-  Proposed Access Trail
-  System Trail
-  FS Road
-  Stream

-  City Limit
-  State Line
-  National Forest

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Vicinity Map



Map 4: Proposed Boater Access Points—Bull Pen Bridge (Nantahala RD)



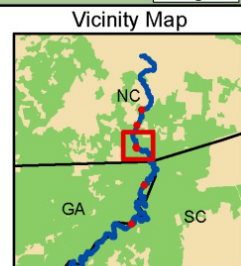
Proposed Chattooga River Access - Bull Pen Bridge

0 0.01 0.02 0.04 Miles

- | | | | | | |
|--|-----------------------|--|--------------|--|-----------------|
| | River Access Parking | | System Trail | | City Limit |
| | Boater Access Site | | FS Road | | State Line |
| | Proposed Access Trail | | Stream | | National Forest |

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Map 5: Proposed Boater Access Points—Burrells Ford (Chattooga WSR RD)



Proposed Chattooga River Access - Burrells Ford

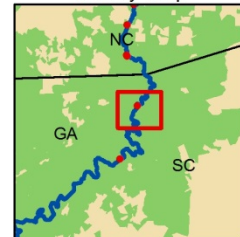
0 0.025 0.05 0.1 Miles

- River Access Parking
- Boater Access Site
- Proposed Access Trail
- System Trail
- FS Road
- Stream
- City Limit
- National Forest

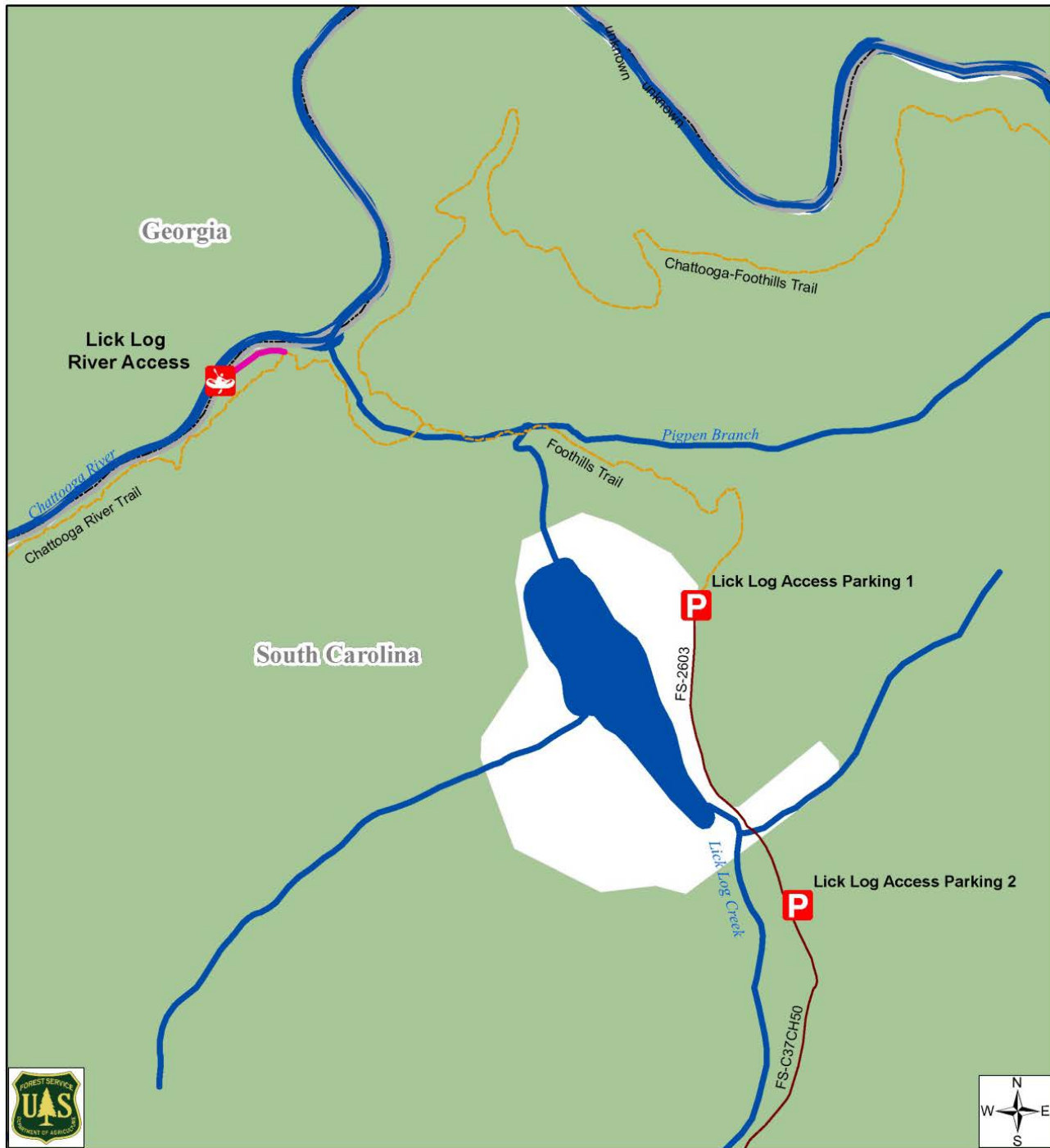
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Vicinity Map



Map 6: Proposed Boater Access Points—Lick Log (Andrew Pickens RD)



Proposed Chattooga River Access - Lick Log

0 0.15 0.3 0.6 Miles

- River Access Parking
- Boater Access Site
- Proposed Access Trail
- System Trail
- FS Road
- Stream

- City Limit
- State Line
- National Forest

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Vicinity Map

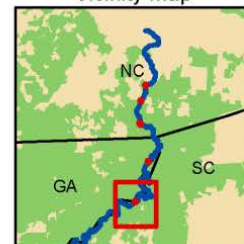


Table 2.2-1 Proposed Project Activity Summary

Access Site	Distance*	Project Work
Green Creek	0.28 miles	Project work would include reconstruction and maintenance of the existing route and designating it as a system trail.
Norton Mill Creek (aka County Line Trail)	1.2 miles	Project work would include reconstruction and maintenance of the existing route and designating it as a system trail.
Bull Pen Bridge - above road	<100 feet	Project work would include maintenance of the existing route and designating it as a system trail.
Bull Pen Bridge - below road	<300 feet	Project work would include construction of a new system trail.
Burrells Ford Bridge	200 feet	Project work would include reconstruction and maintenance of the existing route and designating it as a system trail. Hazard trees would be cut down.
Lick Log	500 feet	Project work would include construction of a new system trail.
Burrells Ford – Georgia side.	375 feet	Two undesignated trails (approximately 375 feet) that lead from the parking area would be decommissioned. The river bank would be stabilized by wood and rock. Additional gravel would be put down and barriers would be replaced in the parking area. Water from the parking area and roadway would be diverted away from the river where possible.

*distances are approximate

2.3 Design Criteria

This project would adhere to standards and guidelines as outlined in the Forest Plans for the three national forests including all amendments (refer to section 1.3).

The following site-specific design criteria would be included with the proposed action.

1. When possible, the Chattooga River, Andrew Pickens and Nantahala Ranger Districts would fell any trees required for the project or to alleviate safety hazards during the hibernation season (December 1 through March 15 for the Chattooga River and Andrew Pickens Ranger Districts and October 15 through April 15 for the Nantahala Ranger Districts) for the Northern Long-eared bat. When this is not possible, trees to be removed would be assessed for bat habitat suitability by a biologist or knowledgeable technician. If trees to be removed do not support suitable bat habitat characteristics (loose bark, crevices), then they can be removed outside of the hibernation season. If suitable bat habitat characteristics are noted during the suitability surveys, simple emergence surveys would be conducted immediately prior to project implementation. If no bats are observed (regardless of species), the trees may be removed outside of the hibernation season. If bats are observed, conversation with the state wildlife agency and USFWS would outline appropriate survey or project design measures.
2. The following conservation/mitigation measures for Indiana Bat apply to the Chattooga River Ranger District:
 - a. Trees known to have been used as roosts by Indiana bats or other federally protected bat species are protected from cutting and/or modification until they are no longer suitable as roost trees, unless their cutting or modification is needed to protect public or employee safety. Where roost tree cutting or modification is deemed necessary, it occurs only after consultation with the US Fish and Wildlife Service.

- b. Snags are not intentionally felled from April 1 through September 1 unless needed to provide for immediate safety of the public, employees or contractors. Exceptions will require evaluation by a qualified individual (i.e. biologist or other individual approved by the district biologist) for current Indiana bat or other protected bat species use and may require coordination with the US Fish and Wildlife Service.
- c. Compliance of Indiana bat and other protected bat species standards will be monitored. The Forest will submit an annual report to the U.S. Fish and Wildlife Service documenting compliance with Standards.

2.4 Alternatives Considered but Not Developed

The following alternatives were considered but not evaluated in detail (40 CFR 1502.14(a) for the reasons described below:

1. **Bamford** – This site was considered as an alternative to Greens Creek. While it would have required less trail construction than the Greens Creek location, it would have opened a shorter section of river to paddling access compared to Greens Creek. Although Greens Creek requires more trail construction, the presence of the existing old road bed minimizes impacts from the trail construction.
2. **Garnett Ridge** – This site was considered as an alternative to Greens Creek. This access would cross private property. The public has no legal access across private land to access National Forest System lands. This location also would have required trailhead parking on private land.
3. **Cane Creek** – This site was considered as an alternative to Greens Creek. This site would have required new trail construction to access the river at an acceptable grade. River access would have been more difficult since it is in a steeper section of the river corridor than other locations. This trail would result in more environmental impacts and public safety concerns than the proposed Greens Creek trail.

2.5 Comparison of Alternatives

Section 2.5 compares aspects of the alternatives to one another. Analysis of the effects can be found in Chapter 3, Affected Environment and Environmental Consequences.

Table 2.5-1 Comparison of Alternatives

	Alternative 1 No Action	Alternative 2 Proposed Action
Would proposed trails be designated by the U.S. Forest Service as system trails?	No	Yes
Would proposed trails be constructed, reconstructed and maintained to Forest Service standards?	No	Yes
Could designated trails be used by all recreation users?	Yes	Yes
Would resource impacts be reduced by designation, construction, reconstruction and maintenance of trails?	No	Yes
Would the ORVs, free-flowing condition and water quality of the Chattooga WSR be protected?	Yes	Yes

Chapter 3 – Affected Environment and Environmental Consequences

3.1 Introduction

This chapter describes the affected environment and environmental effects of the alternatives described in Chapter 2. Potential impacts are evaluated for current management (Alternative 1) and the proposed action (Alternative 2).

- 3.2 ORVs
 - 3.2.1 Recreation
 - 3.2.2 Biology (Fisheries, Wildlife and Botany components)
 - 3.2.3 Scenery
 - 3.2.4 History
 - 3.2.5 Geology
- 3.3 Other River Values
 - 3.3.1 Free-flowing Condition
 - 3.3.2 Water Quality
- 3.4 Other Physical Resources
 - 3.4.1 Soils
 - 3.4.2 Wetlands, Floodplains and Riparian Corridors
 - 3.4.3 Air
 - 3.4.4 Climate Change
- 3.5 Other Biological Resources: Vegetation
- 3.6 Social Environment
 - 3.6.1 Human Health and Safety
 - 3.6.2 Social Impact Analysis
 - 3.6.3 Economics
- 3.7 Wilderness and Roadless Areas

The environmental consequences disclose the direct, indirect and cumulative effects of implementing each alternative. For the cumulative effects analysis, the list of past, present and reasonably foreseeable activities in Table 3.1-1 were considered. The activities listed in the table are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat. The proposed action would complement the objectives of many of these projects by reducing erosion and sediment by designating and maintaining a sustainable trail system for recreation users. ORVs and other river values would be protected and maintained consistent with the three Forest Plans and the Wild and Scenic River Act.

The upper segment of the Chattooga WSR is primarily forested but has a variety of private land uses that include highways, roads, urban areas, rural homes, farms and pastures, golf courses, gardens, small dams and industry.

Table 3.1-1. Past, Present and Reasonably Foreseeable Future Actions within the Chattooga WSR Watershed.

State	Activity	Year(s) Implemented	Acres /Miles Affected	Past	Present	Reasonably Foreseeable	Project Outcomes
GA	Duck's Nest Gap Rx Burn	2010-14	1050 a	X	X	X	1
GA	Roach Mill Rx Burn	2010-14	695 a	X	X	X	1
GA	Chintilly Rx Burn	2010-14	230 a	X	X	X	1
GA	Rabun Bald Trail Reroute	2008-2010	3.5 mi	X			2,3
GA	Water Gauge Yellow Pine-Oak Woodland Restoration (Rx Burn)	2010-14	232 a	X	X	X	1
GA	Tri-District Land Exchange	2010	157 a	X			3
GA	Bartram Trail Reroute @ Wilson Gap	2009	0.5 mi	X			2,4
GA	Satolah Soil and Water Complex	2009	5	X			4
GA	Camp Creek Rx Burn	2009	1800	X		X	1
GA	Upper Warwoman Vegetation Management	2009-2010	200 a	X			1
GA	Invasive Plant Eradication	2014	50a		X	X	1
GA	Herbicide Release of Young Forest Communities	2009-2012	150 a	X	X		1
GA	Vegetation Management for Forest Health	2009-2014	500 a	X	X	X	1
GA	Woodall Shoals Rx Burn	2010-2011	1100 a	X	X		1
GA	Buckeye Branch/Lick Log Rx Burn	2010-2011	2470 a	X	X		1
GA	Willis Knob Horse Trail Reroutes	2010-2014	5 mi	X	X	X	2,4
GA	Sarah's Creek Crossing Replacement	2010	0.05 mi	X			4
GA	Burrells Ford North Rx Burn	2010-2015	2545 a	X	X	X	1
GA	Burrells Ford South Rx Burn	2010-2015	1341 a	X	X	X	1
GA	Willis Knob 1 Rx Burn	2010-2015	1560 a	X	X	X	1
GA	Willis Knob 2 Rx Burn	2010-2015	1628 a	X	X	X	1
GA	Willis Knob 3 Rx Burn	2010-2015	1654 a	X	X	X	1
GA	Hale Ridge East Rx Burn	2010-2015	834 a	X	X	X	1
GA	Hale Ridge West Rx Burn	2010-2015	870 a	X	X	X	1
GA	Tallulah Gorge Co-Op RX Burn	2010-2015	100 a	X	X	X	1
GA	Water Gauge Rock Mtn. Rx Burn	2010-2015	1100 a	X	X	X	1
GA	Water Gauge Stone Place RX Burn	2010-2015	750 a	X	X	X	1
GA	Ammons Culvert Replacement	2011	-		X		4
GA	Buck Branch Timber Sale	2013	50 a			X	1
GA	Pre-commercial Thinning	2012-2013	200 a			X	1
GA	Bog Restoration – Hale Ridge	2010-2015	5 a	X	X	X	1
GA	Bog Restoration –Hedden	2010	5 a	X			1
GA	Bog Restoration – Water Gauge	2010	7 a	X			1
GA	Sandy Ford Road – County Paving Project	2014-2015	2		X	X	4
SC	Loblolly Removal and Restoration Project	2010-2014	5605 a		X	X	1
SC	Crane Mountain RX Burn	2009, 2013	300 a	X		X	1
SC	Earls to Sandy Rx Burn	2010	1000 a	X			1
SC	Whetstone Thinning	2008-2009	64 a	X			1
SC	Garland Tract Rx Burn and Dove Field Maintenance	2004-2014	600 a	X	X	X	1,5
SC	FSR 719 Reconstruction	2009-2010	2.4 mi	X			4
SC	Horse trail closures, relocations	2010-2011	10 mi		X	x	1,4
SC	Horse camp reconstruction	2011	12 a	x			2
SC	Burrells Ford Campground Reconstruction	2009-2010	6 a	X			2,4
SC	Outfitting and Guiding Special Use Permits	2011-2016	-		X	X	2
SC	Simms Field and Fishermen's Trail	2011	1.3 mi			x	2,4

State	Activity	Year(s) Implemented	Acres /Miles Affected	Past	Present	Reasonably Foreseeable	Project Outcomes
	Reconstruction						
SC	Highway 76 Parking Lot Repaving	2010	0.75 a	X			4
SC	Lick Log Creek designated take-out and associated trail to river	2012	0.5 mi			X	2,4
SC GA	Burrells Ford designated put-in/take-out	2012	100 feet			X	2,4
NC	White Bull/Blue Ox Timber Sales	2007	225	X			1
NC	Bullpen/Journ McCall Paving Project (NC Dept. of Transportation (DOT) proposal)	2008	1.5	X			4
NC	Whiteside Cove Paving (NCDOT Proposal)	2008	3	X			4
NC	Garnet Hill Paving (NCDOT proposal)	2008	.3	X			4
NC	Silver Run Rx Burn	2014	300 a			X	1
NC	Ammons Branch Campground – replace pit toilet	2011	-	X			2
NC	Buckwheat Vegetation Management (restoration, wildlife and timber sale projects)	2012	43 a harvest 150 a Rx burn 30 a riparian restoration			X	1
NC	Green Creek designated put-in and Norton Mill Creek designated put-in/take-out and associated trails off Chattooga River Trail to the river	2014/2015	1 mi			X	2,4
NC	Bullpen Bridge designated put-in/take-out	2014/2015	100 ft./<300 ft.			X	
All	Trail/Campsite Designation/Restoration (planning stage)	2-14/2015	No estimate yet				2,4
All	Wildlife Opening maintenance	Ongoing			X	X	5
All	System Road Maintenance	Ongoing			X	X	2,4
All	Recreational activities including hiking, biking and driving.	Ongoing – various locations			X	X	2
All	Invasive Plant Treatments	Ongoing – various locations		X	X	X	1

Source: U.S. Forest Service – Nantahala RD, Andrew Pickens RD and Chattooga River RD (updated 2-11-2014)

1 = maintain/restore and enhance ecosystems/hazard fuel reduction/improve forest health/improve wildlife habitat

2 = recreation management/reduce recreation impacts on other resources

3 = improve resource management

4 = sediment reduction/erosion control/improve aquatic resources

5 = maintain wildlife habitat

3.2 Outstandingly Remarkable Values (ORVs)

3.2.1 Recreation

Affected Environment

Boaters have been allowed to access the upper segment of the Chattooga River at the existing sites since December 2012; many of the trails (both designated and user-created) either have been used by anglers or other river users in the past or follow old logging roads. Erosion and sedimentation occur when trails cross steep, sensitive or wet areas and compact soils or create bare ground. The trails lead users to the river, but do not always definitively provide a single route into the water; without guidance, anglers or boaters who access the river's channel have developed several poorly defined routes down the bank.

The U.S. Forest Service has tracked boating use levels since 2012 through the same self-registration system used on the lower segment. Table 3.2.1-1 shows the number of days that boating was allowed (December 1 through April 30 when flows were above 350 cfs at the Burrells Ford gauge) and the number of days that boaters actually floated the upper segment. Tables 3.2.1-2 and 3.2.1-3 show how use was distributed by access trail for put-ins and take-outs in the first two boating seasons (2012-13 and 2013-14).

Table 3.2.1-1. Number of boatable days and number of days actually boated in first two years of Upper Chattooga boating.

Month	2012-2013		2013-2014	
	Boatable days	Used Boatable days	Boatable days	Used Boatable days
December	2	2	16	4
January	11	6	4	2
February	8	2	3	0
March	2	0	0	0
April	9	7	3	1
Total	32	17	26	7

- In the 2012-13 boating season (December 1 – April 30), flows reached 350 cfs or higher at the Burrells Ford gauge on 32 days. Boaters floated the upper segment on 17 of those days (53% of days).
- In the 2013-14 boating season (December 1 – April 30), flows reached 350 cfs or higher at the Burrells Ford gauge on 26 days. Boaters floated the upper segment on 7 days (27% of days).
- Some boatable days had very high flows that may not be attractive to some users. At least eight of the 32 days in the 2012-13 boating season had flows more than 800 cfs while the 2013-14 boat season had at least six of the 26 days with flows more than 800 cfs; these flows provide challenging whitewater that is beyond the optimal range for “big water boating” in the Chattooga Cliffs and Ellicott Rock reaches (as described in Whittaker and Shelby, 2007).

Uncertainty about whether flows might increase to levels that are considered too challenging may have prevented additional boaters from using those days.

- Some boaters may be uncertain about whether flows would reach 350 cfs or higher; when such flows occur, it can be challenging to organize trips on short notice (Whittaker and Shelby, 2007).

Table 3.2.1-2. Boating use by access area in 2012-13 boating season.

Launch site*	Trips	Boaters	People/trip	Percent of total (by boaters)
Put-ins				
Green Creek	23	79	3.4	43
Bull Pen Bridge	24	84	3.5	45
Burrells Ford	7	22	3.1	12
Total put-ins	54	185	3.4	100
Take-outs				
Bull Pen Bridge	6	20	3.3	12
Burrells Ford	36	122	3.4	70
Lick Log Creek	9	32	3.6	18
Total take-outs	51	174	3.4	100
Total use by access point				
Green Creek	23	79		22
Bull Pen Bridge	30	104		29
Burrells Ford	43	144		40
Lick Log Creek	9	32		9

*No use of Norton Mill Creek (aka County Line Trail). Also, a few permits were incomplete so put-in and take-out totals do not match.

Summary Results of 2012 -13 Boating Season

- About 40% of boaters paddled the Chattooga Cliffs Reach, with the Green Creek put-in attracting all the use (no boaters were recorded putting in at Norton Mill Creek).
- Almost half (44%) of all boaters started their trips at Bull Pen Bridge, and many extended their Chattooga Cliffs trips through the Ellicott Rock Reach (about 87% of all boaters started their trips at either Green Creek or Bull Pen Bridge).
- Relatively few boaters (13%) paddled the Rock Gorge Reach from Burrells Ford.
- Approximately 9% of boaters paddled all three reaches.
- The take-out used most often was Burrells Ford, with about 70% of all use.
- Relatively few boaters ended their trips at Bull Pen Bridge (12%) or Lick Log (18%).
- Taken together, in 2012-2013, the highest boating use access areas were Burrells Ford (41% of all boaters used this for either put-in or takeout) and Bull Pen Bridge (29%). Green Creek was also used often (22%), while relatively few used Lick Log.

Table 3.2.1-3. Boating use by access area in 2013-14 boating season.

Launch site*	Trips	Boaters	People/trip	Percent of total (by boaters)
Put-ins				
Green Creek	2	12	6	41
Bull Pen Bridge	5	15	3	52
Burrells Ford	1	2	2	7
Total put-ins	8	29	3.6	100
Take-outs				
Bull Pen Bridge	1	8	8	28
Burrells Ford	6	19	3	65
Lick Log Creek	1	2	2	7
Total take-outs	8	29	3.6	100
Total use by access point				
Green Creek	2	12		21
Bull Pen Bridge	6	23		40
Burrells Ford	7	21		36
Lick Log Creek	1	2		3

* No use of Norton Mill Creek (aka County Line Trail).

Summary Results of 2013 -14 Boating Season

- About 25% of boaters paddled the Chattooga Cliffs Reach, with the Green Creek put-in attracting all the use (no boaters were recorded putting in at Norton Mill Creek).
- Over half (63%) of all boaters started their trips at Bull Pen Bridge, and one extended their Chattooga Cliffs trip through the Ellicott Rock Reach during the 2013-14 boating season (about 88% of all boaters started their trips at either Green Creek or Bull Pen Bridge this season).
- Relatively few boaters (13%) paddled the Rock Gorge Reach from Burrells Ford.
- The take-out used most often was Burrells Ford, with about 75% of all use.
- Relatively few boaters ended their trips at Bull Pen Bridge (13%) or Lick Log (13%).
- Taken together, in 2013-2014, the highest boating use access areas were Burrells Ford (44% of all boaters used this for either put-in or takeout) and Bull Pen Bridge (38%).

There were almost no interactions between boaters and non-boaters on the North Carolina side during the 2012/2013 and 2013/2014 seasons. Less information exists about use levels for other activities; the U.S. Forest Service has not yet implemented a comprehensive use monitoring program, although a request for monitoring proposals is planned for 2015.

Recreation Opportunity Spectrum (ROS)

National Forest System lands are often categorized into one of six different Recreation Opportunity Spectrum (ROS) classes that range from “primitive” to “urban” (USFS, 1982). This classification system helps land managers and the public understand how a range of setting attributes (ecological, social and managerial) affect the quality of recreation experiences. It offers a framework for

inventorying recreation settings and attributes, and considering how changes to that setting may change recreation experiences.

The ROS inventories for the areas where the five access trails are proposed range from primitive to roaded natural under existing conditions:

- The proposed Green Creek, County Line and Lick Log trails are all in backcountry areas (more than one-quarter mile from the road) in the Chattooga Cliffs and Rock Gorge reaches that fit the ***primitive class***, which are areas “characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls, with motorized use not permitted.”
- The proposed Bull Pen Bridge access trails are in a lower use frontcountry setting in the Chattooga Cliffs Reach that is best described as the transition between ***semi-primitive motorized*** (due to the presence of the road) and ***semi-primitive non-motorized*** (to reflect that motorized use is not allowed off the road). The ***semi-primitive*** setting is, “characterized by a predominately natural or natural-appearing environment of moderate to large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but they are subtle.”
- The Burrells Ford Frontcountry Area fits in the ***roaded-natural*** class, which is “characterized by predominantly natural-appearing environments with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderated, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.”

The management actions in each alternative will be analyzed to determine whether trail improvements are compatible with the existing ROS inventory or whether they might change it to the next use and development class.

Potential future capacities associated with the proposed boater access trails

This EA assesses the potential effects the proposed boater access trails would have on capacities in Alternative 2. Trail development does not increase the size of parking areas at trailheads, and is not intended to modify capacities adopted in the Forest Plans. Instead, this EA focuses on whether trail improvements or extensions would attract more use than existing parking or established capacities.

In general, this EA recognizes that social impacts (especially potential crowding and congestion at the access trailheads) remain the limiting factor for use levels in the area, as outlined in the 2012 EA. While higher use of these proposed trails may have adverse impacts on biophysical or cultural resources in recreation settings (and will be analyzed), the type (or behavior) of users often matters more than the amount of use. In addition, many biophysical impacts can be reduced more effectively

by other actions in the management prescription (e.g., trail hardening and redesign, directing use away from sensitive areas) rather than adjusting use levels (Cole 1987, 1994, 2000).

Because capacity is based on achieving a defined management prescription, the impact that is violated at the lowest use level is the limiting factor. For the proposed trails and access sites, capacities were established in the 2012 EA to ensure that management actions would continue to do the following:

1. Protect, and, wherever possible enhance, the river's ORVs (this section of the EA specifically addresses the Recreation ORV); and,
2. Provide opportunities for desired recreation experiences of both traditional and new users.

A. Alternative 1 - Direct and Indirect Effects

1. Types of Existing Use

a. Trout Fishing

Fishing opportunities would continue to be available in the vicinity of the five existing access trails. These user-created trails are occasionally used by anglers, although they are not considered primary access points.

b. Boating

Boating would continue to occur on the upper segment of the Chattooga WSR in accordance with the three Forest Plans. Boaters would be able to use the five access locations even in their existing state. Current conditions do not appear to have prevented boaters from taking their trips.

c. Other Recreational Activities – Hiking, Camping, Relaxing, Picnicking, Swimming, Sightseeing and Hunting

User-created trails would continue to provide access to the river at the existing five locations, although none appear to be primary access points for these activities.

2. Recreation Experience

a. Wild, Scenic and Recreational Designation

The ROS inventories are consistent with the wild, scenic and recreational classifications for the various locations in the upper segment of the Chattooga WSR. Scenic classifications for Bull Pen and Burrells Ford allow road access and parking lots; the existing trails are appropriate in primitive and semi-primitive areas.

b. ROS Class

The ROS inventories for the area would remain as described above: Primitive for Green Creek, County Line and Lick Log; Semi-primitive for Bull Pen Bridge, and Roaded Natural for Burrells Ford.

3. Future Recreation Trends

Likely recreation use trends would apply to existing use patterns over the 10-year planning cycle. Fishing and hunting uses are likely to grow slowly or remain stable, even with small regional population increases; these uses are not expected to substantively increase the relatively low-use levels that have occurred in recent years. Hiking and frontcountry use could increase, but are less likely to do so during the cooler winter months when boating is allowed. Boating is likely to remain low given the use levels that have occurred so far. As predicted by Whittaker and Shelby (2007), a decrease in boating use may occur after the skilled boaters in the area have had a chance to paddle the upper segment reaches for the first time in three decades. Second year data seems to indicate that use has declined.

4. Capacities

The capacities established in the 2012 Forest Plans for frontcountry areas and backcountry reaches would remain in place under Alternative 1. Based on recent use information about boating, the capacities are not at risk of being exceeded in this alternative.

It appears that less than 60% of all days when boating was allowed were used in the first year, and in the 2013-14, use has been even lower. Forty-six boaters paddled on the highest use day in 2012-13, with 29 putting in at Green Creek (the highest use at a single access area on a single day) and 25 putting in at Burrells Ford. Average use levels on days when boating occurred were much lower (about 13 per day).

Boating use levels would likely continue at levels similar to the last two years, and are unlikely to increase substantially the number of encounters per day with anglers. Most boating is occurring at higher flows (boaters were present on three days between 350 and 500 cfs). Based on Whittaker and Shelby (2007), flows are considered unacceptably high for fly fishing at 450 cfs and for spin fishing at 525 cfs; flows are optimal below 250 cfs for fly fishing and 325 cfs for spin fishing. The level of actual encounters and potential for face-to-face conflict between these two groups has probably remained very low to date.

Encounters between boaters are likely to remain low under this alternative; on rare days with peak use as many as eight to 10 groups of boaters may float the Chattooga Cliffs Reach, but it is not certain that all groups would encounter each other if several are on different schedules.

Parking would stay informal and undefined at trailheads, but appears adequate to handle the average number of boating-based vehicles that would use any given trailhead. In 2012-2013 (first boating season), boater use on a single day may have produced eight to 10 boater cars at the Green Creek trailhead, filling the parking spots available at that site. However, boaters have the option of running shuttles or carpooling to reduce cars at the upstream trailhead

when this site is filled. At other locations, the number of boaters on the highest use day would not fill parking capacities at trailhead parking areas.

Undesignated and user-created trails in the vicinity of the proposed access trails would remain the same, with little to no design changes or maintenance activities to reduce erosion impacts or handle drainage problems. Therefore, the sense of naturalness along these routes may slightly deteriorate if these existing trails saw higher use in the future.

5. Recreation ORV

Opportunities for fishing, hiking and general riverside recreation would continue to be available; use levels would remain low enough to protect all recreation opportunities occurring in the area. Capacities are not likely to be exceeded by continued use of the current access locations. As a result, the overall Recreation ORV would continue to be protected.

B. Alternative 1 - Cumulative Effects

Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat. None of these activities would affect recreation use, experience, access or opportunities at the current access points. Projects listed in Table 3.1-1 do not overlap with current use to cause cumulative effects. No specific actions on private lands were identified during scoping that may combine with the effects of the proposed action and contribute to cumulative effects.

C. Alternative 2 – Direct and Indirect Effects

1. Types of Existing Use

a. Trout Fishing

Fishing opportunities would continue to be available in the vicinity of the five existing access locations. Improvements as described in the proposed action would reduce potential resource impacts. New trails at Bull Pen and Lick Log would improve access to the river and place less reliance on the poorly located user-created trails. The new access locations are not considered primary fishing access points and are not likely to induce new fishing use. They may encourage a few anglers to access the channel at specific locations (as opposed to accessing the channel via user-created spur trails). With increased hemlock downfall and heavy understory vegetation growth in the area, designated trails are likely to receive the most use and would discourage use on the old user-created spurs into the river.

b. Boating

Boating would continue to occur on the upper segment; boaters also would be able to use the improved five access locations. These locations are unlikely to induce additional boating use, which is attracted by the whitewater, not the access trails. Boating use levels have been relatively low since 2012 and seem unlikely to increase substantially in the future.

c. Other Recreational Activities – Hiking, Camping, Relaxing, Picnicking, Swimming, Sightseeing and Hunting

User-created trails would continue to provide access to the river. However, with the exception of the County Line Trail (which is a primary access route for hikers and anglers); none appear to be primary access points for these activities. New trails at Bull Pen and Lick Log would improve access to the river and place less reliance on the poorly located user-created trails. The new locations are not considered primary hiking, hunting or riverside recreation access points and are not likely to induce new use. They may simply encourage a few users to access the channel at specific locations (as opposed to accessing the channel via user-created spur trails). With increased hemlock downfall and heavy understory vegetation growth in the area, designated trails are likely to receive the most use and will discourage use on the old user-created spurs into the river.

2. Recreation Experience

a. Wild, Scenic and Recreational Classification

The wild, scenic and recreational classifications in the upper segment would remain consistent with the trail improvements and would not trigger any changes. All three classifications allow for trails and trail improvements. None of the improvements would create roads or road-like conditions. Scenic classifications for Bull Pen and Burrells Ford also allow road access and parking lots (which currently exist and would not change).

b. ROS Class

The ROS inventories for the area would remain the same: Primitive for Green Creek, County Line and Lick Log; Semi-primitive for Bull Pen Bridge; and Roaded Natural for Burrells Ford. Trail improvements are unlikely to induce new use, but would allow existing use to occur with less resource impact. While the development level of the specific trails would increase slightly, none of these changes would “tip the scale” to a higher ROS class. In most cases, trail improvements and elimination of user-created spur trails are expected to decrease resource impacts and thus would make the area appear more primitive (i.e., fewer signs of human use overall, although a single trail would exist in each location).

3. Future Recreation Trends

The effects are the same as in Alternative 1.

4. Capacities

As discussed for Alternative 1, boating use would likely continue at levels similar to the last two years. Boating use would occur on a portion of the days that boating is allowed, and these would probably continue to be at flows that are less attractive to anglers. Encounters between boaters are also likely to remain low under Alternative 2, as the newly designated trails are unlikely to induce additional boating use.

As under Alternative 1, parking would remain informal and undefined at trailheads; parking appears adequate to handle the average number of vehicles that would use any given trailhead. However, occasional days with higher use may produce eight to 10 boater cars at the Green Creek trailhead (filling the parking spots available at that site). When this site is full, boaters would have the option of running shuttles or carpooling to reduce cars at the upstream trailhead. At other locations, the number of boaters on the highest use day would not fill parking capacities at trailhead parking areas.

Two undesignated and user-created trails in the vicinity of the Burrells Ford Bridge would be eliminated in Alternative 2; design changes or maintenance activities would reduce erosion impacts or handle drainage problems on all five of the existing locations. This would increase the sense of naturalness along these trails, even if use were to increase.

Designating put-in and take-out sites and trails to them would also improve access for non-boating users; however, new use is unlikely to occur. People who currently travel to these sites know there is trail-related access to the channel, even if those trails are user created. In Alternative 2, the U.S. Forest Service would be funneling use onto a single designated trail to the channel. This is not likely to induce new use that would threaten to exceed capacities; it would only direct use that is already occurring in the area.

One new trail would be developed downstream from Bullpen Bridge into Ellicott Rock Wilderness. While this would be new development, it would replace existing user-created trails in the area that have the potential for greater resource impacts that would detract from a sense of naturalness.

Monitoring would allow the forests to determine if use is exceeding frontcountry or backcountry capacities. If use approaches or exceeds those capacities, there are options for using education to help better distribute use on high use days (e.g., carpooling for boaters in larger groups).

5. Recreation ORV

Opportunities for fishing, hiking and general riverside recreation would continue to be available; use levels would remain low enough to protect all recreation opportunities occurring in the area. Capacities are not likely to be exceeded by new and improved trails at the current access locations.

D. Alternative 2 - Cumulative Effects

Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat.

Designating, maintaining and constructing these access points would have cumulative positive effects on recreation use in the upper segment of the Chattooga WSR by developing sustainable trails and access points similar to other recreation projects in the watershed. However, the effects are minor given the small size of the proposal as listed in Table 2.2-1. None of these activities would affect recreation use, experience, access or opportunities at the current access points. Projects listed in Table 3.1-1 do not overlap with current use to cause cumulative effects. No specific actions on private lands were identified during scoping that may combine with the effects of the proposed action and contribute to cumulative effects.

3.2.2 *Biology (Fisheries, Wildlife and Botany Components)*

3.2.2A *Fisheries*

Affected Environment

Conditions at the time of designation and in the 1996 ORV report have been described in the 2012 EA and are incorporated by reference into this analysis.

Streams in the proposed project area include the Chattooga WSR and notable tributaries including but not limited to Green Creek, Norton Mill Creek, Cane Creek, Ammons Branch, Fowler Creek, East Fork Chattooga WSR, Harden Creek, King Creek, Lick Log Creek and Reed Creek (all in the upper segment). These streams contain cool and cold water aquatic communities.

1. Aquatic Federally Threatened, Endangered and Proposed Aquatic Species and Region 8 Forest Sensitive Aquatic Species (PETS)

No federally listed aquatic species occur in the Chattooga WSR or its tributaries. Five Region 8 forest sensitive aquatic species may occur in the watershed (see Table 3.2.2A-1).

Table 3.2.2A-1. PETS Aquatic Species for Chattooga WSR Watershed.

Species	Species Ranking				Forest List	Habitat
	Global	State	AFS	Forest		
Chauga crayfish <i>Cambarus chaugaensis</i>	G2	GA-S1 SC-S2S3 NC-S2	T	Sensitive	CONF SNF NNF	Fast-moving, rocky tributaries of the upper Savannah River.
Brook floater <i>Alasmidonta varicosa</i>	G3	GA-S2 SC-SNR NC-S1	T	Sensitive	CONF SNF	High gradient streams and moderate gradient rivers among rocks and gravel substrates in sandy shoals, riffles and moderate rapids.
Georgia beloneurian	G2	GA-S2		Sensitive	CONF	High elevation waterfalls spray cliffs and

Species	Species Ranking				Forest	Habitat
stonefly <i>Beloneuria georgiana</i>		NC-S1S3				spring brooks.
Mountain river cruiser <i>Macromia margarita</i>	G3	GA-S1 SC-SNR		Sensitive	CONF SNF NNF	Mountain, sometime Piedmont streams and rivers with high water quality, forested watersheds and silt deposits among rocks.
Edmund's snaketail <i>Ophiogomphus edmundo</i>	G1G2	GA-S1 NC-S1		Sensitive	CONF SNF NNF	Clear moderately flowing mountain streams and rivers with sand or gravel riffles.

Documented occurrences in the Chattooga WSR watershed exist for four of the five U.S. Forest Service Region 8 forest sensitive aquatic species.

State natural heritage program element occurrence (EO) records maintained by all three states exist for *Cambarus chaugaensis* and *Alasmidonta varicosa* in the Chattooga WSR. *Cambarus chaugaensis* range includes the Chattooga WSR watershed in North Carolina, South Carolina and Georgia and the Chauga River watershed in South Carolina, where it is most abundant (NatureServe, 2014). *Alasmidonta varicosa* is located in the main channel from the vicinity of the Highway 28 Bridge and downstream in South Carolina and Georgia. The mussel's range extends along the East Coast from Georgia into Canada.

English (1990) sampled *Beloneuria georgiana* in the Chattooga WSR and two Georgia tributaries. *Beloneuria georgiana* is known from Georgia, North Carolina and Tennessee. The proposed access points and trails would not affect any waterfalls, spray cliffs or spring brooks within the CONF. Therefore, this species will not be evaluated further in this analysis.

Macromia margarita is documented from Alabama, Georgia, North Carolina, South Carolina, Tennessee and Virginia. In South Carolina, this species is documented from the Seneca River watershed in Pickens County. *Macromia margarita* is not documented from the watershed, but occurs in adjacent watersheds in South and North Carolina. For this reason, and the likelihood of discovering more occurrences (NatureServe, 2014), this species is included for analysis.

Ophiogomphus edmundo was recently reported from the Chattooga WSR in the main channel of the river in the vicinity of the Highway 76 Bridge (Abbott, 2010). This species has also been reported from Georgia, North Carolina and Tennessee. There is the possibility that this aquatic insect occurs in a wider range than is documented due to the lack of wide-range sampling and the difficulty of identifying individuals at different life stages. English and Pike (2009) found the genus *Ophiogomphus* at seven sites in the Chattooga WSR watershed, but were unable to identify them to the species level.

Species Evaluated and Rationale

Sensitive species considered in this analysis are those identified by the regional forester for which population viability is a concern (August, 2001). Ten aquatic species listed by the

regional forester as sensitive are either known to occur or may occur on the NNF (refer to the Biological Evaluation or BE). The NCNHP database was queried for occurrences of aquatic sensitive species in Jackson and Macon counties. Seven sensitive aquatic species remained. These seven species were then filtered by watershed, resulting in only two species remaining, *Cambarus chaugaensis* and *Macromia margarita* (refer to the BE).

There are 34 U.S. Forest Service sensitive species on the CONF. All sensitive species were initially considered during this evaluation. However, there are no known locations of sensitive animal species that were identified in U.S. Forest Service records or the Georgia Natural Heritage Program (GANHP) database for the project area. In addition, the current user trail system and parking area does not provide suitable habitat for any sensitive species. A field visit on November 23, 2012 confirmed that the existing parking area and user-created trail did not provide suitable habitat for sensitive species. Therefore, all sensitive species known to occur on the Chattooga River Ranger District were dropped from further consideration due to the fact that this project area is limited to an existing parking area and user-created trail network, which does not serve as suitable habitat for any sensitive species. Although the adjacent riparian zone could serve as suitable habitat for some sensitive species, this habitat would not be affected by the proposed project activities.

Six sensitive aquatic species occur on the SNF. These species were then filtered based upon habitat information and the availability of these habitats within the aquatic analysis area. Based upon the results of this filtering process four sensitive aquatic species were evaluated for this analysis.

2. Locally Rare, Forest Concern Aquatic Species²

The CONF maintains a locally rare species list and the NNF maintains a forest concern species list. The SNF does not maintain either list. The analysis will include effects on locally rare species that may occur in the project areas. Those species that may occur in the watershed are listed in Table 3.2.2A-2. *Notropis leuciodus* has been located in the Chattooga WSR by the SCDNR and Georgia Department of Natural Resources (GADNR).

Table 3.2.2A-2. Forest Listed Locally Rare (LR) Species/Forest Concern (FC) Species Ranking.

Species	Species Ranking				Forest List	Habitat
	Global	State	AFS ³	Forest		
Whitetail shiner - <i>Cyprinella galactura</i>	G5	GA-S3S4	CS	LR	CONF	Cool, usually clear, high gradient headwaters, creeks and small rivers with clean gravel and rubble.
Tennessee shiner - <i>Notropis leuciodus</i>	G5	GA-S3	CS	LR	CONF	Pools and runs of cool usually clear creeks and small to medium rivers with gravel-rubble substrate.
<i>Cryptobranchus alleganiensis</i>	G3G4	NC-S3	-	FC	NNF	Rivers and large streams, TN and Savannah River systems

² For simplicity and clarity in this document, both the NNF and the CONF species will be referred to as locally rare.

³ The American Fisheries Society (AFS) ranking of CS means “currently stable.” This denotes a species whose distribution is widespread and stable or a species that may have declined in portions of its range, but is not in need of immediate conservation management actions.

<i>Beraea gorteba</i>	G1G2	NC-S1S2	-	FC	NNF	Specifics unknown
<i>Homoplectra monticola</i>	G2G3	NC-31	-	FC	NNF	Scattered central and southern mountains (Jackson and Macon)
<i>Hydropsyche carolina</i>	G2G3	NC-S1	-	FC	NNF	Cullasaja River (Macon); Whitewater River (Jackson)
<i>Oropsyche howellae</i>	G2	NC-S2	-	FC	NNF	Streams (Jackson and Macon)
<i>Stylurus scudderi</i>	G4	NC-S2?	-	FC	NNF	Streams and rivers
<i>Etheostoma inscriptum</i>	G4	NC-S1	-	FC	NNF	Large streams in Savannah River system
<i>Micropterus coosae</i>	G5	NC-S1	CS	FC	NNF	Clear upland creeks and small to medium rivers in rocky pools and runs. May move to small tributary streams for spawning.
<i>Notropis lutipinnis</i>	G4Q	NC-S1	-	FC	NNF	Savannah and Little TN River systems, Jackson and Transylvania Co.; Broad River system
<i>Baetopus trishae</i>	G1G2	NC-S1	-	FC	NNF	Specifics unknown

Fifty-six aquatic forest concern species are either known to occur or may occur on the NNF. The NCNHP database was queried for occurrences of forest concern species in Macon and Jackson counties. Twenty-nine forest concern species remained after this initial filter. These twenty-nine species were then filtered using their habitat information and the availability of these habitats within the aquatic analysis area. Based upon the results of this filtering process twelve forest locally rare species were evaluated in this analysis. These species were analyzed for this project because they are either known to occur within the project area or suitable habitat exists for these species. Species that do not have suitable habitat within the project area were eliminated from further analysis.

3. Aquatic Management Indicator Species (MIS) and Management Indicator Communities

MIS and management indicator communities are representative of the diversity of species and associated habitats. MIS can be used as a tool for identifying specialized habitats and creating habitat objectives and standards and guidelines. The MIS concept is used to identify a few species that are representative of many other species and to evaluate the effects of proposed management on MIS habitats. Both population and habitat data are used to monitor MIS on the national forests. The SNF monitors cool and cold water aquatic communities while the NNF monitors particular fish species.

Table 3.2.2A-3. Aquatic MIS and Management Indicator Communities for the NNF and SNF.

Aquatic MIS and Mgmt. Indicator Communities	Forest	Habitat
Management Indicator Species		
Brook trout, <i>Salvelinus fontinalis</i>	NNF	Coldwater streams.
Rainbow trout, <i>Oncorhynchus mykiss</i>	NNF	Coldwater streams.
Brown trout, <i>Salmo trutta</i>	NNF	Coldwater streams.
Blacknose dace, <i>Rhinichthys atratulus</i>	NNF	Coldwater streams.
Management Indicator Communities		
Cold Water Communities	SNF	Chattooga River and tributaries; brook trout, rainbow trout, brown trout, blacknose dace, aquatic insects, crayfish and mollusks.
Cool Water Communities	SNF	Chattooga River and tributaries; trout and other fish species, aquatic insects, crayfish and mollusks.

Continued monitoring indicates that, while individual populations exhibit high annual variability in age class structure and biomass, overall trends in *Salvelinus fontinalis*, *Oncorhynchus mykiss*, *Salmo trutta* and *Rhinichthys atratulus* populations across the Nantahala and Pisgah National Forests have remained stable during the last 13 years (National Forests in North Carolina FY 2009 Monitoring and Evaluation Report, USFS 2009).

The Chattooga WSR and its tributaries contain cold to cool water aquatic communities from the headwaters to the downstream reaches. The cold water and cool water aquatic communities serve as management indicators that are monitored to indicate the effects of management on riparian resources. Fish, crayfish, aquatic insects and mollusks are all components of these communities.

The aquatic communities include one forest-listed locally rare fish species: *Notropis leuciodus*. The fish species diversity of the Management Indicator Community in the Chattooga WSR watershed has not changed in more than 20 years of sampling the main stem of the river (SCDNR unpublished data in project file). NatureServe has assigned a global rank of either G4 (apparently secure) or G5 (secure) to all of the fish species in the community.

The aquatic communities include one forest sensitive crayfish *Cambarus chaugaensis*. All other crayfish are rated as G4 or G5 by NatureServe and CS by AFS (Taylor et al., 2007). In addition, *Cambarus asperimanus* is ranked as S1 by the SC Natural Heritage Program (SCNHP), S2 by the GANHP and S3? by the NCNHP.

The aquatic communities include one forest sensitive mussel species: *Alasmidonta varicosa*. *Elliptio producta* has a global rank of G3 and is ranked as special concern by the AFS (Williams et al. 1992). *Elliptio angustata* has a global rank of G4 and is ranked as special concern by the AFS. *Elliptio complanata* has a global rank of G5 and is ranked as CS by the AFS.

Aquatic insect surveys were conducted in the Chattooga WSR from 1986-89 by English (1990), in 2007-08 by English and Pike (2009), and in 1994 by Weber and Isely (1995). Weber and Isely conclude that water quality in the Chattooga WSR basin was good to excellent using macroinvertebrates as biological indicators of water quality. Analysis of macroinvertebrate data in the English 1990 report indicates the water quality in the Chattooga WSR watershed was good. The average density over the entire Chattooga WSR watershed suggested that the river was neither over nor under productive compared to streams in the Great Smoky Mountains National Park. Sites from the 1990 report were resampled in fall 2007 and 2008 (English and Pike 2009) and encompass sample sites from the headwaters downstream to just above Tugaloo Lake, including some tributaries.

4. Aquatic Habitat

Stream habitat surveys using Basinwide Visual Estimation Technique (Doloff et al., 1993) were conducted in six South Carolina tributaries to the Chattooga WSR in 2001 and 2002. The total area of riffle habitat in these streams was 1.5 to 3.8 times greater than the total pool area. The lack of in-stream habitat complexity is in part associated with a low percentage of large woody debris within the streams. Presence of large woody debris classes considered large enough to be stable and create fish habitat ranged from one to 15 percent of the total wood surveyed within the streams. The larger, most stable, woody debris class (greater than five meters in length and 55 cm in diameter) ranged from one to seven percent of the total wood. Recent monitoring indicates that large wood is not being cut in the newly opened paddling reaches in the Chattooga River mainstem (USFS 2014). Construction, reconstruction and maintenance of trails and access sites would have no impact on aquatic habitat and will not be evaluated further in this analysis.

This analysis addresses proposed activities that may contribute sediments or otherwise impact aquatic habitat or species. Fine sediments can alter and degrade aquatic habitats and eliminate benthic macroinvertebrates or reduce their density and diversity. This in turn decreases a food source for some aquatic species. Sedimentation can cause mortality in egg and larval stages of aquatic species reproduction. Sediments can fill in and destroy habitat niches within a stream. Van Lear et al. (1995) found that 80 percent of observable sediment sources in the Chattooga WSR watershed were associated with open graveled and unsurfaced roads. The use of these roads contributes to their degradation through heavy trafficking and by increasing the need for maintenance, both of which aggravate sedimentation. Van Lear (1995) also found that the wild and scenic corridor of the main stem Chattooga WSR contributes relatively little new sediment.

Species conservation status and known population trends and aquatic habitat conditions are discussed in the affected environment section. The *Final Environmental Impact Statement for the Revised Land and Resource Management Plan Sumter National Forest* acknowledges that effects on aquatic ecosystems do occur on a watershed scale and sediment has been determined to be a risk factor for aquatic species viability in the Chattooga WSR watershed. Trail erosion and sediment input and turbidity were identified as an existing impact issue on the river by Whittaker and Shelby (2007).

A. Alternative 1 – Direct and Indirect Effects

The aquatic community (including sensitive, locally rare, MIS and aquatic communities) would remain in the present state or continue current population trends as described above. This alternative would meet standards for all three Forest Plans by maintaining existing MIS populations.

B. Alternative 1 – Cumulative Effects

Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat. Projects aimed at reducing soil erosion and sediment in the drainage would lead to long term reductions in sediment in the Chattooga River. The Riparian Corridor Management Prescription addressing perennial and intermittent streams and the Forestwide Standards specific to ephemeral channels for all three national forests would be implemented for all these projects.

Current access sites would continue to contribute minor amounts of erosion and sediment when considered in context with the effects that existing roads are having in the drainage. However, cumulative erosion and sediment reductions are likely under this alternative. No specific actions on private lands were identified during scoping that may combine to substantially increase erosion and sediment in the river.

C. Alternative 2 – Direct and Indirect Effects

Locally Rare and Sensitive Species

Recreational boating use on the upper segment of the Chattooga WSR is expected to be low due to the high skill level required and the relatively isolated location of the access points. Recreational boaters would only use these trails for five months of the year when flows reach 350 cfs, which would be approximately 10 – 30 days per year. Furthermore, all access sites would be constructed/reconstructed and maintained to minimize erosion and sedimentation to analysis area waters by hardening the trails and/or seeding and mulching any disturbed soil. No in-stream construction is proposed for this project. Project design features to minimize erosion and sedimentation would prevent visible sediment from reaching analysis area waters and habitats suitable for locally rare and sensitive aquatic species. One small tributary would have a short wooden footbridge constructed across the channel for the Greens Creek Trail. This footbridge construction may involve some excavation within the riparian area for installation of abutments/supports but this construction would be limited to a very small area (approximately five linear feet along the stream banks) and would be seeded and mulched after construction is completed. There are no effects anticipated from this construction due to the application of best management practices to control erosion and sedimentation. Furthermore, the footbridge would span the entire bankfull channel; therefore, no in-stream disturbance would occur.

The probability of an individual of the forest concern or locally rare aquatic species occurring at one of the access points during a high flow event at the exact moment that a boater launches his/her boat

is extremely low. Also, current use is lower than predicted which would further reduce the chances of someone stepping on an individual of the locally rare and sensitive aquatic species. These factors, coupled with the limited number of days per year that flows would be high enough to enable paddling, further reduces the chances of direct and indirect effects on individuals of the locally rare and sensitive aquatic species.

Determination of Effect

Implementation of this project would have no direct impact to the locally rare and sensitive aquatic species beyond those previously disclosed in the Biological Evaluation for *Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor* (2012 EA) because the proposed access points would not involve in-stream construction or modification of the river channel. Project design features would prevent visible sediment from entering analysis area waters. Implementation may produce indirect sediment effects on locally rare and sensitive aquatic species through visitors hiking trails and paddling the river, but those impacts would be no greater than those previously disclosed in the BE for the 2012 EA.

MIS and Management Indicator Communities

Wild rainbow trout, wild brown trout, blacknose dace, aquatic insects, crayfish and mussels

The effects of this alternative on the project MIS and Management Indicator Communities would generally be the same as those described for the locally rare and sensitive species described above. Construction of the trail segments and the one stream crossing for the Green Creek Trail would have no effects on any aquatic resources because best management practices would be used to prevent sedimentation to analysis area streams. There would be no other direct or indirect effects on the aquatic MIS and Management Indicator Communities from this project.

Implementation of this project would not change the current forest-wide trend for wild rainbow trout, wild brown trout, blacknose dace, aquatic insects, crayfish and mussels. The current forest-wide trends for wild rainbow trout, wild brown trout, blacknose dace, aquatic insects, crayfish and mussels are stable and implementation of Alternative 2 would not affect these population trends because the project design features would prevent measureable sediment from entering any stream with fish populations.

Aquatic Habitat

Implementation of Alternative 2 would stabilize boat access trails and access points; thereby, minimizing the potential for additional sediment sources resulting from the recreational activities within the corridor. Recent monitoring indicates that large wood is not being cut in the newly opened paddling reaches in the Chattooga River mainstem (USFS 2014).

D. Alternative 2 – Cumulative Effects

Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest

health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, maintain wildlife habitat. Projects aimed at reducing soil erosion and sediment in the drainage would lead to long term reductions in sediment in the Chattooga River. The Riparian Corridor Management Prescription addressing perennial and intermittent streams and the Forestwide Standards specific to ephemeral channels for all three national forests would be implemented for all these projects.

Cumulative decreases in erosion and sediment to the Chattooga River are expected with implementation of the proposed action when considered in context with other projects in the drainage. No specific actions on private lands were identified during scoping that may combine to substantially increase erosion and sediment in the river.

3.2.2B Wildlife

Affected Environment

1. PETS, Locally Rare Species

The information provided in this section will be used to disclose and analyze the potential effects alternatives 1 and 2 may have on PETS and/or locally rare wildlife species.

The Chattooga WSR watershed has a geology and climate which is unique in the Southern Appalachians; therefore it provides suitable habitats for several wildlife species which are listed as “state rare” or altogether “globally rare.” Some of the most important and unique habitat components for locally rare wildlife species within the watershed include: exposed rock outcrops; deep, narrow gorges and associated vertical rock walls; steep, exposed, rocky forested slopes; and sheltered riparian corridors. These unique geologic features and habitats, combined with an average annual rainfall which can exceed 100 inches in some areas, provide a full spectrum of important and unique wildlife habitats. These unique features are mostly associated with the upper portion of the watershed and for this reason; approximately 70% of all locally rare species known or with potential to occur in the Chattooga WSR watershed are restricted to the upper portion of the watershed.

Table 3.2.2B-1 contains information on all natural communities which occur in the Chattooga WSR watershed.

Table 3.2.2B-1. Comparison of Natural Communities Abundance within the Chattooga WSR Watershed, and the Upper (north of US 28) and Lower (south of US 28) Segments of the Chattooga WSR Corridor.

Natural Communities	Acres	% in Watershed	Upper Segment Wild & Scenic Corridor (Ac)	% Upper Corridor	Lower Segment Wild & Scenic Corridor (Ac)	% Lower Corridor
High Elevation Red Oak Forest	1990	1%	23	0.3%	0	0%
Montane oak-hickory forest	10892	6%	156	2%	0	0%
Montane White Oak Forest	2046	1%	13	0.2%	0	0%
White Pine/Heath Forest	17328	9%	1331	19%	436	2%
Mesic oak-hickory forest	37729	20%	636	9%	4916	25%

Table Mountain Pine-Oak/Heath Forest	298	0.2%	0	0%	0	0%
Pitch Pine-Oak/Heath Forest	17687	9%	955	14%	2257	12%
acidic cove forest	6518	3%	423	6%	2323	12%
Eastern Hemlock/ Rhododendron maximum Forest	18302	10%	842	12%	92	0.5%
Alluvial Forest	1789	1%	156	2%	628	3%
Chestnut Oak/Northern Red Oak/ Rhododendron	5244	3%	528	7%	367	2%
Chestnut Oak/Scarlet Oak/Heath Forest	12656	7%	604	9%	187	1%
Dry oak-hickory forest	18718	10%	1048	15%	976	5%
Shortleaf Pine-Southern Red Oak-Blackjack Oak Forest	14106	7%	9	0.1%	1099	6%
Shortleaf Pine-Southern Red Oak Forest	19890	11%	141	2%	5721	29%
Heath Bald	565	0.3%	0	0%	0	0%
Swamp Forest/Bog	1165	1%	0	0%	0	0%
Rock Outcrops	234	0.1%	0	0%	0	0%
Urban	223	0.1%	0	0%	0	0%
Water	1585	1%	182	3%	496	3%
Totals	188965		7047		19498	

Fifteen PETS and locally rare wildlife species are known to occur (documented) within the overall Chattooga WSR watershed. An additional three wildlife species have the potential to occur within the watershed, as well as within the proposed boater access points/routes (see Table 3.2.2B-2).

Table 3.2.2B-2. Chattahoochee, Nantahala and Sumter Wildlife Species which are Known to Occur, or have Potential to Occur, within the Chattooga WSR Watershed and Boater Access Sites.

Type	Scientific Name	Common Name	Element Occurrence Location ⁴	Number of Separate Element Occurrences	Forest	Rank ⁵
Mammal	<i>Myotis sodalis</i>	Indiana Bat	Upper and Lower Watershed	Not documented (potential to occur)	NNF CONF	E
Mammal	<i>Myotis septentrionalis</i>	Northern Long Eared Bat	Upper and Lower Watershed	Not documented (potential to occur)	NNF SNF CONF	T
Amphibian	<i>Aneides aenus</i>	Green Salamander	Upper and Lower Watershed	28 (27 Upper, 1 Lower)	NNF CONF	LR
Amphibian	<i>Plethodon</i>	Southern	Upper Watershed	10	NNF	S

⁴ Upper watershed includes all tributaries of the North Fork of the Chattooga WSR above the West Fork – North Fork confluence as well as all the tributaries of the West Fork of the Chattooga WSR. Lower watershed includes all tributaries which drain into the North Fork of the Chattooga WSR below the West Fork – North Fork confluence.

⁵ E = Endangered; P = Proposed; LR = Locally Rare; S = Sensitive; TSA = Threatened – Similarity of Appearance.

Type	Scientific Name	Common Name	Element Occurrence Location ⁴	Number of Separate Element Occurrences	Forest	Rank ⁵
	<i>teyahalee</i>	Appalachian Salamander			CONF	
Bird	<i>Aegolius acadicus pop. 1</i>	Northern Saw-whet Owl	Upper Watershed	1	NNF	LR
Bird	<i>Falco peregrinus</i>	Peregrine Falcon	Upper Watershed	1	NNF	S
Bird	<i>Contopus cooperi</i>	Olive-sided Flycatcher	Upper Watershed	1	NNF	LR
Butterfly	<i>Erora laeta</i>	Early Hairstreak	Upper Watershed	1	NNF	LR
Bird	<i>Haliaeetus leucocephalus</i>	Bald Eagle	Upper and Lower Watershed	Not documented (potential to occur)	NNF SNF CONF	S
Mammal	<i>Myotis leibii</i>	Eastern Small-footed Bat	Upper Watershed	5	NNF SNF CONF	S
Mammal	<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	Upper Watershed	1	NNF	S
Mammal	<i>Neotoma floridana haematoresia</i>	Southern Appalachian Woodrat	Upper and Lower Watershed	2	CONF	LR
Mammal	<i>Sorex palustris punctulatus</i>	Southern Water Shrew	Upper Watershed	2	NNF	S
Mammal	<i>Sorex dispar</i>	Long-tailed Shrew	Upper Watershed	1	CONF	LR
Mammal	<i>Tamiasciurus hudsonicus</i>	Red Squirrel	Lower Watershed	3	CONF	LR
Reptile	<i>Eumeces anthracinus</i>	Coal Skink	Upper Watershed	2	NNF	LR
Reptile	<i>Clemmys muhlenbergii</i>	Bog Turtle	Upper Watershed	2	NNF CONF	T SA (NNF) S (CONF)
Reptile	<i>Pituophis m. melanoleucus</i>	Northern Pine Snake	Lower Watershed	1	CONF	LR

Wildlife Species Initially Considered

All PETS and locally rare species lists and information were compiled by:

1. Consulting US Forest Service plant and animal inventory records;
2. Consulting Georgia, North Carolina and South Carolina Natural Heritage Program element occurrence records;
3. Consulting with other federal, state and non-governmental organization biologists;
4. Reviewing USFWS lists for proposed, endangered and threatened species in Jackson, Macon, Oconee and Rabun counties; and
5. Using the references at the end of this document.

Initially, wildlife species which are listed on the CONF and the NNF were considered in this analysis. This initial list did not include some Piedmont species and Ridge and Valley species which are included on the CONF list but do not occur in the Southern Blue Ridge Subsection. This initial list included 104 PETS and locally rare wildlife species (see Table 3.2.2B-3). The SNF does not maintain a locally rare list of wildlife species.

Table 3.2.2B-3. CONF, NNF and SNF Threatened, Endangered, Sensitive and Locally Rare Wildlife Species List and Project-level Analysis Information.

TYPE	SCIENTIFIC NAME	COMMON NAME	HABITAT/RANGE	FOREST	LISTING	ANALYZED / REASON1
Mammal	<i>Glaucomys sabrinus coloratus</i>	Carolina Northern Flying Squirrel	High elevation forests, mainly spruce-fir	NNF	E	No / 4
Mammal	<i>Myotis sodalis</i>	Indiana Bat	Roots in hollow trees or under loose bark (warmer months), in caves (winter).	NNF CONF	E	Yes / 1
Mammal	<i>Puma concolor cougar</i>	Eastern Cougar	Extensive forests, remote areas	NNF	E	No / 5
Mammal	<i>Myotis septentrionalis</i>	Northern Long-eared Bat	Roosts under loose bark, crevices or hollow trees	NNF CONF SNF	T	Yes / 1
Reptile	<i>Clemmys muhlenbergii</i>	Bog Turtle	Bogs, wet pastures, wet thickets	NNF CONF	T (S/A) S	No / 4
Spider	<i>Microhexura montivaga</i>	Spruce-fir Moss Spider	In moss of spruce-fir forests (endemic to North Carolina and adjacent Tennessee)	NNF	E	No / 4
Terrestrial Gastropod	<i>Patera clarki nantahala</i>	Noonday Globe	Nantahala Gorge (endemic to this site)	NNF	T	No / 3
Amphibian	<i>Desmognathus santeetlah</i>	Santeetlah Dusky Salamander	Stream headwaters and seepage areas; southwestern mountains	NNF	S	No / 4
Amphibian	<i>Eurycea junaluska</i>	Junaluska Salamander	Forests near seeps and streams in the southwestern mountains	NNF	S	No / 3
Amphibian	<i>Plethodon aureolus</i>	Tellico Salamander	Forests in the Unicoi Mountains	NNF	S	No / 3
Amphibian	<i>Plethodon teyahalee</i>	Southern Appalachian Salamander	Moist forests, in southwestern mountains at all elevations	CONF NNF SNF	S	No / 2
Beetle	<i>Cicindela ancocisconensis</i>	Appalachian Tiger Beetle	Habitat specialist preferring sand and cobble along permanent streams or grassy openings, above 4000 feet	CONF NNF	S	No / 4
Beetle	<i>Cicindela patruela</i>	A Tiger Beetle	Sandy soil in open pine or pine-oak woods	CONF	S	No / 4
Beetle	<i>Trechus luculentus unicolor</i>	A ground beetle	Beneath rocks and moss in wet ravines and near seeps and springs	NNF	S	No / 3
Beetle	<i>Trechus rosenbergi</i>	A ground beetle	Deep in mat of spruce and fir needles piled up against wet, vertical rock faces, Plott Balsam and Great Balsam Mountains	NNF	S	No / 4
Bird	<i>Aimophila aestivalis</i>	Bachman's Sparrow	Dry, open, pine or oak woods with well developed herb layer	CONF	S	No / 4
Bird	<i>Falco peregrinus</i>	Peregrine Falcon	Cliffs (for nesting)	CONF NNF	S	No / 4

TYPE	SCIENTIFIC NAME	COMMON NAME	HABITAT/RANGE	FOREST	LISTING	ANALYZED / REASON1
Bird	<i>Haliaeetus leucocephalus</i>	Bald Eagle	Mature forests near large bodies of water (for nesting)	CONF NNF SNF	S	Yes / 1
Bird	<i>Lanius ludovicianus migrans</i>	Migrant Loggerhead Shrike	Fields and pastures (breeding season only)	CONF NNF	S	No / 4
Bird	<i>Thryomanes bewickii altus</i>	Appalachian Bewick's Wren	Woodland borders or openings, farmlands or brushy fields, at high elevations (breeding season only)	NNF	S	No / 4
Butterfly	<i>Callophrys irus</i>	Frosted Elfin	Open woods and borders, usually in dry situations; host plant-lupines (<i>Lupinus</i>) and wild indigos (<i>Baptisia</i>)	NNF	S	No / 4
Butterfly	<i>Speyeria diana</i>	Diana Fritillary	Rich woods and adjacent edges and openings; host plants violets (<i>Viola</i>), pine forests	CONF NNF SNF	S	No / 2
Grasshopper	<i>Melanoplus divergens</i>	Divergent Melanoplus	Glades and balds, 1800-4717 feet	NNF	S	No / 4
Grasshopper	<i>Melanoplus serrulatus</i>	Serrulate Melanoplus	Valleys and lower slopes, Nantahala Mountains	NNF	S	No / 3
Grasshopper	<i>Scudderella septentrionalis</i>	Northern Bush Katydid	Woodlands	NNF	S	No / 4
Grasshopper	<i>Trimerotropis saxatilis</i>	Rock-loving Grasshopper	Boulderfields	NNF	S	No / 4
Mammal	<i>Microtus chrotorrhinus carolinensis</i>	Southern Rock Vole	Rocky areas at high elevations, forests, or fields	NNF	S	No / 4
Mammal	<i>Myotis austroriparius</i>	Southeastern Bat	Standing snags, hollow trees and buildings	CONF	S	No / 4
Mammal	<i>Myotis leibii</i>	Eastern Small-footed Bat	Roosts in hollow trees, rock outcrops, bridges (warmer months), in caves and mines (winter)	CONF NNF SNF	S	Yes / 1
Mammal	<i>Sorex palustris punctulatus</i>	Southern Water Shrew	Stream banks in montane forests or northern hardwood forests above 3000 ft.	CONF NNF	S	No / 4
Mammal	<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	Roosts in old buildings, hollow trees, caves, mines, and beneath bridges, usually near water	CONF NNF SNF	S	Yes / 1
Moth	<i>Euchlaena milnei</i>	Milne's Euchlaena	Hardwood forest and riparian areas in mountains	NNF	S	No / 2
Moth	<i>Semiothisa fraserata</i>	Fraser Fir Angle	spruce/fir forests with fraser fir	NNF	S	No / 4
Spider	<i>Nesticus cooperi</i>	Lost Nantahala Cave Spider	Caves and along Nantahala River (apparently endemic to Swain County, NC)	NNF	S	No / 3
Spider	<i>Nesticus sheari</i>	a nesticid spider	on the ground in moist or rich forests (apparently endemic to Graham County, NC)	NNF	S	No / 4
Spider	<i>Nesticus silvanus</i>	a nesticid spider	Habitat not indicated (apparently endemic to southern mountains of NC)	NNF	S	No / 2
Terrestrial Gastropod	<i>Pallifera hemphilli</i>	Black Mantleslug	High elevation forest, mainly spruce-fir	NNF	S	No / 4

TYPE	SCIENTIFIC NAME	COMMON NAME	HABITAT/RANGE	FOREST	LISTING	ANALYZED / REASON1
Terrestrial Gastropod	<i>Paravitrea placentula</i>	Glossy Supercoil	Leaf litter on wooded hillsides	NNF	S	No / 3
Amphibian	<i>Ambystoma talpoideum</i>	Mole Salamander	Breeds in fish-free semi-permanent woodland ponds; forages in adjacent woods	NNF	FC	No / 2
Amphibian	<i>Aneides aeneus</i>	Green Salamander	Damp, shaded crevices of cliffs or rock outcrops in deciduous forests (southern forests)	CONF NNF	LR FC	No / 2
Amphibian	<i>Eurycea longicauda longicauda</i>	Longtail Salamander	Moist woods and floodplains; small ponds for breeding	NNF	FC	No / 3
Amphibian	<i>Hemidactylium scutatum</i>	4-toed Salamander	Pools, bogs and other wetlands in hardwood forests	CONF	LR	No / 4
Bird	<i>Accipiter striatus</i>	Sharp-shinned hawk	Forests and Woodlands	NNF	FC	No / 3
Bird	<i>Aegolius acadicus pop. 1</i>	Northern Saw-whet Owl	Spruce-fir forests or mixed hardwood/spruce forests (for nesting) [breeding season only]	NNF	FC	No / 4
Bird	<i>Bombycilla cedrorum</i>	Cedar Waxwing	Hardwood, pine forest / woodland (breeding season only)	CONF	LR	No / 4
Bird	<i>Catharus guttatus</i>	Hermit Thrush	Spruce-fir forests (for nesting) [breeding season only]	NNF	FC	No / 4
Bird	<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo	Deciduous forests, mainly at higher elevations [breeding season and habitat only]	NNF	FC	No / 4
Bird	<i>Contopus cooperi</i>	Olive-sided Flycatcher	Montane conifer forests (mainly spruce-fir) with openings or dead trees [breeding season only]	NNF	FC	No / 4
Bird	<i>Corvus corax</i>	Common Raven	High elevation, remote cliffs and rock outcrops	CONF	LR	No / 4
Bird	<i>Dendroica cerulea</i>	Cerulean Warbler	Mature hardwood forests; steep slopes and coves in mountains [breeding season only]	NNF CONF	FC LR	No/ 2
Bird	<i>Dendroica magnolia</i>	Magnolia Warbler	Spruce-fir forests, especially in immature stands [breeding season only]	NNF	LR	No / 4
Bird	<i>Empidonax alnorum</i>	Alder flycatcher	High elevation, shrub/sapling thicket	NNF	LR	No / 4
Bird	<i>Empidonax minimus</i>	Least Flycatcher	Open hardwood forests, groves, streamside trees (breeding season only)	CONF	LR	No/ 2
Bird	<i>Empidonax traillii</i>	Willow Flycatcher	Wet thickets, streamsides, riparian areas (breeding season only)	CONF	LR	No/ 2
Bird	<i>Loxia curvirostra</i>	Red Crossbill	Pine and pine / oak forests and woodlands (breeding season only)	CONF	LR	No / 4
Bird	<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak	Hardwood forests at mid-to high elevations (breeding season only)	CONF	LR	No / 4
Bird	<i>Regulus satrapa</i>	Golden-crowned Kinglet	Mixed pine / hardwood forests at mid-to high elevations (breeding season only)	CONF	LR	No / 4
Bird	<i>Shyrapicus varius appalachiensis</i>	Appalachian Yellow-bellied Sapsucker	Mature, open hardwoods with scattered dead trees [breeding season only]	NNF	FC	No/ 2
Bird	<i>Sitta canadensis</i>	Red-breasted Nuthatch	Mixed conifer and hardwood forest and woodland (breeding season only)	CONF	LR	No/ 2

TYPE	SCIENTIFIC NAME	COMMON NAME	HABITAT/RANGE	FOREST	LISTING	ANALYZED / REASON1
Bird	<i>Troglodytes troglodytes</i>	Winter Wren	Mixed conifer and hardwood forest and woodland at mid to high elevations (breeding season only)	CONF	LR	No / 4
Bird	<i>Vermivora chrysoptera</i>	Golden-winged Warbler	Old fields, woodlands and hardwood successional forests (breeding season only)	CONF	LR	No / 4
Bird	<i>Vermivora pinus</i>	Blue-winged Warbler	Low elevation brushy fields and thickets	NNF	FC	No / 4
Bird	<i>Vireo gilvus</i>	Warbling Vireo	Scattered hardwoods in open country [breeding season only]	NNF	FC	No / 4
Bird	<i>Wilsonia canadensis</i>	Canada Warbler	Shrub thickets in riparian areas, second growth deciduous hardwoods (breeding season only)	CONF	LR	No / 4
Butterfly	<i>Autochton cellus</i>	Golden-banded Skipper	Moist woods near streams; host plant-hog peanut (<i>Amphicarpa bracteata</i>)	NNF	LR	No/ 2
Butterfly	<i>Chlosyne gorgone</i>	Gorgone Checkerspot	Woodland Openings and borders	NNF	FC	No / 4
Butterfly	<i>Celastrina niger</i>	Dusky Azure	Rich, moist deciduous forests; host plant-goat's beard (<i>Aruncus dioicus</i>)	NNF	FC	No/ 2
Butterfly	<i>Euphydryas phaeton</i>	Baltimore Checkerspot	Bogs, marshes, wet meadows, rarely upland habitat, host plants turtle hrad (<i>Chelone</i>) and false foxglove (<i>Aureolaria</i>)	NNF	FC	No / 4
Butterfly	<i>Papilio cressphontes</i>	Giant Swallowtail	Primarily coastal in maritime forests or thickets	NNF	FC	No / 4
Butterfly	<i>Phyciodes batesii maconensis</i>	Tawny Crescent	Rocky ridges, woodland openings, at higher elevations; host plants- Asters, mainly <i>Aster undulatus</i>	NNF	FC	No / 4
Butterfly	<i>Polygonia progne</i>	Gray comma	Rich deciduous woods	NNF	FC	No / 3
Butterfly	<i>Satryium edwardsii</i>	Edward's Hairstreak	Xeric oak woods , host plants oaks	NNF	FC	No / 4
Butterfly	<i>Erora laeta</i>	Early Hairstreak	Deciduous forests, especially along roads or edges at high elevations	NNF	FC	No / 4
Fly	<i>Eulonchus marialiciae</i>	Mary Alice's Small-headed Fly	High-elevation hardwood – hemlock forests	NNF	FC	No / 4
Grasshopper	<i>Melanoplus cherokee</i>	Cherokee Melanoplus	Woodlands, 1800-5100 feet	NNF	FC	No / 4
Grasshopper	<i>Melanoplus viridipes eurycerus</i>	Green-legged Melanoplus	Woodlands and forest edges	NNF	FC	No / 4
Grasshopper	<i>Melanoplus acrophilus acrophilus</i>	A short-winged Melanoplus	Shrubby areas, 3600-5000 feet elevation	NNF	FC	No / 4
Mammal	<i>Condylura cristata</i>	Star – nosed mole	Forested wetlands, bogs/fens and swamps	CONF	LR	No / 4
Mammal	<i>Mustela nivalis</i>	Least Weasel	Mixed hardwood pine grassy upland and riparian woodland, grassland	CONF	LR	No / 4
Mammal	<i>Neotoma floridana</i>	Eastern Woodrat – Southern Appalachian	Rocky places in deciduous or mixed forests	CONF	LR	No/ 2

TYPE	SCIENTIFIC NAME	COMMON NAME	HABITAT/RANGE	FOREST	LISTING	ANALYZED / REASON1
	<i>haematoreia</i>	Pop.				
Mammal	<i>Neotoma magister</i>	Allegheny woodrat	Rocky places and abandoned buildings in deciduous or mixed forests in the northern mountains and adjacent Piedmont.	NNF	FC	No / 3
Mammal	<i>Sorex dispar</i>	Long-tailed Shrew	High elevation forests with talus or rocky slopes	CONF NNF	LR FC	No / 4
Mammal	<i>Sylvilagus obscurus</i>	Appalachian cottontail	High elevation balds and shrub thickets	CONF	LR	No / 4
Mammal	<i>Tamiasciurus hudsonicus</i>	Red Squirrel	Mixed conifer and hardwood forest and riparian areas	CONF	LR	No / 2
Moth	<i>Hepialus sciophanes</i>	a ghost moth	Spruce-fir forests	NNF	FC	No / 4
Moth	<i>Itame subcessaria</i>	Barred Itame	High elevation forests with gooseberries	NNF	FC	No / 4
Reptile	<i>Eumeces anthracinus</i>	Coal Skink	Rocky slopes, wooded hillsides and road banks	CONF	LR	No / 2
Reptile	<i>Pituophis m. melanoleucus</i>	Northern Pine Snake	Dry and/or sandy pine/oak uplands	CONF	LR	No / 4
Reptile	<i>Sternotherus minor</i>	Loggerhead Musk Turtle	Streams and rivers in Mississippi drainage	NNF	FC	No / 3
Spider	<i>Nesticus species nova 1</i>	A nesticid spider	Talus fields, known only from a five mile radius on the northern end of Chunky Gal Mountain	NNF	FC	No / 3
Spider	<i>Nesticus species nova 2</i>	A nesticid spider	Rocky talus fields along the Chattooga WSR and rock crevices of Whiteside Mountain	NNF	FC	No / 4
Terrestrial Gastropod	<i>Glyphyalinia junaluskana</i>	Dark Glyph	Moist leaf litter in deciduous woods on mountainsides	NNF	FC	No / 2
Terrestrial Gastropod	<i>Glyphyalinia pentadelphia</i>	Pink Glyph	Pockets of moist leaves in upland woods	NNF	FC	No / 2
Terrestrial Gastropod	<i>Haplotrema kendeighi</i>	Blue-footed Lancetooth	Mountainsides in leaf litter, usually above 2000 feet elevation	NNF	FC	No / 2
Terrestrial Gastropod	<i>Helicodiscus bonamicus</i>	Spiral Coil	Leaf litter on wooded hillsides	NNF	FC	No / 3
Terrestrial Gastropod	<i>Helicodiscus fimbriatus</i>	Fringed Coil	Leaf litter and under rocks on wooded hillsides	NNF	FC	No / 3
Terrestrial Gastropod	<i>Appalachina chilhoweensis</i>	Queen Crater	Under leaf litter or in rock piles	NNF	FC	No / 3
Terrestrial Gastropod	<i>Patera clarki</i>	Dwarf Proud Globe	Under leaf litter on wooded mountainsides	NNF	FC	No / 2
Terrestrial Gastropod	<i>Inflectarius ferrissi</i>	Smoky Mountain Covert	Under rock ledges, in rock piles, under downed logs at elevations above 2000 feet; Great Smokey Mountains and Plott Balsams	NNF	FC	No / 3
Terrestrial Gastropod	<i>Fumonlelix orestes</i>	Engraved Covert	In crevices in rock ledges; high elevations in the Plott Balsam Mountains	NNF	FC	No / 3
Terrestrial Gastropod	<i>Paravitrea lacteodens</i>	Ramp Cove Supercoil	Habitat unknown-probably leaf litter on mountainsides	NNF	FC	No / 3
Terrestrial Gastropod	<i>Paravitrea lamellidens</i>	Lamellate Supercoil	Pockets of deep, moist leaf litter on wooded hillsides or in ravines	NNF	FC	No / 2

TYPE	SCIENTIFIC NAME	COMMON NAME	HABITAT/RANGE	FOREST	LISTING	ANALYZED / REASON1
Terrestrial Gastropod	<i>Paravitrea umbilicatus</i>	Open Supercoil	Pockets of deep, moist leaf litter on wooded hillsides or in ravines	NNF	FC	No / 2
Terrestrial Gastropod	<i>Zonitoides patuloides</i>	Appalachian Gloss	Pockets of deep, moist leaves on mountainsides and in ravines	NNF	FC	No / 2

1 = suitable habitat for the species occurs in the analysis area and this species could potentially be impacted by one or more alternatives in this analysis; therefore, species is analyzed in project – level effects analysis;

2 = Dropped - = suitable habitat for the species occurs in the analysis area, but this proposal does not include management actions which would affect this species;

3 = Dropped – the analysis area is outside of the known or suspected range of the species (only includes nesting range for birds); therefore, species is dropped from further analysis;

4 = Dropped – Within range, but no suitable habitat in the analysis area; therefore, species is dropped from further analysis; and

5 = Dropped – the best available science indicates this species is extirpated.

From this list, 78 species were immediately dropped from further consideration due to the following criteria:

1. Unsuitable habitat for the species occurring in the analysis area;
2. The analysis area being outside the known or suspected range of the species;
or
3. The species being considered extirpated.

An additional 21 PETS and/or locally rare wildlife species, although either being known or having potential to occur in project area, were dropped from consideration because the project activities would have no effect on the species or its habitat. Examples include species that occur in rock outcrops or old large hollow trees, both of which represent habitats that would not be affected by alternatives 1 or 2. Five species (bald eagle, Indiana bat, northern long-eared bat, Rafinesque's big-eared bat and Eastern small-footed bat) were identified as having potential to occur within the project area, and could be potentially affected by Alternative 2 for this project (Table 3.2.2B-4). These two species will be further analyzed in the effects analysis section of this document. No locally rare species are considered in this list and therefore, will not be evaluated further in this EA.

Table 3.2.2B-4. CONF, NNF and SNF Proposed, Endangered and Sensitive Species which have Potential to Occur in the Project Area and could Potentially be Impacted by the Alternatives.

TYPE	SCIENTIFIC NAME	COMMON NAME	HABITAT/RANGE	FOREST	LISTING
Mammal	<i>Myotis sodalis</i>	Indiana Bat	Roots in hollow trees or under loose bark (warmer months), in caves (winter).	NNF CONF	Endangered
Mammal	<i>Myotis septentrionalis</i>	Northern Long-eared Bat	Roosts under loose bark, crevices or hollow trees	NNF CONF SNF	Threatened
Mammal	<i>Myotis leibii</i>	Eastern Small-footed Bat	Hollow trees, rock outcrops, bridges (warmer months), in caves and mines (winter months)	NNF CONF SNF	Sensitive
Mammal	<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	Old buildings, hollow trees, caves, mines, and beneath bridges, usually near water	NNF CONF SNF	Sensitive

TYPE	SCIENTIFIC NAME	COMMON NAME	HABITAT/RANGE	FOREST	LISTING
Bird	<i>Haliaeetus leucocephalus</i>	Bald Eagle	Open bodies of water, such as rivers and lakes, and adjacent forested habitats	NNF CONF SNF	Sensitive

a. Indiana Bat, *Myotis sodalis*

The range of Indiana bat includes much of the Midwest, portions of New England, the Southeast and the south-central states, with accidental/non-regular occurrences outside this range. The majority of the population hibernates at relatively few sites, including several caves and one mine in Missouri, southern Indiana and Kentucky. About 85% of the total population hibernates in nine Priority 1 caves (NatureServe, 2013). There are several extant hibernacula in western North Carolina, eastern Tennessee and northern Alabama (USFWS, 2007). In Georgia, there are historic hibernacula records for Indiana bats in two Dade County caves. However they were last documented there in the fall and winter of 1966 (Trina Morris, GADNR, pers. comm.).

Most of the known maternity sites have been located in forested tracts in agriculturally dominated landscapes (e.g., Missouri, Iowa, Indiana, Illinois) but maternity colonies also exist to the south in heavily forested regions to at least eastern Tennessee and western North Carolina (NatureServe, 2013). Until recently, Indiana bats were thought to be absent south of Tennessee in summer. However in early April 2012, a radio-tagged female Indiana bat was tracked from a cave in White County, Tennessee to the Rich Mountain Wildlife Management Area in Gilmer County, Georgia. The site is located on state lands, approximately two miles south of the CONF boundary. This bat was monitored daily for approximately 10 days until the transmitter battery failed. During this period, she roosted in multiple pine snags in a pine beetle killed area. In addition, another 13 bats were observed using one of these roost trees. Given this, it is assumed that this represents the first Indiana bat maternity colony in Georgia (Trina Morris, GADNR, pers. comm.) Based on this new maternity colony record as well as hibernacula and maternity records from the adjoining states, the entire CONF is considered to be within the potential range of the Indiana bat (Trina Morris, GADNR, pers. comm with Pete Pattavina, USFWS). Additional mist net surveys at the new Georgia site in June, July and August 2012 failed to capture any additional Indiana bats. A number of mist netting surveys also were conducted throughout north Georgia in the summer of 2013 by Georgia DOT contractors and personnel from the USFWS, GADNR, and U.S. Forest Service. No Indiana bats were captured during these surveys. There are currently no known roost locations within the project area and within the entire northeast part of Georgia.

Maternity sites generally are found behind loose bark of dead or dying trees or in tree cavities. In the Southern Appalachian region, maternity colonies are often located in sun-exposed conifer snags (Britzke et al. 2003). Females establish primary maternity roosts under the sloughing bark of dead yellow and white pines and Eastern hemlock. In the southern portion of its range, both males and females of this species prefer yellow pine snags (with loose bark patches) for roosting (Joy O'Keefe, Indiana State University and Susan Loeb, Southern Research Station, U.S. Forest Service, personal communication).

Single bats may use a variety of tree species for roosts, as long as there is available sloughing bark or crevices on those trees (NatureServe, 2013).

The forests of North Georgia represent the southern edge of the range of Indiana bats, and summer roosting/possible maternity habitat in this region differs from summer habitat in the core of the range. Preferences for open-canopied, patchy stands with yellow pine snags have been documented within this region. The typical roost tree is a large yellow pine snag on a southern aspect, with an open canopy above the roost location, at an advanced stage of decay (most bark already gone) (Joy O'Keefe, unpublished information). Contiguous forested habitat and snags are plentiful within the project area, but stand densities are typically high and closed-canopied, and yellow pine snags and the availability of native yellow pine species other than Virginia pine is somewhat limited due to fire suppression and other past land use practices. However, due to the recent range expansion for this species into Georgia, and given the likelihood that potential roost trees may be impacted by the project, this species will be carried through the effects analysis for this project.

b. Northern Long-eared Bat, *Myotis septentrionalis*

The northern long-eared bat was proposed for listing as endangered in October 2013 (USFWS, 2013). The bat was listed as threatened on May 4, 2015, 30 days after publication of the final listing determination in the *Federal Register*. White-nose syndrome (WNS) was identified as the primary threat to this species and has led to dramatic and rapid declines in northern long-eared bats of up to 99 percent of pre-WNS levels in some areas.

The northern long-eared bat ranges across much of the eastern and north central United States, and all Canadian Provinces west to the southern Yukon Territory and eastern British Columbia (USFWS, 2013). In the United States, the species' range reaches from Maine west to Montana, south to eastern Kansas, eastern Oklahoma, Arkansas, and east to the Florida panhandle. More than 780 winter hibernacula have been identified including two in northwestern Georgia and one in northeast Georgia (Trina Morris, pers. comm.) as well as North Carolina (n=20), South Carolina (n=2) and Tennessee (n=11). Numerous summer records for this species exist on the CONF including 51 records from mist-net surveys conducted in 2001-2002 and 2006-2007. A number of mist netting surveys also were conducted throughout north Georgia in the summer of 2013 by Georgia DOT contractors and personnel from the USFWS, GADNR, and the U.S. Forest Service. More than 50 northern long-eared bats were captured during these 2013 surveys, including several from net sites on the Forest (Trina Morris, Dottie Brown pers. comm.).

During summer, northern long-eared bats typically roost singly or in colonies underneath bark or in cavities or in crevices of both live trees and snags (USFWS, 2013). The northern long-eared bat appears to be somewhat opportunistic in tree roost selection, selecting varying roosts and types of roosts throughout its range. Northern long-eared bats also have been observed roosting in human-made structures.

Although there are some minor differences, summer roost preferences of northern long-eared bats appear to be similar to those of the Indiana bat (Jeffery 2013, USFWS, 2014).

Northern long-eared bats appear to be somewhat more flexible than Indiana bats tending to select hardwoods for roosts more often than Indiana bats and displaying a wider variability in roost tree diameters (>three-inch diameter). Northern long-eared bats also appear to select roost sites with somewhat more canopy cover than Indiana bats (USFWS,2014). However, both selected relatively large diameter roost trees, generally on the upper portions of south-facing slopes. Both species showed a preference for roosts with relatively low canopy coverage which allows for greater solar exposure.

c. Eastern Small-footed Bat, *Myotis leibii*

This species is one of the smallest North American bats. At the southern terminus of its range on the Andrew Pickens Ranger District, this species was detected near Lake Cherokee and over the Chattooga WSR near Highway 28. In winter, eastern small-footed myotis roost in caves, rock shelters and fissures in cliffs. During migration and summer, little is known about the species' roosting habits, although there are reports of the species using abandoned buildings, bridges and rock shelters. There are five occurrence records for this species within the "Georgia side" of the Chattooga WSR Watershed.

d. Rafinesque's Big-eared Bat, *Corynorhinus rafinesquii*

This species is one of the least known bats of the southeastern United States. Its colonial roosts can contain more than 100 individuals. These bats use a wide variety of roost sites: caves, old mine shafts, hollow trees, areas behind loose bark, abandoned buildings and under bridges. They leave their roosts only when it is completely dark, forage for insects and return to the roosts before sunrise. Rafinesque's big-eared bat hibernates in the winter months, but may be active during warm spells in the southern portions of its range. Eight individuals have been detected on the Andrew Pickens Ranger District, as well as one individual on the Chattooga River Ranger District. While none are known to occur directly within the project area, potential habitat exists.

e. Bald Eagle, *Haliaeetus leucocephalus*

This species nests in tall, usually living trees near an open body of water. This species mostly forage near estuaries, lakes, ponds, rivers, open marshes and shorelines. Bald eagles will soar over a body of water and swoop to the surface for fish. They also scavenge for dead fish and other carrion along shores and occasionally consume small birds and mammals. Although nationwide recovery efforts led to the removal of bald eagles from the threatened and endangered species list on August 9, 2007, this species is still protected under the Bald and Golden Eagle Protection Act (16 USC 668-668c) and the Migratory Bird Treaty Act (16 USC 703-712). There are no known nests on the Chattooga River, and Andrew Pickens Ranger Districts, but there are documented nests on the Nantahala Ranger District; however, the Chattooga, Chauga Rivers and several large water bodies (e.g., Lake Cherokee, Lake Cheohee and Chattooga Lake) provide suitable foraging habitat for this species, and the project area may provide potential nest and roost sites.

2. Management Indicator Species (MIS)

The CONF, NNF and SNF have a combined total of 20 terrestrial MIS. These species and their important habitat components are listed in Table 3.2.2B-5. Of these species, only those that are indicators of important habitat components that might be directly or indirectly affected by two alternatives will be analyzed in detail. Specifically, only those MIS that are indicators of the following important habitat components will be analyzed further in this analysis:

1. Large contiguous forest interior;
2. Hard mast forest;
3. Pine/pine-oak forest;
4. Mid- to late-successional riparian forests;
5. Mid- to late-successional mesic forests; and
6. Standing dead trees (snags).

Those species that will not be included in this analysis are dropped because their important habitat components do not occur in amounts or arrangements suitable for supporting a viable population of the species and/or simply because their important habitat components would not be affected by the alternatives.

Table 3.1.2B-5. CONF, NNF, and SNF Management Indicator Species (MIS) List and Project-level Analysis Information.

Type	Common Name	Important Habitat Component	Forest	Project Level Analysis / Reason*
Mammal	Black Bear	Hardmast Forest, Early Successional Forest, Large Contiguous Forest Interior with Low Disturbance	CONF NNF SNF	Yes / 1
Mammal	White-tailed Deer	Hardmast Forest, Early Successional Forest	CONF NNF	Yes / 1
Bird	Pileated Woodpecker	Standing Dead Trees (Snags)	CONF NNF SNF	Yes / 1
Bird	Ovenbird	Large Contiguous Deciduous Forest Interior	CONF NNF	Yes / 1
Bird	Eastern Towhee	Early Successional Forest	NNF	No / 2
Bird	Pine Warbler	Pine / Pine – Oak Forest	CONF NNF SNF	Yes / 1
Bird	Ruffed Grouse	Early Successional Forest	NNF	No / 2
Bird	Acadian Flycatcher	Mid – Late Successional Riparian Forests	CONF NNF SNF	Yes / 1
Bird	Hooded Warbler	Mid – Late Successional Mesic Forests	CONF SNF	Yes / 1
Bird	Scarlet Tanager	Hardmast Forest	CONF SNF	Yes / 1
Bird	Brown-headed Nuthatch	Pine Woodlands	SNF	No / 2
Bird	Prairie Warbler	Early Successional Forest	CONF SNF	No / 2
Bird	Swainson's Warbler	Early Successional Riparian Forest	CONF SNF	Yes / 1
Bird	Field Sparrow	Woodland, Savanna and Grassland Habitat	CONF SNF	No / 2
Bird	American Woodcock	Early Successional Riparian Forest	SNF	No / 2
Bird	Bobwhite Quail	Early Successional Forest, Woodland, Savanna and Grassland Habitat	SNF	No / 2
Bird	Eastern Wild Turkey	General Forest Habitat	SNF	Yes / 1
Bird	Red-cockaded Woodpecker	Longleaf Pine Woodland / Savanna	CONF	No / 2
Bird	Wood Thrush	Forest Interior	CONF	Yes / 1
Bird	Chestnut-sided Warbler	High Elevation Early Successional Forest	CONF	No / 2

* Listed below are the reasons why a particular MIS is or is not considered in the analysis.

1 = Species has important habitat components in the project area which may be affected by one or more of the proposed alternatives.

2 = Species does not have important habitat components in the project area which may be affected by one or more of the proposed alternatives.

a. Black Bear

Black bear is used as an MIS on all three national forests within this analysis area. This species was selected as an MIS to help indicate the effects of management in meeting public demand as a hunted species. In the Southern Appalachians, important habitat elements for black bears are habitat diversity, den site availability, availability of hard mast and habitat remoteness. Black bear populations in the Southern Appalachians have been increasing steadily for the past 25 years and are currently described as “stable to slightly increasing” for the three states included in this analysis.

b. White-tailed Deer

White-tailed deer is used as an MIS on the NNF and CONF. This species was selected as an MIS to help indicate the effects of management in meeting public demand as a hunted species. White-tailed deer require a mixture of habitats in various successional stages. Key requirements include the interspersed of mature, mast-producing stands during fall and winter; early successional forest to provide browse and soft mast; and high quality permanent openings. Currently, deer populations on the CONF, NNF and SNF are considered stable.

c. Pileated Woodpecker

The pileated woodpecker is used as an MIS on all three national forests to help indicate the effectiveness of management in maintaining desired conditions relative to abundance of standing dead trees (snags). Typical habitat consists of extensive areas of late successional coniferous or deciduous forest. However, young forests that retain scattered, large, dead trees also provide suitable habitat. Forest management activities that favor this species include maintaining older forests and retaining dead trees, hollow trees, and older live trees to replace existing snags over time. Trend estimates indicate that populations of pileated woodpecker are stable across the southeastern United States; however, from 1992-2004 this species has decreased annually 2.3%, 0.5% and 1.2% on the NNF, CONF and SNF, respectively (La Sorte et al., 2007).

d. Ovenbird

The ovenbird is used as an MIS on the NNF and CONF to help indicate the effects of management on species associated with mature interior forest habitats. The ovenbird requires large, contiguous, mature forests for successful breeding. It is commonly found in mature mesic deciduous forests. Typical forested communities where ovenbirds breed include oak-hickory and oak-pine forests. Overall, the US Geological Survey (USGS) Breeding Bird Survey indicates a stable to slightly increasing trend for this species from 1966 to 2004 (Sauer et al., 2014); however, between 1992-2004 this species has decreased annually 0.6%, 0.1%, and 1.0% on the NNF, CONF and SNF, respectively (La Sorte et al., 2007).

e. Pine Warbler

The pine warbler is used as an MIS on all three national forests included in this analysis. This species is used to help indicate the effects of management on species associated with yellow pine and pine-oak forests. Pine warbler uses a variety of upland pine and pine-hardwood forest types throughout its range, and nests in deciduous forest with scattered individual or small groves of pines. The USGS Breeding Bird Survey indicates a positive trend for this species (Sauer et al., 2014). During 1992-2004, the population of this species increased annually on the NNF (2.8%) and on the CONF (0.4%). On the SNF, pine warbler populations have decreased 0.2% annually during the same period of time (La Sorte et al., 2007).

f. Acadian Flycatcher

The Acadian flycatcher is used as an MIS on all three national forests to help indicate the effects of management on species associated with mid- to late-successional riparian forest conditions. Breeding habitat for this species is mature mesic deciduous forests, often near streams. Habitat management includes maintaining relatively undisturbed, mature, deciduous forests in riparian areas and coves within larger blocks of mature forest. The USGS Breeding Bird Survey indicates a relatively stable trend for this species Sauer et al., 2014). During 1992-2004, the population of Acadian flycatcher has increased annually on the NNF (11.8%) and on the CONF (3.2%). On the SNF, pine warbler populations have decreased 1.2% annually during the same period of time (La Sorte et al., 2007).

g. Hooded Warbler

The hooded warbler is used as an MIS on the CONF and SNF to help indicate the effects of management on mature mesic hardwood forests, with special focus on the presence of canopy gaps and structural diversity. This species favors moist deciduous forests with a fairly dense understory. Nesting locations are restricted to large forest patches. It typically inhabits mature forests where large trees fall to create canopy gaps. Management for hooded warbler may entail creating canopy gaps where they are absent and maintaining a shrub layer. The USGS Breeding Bird Survey indicates a stable trend for this species (Sauer et al., 2014). During 1992-2004, hooded warbler experienced a dramatic decline in the number of observations per count on the NNF (18.5% annual decline). During the same period of time, this species increased on the CONF by 8.4% annually and decreased on the SNF by 6.8% annually (La Sorte et al., 2007).

h. Scarlet Tanager

The scarlet tanager is used as an MIS on the CONF and SNF to help indicate the effects of management on species associated with mature upland oak communities. The scarlet tanager inhabits large blocks of mature forest, especially where oaks are common, but also may occur in young successional woodlands. Management emphasis for this species centers on maintaining large forest tracts and creating open canopies or canopy gaps. The USGS Breeding Bird Survey indicates a stable trend for this species (Sauer et al., 2014).

During 1992-2004, populations of scarlet tanager increased at a rate of 5.0% per year on the CONF. On the NNF and SNF, this species experienced declines of 4.8% annually and 1.0% annually, respectively (La Sorte et al., 2007).

i. Swainson's Warbler

The Swainson's warbler is used as an MIS on the CONF and SNF to help indicate the effects of management on species in canebrakes and other early-successional riparian habitats. The Swainson's warbler occurs in rhododendron or mountain laurel tangles, generally in ravines in hardwood and mixed forests. Habitat management includes maintaining relatively undisturbed, mature, deciduous forests in riparian areas and coves within larger blocks of mature forest. During 1992-2004, populations of Swainson's warbler increased annually on the NNF and SNF at a rate of 11.9% and 8.2%, respectively; no data are available for the CONF (La Sorte et al. 2007).

j. Eastern Wild Turkey

The Eastern wild turkey is used as an MIS on the SNF because it is a game species in high demand and because of its association with both open, fire-maintained habitat and mature hardwood forests. In the south, wild turkey use upland forests of oaks, hickories and pines, as well as bottomland forest habitats, which include beech, gum, bald cypress, tupelo and water ash. Habitat management centers on maintaining mature bottomland hardwood forest, open upland forest maintained with fire, and scattered openings dominated by herbaceous cover. Populations of wild turkey suffered dramatic declines in the early 1900s. Aggressive stocking programs successfully reintroduced this species to most of its eastern range where populations continue to increase.

k. Wood Thrush

The wood thrush is used as an MIS on the CONF to help indicate the effects of management on species that depend on forest interior habitat conditions. This species uses deciduous or mixed forests with a fairly well developed deciduous understory, especially where moist. The USGS Breeding Bird Survey indicates that during 1966-2012, wood thrush has experienced a 1.6% annual decline within the Appalachian Mountain Region (Sauer et al., 2014).

3. Migratory Birds

The U.S. Forest Service is recognized as a national and international conservation leader and plays a pivotal role in the conservation of migratory bird populations and their habitats. Within the National Forest System, conservation of migratory birds focuses on providing a diversity of habitat conditions at multiple spatial scales and ensuring that bird conservation is addressed when planning for land management activities.

The Chattooga River, Nantahala and Andrew Pickens ranger districts occur within the physiographic region known as the Blue Ridge Province in the Southern Appalachian

Mountain region. This area is associated with Bird Conservation Region (BCR) 28 – Appalachian Mountains. The 105 million-acre BCR 28 is a forest-dominated area that provides habitat for 234 breeding, migratory and wintering bird species, many of which have experienced steep population declines in recent decades.

The following sources, along with an analysis of species' range, life history and available habitat information, were reviewed to identify priority migratory birds that are likely to occur in the project area:

1. Partners in Flight (PIF) Priority Bird List for BCR 28;
2. USFWS Birds of Conservation Concern for BCR 28; and
3. *The Land Manager's Guide to the Birds of the South* (Hamel, 1992).

The results of this analysis produced the following table of priority migratory birds that are associated with and potentially affected by the alternatives.

Table 3.2.2B-6. Priority Migratory Birds Associated with this Analysis and Relevant Areas of the Chattooga River, Nantahala and Andrew Pickens Ranger Districts.

Species	Habitat Association	Source
Acadian Flycatcher, <i>Empidonax vireescens</i>	Deciduous Forest	PIF ⁶
Bald Eagle, <i>Haliaeetus leucocephalus</i>	Mixed Forest	USFWS ⁷
Carolina Wren, <i>Thryothorus ludovicianus</i>	Deciduous Forest	PIF
Cerulean Warbler, <i>Dendroica cerulea</i>	Deciduous Forest	PIF, USFWS
Chuck-will's-widow, <i>Caprimulgus carolinensis</i>	Mixed Forest	PIF
Hooded Warbler, <i>Wilsonia citrina</i>	Deciduous Forest	PIF
Kentucky Warbler, <i>Oporornis formosus</i>	Deciduous Forest	PIF, USFWS
Louisiana Waterthrush, <i>Seiurus motacilla</i>	Deciduous Forest	PIF, USFWS
Pine Warbler, <i>Dendroica pinus</i>	Mixed Forest	PIF
Red-bellied Woodpecker, <i>Melanerpes carolinus</i>	Deciduous Forest	PIF
Red-headed Woodpecker, <i>Melanerpes erythrocephalus</i>	Mixed Forest	PIF, USFWS
Red-shouldered Hawk, <i>Buteo lineatus</i>	Deciduous Forest	PIF
Swainson's Warbler, <i>Limnithlypis swainsonii</i>	Deciduous Forest	PIF, USFWS
Whip-poor-will, <i>Caprimulgus vociferus</i>	Deciduous Forest	USFWS
Wood Thrush, <i>Hylocichla mustelina</i>	Deciduous Forest	PIF, USFWS
Worm-eating Warbler, <i>Helmitheros vermivorus</i>	Deciduous Forest	PIF, USFWS
Yellow-throated Vireo, <i>Vireo flavifrons</i>	Deciduous Forest	PIF
Yellow-throated Warbler, <i>Dendroica dominica</i>	Deciduous Forest	PIF

All other migratory bird species that occur in BCR 28 were excluded from analysis because they were not identified as PIF priority species or USFWS birds of conservation concern, the project area occurs outside of their known breeding, wintering, or migratory range, and/or suitable habitat does not exist within the project area.

⁶ Partners in Flight Species of Continental Importance in the Eastern Avifaunal Biome
(http://www.partnersinflight.org/cont_plan/PIF3_Part2WEB.pdf)

⁷ USFWS Birds of Conservation Concern for BCR 28
(<http://www.fws.gov/migratorybirds/NewReportsPublications/SpecialTopics/BCC2008/BCC2008.pdf>)

1. PETS and Locally Rare Species

Indiana bat, Northern long-eared bat, Eastern small-footed bat, Rafinesque's big-eared bat and bald eagle

The following text discloses the environmental consequences for the five species which have potential to occur within the project area, and could be impacted by alternatives 1 or 2.

A. Alternative 1 - Direct and Indirect Effects

Alternative 1 would not include any tree cutting or manipulation of habitat. Therefore, this alternative would have no direct or indirect effect on these species. There would be the potential for disturbance to some of the species from current recreational uses but species would be able to utilize the large amount of habitat available. Under this alternative, current management plans (including the 2012 Forest Plans) would continue to guide management in the project area. The natural resources and ecological processes within the project area would continue at the existing level of human influence. The characteristics of the forest environment would be affected primarily by natural disturbances such as insects, disease and weather.

B. Alternative 1 - Cumulative Effects

Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat. Projects aimed at improving forest health and restoring/maintaining diverse ecosystems would benefit Indiana bat, Northern long-eared bat, Eastern small-footed bat, Rafinesque's big-eared bat and bald eagles by enhancing habitat components such as but not limited to providing open canopy and early successional stands and foraging areas. However, there are no cumulative effects to these species since projects listed in Table 3.1-1 do not overlap with this alternative.

C. Alternative 2 - Direct and Indirect Effects

Indiana bat, Northern long-eared bat, Eastern small-footed bat and Rafinesque's big-eared bat: It is estimated that less than half an acre would be impacted by trail construction activities and less than two acres would be impacted by reconstruction and maintenance activities. Some hazard trees and larger trees would be cut but is expected to be extremely low. Although only a minimal amount of trees would be cut as a result of this project, cutting of any trees which could serve as potential roost sites/maternity sites during the summer months could adversely affect this species. Tree cutting would most likely take place during the hibernation season for bats. The hibernation season for the CONF and SNF is December 1st through March 15th and for the NNF it is October 15th through April 15th. This would eliminate any direct impacts to bat species. However, bat habitat suitability would be assessed by a wildlife biologist if trees are cut during the active season for bats. Consultation would take place between the Forest Service, USFWS and appropriate state agencies if federally listed bats are observed using trees to be cut. This would avoid direct impacts to bat species. It is

unlikely that there would be measureable indirect effects to bat habitat given the amount of forest habitat associated with the five access sites, the high density of yellow pine snags as well as other suitable roost trees within the project area.

Bald Eagle: This species is highly mobile and any disturbance associated with trail construction, reconstruction or maintenance and from recreational use (boaters, hikers, backpackers, anglers, campers, etc.) might cause a temporary displacement of individuals to undisturbed areas. In addition, the small scale of the proposal and the low number of recreational users and associated activities are not expected to impact any habitat for this species. There would be no measureable indirect impacts to this species given the large amount of available habitat surrounding the access sites and the limited number of trees to be cut.

D. Alternative 2 - Cumulative Effects

Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat.

Indiana Bat, Northern Long-eared Bat, Eastern Small-footed Bat and Rafinesque's Big-eared Bat, Bald Eagles: Projects aimed at improving forest health and restoring/maintaining diverse ecosystems would benefit Indiana bat, Northern long-eared bat, Eastern small-footed bat, Rafinesque's big-eared bat and bald eagles by enhancing habitat components providing open canopy and early successional stands and foraging areas. Currently, suitable roost trees and other habitat features are widely abundant throughout the project area and the watershed. The amount of suitable roost trees would likely increase as the forests continue to become older. However, there are no cumulative effects to these species since projects listed in Table 3.1-1 do not overlap with this alternative.

2. MIS

A. Alternative 1 - Direct and Indirect Effects

Alternative 1 would not impact MIS habitat since no habitat is being altered or created. There would be the potential for disturbance to some of the species from current recreational uses but species would be able to utilize the large amount of habitat available. Under this alternative, current management plans (including the 2012 Forest Plans) would continue to guide management in the project area. Effects to individual MIS and habitats are expected to be the same as was analyzed in the 2012 EA. The natural resources and ecological processes within the project area would continue at the existing level of human influence. The characteristics of the forest environment would be affected primarily by natural disturbances such as insects, disease and weather.

B. Alternative 1 - Cumulative Effects

Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat. This alternative would not have any measureable cumulative impact on species given the current access sites do not overlap with any other activities taking place in the drainage.

C. Alternative 2 - Direct and Indirect Effects

a. Black Bear

Direct effects on black bear are not expected to occur with the implementation of Alternative 2. Trail construction, reconstruction and maintenance activities and the use of the trails by the public may disturb this species; however, black bear would relocate to undisturbed areas. Disturbance associated with project activities during construction, reconstruction and maintenance of trails could potentially disrupt black bear reproduction. Breeding occurs in summer and peaks between June-July, a timeframe which coincides with potential project activities. However, with home ranges of Appalachian black bears estimated at 7-51 km² in Tennessee (van Manen, 1994) and 27-112 km² in Virginia (Hellgren and Vaughan, 1989), the likelihood of this project having a direct effect on black bear reproduction is low.

Habitat remoteness is an important element of black bear habitat that might be affected by Alternative 2. Human disturbance restricts available habitat and limits additional range expansion of black bear (Pelton 2001, Jones 2005). Although black bear are occasionally disturbed by hikers or anglers within the upper segment of the Chattooga WSR corridor, this area and the surrounding watershed generally provides optimal “remoteness” for this species, especially when compared to other areas across the three national forests. Alternative 2 would likely diminish the habitat remoteness element because it would facilitate more public use within the upper segment of the Chattooga WSR corridor.

b. White-tailed Deer

Direct effects on white-tailed deer are not expected to occur with the implementation of Alternative 2. Trail construction and maintenance activities and the use of the trails by the public may disturb this species; however, white-tailed deer would relocate to undisturbed areas.

White-tailed deer use a wide variety of habitats and are less susceptible to human disturbance than the other MIS. Trail construction, reconstruction and maintenance activities and the use of the trail by the public are not expected to have indirect effects on this species. Availability or quality of habitat is not expected to be affected by Alternative 2.

c. All Avian MIS

Direct effects are not expected for pileated woodpecker, ovenbird, pine warbler, Acadian flycatcher, hooded warbler, scarlet tanager, Swainson's warbler, Eastern wild turkey or wood thrush. These MIS are highly mobile avian species that would relocate to undisturbed areas if they were displaced by proposed activities. However, it is possible that if any of these species were nesting during trail construction, reconstruction or maintenance activities, nests and nestlings could be lost. These effects are considered minor since only a small portion of available habitat would be managed at any one time. In addition, trail construction and maintenance activities would have to occur at the exact time when species are most vulnerable and also occur over successive years to have substantial impacts. This is unlikely given past management practices. In addition, avian species will re-nest multiple times throughout the nesting season. Recreational activities are expected to have similar minor impacts.

While Eastern wild turkey use a wide variety of habitats and are less susceptible to human disturbance than the other avian MIS, pileated woodpecker, ovenbird, pine warbler, Acadian flycatcher, hooded warbler and scarlet tanager and wood thrush are considered species that require forest interior conditions (Hamel 1992). Forest interior species tend to avoid disturbance during the breeding season. Research suggests that forest road density can adversely affect the distribution and reproductive success of forest interior birds (Ortega and Capen 1999, Rich et al. 1994), but that small (<25 feet wide) forest roads and trails had no negative effects on reproductive success of forest song birds (King and DeGraaf, 2002). Therefore, trail construction and maintenance activities and the use of the trails by the public are not expected to adversely affect the availability of habitat for these MIS.

D. Alternative 2 - Cumulative Effects

Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat. There would be no cumulative effects to habitat since no activities are proposed on the currently used access sites. The proposed action would not have any measureable cumulative impact on species given the project is limited in size and it does not overlap with any other activities taking place in the drainage.

3. Migratory Birds

A. Alternative 1 - Direct and Indirect Effects

Under this alternative, no additional designated trails or access points to the river would be created, reconstructed or maintained. Existing trails and access points would remain in their current locations.

Direct effects are effects on the species known or assumed to occur in the proposed project area. They occur at the same time and place as the project activity. Priority migratory birds would continue to use the thickets, forest edges, interior forests and stream-side habitats within the project area.

Indirect effects include the consequences of management activities that result in the modifications of habitat and ecological conditions that affect food, water, shelter and other life requirements for a species. Habitat conditions for priority migratory birds would not be altered under Alternative 1. The existing trails or access points within the project area would continue to provide a diversity of habitats for these species.

B. Alternative 1 - Cumulative Effects

Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat. There would be no cumulative effects to habitat since no activities are proposed at the currently used access sites. This alternative would not have any measureable cumulative impact on species given the current access sites do not overlap with any other activities taking place in the drainage.

C. Alternative 2 - Direct and Indirect Effects

It is possible if priority migratory bird species were nesting during the construction/reconstruction/maintenance of trails or access points, nests and nestlings could be lost, but unlikely due to the small area in Alternative 2 when compared to the large amount of forested habitat contained in the upper segment of the Chattooga River. If disturbed, avian species would likely re-nest multiple times throughout the nesting season, further reducing the threat of direct effects on reproductive success. Increased human presence on these trails or at these access points would not be expected to have a substantial direct effect to these species. These highly mobile species would simply relocate to undisturbed areas if they were displaced by proposed activities and recreation use in the areas.

The construction/reconstruction/maintenance of trails or access points to the Chattooga WSR would not result in a net decrease in habitat for priority migratory bird species. Alteration of priority migratory bird habitat resulting from Alternative 2 would be minor. Priority migratory birds would continue to use the thickets, forest edges, interior forest and stream-side habitats within the project area.

Habitats in the project area would not measurably change for the priority migratory birds given the small size of the affected area and the minimal work expected in trail construction, reconstruction and maintenance. The proposed actions would not substantially reduce the amount of habitat (estimated at less than two acres) available to these species. Likewise, human disturbance associated with increased public use would not likely decrease habitat suitability.

D. Alternative 2 - Cumulative Effects

According to Breeding Bird Survey data from 1966-2012, 9 of the 19 selected priority migratory bird species have experienced slight population declines in the Appalachian Mountain Region over the 46-year period surveyed which is in contrast to the trend survey-wide (Sauer 2014). Ten of the species have experienced population increases in the Appalachian Mountain Region over the same period which is in contrast to the trend survey-wide. Table 3.2.2B-7 lists the population trends for priority migratory bird species.

Table 3.2.2B-7. Population Trends for Priority Migratory Birds Associated with Alternatives 1 and 2 and Relevant Areas of the Chattooga River, Nantahala and Andrew Pickens Ranger Districts.

Species	Percent Annual Change	
	Appalachian Mountains Region, Trend 1966-2012	Trend Survey-wide 1966-2012
Acadian Flycatcher, <i>Empidonax vireescens</i>	-0.98	-0.41
Bald Eagle, <i>Haliaeetus luecocephalus</i>	12.32	5.27
Carolina Wren, <i>Thryothorus ludovicianus</i>	1.88	1.14
Cerulean Warbler, <i>Dendroica cerulea</i>	-3.02	-3.02
Chuck-will's-widow, <i>Caprimulgus carolinensis</i>	-3.92	-2.17
Hooded Warbler, <i>Wilsonia citrina</i>	2.37	1.54
Kentucky Warbler, <i>Oporornis formosus</i>	-1.81	-1.08
Louisiana Waterthrush, <i>Seiurus motacilla</i>	-0.29	0.36
Pine Warbler, <i>Dendroica pinus</i>	0.02	0.94
Red-bellied Woodpecker, <i>Melanerpes carolinus</i>	3.03	1.05
Red-headed Woodpecker, <i>Melanerpes erythrocephalus</i>	0.63	-2.59
Red-shouldered Hawk, <i>Buteo lineatus</i>	4.96	2.93
Swainson's Warbler, <i>Limnothlypis swainsonii</i>	-0.89	1.01
Whip-poor-will, <i>Caprimulgus vociferus</i>	-3.77	-2.85
Wood Thrush, <i>Hylocichla mustelina</i>	-1.63	-2.12
Worm-eating Warbler, <i>Helminthos vermivorus</i>	0.24	0.55
Yellow-throated Vireo, <i>Vireo flavifrons</i>	-0.24	1.04
Yellow-throated Warbler, <i>Dendroica dominica</i>	0.80	0.82

Even though much of the species are in decline, this can be attributed to a loss of wintering grounds. Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat. This alternative would not have any measureable cumulative impact on species given the current access sites do not overlap with any other activities taking place in the drainage.

3.2.2C Botany

The analysis of effects on vegetation from the alternatives is divided into two sections. The first section, Botany, addresses the effects of the alternatives on the botany components of the Biology

ORV (Southern Appalachian endemics, spray cliff and old growth communities). The second section, 3.5 Other Biological Resources: Vegetation, addresses three botanical categories:

1. PETS;
2. Ecological plant communities; and
3. Non-native invasive plant species (NNIS).

Some species that are addressed in section 3.2.2C are also addressed in the section 3.5 because they are species not only within the botany component of the Biology ORV, but also listed as PETS or are components of ecological plant communities or MIS.

Affected Environment

The botany component of the Biology ORV is composed of the Southern Appalachian endemics, spray cliff communities and old growth forests.

1. Southern Appalachian Endemics

Several plant species were identified as part of the Biology ORV when the Chattooga WSR was designated. All the listed species were Southern Appalachian endemics that were rare at the time of designation. It is uncertain when the other plant species associated with the Biology ORV were first identified. The 1971 Study Report did not mention all the botanical species or groups that were mentioned later in the 1996 Chattooga WSR ORV assessment. Table 3.2.2C-1 lists the ten plant species, their range and habitats and whether they are included in the analysis.

Of the ten Southern Appalachian endemics known to occur within the CONF, NNF and SNF, Fraser's loosestrife, mountain camellia and liverworts are known to occur or have habitat within or adjacent to the proposed trail work or at the boater access sites along the Chattooga WSR (see Table 3.2.2C-1).

Table 3.2.2C-1. Southern Appalachian Endemics that occur within the Chattooga WSR Watershed and Project-level Analysis.

Species	Forest	Range and Habitat	Analyzed?/Rationale
Biltmore Sedge <i>Carex biltmoreana</i>	NNF SNF	Narrow Southern Appalachian endemic ranging within a 100-kilometer area from Brevard, NC to northwestern SC and northeastern GA. Habitat is restricted to rock outcrops either in woodlands or high elevation granitic dome.	NO / 3
Blue Ridge Bindweed <i>Calystegia catesbeiana</i> var. <i>sericata</i>	CONF NNF SNF	Carolinas and GA to the FL panhandle. Habitats are all early seral from meadows, openings in oak-hickory forest, roadside edges to open rock outcrops.	NO / 2
Divided Leaf Ragwort <i>Packera millefolium</i>	CONF NNF	Southern Appalachian endemic (NC, SC, and GA). Occurs in high elevation granitic dome and montane cedar woodland.	NO / 3
Fraser's Loosestrife <i>Lysimachia fraseri</i>	CONF NNF SNF	Mountains of NC, SC and TN. Habitats include acidic cove forest, oak-hickory forest, wet rock outcrops, and river rocky shoals and islands.	YES / 1
Liverworts	N/A	Known to be diverse across the Chattooga WSR watershed but no	YES / 1

Species	Forest	Range and Habitat	Analyzed?/Rationale
		comprehensive survey has been conducted.	
Manhart's Sedge <i>Carex manhartii</i>	CNF NNF SNF	Northern GA and eastern TN to southwestern VA and southern WV. Habitats include mesic areas ranging from rich cove forest to oak-hickory forest.	NO / 2
Mountain Camellia <i>Stewartia ovata</i>	CONF NNF SNF	Virginia and Kentucky south to Mississippi and Florida. Habitat primarily riparian and alluvial forest, often densely covered with <i>Rhododendron maximum</i> .	YES / 1
Ocone Bells <i>Shortia galacifolia</i> var. <i>galacifolia</i>	CONF NNF SNF	Narrow range of five counties on the Blue Ridge Escarpment in NC, SC and GA. Habitat streamside typically under dense <i>Rhododendron</i> shade, humid escarpment gorges with heavy rainfall.	NO / 2
Pink Shell Azalea <i>Rhododendron vaseyi</i>	NNF	NC endemic present at the southern edge of its range in the Chattooga WSR watershed. Occurs in high elevations from closed canopy Northern hardwood forests to partially open areas including seeps, boulder fields, meadows, and Southern Appalachian bogs.	NO / 2
Rock Gnome Lichen <i>Gymnoderma lineare</i>	CONF NNF	NC mountains with peripheral populations in the mountains of TN, GA, and SC. Occurs on sloping to vertical rock faces with some seepage at higher elevations, generally above 5000 feet.	NO / 2

CONF, NNF and SNF. Reason for including or not including in analysis (Analyzed?/Rationale):

1 = Species is known to occur within project area;

2 = Species is not known to occur within project area and potential habitat does not exist;

3 = plants are inaccessible to recreationists

2. Spray Cliff Communities

Southern Appalachian Blue Ridge spray cliffs are vertical to gently sloping rock faces that are constantly wet from the spray of waterfalls (NatureServe, 2014, Schafale and Weakley 1990). Given these characteristics, they are inherently rare. The global rank is G2. These communities are found within southwestern North Carolina, northwestern South Carolina, northeastern Georgia and west of the escarpment in eastern Tennessee (NatureServe, 2014). It is best developed within the Blue Ridge Escarpment region across North Carolina, South Carolina and Georgia. This community is dominated by mosses, liverworts and algae with vascular herbs having substantially less cover. Most associated species require a constantly moist substrate and high relative humidity. Sheltered site characteristics result only in rare freezes. Rare bryophytes, disjunct from tropical or subtropical regions, are able to persist within this community given the relatively constant temperature and high humidity. Deeply sheltered grottoes are often associated with spray cliff communities. These dark environs provide suitable habitat for other unusual or rare plants.

3. Old Growth Communities

No old growth inventory was documented at the time of wild and scenic designation. The most comprehensive old growth assessment was completed across the Chattooga WSR watershed in 1995 (Carlson 1995). Old growth was defined as principally plant communities dominated by trees more than 150 years of age and with little to no signs of human disturbance. A total of 110 stands, consisting of 4,578 acres, were identified as existing old growth across all three national forests in the Chattooga WSR watershed. While old growth

conditions were identified across all forest types, the vast majority, around two-thirds, were in sub-mesic oak, which often was dominated by chestnut oak (*Quercus prinus*).

A. Alternative 1 - Direct and Indirect Effects

1. Southern Appalachian Endemics

Known populations of Fraser's loosestrife were found near Bull Pen Bridge, Norton Mill Creek and Burrells Ford Bridge. It is unlikely that they would be impacted by current recreation activities as users would likely continue to use existing user-created trails to access the river. Mountain camellia is unlikely to be impacted because the last known location was found in the vicinity of the Lick Log confluence with the Chattooga WSR. Current recreation access via user-created trails is concentrated south of the confluence of Lick Log Creek on an easily accessible river terrace. The three liverworts known at the Lick Log site (*Acrobolbus ciliatus*, *Radula sullivantii* and *Plagiochila caduciloba*) are unlikely to be impacted since they occur near the Lick Log waterfall near the confluence with the Chattooga WSR. Current and future recreation use occurs downstream given the topography. *Radula sullivantii*, *Plagiochila sharpie* and more common epiphytic liverworts such as *Frullania* species that occur near Bull Pen Bridge are unlikely to be impacted by current recreation use. Greens Creek and County Line were surveyed for Oconee bells on 02/20/2014. No Oconee bells were noted, only large populations of Galax. These two species can be easily confused but have distinctly different seasonal blooming periods.

2. Spray Cliff Communities

Alternative 1 would have no effect on spray cliff communities because the boater access site at Lick Log is downstream and outside the area of potential effects. They are considered to be inaccessible and unlikely to be impacted by the alternative.

3. Old Growth Communities

Old growth communities are not impacted because none are located within or adjacent to the proposed project area. This alternative would not affect old growth communities at the access sites since only minimal understory vegetation would be impacted during trail reconstruction and maintenance.

B. Alternative 2 - Direct and Indirect Effects

1. Southern Appalachian Endemics

It is unlikely that the known populations of Fraser's loosestrife found near Bull Pen Bridge, Norton Mill Creek and Burrells Ford Bridge would be directly impacted by trail construction/reconstruction and maintenance work or at the boater access sites. A designated maintained trail and established access site would help funnel people away from nearby plants. Mountain camellia is unlikely to be impacted because the last known location was found in the vicinity of the Lick Log confluence with the Chattooga WSR. The proposed

access trail and boater access site are south of the confluence of Lick Log Creek on an easily accessible river terrace about a 1,000 feet away. The three liverworts known at the Lick Log site (*Acrobolbus ciliatus*, *Radula sullivantii* and *Plagiochila caduciloba*) also are unlikely to be impacted since they occur in an inaccessible area near the Lick Log waterfall at the confluence with the Chattooga WSR. Current recreation use is more likely downstream given the topography. *Radula sullivantii* and *Plagiochila sharpii* may be impacted by the access along the Chattooga WSR near the new trail and the common epiphytic liverworts such as *Frullania* species that occur near Bull Pen Bridge would be impacted by the removal of trees during trail construction. Individual plants would be lost but would not lead to loss of plant populations in the area.

2. Spray Cliff Communities

Alternative 2 would have no effect on spray cliff communities because the boater access site at Lick Log is downstream and outside the area of potential effects. They are considered to be inaccessible and unlikely to be impacted by the alternative.

3. Old Growth Communities

Old growth communities are not impacted because none are located within or adjacent to the proposed project area. This alternative would not affect old growth communities at the access sites since only minimal understory vegetation would be impacted during trail reconstruction and maintenance.

C. Alternative 1 and 2 - Cumulative Effects

Because neither the on-going uses under the No Action Alternative, or the Proposed Action would result in any effect on these species outside of the site-specific project area, none of the projects identified in Table 3.1-1 would result in measurable cumulative effects.

3.2.3 Scenery

Affected Environment

Scenery remains largely unchanged since the time of designation. Timber harvest has not taken place in the Chattooga WSR corridor since designation. However, some changes to the vegetation have been occurring. Eastern hemlock trees are dying from hemlock wooly adelgid (HWA) an insect native to East Asia. Eventually all of the hemlocks will succumb to this pest and other vegetation will take its place.

Trails and boater put-in and take-out points at Green Creek, Norton Mill Creek and Lick Log Creek are largely within a forested environment with a variety of understory plants and shrubs. Burrells Ford Bridge and Bull Pen Bridge access sites and trails are in close proximity to the bridges. These areas generally have a more open forest canopy with a well-developed understory shrub component due to the increased sunlight provided by the adjacent roads and bridges. These two frontcountry locations provide views of the canyon and the variety of colors textures of vegetation associated with the varying seasons.

Currently, scenery impacts within the river corridor at the various proposed access points come from soil compaction, erosion and vegetation damage associated with dispersed camping and user-created trails, human waste and trash accumulation. Standing dead and dying hemlock are common throughout the area and also detract from the scenic quality of the access sites.

A. Alternative 1 - Direct and Indirect Effects

Scenery would remain unchanged and natural processes would continue. Views up and down the canyon at the more open bridge site locations would continue. User-created and designated trails along with dispersed campsites would continue to be evident at all the access site locations. This would continue to impact scenery. Standing dead hemlock trees will begin to fall and will become less evident under other vegetation that takes their place.

B. Alternative 1 - Cumulative Effects

Activities listed in Table 3.1-1 are not in close proximity to the currently used access sites. Continued use of these access sites would not have overlapping effects that would cause adverse cumulative effects to scenery.

C. Alternative 2 - Direct and Indirect Effects

Designation of trails and boater access sites along with decreased reliance on user-created trails to gain access to the river would result in minimal improvement to scenic quality at the sites. The designated trails would meet U.S. Forest Service design specifications and would be maintained to reduce resource impacts associated with erosion, compaction and sedimentation. Scenic quality would improve as techniques to discourage continue use of user-created trails (covering the trail with vegetation, logs, rocks and tree limbs) would result in vegetation recovery which would further hide user-created trails and improve scenic quality in the area. The long-term visual impacts would be positive on the scenery. Some forest visitors generally would be pleased with these changes or actions over time.

D. Alternative 2 - Cumulative Effects

Activities listed in Table 3.1-1 are not in close proximity to the currently used access sites. Constructing, reconstructing, maintaining and designating these access sites would not have overlapping effects that would cause adverse cumulative effects to scenery.

3.2.4 History

Affected Environment

Archaeologists for the three national forests evaluated the proposed project locations for the potential to impact heritage resources. No archaeological sites or other cultural resources were found during the examination of the current boater access sites.

A. Alternative 1 and 2 – Direct and Indirect Effects

There would be no impacts to archaeological sites or other cultural resources from these alternatives since no sites were found.

B. Alternative 1 and 2 – Cumulative Effects

Because the effects to historic sites are limited to the immediate area surrounding the five access sites, none of the activities listed in Table 3.1-1 would overlap with the effects of either alternatives to cause cumulative adverse effects to archaeological or other cultural resources.

3.2.5 *Geology*

Affected Environment

The rocks and geologic structure found within the watershed and at the proposed access sites indicate periods of mountain building, continental rifting, erosion, sedimentation and metamorphism over millions of years. The geological and geomorphological values are still unaltered today.

The area surrounding the proposed access sites is primarily moderate to steep forested slopes with riparian areas and floodplains. Land use has remained constant since designation and has emphasized protection of ORVs.

A. Alternative 1 – Direct, Indirect and Cumulative Effects

Alternative 1 would not impact the Geology ORV.

Past, present and foreseeable projects listed in Table 3.1-1 would have no cumulative effects on geological and geomorphological processes.

B. Alternative 2 – Direct, Indirect and Cumulative Effects

There would be no impacts from Alternative 2 since land uses are not expected to change, no consumptive uses are proposed and further infrastructure development is unlikely given the extensive federal ownership in the drainage and river corridor.

Past, present and foreseeable projects listed in Table 3.1-1 would have no cumulative impacts to geological and geomorphological processes.

3.3 Other River Values

3.3.1 *Free-flowing Condition*

The WSRA requires that the managing agency preserve the free-flowing condition and protect the water quality of designated rivers. This section analyzes the effects of all alternatives on the river's free flowing condition and water quality.

Section 16 (a) of the WSRA defines free-flowing as, “existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway.” As required by the WSRA, at the time of designation, the Chattooga River was flowing in its natural condition without impoundment from Cashiers Lake south to Tugaloo Lake.

Affected Environment

There are currently no impacts to the natural flows of the Chattooga WSR for its entire length. The free-flowing condition of the Chattooga WSR is unchanged.

A. All Alternatives – Direct, Indirect and Cumulative Effects

Section 7 of the WSRA is applied if a project requires construction within the bed or banks of the designated river. Examples of water resource projects include dams, fish habitat structures or boat ramps. No water resources projects are proposed in any alternative; therefore, none would affect the free-flowing condition of the Chattooga WSR. As a result, further Section 7 analysis is not required.

All alternatives and past, present and foreseeable projects (listed in Table 3.1-1) along with those on private lands are not water resources projects; therefore, the free-flowing conditions of the Chattooga WSR would be preserved.

3.3.2 Water Quality

Affected Environment

The Chattooga WSR watershed is located in the Southern Blue Ridge Ecological Province. Streams and rivers in the Southern Blue Ridge tend to be entrenched step/pool or pool/riffle systems with boulder and cobble substrate in riffles, and some sand in pools. The Chattooga WSR Corridor is situated mostly within the Chattooga River Gorge. Topography and landforms in the gorge include steep gorge walls, alluvial terraces, hillside ravines, low ridges and bouldery river/waterfalls. The geology features weathered parent material that is sensitive to disturbance and susceptible to erosion. When exposed to the elements, disturbed areas can become chronic sediment sources.

The Chattooga WSR and its tributaries have various classifications developed by each state water quality agency, in addition to the federally designated wild and scenic river status. In North Carolina, the Chattooga WSR from its source to the state line is classified as a Class B, trout water and outstanding resource water (ORW). In Georgia, the Chattooga WSR from the Georgia-North Carolina state line to the Tugaloo Reservoir is classified as wild and scenic. The Chattooga WSR and all its tributaries are also classified as primary trout waters in Georgia. In South Carolina, the Chattooga WSR from the North Carolina state line to its confluence with Opossum Creek is classified as ORWs. Beneficial uses for the Chattooga WSR include primary recreation (swimming on a frequent or organized basis), fishing, wildlife and aquatic life which include natural trout propagation and survival of stocked trout.

Table 3.3.2-1. State Water Classifications and Water Quality Standards.

State	Segment	Classification	Standard
Georgia	Chattooga WSR from Georgia – North Carolina state line to Tugaloo Reservoir	Wild and scenic	There shall be no alteration of natural water quality from any source.
North Carolina	Chattooga WSR from source to North Carolina – Georgia state line	ORWs	Water quality conditions shall clearly maintain and protect the outstanding resource values. The following undesignated tributaries to the Chattooga WSR. shall comply with the same ORW standards: see below (*)
South Carolina	Chattooga WSR from confluence with Opossum Creek to Tugaloo River	Freshwater	Turbidity not to exceed 50 Nephelometric Turbidity Unit (NTU) provided existing uses are maintained. See SC state standards for further information
South Carolina	That portion of the river from North Carolina line to its confluence with Opossum Creek	ORWs	Water quality conditions shall be maintained and protected to the extent of the South Carolina Department of Health and Environmental Control statutory authority. Numeric and narrative criteria for class ORW shall be those applicable to the classification of the water body immediately prior to reclassification to class ORW, including consideration of natural conditions.

*Note: The following NC tributaries shall comply with the same ORW standards: North and South Fowler creeks, Green and Norton Mill creeks, Cane Creek, Ammons Branch, Glade Creek and associated tributaries. Source: NC Division of Water Quality.

Sediment is the primary pollutant of concern in forested watersheds in the Southeast (Coats and Miller, 1981); this area is no exception. Excess fine sediment in stream systems fills interstitial space between larger rocks and reduces the amount of available fish and macroinvertebrate habitat. Many of the streams in the Chattooga WSR watershed have excess stored sediment from past land management activities as well as the high erosive potential of micaceous soils in the region (Van Lear et al., 1995).

Unpaved dirt and gravel roads with fine aggregate surfacing and roads with poor surface drainage are the primary contributors to stream sedimentation in the Chattooga WSR watershed (Van Lear et al., 1995). Another source of sediment comes from recreation sites and user-created recreation areas. Managing recreation impacts can reduce sedimentation and improve overall water quality. Recreation uses have increased since 1995; therefore, recreation impacts from existing users to water quality in the Chattooga WSR watershed are likely higher today. Managing impacts from these uses can improve water quality in the Chattooga WSR watershed.

Under the Clean Water Act, each state is required to publish a 305(b) monitoring report that summarizes water quality conditions for state waters. If a stream does not have high enough water quality to meet its designated beneficial uses, it is listed as not supporting or impaired based on the presence of certain pollutants. Streams that are not supporting their designated beneficial uses are added to the state's 303(d) list of impaired streams.

As of the 2012 303(d) listings for all three states, no streams are listed in the project area. All streams in the Chattooga WSR watershed in North Carolina are currently supporting designated beneficial uses, although in 1998 Norton Mill Creek was impaired by sediment. By the following reporting cycle in 2000, Norton Mill Creek was removed. In South Carolina and Georgia, all streams also are supporting designated beneficial uses in the project area. However, sediment continues to be an issue or concern to address with many types of activities and land use.

A. Alternative 1 – Direct and Indirect Effects

The existing trail network and unauthorized user-created trails would continue to be used and are likely to have an increase in use in the foreseeable future. User-created trails that currently experience erosion and subsequent sedimentation would likely continue to do so and would likely get progressively more unstable. For example, at the Burrells Ford Bridge site, three user-created trails access the river and have a high likelihood of contributing sediment to the Chattooga WSR.

B. Alternative 1 – Cumulative Effects

Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat.

Camping along the river has some potential to expose, disturb and compact soils, damage trees, contribute solid or other waste materials and start fires. Effects of designated facilities are generally mitigated by design, but use outside of designated trails and facilities are not. River access currently occurs off system trails by means of user-created trails. Such trails are frequently not to U.S. Forest Service design standards and are often an erosion and sediment problem because of steep slopes and inadequate drainage. These trails were mapped and conditions noted during the 2007 biophysical inventory. Frontcountry locations are more heavily impacted by users and are causing more resource damage since they provide quick access to the river. Erosion points and un-vegetated areas were also documented and though they may cause local sediment and erosion concerns they are minor when placed in context with the upper corridor segment.

Past actions within the watershed such as splash-dams, logging, skidding, cultivation, drainage, farming operations and buildings have had a substantial impact on sediment loading to the Chattooga WSR. Reasonably foreseeable activities that would have the greatest impact include alteration of forest to developed land and associated roads. By continuing existing management under this alternative, user-created trails would continue to be used to access the river. With the potential for increased recreational use, this user-created trail network could become more unstable and result in an increasing source of sediment to the river. At this time, the uses combined with the impacts from the projects identified in Table 3.1-1 do not exceed any required sedimentation threshold.

C. Alternative 2 – Direct and Indirect Effects

This alternative proposes to construct, designate and maintain approximately 1.63 miles of foot trail to access five boater put-in and take-out sites along the Chattooga WSR. Trails accessing the Green Creek and Norton Mill Creek sites would be constructed on existing road beds, requiring some reconstruction and minor realignment to produce a sustainable trail. Sections of these old road beds are currently used although they are not designated or maintained. The proposed work on these new trails would improve their conditions and reduce impacts to water resources.

At the Bull Pen Bridge and Lick Log sites, another 300 and 500 feet of trail, respectfully, would be constructed to the river. At the Burrells Ford Bridge site, three user-created trails access the river. Approximately 200 feet of one of these trails would be stabilized and become part of the maintained system trail network, while the remaining two trails would be decommissioned and stabilized, thereby eliminating their use and potential to produce sediment.

Impacts on forested riparian corridor function would be minimal since the area of proposed disturbance would occur over an area less than an acre spread out over the five sites. Potential impacts to streamside areas (including riparian areas) are expected only along short sections of trail where the trail accesses the river. These relatively flat areas along the river bank are likely places where boaters would congregate; therefore, they could see clearing and trampling of vegetation, loss of the leaf litter layer, soil compaction and subsequent erosion. These areas would not be particularly prone to erosion due to flat surfaces, boulder and bedrock outcrops and well-drained alluvial soils; therefore with appropriate maintenance and mitigation, sedimentation should be minimized. Riparian corridors would continue to provide bank stability and sediment filtering to protect water quality as well as a source of large woody debris and shading to maintain stream temperatures.

Some temporary or intermittent increases in fecal coliform may be associated with people using the riparian area as a restroom if proper “Leave No Trace” techniques are not implemented. These increases, if present, would be primarily on-site and no measured change would be noticed in the Chattooga WSR.

Use at existing parking areas is likely to increase. Pollutants from parking areas would, in most circumstances, be undetectable or minor, although excessive leaks of automobile fluids could occur which has the potential to cause pollution. Soils would, in most cases, absorb, contain and filter contaminants and aid in their breakdown through bacterial or other means. U.S. Forest Service personnel and law enforcement would check for the occurrence of larger fluid leaks and spills at the sites during regular visits.

D. Alternative 2 – Cumulative Effects

Past, present and reasonably foreseeable future projects are listed in Table 3.1-1. The activities listed are intended to: 1) maintain/restore and enhance ecosystems, reduce hazardous fuels, improve forest health, and improve wildlife habitat; 2) manage recreation uses and reduce recreation impacts on other resources; 3) improve resource management through land acquisitions; 4) reduce sediment, control erosion and improve aquatic resources; and, 5) maintain wildlife habitat.

Implementing Alternative 2 would have a positive cumulative effect where user-created trails would be stabilized by means of proper design or decommissioning. Newly constructed trails and river access sites would have the potential for increased erosion and sedimentation, but with the implementation of effective design measures, measurable adverse impacts to water quality would be avoided. These changes would be noticed at the particular access site but would not be detectable in the Chattooga WSR. The proposed project is not likely to create unacceptable cumulative impacts across the Chattooga WSR watershed since most impacts that are occurring in the drainage are coming from roads. Some of the projects specifically proposed or already being implemented in the drainage would continue to reduce erosion and sediment into the river.

3.4 Other Physical Resources

3.4.1 Soils

Affected Environment

The soils were analyzed to determine impacts associated with construction, reconstruction, designation and maintenance of trails and boater put-in locations near Green Creek, Norton Mill Creek, Bull Pen Bridge, Burrells Ford Bridge and a boater take-out near Lick Log Creek. The primary impacts on soils in the analysis area are expected to be associated with erosion, soil stability, compaction and displacement. Erosion and sediment originating from user-created trails, dispersed campsites and areas with chronic erosion are minor when compared to the chief contributors such as existing roads, bridges and parking lots (VanLear, 1995).

The length of the access trails and the soil types were analyzed using a Geographic Information System (GIS); the information is contained in the project record. Trail segment lengths were intersected with soil types to determine an overall length for each soil type. The analysis area consists of specific trail and boater put-in and take-outs locations. Several soil types within the areas differ because of parent material, geology, slope, slope position and aspect. Soils vary in soil structure, horizon depths, texture and permeability due to the different conditions in which they formed. These soil characteristics determine soil series and their relativity to soil productivity, erodibility and stability.

Soils within the analysis area are generally well drained, but have a wide range of slope and landform conditions from nearly level to steep slopes. The relatively flat to gently sloping areas are characteristic of the relatively narrow floodplains and terraces. Side slopes range from gentle to steep sloping areas, with mostly narrow and irregular ridgetops. Many of the ridgetop and upper side-slope soils are formed from residual materials weathered from gneiss, schist rock and granite. In the mountains, many of these soils tend to be more stable depending on the physical make up, width of ridge and slope. Soils on steep upper slopes may be less developed, shallow and more eroded due to gravity and/or washing and past activities. These soils are highly to severely erodible if exposed.

Soils that have a very high content of mica are considered to be micaceous soil types. They erode easily because of the lack of clay to bond the soil materials together and generally exist in unstable conditions. The Fannin and Cashiers soil series make up the highest percentage of the soils in the analysis area. Soils are considered micaceous when 40 % of the soil by weight contains mica flakes. High levels of mica tend to be present throughout the area and tend to be very prominent near the

South Carolina and North Carolina border. Approximately 36 percent or 7,700 feet of trails in the analysis area are located on micaceous soils.

The upland soils (approximately 34 percent or 7,400 feet) are located on gently sloping to very steep ridges and side slopes. Most of the soils have a sufficient amount of clay and are stable on gently sloping terrain and have minimal impact on soil erosion and disturbance. Trails are suitable on upland areas with gentle slopes, but direct connections of these activities to streams should be avoided or mitigated.

Colluvial soils are developed from gravity transported materials from higher slopes that have accumulated on lower side-slopes or foot-slopes of hills or mountains. They are a large mass of soil materials or rock fragments deposited from steep slopes onto relatively flat slopes. They are often located at the base of the slope in a cove near stream terraces and floodplains. These colluvial soils can be unstable and sensitive to ground disturbance. Approximately 17 percent or 3,600 feet of trails are prone to slippage and slumpage of the hillside. These soils are sensitive to ground disturbing activities due to their severely erosive and unstable nature. Many of these soils are especially susceptible to failure from:

1. Removal of vegetation;
2. Added concentrated water flow from other activities;
3. Altering the toe slope support;
4. Changes in hydrology; or
5. Severe storm events that follow some form of severe vegetative disturbance (fire, wind, etc.).

Alluvial floodplain soils are formed from sediments that were transported and deposited from flowing water-streams. Soils within the Chattooga WSR floodplain are generally stable when undisturbed, but are susceptible to compaction and/or erosion. These soils are sensitive to ground-disturbing activities due to their erosive nature on slopes or areas with concentrated flow. Alluvial soils make up approximately 13 percent or 2,800 feet of trails in the analysis area.

Soils were grouped and rated by similar characteristics for analysis purposes and are displayed in Table 3.4.1-1. These ratings are based on bare soil conditions subjected to rainfall. Any of the soils subjected to concentrated flow will normally have a high (H) rating. The ratings are listed as low (L), moderate (M) and high (H). Group 1 consists of soils that are micaceous which include the Cashiers, Chandler and Fannin series. Soils in Group 2 developed in colluvial material and those series include the Brevard, Cullasaja, Tuckasegee, Whiteside and Tusquitee. Group 3 is the alluvial soils and consists of the Toccoa soil series. Group 4 is the upland and hillside stable soils with local gentle inclusions and consists of Chestnut, Cleveland, Edneyville, Evard, Plott, Walhalla and Rock Outcrops.

These soils have various levels of sensitivity to impacts from trails. Table 3.4.1-1 lists each activity and rates its potential effects on the soil resource. Impacts to soil resources include erosion, soil stability, compaction and displacement and are associated with trails and boater put-ins and take-outs. This analysis assumes that designated trails would be located on grades of less than 12 percent, with dips and other structures that limit concentrated flows.

Table 3.4.1-1. Soil Ratings for Trails, Put-ins and Take-outs.

Groupings	Trails	Put-Ins	Take-Outs
1	H		
2	H		
3	M	M	M
4	L-M		

L=low effects, generally acceptable but some mitigation may be needed

M=medium effects, mitigation likely needed

H=high effects, difficult to mitigate, avoid if possible

Current conditions listed below are specific to the five proposed access sites and trail locations.

- *Non-designated or user-created trails* have more potential for erosion and sediment entering the stream because of their location and lack of design and maintenance. As a result, they are periodically eroded during storm and flood events and become more entrenched over time, as well as more capable of eroding and delivering sediment. Currently, the non-designated trails at Burrells Ford Bridge are heavily used and are eroding in some locations. The trails at Green Creek, Bull Pen Bridge and Lick Log are not used very much and have minimal erosion.(refer to section 3.2.1)
- *The parking area* of concern in this analysis area is at the Burrells Ford access site. The parking area is contributing sediment to the river via the existing non-designated trails.

Environmental effects on the soil resources are discussed in the 2012 EA which is incorporated by reference in this EA.

A. **Alternative 1 – Direct and Indirect Effects**

Under this alternative, access to boater put-in and take-out sites would rely on the use of both designated and non-designated trails. Non-designated trail use would continue; therefore, impacts to soils would be more extensive than alternative 2 and erosion would be allowed to continue over time. There is a greater likelihood of more non-designated trail development in these locations with likely increased recreational use over time.

Non-designated trails may occur in areas that are unsustainable and they lack water control features (dips, water-bars, reverse grades, lead-outs, etc.). Water has a tendency to move down the non-designated trail causing increased soil erosion without these water control features. Over time, compaction and erosion leads to entrenchment of the trail. These trails can also transport soil particles directly to water sources. Soil compaction and disturbance combined with site-erosion can lead to declining vegetation conditions. When this is combined with periodic flooding (especially in the floodplain), it can eventually lead to accelerated erosion in areas of heavy trail concentration. Under this alternative, boater put-in and take-out access would be dispersed along the river bank with the potential for the sites to be in unsustainable locations.

B. Alternative 2 – Direct and Indirect Effects

For the most part, this alternative would reduce the potential for impacts to soils and concentrate soil disturbance in designated locations. Overall, impacts to soils such as erosion and compaction would be reduced over time through mitigation of existing resource damage and application of forest plan standards and guidelines on the three national forests. However, at Norton Mill Creek, impacts to soils would be similar to the effects described in Alternative 1 within 300 feet of the confluence. Once the district establishes the put-in spot, long-term effects would be as follows:

Trails

Closing and rerouting poorly located non-designated trails would reduce chronic erosion, especially from those located directly on top of stream banks and in riparian areas. It would also reduce soil disturbance and compaction leading to improved soil productivity especially in riparian areas. Fewer impacts on stream banks and limited access to the water's edge would improve bank stability and reduce erosion. The roots from trees, shrubs and grasses would begin to recover and would help hold the bank together. There would also be less chance for accelerated erosion during flooding in riparian areas.

New or reconstructed trails would cause disturbance by removing the litter and organic layer and compacting soil within the new trail tread area. However, new trails would be placed in better locations and would cause minimal disturbance. Hand tools would be used to construct the new trails and impacts from construction are expected to be minimal. There would be bare soil in some areas for a few months that would be susceptible to erosion. However, after the first leaf fall occurs the potential would greatly decrease.

Hiking on trails can lead to soil displacement, erosion and compaction to the soil surface. This can cause localized erosion and compaction that exposes roots of vegetation which can lead to a loss in vegetation along the trail. Designated trails are planned and designed to minimize the impacts to the soil resource by locating them on adequate grades with water diversion structures, proper slopes and stable soils. These design features protect the trail tread by getting the water off the trail which reduces erosion. System trails would receive periodic maintenance to minimize adverse effects from soil compaction, soil displacement, soil erosion and other disturbance activities.

Generally, colluvial soils should be avoided in trail design as they have a tendency to slump (hillside wash downhill) during intense rainfall. Under this alternative, 3,500 feet of trails already exists in the analysis area. The Chattooga River Trail, that is part of this analysis (1,600 feet), occurs on these same soil types and has remained stable over time. Green Creek and Norton Mill trails that would be designated occur on old road beds, of which 1,700 feet are located on these soil types and are relatively stable. Trail reconstruction and maintenance work would increase the stability of these trails. Below the road at Bull Pen Bridge, approximately 68 feet of the 300 feet of new trail construction would occur on colluvial soils. Therefore, construction effects would be minimal for activities occurring on these soil types. Periodic monitoring of these trails may lead to relocation or upgrading design or maintenance on portions of them should recreational activities result in resource damage.

The Green Creek designated trail would be located on an old road bed. Currently, erosion is occurring due to the design and location of the road bed. By designating this as a trail, current erosion issues would be addressed by implementing standards and guidelines. One location along the road bed is actively eroding into a tributary. This area would be rehabilitated and a small footbridge would be installed that would span the tributary, which would eliminate the erosion source.

At Burrells Ford on the Georgia side, erosion and sediment would be reduced by decommissioning two non-designated trails and by designating one of the current non-designated trails. Currently, water from the parking lot at Burrells Ford is being directed onto the two non-designated trails. Long-term erosion would be eliminated by decommissioning these two trails and reshaping the parking lot to turn water away from those trails. River bank and upland stabilization work would consist of, but not be limited to, installation or maintenance of proper surface drainage to control storm-water runoff; use of both live material (vegetation) and structural features (rock and logs) to stabilize and armor eroded areas and minimize off-site sediment. Designation of the access trail and access for user entry to the Chattooga WSR would create adverse soil effects. The anticipated effects of these treatments would be to control active erosion and sediment occurring at the existing sites, restore and stabilize upland areas along the river and minimize the loss of normal function of the riparian area.

Overall, traveling by foot on properly designed and maintained system trails usually causes minimal soil disturbance regardless of how many people are traveling at one time. Inevitably the more use a trail receives, the more compacted the path would become; however, this effect is minimal in scope because the disturbance usually stays within the trail path.

Over time, implementation of forest standards and guidelines in Alternative 2 would reduce existing levels of soil erosion and compaction although these improvements may be slowed by continuing increases in overall recreation use.

Boater Put-ins and Take-out Access Sites

Impacts to soils at the proposed boater access sites would be minimal because these areas are mostly rock and gravel. However, the potential for soil resource impacts would increase in the area adjacent to the river on the flood plain where boaters would likely prepare equipment and/or rest before or after a float trip. Likewise, other recreation users (hikers, anglers, campers, etc.) may use these same sites to gain access to the river. These types of activities, depending on the amount of use, increase the potential for soil disturbance. Disturbance to the soil surface and compaction combined with erosion exposes roots of vegetation leaving them susceptible to damage. This leads to vegetation die-back or decline and the site expanding in size over-time. Disturbance to vegetation that exposes the soil to erosion is the most critical factor. Since these areas are located in the floodplain and slopes are relatively flat, erosion is most likely to take place during flood events. Under this alternative, use at the boater put-ins and take-outs would be more concentrated but the access points would be located in sustainable locations. Overall, the effects on soils are expected to be minimal due to the limited amount of boating use (refer to Table 3.2.1-2).

C. Cumulative Effects

Cumulative effects were assessed for the specific locations of the five boater access points and associated trails. Cumulative effects were also assessed at the fifth level watershed scale. Past, present and reasonably foreseeable projects as identified in Table 3.1-1 were considered in the analysis. Private land use in the area is primarily homesites with small amounts of agriculture and timber harvest.

At the watershed scale, the cumulative effects for both alternatives 1 and 2 would be practically the same. The Chattooga WSR watershed is approximately 180,000 in size with about 67 percent in federal ownership and managed by the U.S. Forest Service. The majority of the watershed is forested and forest management is taking place on all three national forests within the drainage, though activities are a very small portion of the total forest environment.

Recreational activities that affect the soil resource within the watershed (camping, boating, fishing and hiking) use roads, parking lots, trail heads, trails and campsites. Most of these activities occur on national forest though some recreation use is occurring on private lands. Maintenance activities reduce resource impacts associated with water runoff and subsequent erosion from roads, parking lot/trailheads and trails.

Alternative 1

Under Alternative 1, recreational use would likely continue to expand in these five areas which would cause an increase in overall adverse effects on soils in these areas. There would be no decrease in the current levels of erosion on non-designated trails and there would be a potential for more non-designated trails to develop over time with likely increased recreational use. Non-designated trails typically have no maintenance to reduce or prevent erosion. Erosion occurring from non-designated trails is a minor source of erosion in the watershed when considered in context with other soil erosion sources, particularly that which is coming from existing roads. There would be no measureable cumulative increase in erosion and sediment delivery to river with implementation of this alternative. Some of the activities listed in Table 3.1-1 would result in decreased erosion and sedimentation to the river.

Alternative 2

Alternative 2 would close and rehabilitate two user-created trails at Burrells Ford that are not sustainable, rehabilitate erosion sources resulting from non-designated trail use and designate trails that are sustainable with proper maintenance. The parking lot at Burrells Ford would receive additional gravel and the water from the parking area would be diverted away from the river where possible. This would reduce active bank erosion that is occurring. This alternative would reduce user-created trail use thus, reducing adverse effects on soils within the watershed as a whole. Overall, reductions in erosion are likely under the proposed alternative with designated trails that receive proper maintenance, but it still would be minor when placed in context with contributions made from existing roads and other chronic sources of erosion in the watershed. There would be no measureable cumulative decrease in erosion and sediment delivery to river with implementation of this alternative when considered together with the activities described in Table 3.1-1.

3.4.2 Wetlands, Floodplains and Riparian Corridors

Affected Environment

1. Wetlands

For the five proposed river access sites and their trails, the USDA Natural Resources Conservation Service (NRCS) Soil Survey identified soils as being non-hydric (or soils that are not sufficiently wet in the upper layer to develop anaerobic conditions during the growing season). Also, soils are largely well drained in these areas with the exception of soils at Green Creek and the Lick Log sites where they are considered excessively well drained and moderately well drained, respectively. The Lick Log site has the highest potential for wetlands in the Toccoa fine sandy loam soils, since this soil series is derived from river alluvium deposited during occasional flooding. However, wetlands were not found to occur in this area.

The natural lay of the land, such as steep hill slopes and well-drained forest soils, has resulted in few wetlands. There are likely small wetlands, like seeps and springs, in the general area that would not be impacted by proposed activities.

2. Floodplains

For the most part, floodplains tend to be narrow along the Chattooga WSR, in part due to channel entrenchment within the gorge, consistent with bedrock and boulder dominated Rosgen B and F type channels. However, local deposits of alluvial materials do occur where the narrow valley bottom widens to allow channel materials to deposit and form a floodplain feature. Floodplains are often stable features in the valley bottom because of abundant vegetation growth, but they can also be disturbed by large flood and debris flow events.

3. Riparian Corridors

The riparian areas along the Chattooga WSR are managed under the appropriate national forest's LRMP. Vegetative prescriptions in these areas benefit the establishment, maintenance and improvement of the stream ecosystem. The riparian prescription maximizes protection of streams bordering management areas to ensure good water quality and aquatic and riparian habitat throughout the forest.

Impacts associated with historic land use and activities are present in varying degrees of intensity across the landscape. The greatest impacts come from past ground-based logging that left a road network that often paralleled streams and occupied stream side areas. Most of these old legacy roads are currently stable due to vegetation growth and leaf cover over the past several decades, while some areas will continue to have long-term adverse impacts to the growth of vegetation because of soil loss and compaction. The Chattooga WSR was influenced by past splash-dams (structures used to float and transport logs in the rivers at the turn of the 20th century). This action likely had devastating impacts to the river's riparian corridor since it was likely a catastrophic event of logs and water flushing downstream with great force. This resulted in some loss of shade to the river, organic and large woody debris

inputs and bank instability. With the passage of nearly a century, the riparian corridor has reestablished and is largely healthy and functioning properly. Currently, the Chattooga River Trail runs along and near the river in places. Trail standards and regular maintenance minimize potential trail impacts.

Since farming practices stopped, much of the area has been regrowing within the riparian corridors. Trail and boater access locations are proposed within riparian areas where construction and maintenance BMPs would be implemented. The riparian ecosystems are typically an elevated terrace adjacent to the river. Implementation of the project would maintain sufficient overstory and understory cover to provide shade, maintain bank stability and protect water quality.

A. Alternative 1 – Direct and Indirect Effects

1. Wetlands

Alternative 1 would have no effect on wetlands because none are within the Chattooga WSR.

2. Floodplains

Localized seeps and springs would be unaltered and surface and sub-surfaces flows would continue. Floodplains would remain in their current state; stable and functioning properly.

3. Riparian Corridors

Riparian corridors would continue to provide habitat for riparian vegetation and terrestrial wildlife and aquatic species. In addition, riparian corridors would provide bank stability and sediment filtering to protect water quality as well as a source of large woody debris and shading to maintain stream temperatures.

B. Alternative 1 – Cumulative Effects

The upper segment of the Chattooga WSR is primarily forested, but has a minor component that includes a variety of land uses including highways, roads, urbanization associated with Cashiers and Highlands, NC, rural and home development, timber harvesting and thinning, golf courses, small pasture and rural farming, gardens, small dams, marketing and industry. Specific past, present and future activities that may have a cumulative effect are listed in Table 3.1-1. River access currently occurs on system and non system trails by means of road beds and user-created trails. Such trails are often not to Forest Service design standards and are often an erosion and sediment problem because of inadequate drainage.

Past actions within the watershed such as splash-dams, logging, skidding, cultivation, drainage, farming operations, and buildings have resulted in chronic erosion and loss of riparian areas in some areas on the Chattooga WSR. Reasonably foreseeable activities that could have the greatest impact include alteration of forest to developed land and associated roads, but would have little measurable impact to wetlands, floodplains and the riparian corridor. By continuing current management under this alternative, user-created trails would continue to be used to access the river. With a likely

increase in recreational use, this trail network could become more unstable and a source of sediment to the river.

C. Alternative 2 – Direct and Indirect Effects

Trails accessing the Green Creek and Norton Mill Creek sites would require some reconstruction and minor realignment to produce a sustainable trail. The work on these new trails would improve their conditions and reduce impacts to water resources. At the Bull Pen Bridge and Lick Log sites another 300 and 500 feet of trail, respectfully, would be constructed to the river. At the Burrell's Ford Bridge site there are three user-created trails that access the river. Approximately 200 feet of one of these trails would be stabilized and become part of the maintained system trail network, while the remaining two trails would be decommissioned and stabilized, thereby eliminating their use and potential to produce sediment.

1. Wetlands

Alternative 2 would have no effect on wetlands because none are within the Chattooga WSR.

2. Floodplains

Potential impacts to floodplains and riparian corridors are expected only along short sections of trail where the trail accesses the river. These relatively flat areas along the river bank are likely places where boaters would congregate. These areas could see clearing and trampling of vegetation, loss of the leaf litter layer, soil compaction and subsequent erosion. These areas would not be particularly prone to erosion due to flat surfaces and well drained soils; therefore with appropriate maintenance and mitigation, sedimentation should be minimized and floodplain function would be sustained.

3. Riparian Corridors

Impacts on riparian corridor function would be minimal since the area of proposed disturbance would occur over an area less than an acre spread out over the five sites. Riparian corridors would continue to provide bank stability and sediment filtering to protect water quality as well as a source of large woody debris and shading to maintain stream temperatures.

Some temporary or intermittent increases in fecal coliform may be associated with people using the riparian area as a restroom if proper "Leave no Trace" techniques are not implemented. These increases, if present would be primarily on-site and no measured change would be noticed in the Chattooga WSR.

Use at existing parking areas is likely to increase. Pollutants from parking areas would, in most circumstances, be undetectable or minor, although excessive leaks of automobile fluids could occur which has the potential to cause pollution. Soils would, in most cases, absorb, contain and filter contaminants and aid in their breakdown through bacterial or other means.

U.S. Forest Service personnel and law enforcement would check for the occurrence of larger fluid leaks and spills at the sites during regular visits.

D. Alternative 2 – Cumulative Effects

The upper segment of the Chattooga WSR is primarily forested, but has a minor component that includes a variety of land uses including highways, roads, urbanization associated with Cashiers and Highlands, NC, rural and home development, timber harvesting and thinning, golf courses, small pasture and rural farming, gardens, small dams, marketing and industry. Specific past, present and future activities that may have a cumulative effect are listed in Table 3.1-1. River access currently occurs off system trails by means of user-created trails. Such trails are often not to U.S. Forest Service design standards and are often an erosion and sediment problem because of inadequate drainage.

Past actions within the watershed such as splash-dams, logging, skidding, cultivation, land drainage, farming operations, and buildings have had a substantial impact on the Chattooga WSR. Reasonably foreseeable activities that would have the greatest impact include alteration of forest to developed land and associated roads. Alternative 2 would have a positive cumulative effect where user-created trails are stabilized by means of proper design or decommissioning. Newly constructed trails and river access sites would have the potential for increases in erosion and sedimentation, but would not impact wetlands or floodplains. Loss of riparian function would occur in the areas dedicated to trail and river access, but adverse cumulative effects on riparian function would not be measurable, especially with the implementation of best management practices to minimize impacts.

3.4.3 *Air*

Affected Environment

Air quality is monitored on the NNF, CONF and SNF to determine compliance with national ambient air quality standards set by the Environmental Protection Agency. This information is available in monitoring reports prepared by the three forests which are posted on each forest's website.

Prescribed burning and vehicular traffic are the primary sources of air pollution on the districts.

A. All Alternatives – Direct and Indirect Effects

Recreational use via vehicular access to the sites is expected to be about the same whether the boater access sites are designated or not. Recreation users would continue to use the existing parking facilities and existing trails. Dust and emissions from vehicles are expected to be low and would not have measurable effects on air quality.

B. All Alternatives – Cumulative Effects

The alternatives would not have any additional impacts to air quality when added to other past, present and foreseeable activities in the watershed as presented in Table 3.1-1. Private land uses are not expected to change much in this mostly forested landscape.

3.4.4 Climate Change

Affected Environment

The US Global Changes Research Program published a report (USGCRP, 2009) on climate change in different regions. Predictions for the Southeast include: air temperature increases; sea-level rise; changes in the timing, location and quantity of precipitation; and increased frequency of extreme weather events such as hurricanes, heat waves, droughts and floods. These predicted changes would affect renewable resources, aquatic and terrestrial ecosystems and agriculture, with implications for human health.

Human greenhouse gas (GHG) emissions, primarily carbon dioxide emissions (CO₂), are the main source of accelerated climate change on a global scale. The Template for Assessing Climate Change Impacts and Management Options (TACCIMO, USFS, 2011) was used to assess differences among three general circulation models at Oconee County (SC). TACCIMO was used to create a report that summarizes the resulting climate change impacts. Climate change, especially climate change variability (droughts and floods), may alter hydrologic characteristics of watersheds with implications for wildlife, forest productivity and human use. This climate change variability may result in long-term and seasonal changes in temperature that could influence ecosystem health and function. These impacts result from both long-term warming and from shorter term fluctuations in seasonal temperature that may interrupt or alter temperature dependent ecosystem processes.

The Chattooga WSR watershed is mostly forested and thus provides a source for uptake and storage of carbon. At the watershed scale, this uptake is substantial but at the larger global scale it is not measureable.

Generally speaking, a warmer and drier climate would reduce cold water (trout) fishing opportunities while warm weather activities may increase (TACCIMO, 2011). As reported by Morris and Walls (2009), climate change impacts could exacerbate current natural disturbances including drought, wildfire, insect infestations and extreme weather. “Changes in vegetation and other ecosystem components (e.g., freshwater availability and quality) caused by droughts, insects and disease outbreaks, fires, and storms may alter the aesthetics, sense of place, and other cultural services that the public values” (Rouault et al., 2006). Increased tree mortality sets the stage for increased wildfires which also affects outdoor recreation.

“Weather and climate are key influences on the tourism sector worldwide (Smith 1993, Boniface and Cooper 1994, Perry 2007), affecting the length and quality of tourism seasons and the environmental resources that draw tourists to destinations....” (TACCIMO, 2011).

Effects of Climate Change on Access Sites at Green Creek, Norton Mill Creek, Bull Pen Bridge, Burrells Ford Bridge and Lick Log Creek

A. All Alternatives – Direct and Indirect Effects

A drier, warmer climate is not expected to result in measureable changes in use on trails and at the five access sites. As outlined in the 2012 EA, use by boaters and anglers is flow dependent; however,

warmer and drier conditions would favor those that prefer lower flows and drier conditions (campers and anglers for instance). It is unlikely that overall recreation use would decrease but it is more likely the types of recreation use would change. For example, in a drier year with lower flows, conditions would likely favor uses that are not flow dependent. Biophysical impacts would most likely be unchanged at the five access sites as all types of users would continue to use designated and user-created trails.

B. All Alternatives – Cumulative Effects

Other past, present and foreseeable future projects (listed in Table 3.1-1) do not overlap with this project to cumulatively affect use patterns at the five sites or impact biophysical resources. Use of designated and user-created trails and campsites would continue as disclosed in the 2012 EA. No specific actions on private lands are identified during scoping that may contribute with the effects of the alternatives and contribute to cumulative effects.

Effects of the Access Sites at Green Creek, Norton Mill Creek, Bull Pen Bridge, Burrells Ford Bridge and Lick Log Creek on Climate Change

C. All Alternatives – Direct and Indirect Effects

Current management and proposed management under alternative 2 would have no measureable effects on climate change.

D. All Alternatives – Cumulative Effects

Other past, present and foreseeable future projects (listed in Table 3.1-1) do not overlap with this project to cumulatively affect use patterns at the five sites or impact biophysical resources. Use of designated and user-created trails and campsites would continue as disclosed in the 2012 EA. No specific actions on private lands are identified during scoping that may contribute with the effects of the alternatives and contribute to cumulative effects.

3.5 Other Biological Resources: Vegetation

Affected Environment

The vegetation assessment analyzes impacts to the following plant groupings: 1) ecological communities; 2) MIS; and 3) PETS and locally rare plant species. Potential effects on vegetation from Alternatives 1 and 2 are due to trampling of plants by recreation users, introduction of non-native invasive species (NNIS) and loss of plants during trail/boater access construction, reconstruction, maintenance and other connected actions.

1. Ecological Communities

Table 3.5-1 lists the dominant vegetation types at each of the boater access sites.

Table 3.5-1. Dominant Vegetation Type at the Five Chattooga WSR Boating Access Sites.

Access Site	Dominant Vegetation Type
Green Creek	Grading from rock chestnut oak- (northern red oak) - hickory/sourwood forest (basically a dry-mesic oak-hickory forest) to acidic cove forest and Eastern hemlock/rhododendron maximum with dead eastern hemlock along the Chattooga WSR
Norton Mill Creek	Fairly similar to Green Creek; also white pine-heath on the upper drier portions (a variant of dry-mesic oak-hickory)
Bull Pen Bridge	Acidic cove forest and alluvial bar
Burrells Ford Bridge	Acidic cove forest grading to Eastern hemlock/rhododendron maximum; all the hemlock are essentially dead now
Lick Log	Pine - oak (pitch pine-oak/heath forest) /heath forest; white pine-oak and mesic oak-hickory forest

2. Management Indicator Species (MIS)

MIS serve as the system to monitor forest plan implementation and effects on diversity and population viability of all native and desirable non-native plants and animals. At the project scale, MIS are used to focus the effects of proposed activities on habitat types. When these effects are evaluated within a forest-wide context, it is determined whether or not any trends for MIS would change. An assessment of habitat changes linked to MIS is documented in this section. The NNF is the only forest in the Chattooga WSR watershed to have MIS plants. Table 3.5-2 identifies the four plant MIS and the biological communities they represent.

Table 3.5-2. Biological Communities and Associated MIS for the Nantahala National Forest.

Biological Community	MIS Plant	Analyzed Further/Evaluation Criteria*
Fir dominated high elevation forests	Fraser fir	No further analysis/1
Northern hardwood forests	Ramps	No further analysis/1
Carolina hemlock bluff forests	Carolina hemlock	No further analysis/1
Rich cove forests	Ginseng	Further analysis/2

*1 Biological community and its represented species do not occur in the activity area; therefore, this biological community will not be affected. Given no effects on the community, the alternatives will not cause changes to forest-wide trends or changes in population trends of species associated with this community.

*2 Plant species seen along the access trail (Chattooga River Trail off Whiteside Cove Road); however, optimal suitable habitat for this species is not present within the activity area.

All plant MIS potentially affected by project activities were initially evaluated. Information about forest-wide MIS habitats and population trends is contained in the NNF MIS report, *“Management Indicator Species Habitat and Population Trends”* (USFS 2005b). One MIS plant, American ginseng (*Panax quinquefolius*), was located along the northernmost access trail (Chattooga River Trail) off Whiteside Cove Road. While this species was located within North Carolina along a single trail, the optimal habitat for this medicinal herb was not seen within the proposed activity area.

The estimated population trend for American ginseng is gradually decreasing across the Nantahala and Pisgah national forests primarily due to commercial harvest, both legal and illegal. The preferred habitat for American ginseng is rich cove forest with high soil nutrients

and calcium content. Ginseng population sizes are limited for this species within the Southern Appalachians, generally with fewer than 50 individuals (Kauffman, 2006). Populations are small because of annual harvest pressure and less suitable habitat with higher base content. Within the Chattooga WSR Corridor, habitat is very limited since most sites have acidic soils with limited nutrients and are marginal for *Panax quinquefolius*.

3. Federally Listed Plants

All federally threatened or endangered plant species that occur or could occur on the NNF, CONF or SNF were initially considered in this analysis. The list of federally listed species was compiled by reviewing: (1) USFWS county occurrence records for known and potential species, (2) North Carolina Natural Heritage Program EO records, (3) Georgia Nongame Conservation Section EO records, (4) SCDNR EO records and (5) U.S. Forest Service locally rare plant inventory records.

The initial list included 11 plants. Of these 11 species, one federally endangered plant species (*Gymnoderma lineare*) and two threatened plant species (*Isotria medeoloides* and *Trillium persistens*) are known to occur either on the NNF, CONF, or SNF within the Chattooga WSR Watershed.

GIS was used to examine the distribution of EOs on the three forests and general vicinity. These records and distribution maps were reviewed to determine areas of known populations of locally rare species within the proposed project area. Based on these information sources the potential affected rare species list for the upper Chattooga WSR project was filtered to derive those species with the greatest likelihood of occurrence. Species were eliminated based on range information such as only occurring at higher elevations in the NC or GA mountains, or in the foothills or Piedmont at lower elevations in SC or GA. For instance, *Trillium persistens* has a very restricted range in South Carolina and Georgia that is nowhere near the proposed activity areas. Other species were excluded from further analysis because proper habitat did not occur within the proposed activity area. These habitats included Southern Appalachian bogs, swamp forest bogs, high elevation rocky summits and basic mesic forest. Suitable habitat for *Isotria medeloides* is incompletely known and problematic to eliminate from project review. The species does not occur under dense *Rhododendron maximum* thickets which occurs over the vast majority of the proposed activity area. However open understory portions of the analysis areas could not be completely excluded. *Isotria medeloides* tends to occur in plant communities with three or more associated orchid species. Surveys for this species were intensified in areas with these conditions.

The final filtered list of federally listed species that occurs within the Chattooga WSR corridor that might be affected by the proposed project includes two plants, one nonvascular, *Gymnoderma lineare*, rock gnome lichen and one vascular, *Isotria medeloides*, small whorled pogonia. A field survey for these two species was completed at the project areas. *Gymnoderma lineare* species was located in 2007 within the main stem Chattooga WSR just north of the confluence with Fowler Creek. It does not occur within one aerial mile of all the proposed activity areas. It was searched for at all the proposed access sites. No new sites were located for this lichen. It would not be affected by Alternative 2. *Isotria medeloides* was

not located within any of the proposed sites with potential habitat. Thus, this species would not be affected by alternatives.

4. Sensitive Plants

All Region 8 sensitive species that occur or could occur on the NNF, CONF or the SNF were initially considered in this analysis. The list of species was compiled by reviewing: (1) North Carolina Natural Heritage Program EO records; (2) Georgia Nongame Conservation Section EO records; (3) SCDNR EO records; and (4) U.S. Forest Service rare species inventory records.

GIS was used to examine the distribution of individual species occurrences within the Chattooga WSR watershed across the three states. These records and distribution maps were reviewed to determine areas of known populations of rare species within the proposed project areas. Based on these information sources, the potential affected rare species list for the upper Chattooga WSR boating access project was assessed to derive those species with the greatest likelihood of occurrence.

Species were excluded from further analysis because proper habitat did not occur within the proposed activity area. These habitats included Southern Appalachian bogs, swamp forest bogs, dry oak forest and rich cove forest. Some species were eliminated from further analysis if they were known to occur within the project area but unlikely to be impacted by any project activities. For instance, *Schlotheimia lancifolia* and *Cheilolejeunea evansii* are known to occur on the bark of hardwood trees and have been documented near the Chattooga WSR in NC and/or SC depending on the individual species (Davison et al., 1996). However the two bryophytes typically occur on the bark of older deciduous trees and are unlikely to be impacted by the proposed trail projects. Species such as *Hymeophyllum tayloriae*, *Pellia appalachiana*, *Platyhypnidium pringlei* and *Aneura maxima* are only known to occur in very wet grottoes or near spray cliffs (waterfalls). These four species were not located during the 2007 survey or prior surveys within easily accessible microsites that would tend to invite exploration by recreationists. Other rare plant species such as *Packera millefolium*, *Carex biltmoreana* and *Solidago simulans* are known to occur in nearby rock outcrops but they are either undetectable from the river or at a height on almost vertical rock that is essentially inaccessible to anyone except rock climbers. *Rhododendron vaseyi* is only known from North Carolina. While it occurs within the uppermost headwaters of the Chattooga River watershed, it has typically been located within Southern Appalachian bogs, wet meadows or northern hardwood forests, all which are not present within the proposed project area. Even though the very low likelihood of occurrence within the proposed project area, the species was searched for within the NC project area and not located.

Finally a few of the more readily discernible species were eliminated since they were not located within or near the project area during the more recent 2007 Chattooga WSR field review. For instance *Riccardia jugata*, a thalloid liverwort, has not been located within any of the southern escarpment gorges since 1961 despite this survey as well as other surveys. The final filtered list of 17 potentially affected species occurring within the Chattooga WSR corridor that could be affected by the proposed trail projects are included in Table 3.5-3.

These species with the greatest likelihood of occurrence within the project areas were searched for during the field review.

Table 3.5-3. Regionally Sensitive Plant Species in the Chattooga WSR Corridor that could be Affected by any Alternative.

Species	Species Ranking		Forest List (Occurrences)	Range and Habitat
	Global	State		
<i>**Acrobolbus ciliatus</i>	G3?	S1 (NC) SNR (GA) SNR (SC)	NNF (4) SNF (1)	Southern Appalachians within the Carolinas, TN and GA. Humid or moist rocks in steep gorges or shaded outcrops.
<i>**Cephalalozia macrostachya</i> ssp. <i>australis</i>	G4T1	S1 (NC)	NNF (1)	NC within Linville Gorge and Chattooga Gorge. Crevices of streamside rocks.
<i>Peltigera hydrothyria</i>	G4	S3 (NC)	NNF (70+)	Western NC, VA, PA, southeastern Canada and Pacific Northwest. Aquatic lichen generally found attached to rocks partially submerged on the edge of swift-flowing, steep-gradient streams.
<i>**Lejeunea blomquistii</i>	G1G2	S1 (NC) S1 (GA) S1 (SC)	NNF (2) CONF (1)	KY, TN, Carolinas and GA. Typically occur on horizontal rock, dry, and in partial sun.
<i>**Lophocolea appalachiana</i>	G1G2Q	S1 (NC) S1 (SC)	NNF (7) CONF (1)	KY, TN and Carolinas. Typically occurs on shaded wet rocks or seeps.
<i>Sweet Pinesap</i> <i>Monotropis odorata</i>	G3	S3 (NC) S1 (GA) S2 (SC)	NNF (6) CONF (4) SNF (10)	Broad range from DE and WV south to AL, GA, and FL; generally rare throughout; habitat generally acid humus under pines or ericaceous shrubs although also rich cove forest
<i>**Fraser's loosestrife</i> <i>Lysimachia fraseri</i>	G3	S3 (NC) S1 (GA) S3 (SC)	NNF (36) CONF (13) SNF (50)	Mountains of NC, SC, TN and GA, disjunct to AL, KY and IL. Found in a variety of habitats including acidic cove forest, mesic oak-hickory forest, montane oak-hickory forest, dry oak-hickory forest, wet rock outcrops, and river rocky shoals and islands.
<i>**Marsupella emarginata</i> var. <i>latiloba</i>	G5T1T2	S1 (NC)	NNF (2)	NC and VT. Typically occurs within damp shaded rock outcrops.
<i>**Plagiochila austinii</i>	G3	S1S2 (NC) SNR (GA)	NNF (5)	GA, NC and TN north to VT and Nova Scotia. Typically in damp shaded rock outcrops; occasionally associated with spray cliffs.
<i>**Plagiochila caduciloba</i>	G2	S2 (NC) S1? (GA) S1 (SC)	NNF (13) CONF (1) SNF (1)	KY, TN, NC, GA and SC. Shaded damp rocks on vertical rock walls or undersides of ledges; occasionally associated with spray cliffs.
<i>**Plagiochila sharpii</i>	G2G4	S2 (NC) S1? (GA) S1 (SC)	NNF (8) CONF (2) SNF (1)	Southern Appalachian mountains of TN, NC, GA and SC. Wet boulders and outcrops in river gorges.
<i>**Plagiochila sullivantii</i> var. <i>sullivantii</i>	G2T2	S2 (NC) SH (GA) S? (SC)	NNF (4) CONF (1)	WV south to the Carolinas. Deeply shaded overhung rock walls and ledges within gorges; can be associated with spray cliffs and shaded rock outcrops.
Carolina star moss <i>Plagiomnium carolinianum</i>	G3	S2 (NC) S2? (GA) S1 (SC)	NNF (3) CONF (4) SNF (1)	TN, NC, GA, SC. Wet, dripping rocks with a thin soil layer or wet humus in seepage areas.

Species	Species Ranking		Forest List (Occurrences)	Range and Habitat
	Global	State		
<i>**Radula sullivantii</i>	G3	S3(NC) SNR (GA) SNR (SC)	NNF (18) CONF (5) SNF (6)	Northern SC, northeastern GA, western NC, and eastern TN. Locally abundant within escarpment gorges on shaded rock outcrops near streams and rivers, most frequently collected rare liverwort in 2007 survey,
<i>Pink Shell Azalea</i> <i>Rhododendron</i> <i>Rhododendron vaseyi</i>	G3	S3 (NC)	NNF (15)	NC endemic present at the southern edge of its range in the Chattooga River watershed. Occurs in high elevations from closed canopy Northern Hardwood forests to partially open areas including seeps, boulder fields, meadows, and Southern Appalachian bogs.
<i>Southern Nodding</i> <i>Trillium</i> <i>Trillium rugellii</i>	G3	S3 (NC) S3 (GA) S2 (SC)	NNF (18) SNF (1)	Mesic forests of the mountains and Piedmont in the Carolinas, GA, TN, and AL; locally abundant in Ga and NC forests, less abundant in Chattooga River watershed
<i>Sweet White Trillium</i> <i>Trillium simile</i>	G3	S2 (NC) S2 (GA) S1S2 (SC)	NNF (3) SNF (7)	Southern App endemic from NC, TN, GA, and SC; typically in rich cove or mesic hardwood forest with mafic or calcareous rock influence

5. Locally Rare Plants

The three national forests, as well as the geopolitical boundaries, complicate the analysis for plants. There are 176 forest concern plant species with suitable habitat or occurrences on the NNF. Eighty-six (identified as locally rare) are possible on the CONF. The SNF does not track any forest concern/locally rare species. For simplicity and clarity in this document, both the NNF and the CONF species will be referred to as locally rare. Only 19 of the 242 total species are tracked both within the NNF and the CONF. Fifty-one of the species listed by the CONF are known to occur in western North Carolina on the NNF but are not considered rare enough to formally track. These 51 species are generally at the southern edge of their range. Sixteen of these 48 species are also tracked as rare by SCDNR but not tracked as locally rare by the SNF. Five of these plants, *Carex manhartii*, *Carex scabrata*, *Juncus gymnocarpus*, *Lygodium palmatum* and *Stewartia ovata*, are known to occur near the Chattooga WSR on the SNF. There is a single site for *Carex scabrata* located within the Chattooga WSR corridor but not near the proposed activity areas. The species is located in shaded seeps in areas not heavily impacted by recreational users and would not be impacted by the proposed project. Other South Carolina rare plant species (*Boykinia aconitifolia*, *Krigia montana*, *Circaea lutetiana ssp. canadensis*, *Aristolochia macrophylla* and *Stachys tenuifolia var. latidens*) have either been documented on boulders in the Chattooga WSR or on the adjacent floodplain in the SNF. The former two species appear to be locally common within the upper segment of the Chattooga WSR and were observed frequently during the 2007 field survey in NC, Ga and SC. None of these five species will be analyzed for the boater access project since they are not formally tracked by the SNF, the CONF or the NNF. An analysis by elimination of suitable habitat within the project areas was used to filter the potentially affected locally rare plant list (Table 3.5-4).

Table 3.5-4. Nantahala and Chattahoochee NFs Locally Rare Plant Species with Potential Habitat within the Proposed Project Areas that could be affected by Alternative 2.

Species	Species Ranking		Forest List (Occurrences)	Range and Habitat
	Global	State		
Sword moss <i>Bryoxiphium norvegicum</i>	G5?	S1 (NC)	NNF (3)	Widely distributed across the U.S but very rare across eastern states. Shaded moist rocks on ledges or sometimes overhanging water.
**Blue Ridge bindweed <i>Calystegia catesbeiana</i> <i>ssp. Sericata</i>	G3	S3 (NC) SNR(GA) SNR (SC)	CONF (18)	Carolinas and GA to the FL panhandle. Historically distributed within xeric openings in upland forests or associated with outcrops. Typically restricted to roadside edge, power lines or trails.
**Manhart's sedge <i>Carex manhartii</i>	G3G4	S3 (NC) S2 (GA) S2 (SC)	CONF (28)	Northern GA and eastern TN to southwestern VA and southern WV. Habitat ranges from moist montane oak-hickory forest to rich cove forest and open acidic cove forest.
<i>Chiloscyphus muricatus</i>	G5	S1 (NC)	NNF (2)	NC and TN. Rock outcrops within humid gorges
Lime Homalia <i>Homalia trichomanoides</i>	G5	S1 (NC)	NNF (3)	WA, WI, MI and VT south to TN and NC. Within outcrops in humid gorges or spray cliffs.
Seep rush <i>Juncus gymnocarpus</i>	G4	S3 (NC) S2S3 (GA)	CONF (18)	Eastern PA south to eastern TN, northeastern GA and northern SC. Abundant across escarpment gorges.
Kidneyleaf twayblade <i>Listera smallii</i>	G4	S4 (NC) S2 (GA) S1 (SC)	CONF (8)	PA south to TN, GA and SC. Occurs in mesic hemlock forest typically underneath rhododendron thickets.
Climbing fern <i>Lygodium palmatum</i>	G4	S3 (NC) S2 (GA) S3 (SC)	CONF (6)	MA west to MI south to KY, MS and FL. Moist thickets, islands and bogs.
<i>Pohlia lescuriana</i>	G4?	S1? (NC)	NNF (2)	Nova Scotia to WI south to NJ, TN and NC. Wet soil in open areas & on the banks of streams or ditches.
**Mountain camellia <i>Stewartia ovata</i>	G4	S2 (NC) S3 (GA) S2 (SC)	NNF (11) CONF (2)	VA and KY south to MS and FL. Acidic bluffs typically in rhododendron thickets.
Appalachian bristle fern <i>Trichomanes boschianum</i>	G4	S1 (NC) S1 (GA) S1 (SC)	NNF (3) CONF (3) SNF (2)	OH and WV south to the Carolinas. Vertical or overhanging rock outcrops, usually in deeply shaded grottos.
Dwarf filmy fern <i>Trichomanes petersii</i>	G4G5	S2 (NC) S2 (GA) S2 (SC)	NNF (7) CONF (2) SNF (3)	Western NC and eastern TN south to FL and LA and north to AR and IL. Vertical faces of acidic rocks; typically on drier rocks within humid gorges.

Surveys

A field survey was completed by Gary Kauffman, National Forests in NC botanist, in September 2012 for the Green Creek, Norton Mill Creek and Bull Pen Bridge access sites. The access site at Burrells Ford was evaluated by Mike Brod, Chattahoochee zone wildlife biologist, in November 2012 and confirmed that the area did not provide suitable habitat for PETS species. Although the adjacent riparian zone could serve as suitable habitat for some PETS species, this habitat would not be affected by the proposed project activities. The Lick Log site was surveyed by Chris Holcomb, Andrew Pickens biological technician, during late summer/early fall 2012 and again in April 2014.

Other botanical field surveys have been conducted around the Chattooga River Trail and in these areas during the last 20 years. Gary Kauffman surveyed portions of the area during the late 1990s and early 2000s. Portions of the surrounding landscape have had previous bryological surveys by Dr. Paul Davison, University of North Alabama professor, while preparing for his bryology course at Highlands Biological Station. A team of U.S. Forest Service botanists/ecologists (Robin Mackie, SNF; David Danley, Pisgah NF; Dr. Wilson Rankin, NNF; and Gary Kauffman, National Forests in NC) and a botanical consultant, Dr. L. L. Gaddy, conducted surveys from mid- August to early October 2007. Much of the botanical field work concentrated on bryophytes in the river channel or the stream banks.

Botanical field surveys in 2007, 2012 and in 2014 indicate that NNIS plants are scattered across the corridor with greater concentrations within disturbed areas and in sandbars adjacent to the river. The potential exists for damage to locally rare species in sensitive settings along riparian zones. Interim boating access has been occurring at all the proposed access sites but at lower numbers than estimated in the 2012 EA. Effects analyzed compare interim use at the five access sites (Alternative 1) to the proposed action (Alternative 2).

American ginseng was located within the uppermost reach of the corridor along an access trail. However, optimal suitable habitat for this species was determined not to be present within the Chattooga WSR corridor.

The primary effects on vegetation from alternatives 1 and 2 would be trampling of plants and increased introduction of NNIS by likely recreational use increases on designated trails and at boater access sites. This effects analysis is based on recreation use of existing and proposed trails and boater put-in/take-out spots as described in Alternative 2.

1. Ecological Communities

A. Alternative 1 - Direct and Indirect Effects

Alternative 1 is the current management approach and is considered the baseline or current condition for comparison among the two alternatives.

The primary impacts would be on riparian communities including Eastern hemlock-hardwoods, acidic cove, alluvial forest, alluvial island and rocky shoals. Alternative 1 would not result in the loss of any plant community. The almost complete death of Eastern hemlock within the corridor from hemlock wooly adelgid will result in more species composition and structural changes than in any of

the other plant communities. Eventually this community may more closely resemble acidic cove forest although the overstory canopy may be less dense depending on the ability of trees regenerating under the dense *Rhododendron maximum* shrub layer.

Another potential impact on ecological communities would be the continued introduction of additional NNIS from recreation users. NNIS were observed throughout the riparian areas of the river corridor, including *Microstegium vimineum*, *Paulownia tomentosa*, *Pueraria lobata*, *Ailanthus altissima*, *Rosa multiflora*, *Ligustrum sinense*, *Dioscorea polystachya*, *Miscanthus sinensis*, *Lespedeza bicolor*, *L. cuneata*, *Lonicera japonica*, *Albizia julbrissin* and *Elaeagnus umbellulata*. Generally, most outbreaks were small and did not dominate any one plant community. Review by personnel from all three forests in the late 2000's indicates *Miscanthus sinensis* may be on the increase. While little baseline data is available, anecdotal information suggests greater spread of NNIS within sandbars across the corridor. With the exception of *Miscanthus sinensis*, non-native invasive plant species tend to be more frequent within riparian areas and increase with greater flood frequency (Brown and Peet, 2003).

B. Alternative 1 - Cumulative Effects

Ground-disturbing activities, including timber harvest, road reconstruction and prescribed burning, have the potential to introduce non-native invasive plant species (see Table 3.1-1).

The continued introductions of non-native invasive plant species from recreation use on user-created trails and at the current boater put-in and take-out spots would be additive to non-native introductions that occur as a result of other management activities as well as possible introductions in the river from private property upstream. Projects to remove NNIS would subtract from these additions. One specific project focusing on control of *Miscanthus sinensis* (an NNIS) may result in decreases in this species across the Chattooga WSR watershed. However, it is likely that a net increase in introductions of other NNIS would occur over time with this alternative.

Past, present and reasonably foreseeable impacts to riparian communities including Eastern hemlock-hardwoods, acidic cove, alluvial forest, alluvial island and rocky shoals are unlikely. Most projects are located outside riparian communities.

C. Alternative 2 - Direct and Indirect Effects

The primary impacts would be on riparian communities including Eastern hemlock-hardwoods, acidic cove, alluvial forest, alluvial island and rocky shoals.

This alternative may result in fewer outbreaks of NNIS than Alternative 1 since trails and boater access sites would be designated. With designated trails and put-in and take out sites there would likely be less use of user-created trails. In addition, dying hemlock will eventually fall and begin to block some of these trails making cross country travel more cumbersome. Over time, these user-created trails would revegetate naturally and the dying hemlock will also help block use of some of these trails. Alternative 2 would result in minor new outbreaks of NNIS and would not substantially impact existing ecological communities.

This alternative would not result in loss of any ecological plant community. The almost complete decline of hemlock from hemlock wooly adelgid within hemlock-hardwood forest is already occurring and will not be increased or decreased by this alternative.

D. Alternative 2 - Cumulative Effects

Ground-disturbing activities, including timber harvest, road construction, and prescribed burning, have the potential to introduce NNIS (see Table 3.1-1). Past, present and reasonably foreseeable impacts to riparian communities including hemlock/ hardwoods, acidic cove, alluvial forest, alluvial island and rocky shoals are unlikely. Most existing projects and private land use activities are located outside of riparian communities.

The additional introductions of NNIS from designating, constructing, reconstruction and maintain recreation use of trails and boater put-in and take-out sites would be additive to non-native introductions that occur as a result of other management activities as well as possible introductions in the river from private property upstream. Projects to remove NNIS would subtract from these additions. One specific project focusing on *Miscanthus sinensis* (an NNIS) may result in decreases in this species across the Chattooga WSR watershed. However, it is likely that a net increase in introductions of other NNIS would occur over time with this alternative.

Past, present and reasonably foreseeable impacts to riparian communities including Eastern hemlock-hardwoods, acidic cove, alluvial forest, alluvial island and rocky shoals are unlikely. Most projects are located outside riparian communities.

2. MIS

A. Alternative 1 - Direct and Indirect Effects

This alternative would not change the amount of suitable habitat for *Panax quinquefolius* within the Chattooga WSR Corridor. Habitat for this species is not high quality for the corridor. American ginseng is more abundant in soils with higher nutrients and calcium content.

A few individuals of American ginseng were located within an upland site in the Chattooga Cliffs Reach. There are no impacts to this species from current recreation. The greatest likelihood for collection of this species is in the fall since it is more visible when it bears red fruits. In the winter the plant would not be visible aboveground.

American ginseng is most impacted by commercial harvest of the roots. During the last several years there have been increases in harvest intensity as a consequence of either price increases or unemployment. Given that recreational use within the area is likely to increase, there is a greater likelihood of direct effects by collection of the roots, either during the legal harvest season or prior to the season.

The greatest likelihood of impacts to the small populations in the Chattooga Cliffs Reach is not anticipated from unpermitted opportunistic harvesters since this area is not a desirable area to collect

ginseng. This alternative does not propose any new recreational use in the area; therefore any impacts to this species should be minimal.

B. Alternative 2 – Direct and Indirect Effects

This alternative would not result in any changes in the amount of suitable habitat for the species. The greatest likelihood for collection of this species is in the fall since it is more visible when it bears red fruits. Loss of the species from regular recreational users is less likely in spring and summer. Therefore, designation and construction of a trail at Green Creek and the boater access site would not directly impact the known American Ginseng population. Most people would stay on the designated trail system; this would reduce the potential to cause impacts to these plants. Over time, the continued use of user-created trails in the area would decrease as vegetation regrows and hemlock begins to fall, blocking access to some of these trails and reduce the potential for impacts to American Ginseng.

C. Alternative 2 and 3 – Cumulative Effects

None of the past, present and reasonably foreseeable actions should impact the existing forest-wide downward trend for American ginseng populations (see Table 3.1-1 for a list of past, present and reasonably foreseeable management activities). These impacts are primarily associated with commercial harvest.

3. PETS and Locally Rare Plants

All recreation users (hikers, anglers, backpackers, boaters) potentially could impact many of the plant species listed in Table 3.5-5 by trampling while walking on trails, rock slabs in and adjacent to the water, at grottos, spray cliffs and sand bars and scraping of rocks. Trampling of vegetation could occur within existing campsites and from boats traversing the river and portaging of boats around log jams are likely.

A. Alternative 1 - Direct and Indirect Effects

Alternative 1 would have some direct and indirect effects on PETS and forest locally rare species associated with current recreational uses. Thirteen Regional Forester's sensitive plant species, *Acrobolbus ciliatus*, *Cephalalozia macrostachya ssp. australis*, *Marsupella emarginata var. latiloba*, *Peltigera hydrothyria*, *Lejeunea blomquistii*, *Lophocolea appalachiana*, *Lysimachia fraseri*, *Plagiochila austinii*, *Plagiochila caduciloba*, *Plagiochila sharpii*, *Plagiochila sullivantii var. sullivantii*, *Plagiomnium carolinianum*, and *Radula sullivantii* have been recently or previously located within the existing upper segment of the Chattooga WSR. There are 12 locally rare species that could be affected by existing recreational use: *Bryoxiphium norvegicum*, *Calystegia catesbiana var. sericata*, *Carex manhartii*, *Chiloscyphus muricatus*, *Homalia trichomanoides*, *Juncus gymnocarpus*, *Listera smallii*, *Lygodium palmatum*, *Pohlia lescuriana*, *Stewartia ovata*, *Trichomanes boschianum* and *Trichomanes petersii*.

Table 3.5-5. Direct or Indirect Effects on PETS and Forest Locally Rare Plants by Alternative Y=Yes; N=No).

Species	Forest Status	Alt. 1	Alt. 2	Potential Effects to Individuals
<i>Gymnoderma lineare</i>	endangered	N	N	Not likely to adversely affect
<i>Acrobolbus ciliatus</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Cephalalozia macrostachya</i> ssp. <i>australis</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Peltigera hydrothyria</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Lejeunea blomquistii</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Lophocolea appalachiana</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Lysimachia fraseri</i>	sensitive	Y	Y	Impacted on islands
<i>Marsupella emarginata</i> var. <i>latiloba</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Plagiochila austinii</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Plagiochila caduciloba</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Plagiochila sharpii</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Plagiochila sullivanii</i> var. <i>sullivanii</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Plagiomnium carolinianum</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Radula sullivanii</i>	sensitive	Y	Y	Impacts on rocks in river and river bank
<i>Bryoxiphium norvegicum</i>	locally rare	Y	Y	Impacts on rocks in river and river bank
<i>Calystegia catesbeiana</i> ssp. <i>sericata</i>	locally rare	Y	Y	Impacted by trail closures
<i>Carex manhartii</i>	locally rare	Y	Y	Impacted by portage trails, campsites
<i>Chiloscyphus muricatus</i>	locally rare	Y	Y	Impacts on rocks in river and river bank
<i>Homalia trichomanoides</i>	locally rare	Y	Y	Impacts on rocks in river and river bank
<i>Juncus gymnocarpus</i>	locally rare	Y	Y	Impacted on islands
<i>Listera smallii</i>	locally rare	Y	Y	Impacted by portage trails
<i>Lygodium palmatum</i>	locally rare	Y	Y	Impacted by campsites, portage trails
<i>Pohlia lescuriana</i>	locally rare	Y	Y	Impacts on rocks in river and river bank
<i>Stewartia ovata</i>	locally rare	Y	Y	Impacted by campsites, portage trails
<i>Trichomanes boschianum</i>	locally rare	Y	Y	Impacts on rocks in river and river bank
<i>Trichomanes petersii</i>	locally rare	Y	Y	Impacts on rocks in river and river bank

Direct effects would include trampling and/or manipulation of the shrub and herb layers while accessing current user-created trails and boat launching sites with interim access. Anglers, hikers and other users could also directly affect locally rare bryophytes and lichens by scraping occupied rocks and trampling streamside vegetation. Trampling and removal of vegetation associated with the creation of user-created trails would have an indirect effect on competition among associated understory species. Species such as *Juncus tenuis* or NNIS that favor compacted soils may increase and displace locally rare species such as *Carex manhartii*, *Lygodium palmatum* or other sensitive or locally rare species on the islands such as *Lysimachia fraseri* or *Juncus gymnocarpus*.

None of the current or anticipated use is expected to eliminate any of the populations or subpopulations from the Chattooga WSR Corridor. Species are persisting with the existing recreational use based on species collections during the 2007 survey, past surveys and in more difficult to reach microsites. Monitoring in 2013 indicated no decrease in the extent of *Gymnoderma lineare* along the Chattooga WSR and in Fowler Creek. In NC, no impacts to habitat from

recreational use was noted where four sensitive and three locally rare plant species had previously been located within the Chattooga WSR corridor. In GA, there were no impacts from recreational use to *Lejeunea bloomquistii*, *Lophocolea appalachiana* and *Listeria smallii* (2014 Monitoring Report). No stringers were located across the Chattooga WSR at any of these sites. There would be impacts to some individual sensitive and locally plant species from the existing recreational use. However, these plants would continue to exist in the river corridor and, though individual sensitive or locally rare plant species would be impacted it is not likely to cause a trend to federal listing or a loss of viability.

In the past 10-20 years, recreational use has increased on the trails and on the river within the wild and scenic corridor. This increased use has affected individual rare plants. Current recreational activities are anticipated to continue in the future in the most accessible portions of the river corridor.

B. Alternative 2 – Direct and Indirect Effects

By designating trails and put-in and take-out sites, this alternative reduces the amount of user impacts on species compared to Alternative 1. Impacts on trails and at the put-in and take out sites would be reduced with Alternative 2 as there would be less reliance on user-created trails. Most users would rather travel a well maintained trail to the river than go cross-country. In addition, dead hemlock trees are beginning to fall making cross-country travel more difficult resulting in subtly directing recreation users on designated trails. Existing log jams in the river also increase the likelihood of portage trail needs. Current boater use numbers combined with recent plant monitoring indicates that portage trail use if occurring is very sporadic. The report, *Capacity & Conflict on the Upper Chattooga River* (Whittaker and Shelby 2007) states that most portages would likely occur within the river channel itself and only a limited number of trails would occur on the river bank. There would be impacts to some individual sensitive and locally rare plant species under Alternative 2. However, these plants would continue to exist in the river corridor. Therefore, this alternative would not likely cause a trend to federal listing or a loss of viability.

Within NC, two rare species were located. A new subpopulation of *Radula sullivantii*, a regional sensitive liverwort, was located downstream of Bullpen Bridge. It is possible *Plagiochilla sharpii* could have been missed in the survey downstream of the Bull Pen Bridge. Two locally rare plant species were either observed or suitable habitat is present at the Bull Pen site also. *Bryoxiphium norvegicum* was relocated upstream of the bridge. A previous occurrence of *Pohlia lescuriana* was located on the Chattooga River Trail near the bridge and may have been overlooked during the survey. It was determined the trail access site may directly impact individuals of three species (except *Bryoxiphium norvegicum*) by increased trampling either at the put-in by the water's edge or along the road at the trail start. These impacts could result in the death of these individuals. The potential for direct impacts to *Plagiochilla sharpii* is low since it more typically occurs on overhanging rocks which would be less likely to be trampled. For *Pohlia lescuriana*, it is not anticipated the species would be eliminated from the Chattooga WSR watershed with impacts from the proposed project since it has previously been located on the Chattooga WSR Trail and near Bull Pen Road east of the bridge. Given the preference of this species for non-specialized habitat, acidic bare soils within the piedmont and the mountains of North Carolina, it is doubtful the proposed trail project would result in a viability concern for this species across the Nantahala and Pisgah national

forests. *Radula sullivanii* was the mostly commonly encountered rare liverwort species within the Chattooga WSR watershed during the 2007 survey. Thus the possible loss of a few individuals would not result in the loss of viability for this species across the watershed or the NNF.

Near the boater take-out site at Lick Log, there are three sensitive liverworts *Radula sullivanii*, *Plagiochila caduciloba* and *Acrobolbus ciliatus* either at the confluence of Lick Log Creek and the Chattooga WSR or just north of the confluence. All three species were found during the 2007 survey. It is unlikely they would be impacted by Alternative 2 given their location away from the boater take-out site (approximately 400 feet) and trail construction. Suitable habitat was not found for these three species within the activity area. The Lick Log area was surveyed in the fall 2012 and again in April 2014 for two Trillium species, *T. rugelli* and *T. simile* and for *Monotropsis odorata*. The species were looked for again in spring 2014 since the previous survey was completed late and they could have been dormant. None of the three species were located during the 2014 spring survey. There would be no impacts to these species from Alternative 2.

C. Alternatives 1 and 2 – Cumulative Effects

The cumulative effects (Table 3.1-1) from past, present and reasonably foreseeable actions on PETS and locally rare plant species within the corridor are not anticipated to result in the loss of any existing species but may contribute to a reduction in population size of individual species.

On private property in the corridor and the watershed, recent home development, road construction and reconstruction have contributed to the loss of suitable habitat for the forest-associated species and to a lesser extent to the river gorge-associated species. These cumulative effects associated with private property are expected to continue for the foreseeable future given the high land values across the watershed.

3.6 Social Environment

3.6.1 Human Health and Safety

Affected Environment

Safety issues related to boating were addressed in the 2012 EA. That document and the analysis completed are incorporated by reference in this EA. This assessment will focus on the human health and safety risks associated with the construction, reconstruction and maintenance of trails and the boater access sites. Trail construction, reconstruction and maintenance involve cutting trees, down logs, understory vegetation and leveling the surface to produce a level treadway. Risks during project implementation would be minimized by adhering to the U.S. Forest Service Health and Safety Code FSH 6709.11 and Occupational Safety and Health Administration (OSHA) regulations

A. Alternative 1 – Direct and Indirect Effects

This alternative would have no effect on human health and safety beyond current management activities in the area. Trail construction, reconstruction work would not be done and maintenance work would be limited to existing designated trails. Trails would be closed temporarily and signed as

appropriate to protect the public during maintenance activities. Boaters would continue to use system and user-created trails and old road beds to access the river.

B. Alternative 2 – Direct and Indirect Effects

Felling trees and cutting up down woody material with chainsaws presents the greatest risk to workers. In accordance with U.S. Forest Service Health and Safety Code Handbook, all workers are required to wear personal protective equipment when performing certain work activities (such as using a chainsaw or Pulaski). Safety equipment includes items such as hard hats, gloves, eye and ear protection and chaps. Monitoring of compliance with these regulations would be accomplished through on-site inspections and reviews of accident reports (USDA, 1989b). Trails would be closed temporarily and signed as appropriate to protect the public during construction, reconstruction and maintenance activities to minimize or eliminate safety risks.

C. Alternatives 1 and 2 – Cumulative Effects

Past, present and foreseeable future activities (listed in Table 3.1-1) are not in the vicinity of the current access sites and would not result in cumulative adverse effects to human health and safety.

3.6.2 *Social Impact Analysis*

Affected Environment

Six factors were considered in evaluating the social effects of the alternatives following direction contained in U.S Forest Service Handbook (FSH 1909.17, Chapter 30). Additional information is contained in the 2012 EA.

Information for the County Region is compared to the three-state area (Georgia, North Carolina and South Carolina) and to the U.S. Data was derived from the Economic Profile System-Human Dimensions Toolkit (EPS-HDT). This program produces detailed socioeconomic reports of counties, states and regions, including custom aggregations. The reports for this project are contained in the project file.

Social and Economic Overview

Table 3.6.2-1 provides a comparison of demographic, income and social structure in the County Region as compared to the three state areas and the US.

Table 3.6.2-1. Profile of Demographics, Income and Social Structure – A Comparison of the County Region, Three-State Area and the U.S.

Indicators		County Region	Three State Area	U.S.
Demographics	Population Growth (% change, 2000-2012*)	13.8%	18.0%	9.8%
	Median Age (2012*)	na	na	37.2
	Percent Population White Alone (2012*)	89.4%	65.6%	74.2%
	Percent Population Hispanic or Latino (2012*)	5.3%	7.9%	16.4%
	Percent Population American Indian or Alaska Native (2012*)	2.4%	0.6%	0.8%
	Percent of Population 'Baby Boomers' (2012*)	31.3%	27.8%	28.1%
Income	Median Household Income (2012*)	na	na	\$53,046
	Per Capita Income (2012*)	na	na	\$28,051
	Percent Individuals Below Poverty (2012*)	19.8%	17.2%	14.9%
	Percent Families Below Poverty (2012*)	13.0%	12.9%	10.9%
	Percent of Households with Retirement and Social Security Income (2012*)	63.3%	45.9%	46.0%
	Percent of Households with Public Assistance Income (2012*)	19.2%	19.2%	18.7%
Structure	Percent Population 25 Years or Older without High School Degree (2012*)	16.5%	15.6%	14.3%
	Percent Population 25 Years or Older with Bachelor's Degree or Higher (2012*)	23.0%	26.8%	28.5%
	Percent Population That Speak English Less Than 'Very Well' (2012*)	2.7%	4.9%	8.7%
	Percent of Houses that are Seasonal Homes (2012*)	21.4%	4.0%	3.8%
	Owner-Occupied Homes where Greater than 30% of Household Income Spent on Mortgage (2012*)	36.6%	33.6%	36.6%
	Renter-Occupied Homes where Greater than 30% of Household Income Spent on Gross Rent (2012*)	47.2%	46.5%	48.1%

Table 3.6.2-2 provides a summary comparison of population, prosperity, private versus public employment and employment in commodity sectors that have the potential to be tied to public lands and changes in residential development.

Table 3.6.2-2. Summary Profile – A Comparison of the County Region, Three State Area and US.

Trends	County Region	Three-State Area	US
Population % change, 1970-2011	89.8%	96.3%	52.9%
Employment % change, 1970-2011	105.8%	126.1%	92.6%
Personal income % change, 1970-2011	266.6%	268.1%	168.5%
Prosperity			
Unemployment rate, 2012	9.7%	9.2%	8.1%
Average earnings per job, 2011 (2013 \$s)	\$38,999	\$49,411	\$55,704
Per capita income, 2012 (2013 \$s)	\$33,204	\$37,727	\$44,391
Economy			
Non-Labor % of total personal income, 2012	50.5%	36.4%	35.4%
Services % of total private employment, 2011	78.7%	83.3%	85.0%
Government % of total employment, 2011	18.8%	15.6%	13.8%
Use Sectors			
Timber % of total private employment, 2011	1.1%	1.2%*	0.7%

Trends	County Region	Three-State Area	US
Mining % of total private employment, 2011	0.2%	0.1%*	0.6%
Fossil fuels (oil, gas, & coal), 2011	0.0%	0.0%*	0.5%
Other mining, 2011	0.2%	0.1%*	0.1%
Agriculture % total employment, 2011	2.1%	1.1%	1.5%
Travel & Tourism % total private emp., 2011	17.5%	15.6%*	15.2%
Federal Land			
Federal Land % total land ownership	36.5%	6.5%	28.8%
Forest Service %	35.0%	3.0%	8.4%
BLM %	na	na	11.1%
Park Service %	0.3%	0.5%	3.4%
Military %	1.2%	1.6%	1.1%
Other %	na	1.5%	4.7%
Federal land % Type A**	6.8%	30.9%**	38.5%
Federal payments % of gov. revenue, FY07	0.5%	0.0%	na
Development			
Residential land area % change, 2000-2010	-1.0%	4.2%	12.3%
Wildland-Urban Interface % developed, 2010	na	na	16.3%

*Approximated

**Federal public lands that are managed primarily for natural, cultural and recreational features

Social Variables

The following six categories (Forest Service Handbook 1909.17, 30-34, 33.7) are identified and evaluated for each of the alternatives:

1. Values, beliefs and attitudes (VBAs);
2. Lifestyles;
3. Social organization;
4. Population characteristics;
5. Land-use patterns; and
6. Civil rights.

1. Values, Beliefs and Attitudes (VBAs)

VBAs are representative of feelings, preferences and expectations people have for forests and the management and use of particular areas. Values relate to people's view of nature and public land management and the types of opportunities or benefits that are viewed as most desirable. Beliefs refer to how a group perceives: the U.S. Forest Service; how the agency manages resources; and the consequences of the agency's actions. Attitudes indicate people's support for or opposition to management decisions and actions the agency takes. The following statements are summarized from the analysis of comments received during scoping for the proposed project:

- We support you designating and formalizing the existing trail at Green Creek for hiking (including relatively few paddlers hiking to the river).

- The access at Burrells Ford Bridge includes existing multi-use trails for anglers, swimmers, paddlers, and other visitors to access the Chattooga WSR. They are not solely paddling access trails.
- The upper Chattooga WSR Gorge, in the area of this project, is home to a large number of rare species, including several aquatic species in the river and a large number of rare bryophytes.
- Allowing boating from Greens Creek invites trespass onto private property. Newly created user-created and designated trails would result in trespass through the private segment.
- The proposed Greens Creek Trail should be abandoned. The trail will needlessly increase impacts to the riparian zone and to riparian habitat.
- The U.S. Forest Service should make clear through signage, permits and web-posting the external location of the national forest boundaries and where boating will remain prohibited.
- Nothing in the 2012 Decision gives the agency the legal right to locate or create new trails in order to facilitate boater access.
- The issue which has yet to be addressed is about the degradation of the Chattooga headwaters that will be the result of the new, heavier usage of the natural areas.
- The whitewater folks are slowly taking what they originally intended – their use of the upper Chattooga whenever and wherever they please.

2. Lifestyles

Lifestyles include patterns of work and leisure; customs and traditions; and relationships with family, friends and others. People's lifestyles may be affected by management actions on a national forest through a direct economic relationship such as special-use permits or through indirect economic effects where recreational use of the forest is the foundation for the local tourism industry.

Table 3.6.2-1 indicates that more than 63 percent of households in the County Region have incomes derived from retirement and social security which is much larger than the three-state area and the nation. Likewise, the percent of seasonal homes is more than five times as much as the three-state area and the nation.

3. Social Organization

Social organization includes things that satisfy human needs, such as family, school, businesses and city government. The communities that make up the analysis area are small cities and towns set in a mountainous and relatively isolated part of the three-state area.

4. Population Characteristics

The population in the County Region is growing much faster than the nation but is a little slower than the three-state area. The average earnings per job are lower when compared to the three-state area and the nation. The 45-64 year-old age group had the largest increase in

population; the 35-44 year-old age group had the largest decrease during the 2008-2012 period.

5. Land-use Patterns

The County Region is mostly forested (Table 3.6.2-3) and mountainous with NFS lands comprising about 35 percent of the area.

Table 3.6.2-3. Land Use in the County Region.

Type	Acres	Percentage
barren	2,987	0.23
cropland	1,063	0.08
forest	1,062,157	80.38
grassland/herbaceous	203,430	15.40
Herbaceous wetlands	153	0.01
urban	15,128	1.14
water	36,463	2.76
Total	1,321,381	100

6. Civil Rights and Environmental Justice

Civil rights imply fair and equal treatment under the law, both within the agency and in its relations with the public. The U.S. Forest Service participates in special programs to enhance opportunities for equal participation of women, minorities and individuals with disabilities. Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) focuses the attention of federal agencies on the human health and environmental conditions in minority and low-income communities. Environmental justice analyses are performed to identify potential disproportionate adverse impacts to these target populations from proposed federal actions and to identify alternatives that might mitigate these impacts. Executive Order 13045 (Protection of Children from Environmental Health Risks and Safety Risks) directs federal agencies to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children; and ensure that policies, programs, activities and standards address disproportionate risks to children.

A. **All Alternatives – Direct and Indirect Effects**

Current use levels are unlikely to change under either alternative based on analysis completed in section 3.2.1. All five access locations provide opportunities for all recreation users to gain access to the river including the new boating user group.

1. Values, Beliefs and Attitudes (VBAs)

Some historical users likely remain opposed to allowing boating on the upper segment of the Chattooga WSR. They are concerned with biophysical and social impacts to remote sections of the river especially at Green Creek. Local landowners are concerned that improved access at Green Creek would increase the potential for trespass on private lands even though the

U.S. Forest Service has painted landline boundaries in some locations to make people aware of where private lands begin. These concerns are likely to continue.

Comments received from the public during scoping seem to indicate that, they are not as concerned with the County Line Trail boater access. This trail is viewed as “less sensitive” from a number of perspectives. Boaters are unlikely to use the County Line Trail access location based on scoping comments received and use data collected from the 2012 and 2013 boating season. However, County Line Trail does provide access for other kinds of recreational use (hikers, anglers, hunters, etc.) and links to the well-used Chattooga River Trail. Designating it as part of the trail system would help formalize maintenance and address some of the existing resource impacts.

All access locations provide entry points to the river whether trails are designated or not. Concerns with biophysical impacts from recreational use are best handled by identifying improvements needed to provide manageable access to the river. Directing users on sustainable trails should decrease reliance on some user-created trails.

The agency is implementing site-specific decisions based on the 2012 Forest Plans. Alternatives 1 and 2 are unlikely to alter people’s values, beliefs and attitudes about recreation use in the upper segment of the Chattooga WSR.

2. Lifestyles

The high number of retirees and seasonal homes (Table 3.6.2-1) likely account for the high percentage of employment in the travel and tourism sector. People are likely to retire and to have second homes in the area so they can enjoy the natural environment that is predominantly managed by the U.S. Forest Service. This would not change under either alternative. Alternative 2 would likely: improve access for some individuals; reduce some of the adverse biophysical impacts at the current access sites; and improve users’ experiences.

3. Social Organization

Communities in the County Region are likely close knit with a slower and less stressed pace of life. They provide more opportunity for family time; a feeling of increased safety; access to open spaces and nature; and a lower cost of living. The alternatives would have no effect on the social organization of the communities.

4. Population Characteristics

The data indicates that “baby boomers” are retiring in the area. The higher population growth along with other indicators (high number of seasonal homes and the large percentage of non-labor personal income) may indicate that public lands managed by the U.S. Forest Service play a role in stimulating growth in the area. NFS lands likely add to the quality of life by providing a variety of recreational opportunities and improved esthetic surroundings to people that live in the area. The alternatives would have no effect on changing population characteristics in the area.

5. Land Use

The landscape is predominantly forested with the next highest category being grassland/herbaceous area. Together these account for about 95 percent of the land base in the County Region. The alternatives would have no effect on changing land use in the area.

6. Civil Rights and Environmental Justice

Similar access is provided under either alternative to the five locations. The alternatives do not disproportionately affect the health or environmental conditions for minorities and/or individuals or families living below the poverty level. Therefore, additional Environmental Justice analysis is not required. The alternatives do not affect equal participation by women and minorities. Accessibility guidelines for trails are exempt under these alternatives because the trails and trailheads are limited by the physical terrain of the access locations and the natural features are protected under current federal law (Wilderness Act and WSRA). There would be no increased health and safety risks to children from the alternatives.

B. All Alternatives – Cumulative Effects

Table 3.1-1 lists past, present and reasonably foreseeable actions planned in the Chattooga WSR watershed.

1. VBAs

Past, present and foreseeable activities on federal (Table 3.2-1) and private lands are unlikely to change the VBAs of people who live in the area and those who come to the forests to enjoy the variety of recreational activities within the Chattooga WSR Corridor. Current U.S. Forest Service management that separates recreational users by reach, time and flow seems to be having the desired effect of protecting the ORVs and reducing user conflicts in the upper segment. Parking capacity would not change at the five locations and analysis (section 3.2.1) indicates that access sites to the river are unlikely to change current levels of use.

2. Lifestyles

Past, present and foreseeable activities on federal (Table 3.2-1) and private lands would continue to provide outdoor recreation opportunities that draw people to retire and own seasonal homes in the area. The largely forested and scenic areas would continue to provide opportunities for work and leisure centered on families, friends and communities.

3. Social Organization

Past, present and foreseeable activities on federal (Table 3.2-1) and private lands would have a minor effect on local job opportunities and nature-based tourism. Existing guiding opportunities would continue. There would be no additional demand on county services from the alternatives.

4. Population Characteristics

Past, present and foreseeable activities on federal and private lands listed in Table 3.2-1 along with the alternatives are not expected to impact population characteristics.

3. Land-use Patterns

Past, present and foreseeable activities on federal (Table 3.2-1) and private lands are not expected to impact land-use patterns. The County Region would continue to be mostly forested with a smaller component of open private land managed for agriculture and grazing.

6. Civil Rights

Past, present and foreseeable activities on federal (Table 3.2-1) and private lands are not expected to impact civil rights. Similar access is provided under each alternative to the five access locations. Accessibility would not be impacted by any of the past, present or reasonably foreseeable management activities. The alternatives would not disproportionately affect the health or environmental conditions for minorities and/or individuals or families living below the poverty level. The alternatives do not affect equal participation by women and minorities. There would be no increased health and safety risks to children from the alternatives.

3.6.3 Economics

Affected Environment

Trail construction, reconstruction and periodic maintenance is needed to develop a long-term sustainable trail system at the boater access sites. Estimated costs are displayed in Table 3.6.3-1.

A. Alternative 1 – Direct and Indirect Effects

No additional trail maintenance costs would be expended under this alternative.

B. Alternative 1 – Cumulative Effects

Projects listed in Table 3.1-1 do not overlap economically with current use to cause cumulative effects. No specific actions on private lands were identified during scoping that may combine with the effects of the proposed action and contribute to cumulative effects.

C. Alternative 2 – Direct and Indirect Effects

Trail reconstruction work consists of hardening the trails, trail drainage, installation of a footbridge at Green(s) Creek and some tree removal. New trails would be constructed at the Bull Pen Bridge access site below the road and at Lick Log. All trails would be maintained to U.S. Forest Service standards. Estimated costs are displayed in Table 3.6.3-1.

Table 3.6.3-1. Cost to Construct, Reconstruct and Maintain Boater Access Sites and Trails.

Access Site	Distances*	Total Cost Construction/Reconstruction	Yearly Maintenance Costs Expected
Green(s) Creek	0.28 miles	\$6,000	\$460
Norton Mill Creek - County Line Trail	1.2 miles	\$2,500	\$460
Bull Pen Bridge - above road	<100 feet	Only Maintenance	\$230
Bull Pen Bridge - below road	<300 feet	\$2,000	\$230
Burrells Ford Bridge**	200 feet	\$3,400	\$1,900
Lick Log	500 feet	\$2,780	\$230
Burrells Ford obliteration of undesignated trails	375 feet	\$1,050	

*distances are approximate, **harden route, widen, armor bank, remove hazard trees

D. Alternative 2 – Cumulative Effects

Projects listed in Table 3.1-1 do not overlap economically with this alternative to cause cumulative effects. No specific actions on private lands were identified during scoping that may combine with the effects of the proposed action and contribute to cumulative effects.

3.7 Wilderness and Roadless Areas

This analysis focuses on the Ellicott Rock Wilderness and the Big Mountain Roadless Area (aka Rock Gorge Roadless Area). The four qualities of wilderness character are used as a framework for analysis and discussion of the Ellicott Wilderness include:

1. Untrammeled
2. Natural
3. Undeveloped; and
4. Outstanding opportunities for solitude or a primitive and unconfined type recreation.

This analysis also incorporates by reference the information contained in the 2012 EA.

The proposed action that constructs a designated trail and provides boater access to the Chattooga WSR just below the Lick Log confluence would not impact Big Mountain Roadless Area.

The Bull Pen access site and trail are located just a few hundred feet within the boundary of the Ellicott Wilderness in the upper segment of the Chattooga WSR Corridor. Current activities in the Ellicott Rock Wilderness include hiking, backpacking, wildlife viewing, fishing, swimming, boating and other land-based activities.

Big Mountain Roadless Area is located in Oconee County, South Carolina (2,332 acres) and Rabun County, Georgia (2,923 acres). The area is in a very remote section of both the CONF and SNF and is bisected by the Chattooga WSR.

Ellicott Rock Wilderness

Existing impacts to the wilderness character of the Ellicott Rock Wilderness include:

1. Untrammeled

The alternatives would not affect the untrammeled quality of wilderness because no actions are being proposed that would intentionally control or manipulate ecological systems in the wilderness. Therefore, this quality is not discussed further in effects analysis.

2. Natural

User-created trails, campsite impacts and NNIS populations may be impacting the environment.

Indigenous plants and animals that are listed or of concern, non-native invasive plant and animal species, water quality and soil disturbance and erosion are discussed in detail in other sections of this document.

3. Undeveloped

User-created trails exist within the Ellicott Rock Wilderness.

4. Outstanding opportunities for solitude or primitive and unconfined recreation

The wilderness receives high visitation during the high-use season (June 1–Aug. 31). Opportunities for solitude may decrease during this time of the year compared to the winter, low-use times. However, current encounter levels during high-use times are consistent with median tolerances for trail/river encounters in higher use wilderness settings (Dawson and Alberga, 2003). Opportunities for primitive or unconfined recreation remain stable throughout the year.

Big Mountain Roadless Area

Big Mountain Roadless Area is located in Oconee County, South Carolina (2,332 acres) and Rabun County, Georgia (2,923 acres). The area is steep with a mixed hardwood/pine forest with numerous perennial and intermittent streams.

Ellicott Rock Wilderness

Table 3.7-1 summarizes likely effects on wilderness quality indicators from the alternatives.

A. Alternative 1 – Direct and Indirect Effects

1. Undeveloped

Recreationists would continue to use existing user-created trails to access the river. They would continue to detract from the undeveloped character of the wilderness. The current user-created access site is just inside the wilderness boundary near Bull Pen Road and bridge and involves a steep walk down to the river.

2. Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

This alternative has minimal impact on solitude or primitive and unconfined recreation since the access site is just inside the wilderness boundary near Bull Pen Road and bridge.

B. Alternative 2 – Direct and Indirect Effects

Ellicott Rock Wilderness

1. Undeveloped

Designating a trail and access site would likely reduce reliance on other user-created trails in the area and allow vegetation to recover and begin to cover up signs of human use. The positive effect is reduced somewhat given the fact that the access site is just inside the wilderness boundary near Bull Pen Road and bridge.

2. Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

This alternative has minimal impact on solitude or primitive and unconfined recreation since the access site is just inside the wilderness boundary near Bull Pen Road and bridge.

Table 3.7-1. Wilderness Quality Indicators for Alternatives 1 and 2.

Quality	Component	Indicator	Summary of Effects by Alternative	
			1	2
Untrammeled Wilderness is essentially unhindered and free from modern control or manipulation	Authorized actions that control or manipulate the "earth and its community of life"	Actions authorized by the Federal land manager that manipulate the biophysical environment	0	0
	Unauthorized actions that control or manipulate the "earth and its community of life"	Actions not authorized by the Federal land manager that manipulate the biophysical environment	0	0
Natural Wilderness ecological systems are substantially free from the effects of modern civilization	Terrestrial, aquatic and atmospheric natural species and physical resources.	Indigenous plant and animal species that are listed or of concern	S	S
		Non-indigenous invasive plant and animal species	S	S
		Water quality	S	S
		Soil disturbance and erosion	S	S
	Terrestrial aquatic, and atmospheric biophysical processes	No indicators identified	na	na
Undeveloped Wilderness retains its primeval character and influence, and essentially without permanent improvement or modern human occupation.	Development	Non-recreational structures and improvements	*	*
	Mechanization	Motorized equipment use	0	0
		Mechanical transport use	0	0
	Loss of statutorily protected resources	Disturbance to cultural sites	S	S
Solitude or Primitive and Unconfined Recreation Wilderness provides outstanding opportunities for solitude or primitive and unconfined recreation	Outstanding opportunities for solitude	Remoteness from sights and sounds of people inside the wilderness	*	*
	Outstanding opportunities for primitive and unconfined recreation	Management restrictions on visitor behavior	0	0
***	Significant negative effect: Effects are long lasting and have the potential to significantly degrade this quality of the wilderness character.			
**	Moderate negative effect: Effects are of moderate to long-term duration and have potential to appreciably degrade this quality of wilderness character.			
*	Slight negative effect: Effects are of short-term duration; the effect on this quality of wilderness character is deemed negative though minor in intensity.			
0	No discernable effect: Effects of Alternative 2 on this indicator are negligible in intensity and duration.			
+	Slight positive effect: Effects are of short-term duration; the effect on this quality of wilderness character is deemed positive though minor in intensity.			
++	Moderate positive effect: Effects are of moderate to long-term duration and have potential to appreciably improve this quality of wilderness character.			
+++	Significant positive effect: Effects are long lasting and have potential to significantly improve this quality of the wilderness character.			
S	Analysis for this indicator has not been completed in this section; other sections of this EA cover this analysis.			

C. Alternatives 1 and 2 – Cumulative Effects

The effects of other past, present or foreseeable activities (Table 3.1-1), when combined with the effects of these alternatives, would not result in any cumulative adverse impacts on the four qualities of wilderness character within the Ellicott Rock Wilderness since projects do not overlap.

Big Mountain Roadless Area

A. Alternative 1 – Direct and Indirect Effects

This alternative would have no effect on the roadless area as current use at the Lick Log site would continue.

B. Alternative 2 – Direct and Indirect Effects

This alternative involves construction of a trail that would involve clearing and minor excavation with hand tools. The number of trees felled within the roadless area would be less than 25, all less than 6” in diameter. This alternative would have no effect on the roadless area as current use at the Lick Log site would continue.

C. Alternatives 1 and 2 – Cumulative Effects

The effects of other past, present or foreseeable activities (Table 3.1-1), when combined with the effects of these alternatives, would not result in any cumulative adverse impacts on the quality or predispose the Big Mountain Roadless Area to another use since projects do not overlap.

Chapter 4 – List of Preparers and Agencies/Persons Consulted

Interdisciplinary (ID) Team

- Mike Brod – Wildlife Biologist (CONF)
- Brady Dodd– Hydrologist (NC)
- Jason Jennings – Soil Scientist (FMS)
- Gary Kauffman – Botanist (NC)
- Jeff Magniez – Wildlife Biologist (FMS)
- Jason Farmer– Fisheries Biologist (NNF)
- Jim Knibbs – IDT Leader (FMS)

Core Team

- Michelle Burnett –GISPPA Staff Officer (FMS)
- Tony White – SHIRE Staff Officer (FMS)

Steering Team

- Betty M. Jewett – Forest Supervisor (Chattahoochee-Oconee National Forests)
- John Richard Lint – Forest Supervisor (Francis Marion and Sumter national Forests)
- Kristin M. Bail – Forest Supervisor (North Carolina National Forests)
- Mike Wilkins – Nantahala Ranger District (Nantahala Ranger District)
- Mike Crane – Andrew Pickens Ranger District (Andrew Pickens Ranger District)
- Ed Hunter – Chattooga River Ranger District (Chattooga River Ranger District)
- R8 – Planning

Specialist Input/Consulted

- Doug Whittaker, Confluence Research and Consulting
- Thom Saylor, NC Recreation Staff
- Jim Bates, FMS Archaeologist,
- Rodney Snedeker, NC Archaeologist
- Andrew Triplett, NC Archaeologist
- James Wettstaed, CONF Archaeologist
- Mark Garner, FMS Wildlife Biologist
- Sheryl Bryan, NC Wildlife Biologist
- April Punsalan, NC Botanist/Ecologist
- Joe Robles, FMS Recreation Staff
- Robbin Cooper, FMS Landscape Architect
- Dick Rightmyer, CONF Soil Scientist
- Michelle Burnett, writer/editor

Other Agencies

NC Department of Administration - Crystal Best
NC Department of Cultural Resources - Renee Gledhill-Earley
NC Department of Environment and Natural Resources - Lyn Hardison
NC Department of Environment and Natural Resources - Michael Schafale
NC Department of Environment and Natural Resources, Office of Conservation and Community Affairs
NC Department of Public Safety - Kenneth W. Ashe
NC Department of Transportation - Carrie Atkinson
NC Division of Emergency Management - Carolyn Penny
NC Division of Water Quality - Susan A. Wilson
NC Wildlife Resource Commission - David G. McHenry
SC Department of Natural Resources - Tom Swaynham
US Fish and Wildlife Service – Georgia, North Carolina, South Carolina
Tribal Historic Preservation Office of the Eastern Band Cherokee Indians - Yolanda Saunooke
SC Archives and History Center, State Historic Preservation Office
GA Department of Natural Resources, Historic Preservation Division
NC Department of Cultural Resources, State Historic Preservation Office

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Appendix A – Comments Received During the 30 Day Notice and Comment Period and Forest Service Responses

Chattooga River Boating Access Environmental Assessment

Response to Comments Received during the 30 Day Notice and Comment Period (May 7, 2015)

Introduction

The following documents are referenced:

- *Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor* Environmental Assessment, January 2012 is also referred to in this document as the “2012 EA”.
- *Chattooga River Boating Access* Environmental Assessment, September 26, 2014 is also referred to in this document as the “2014 EA”.
- Decision Notice and Finding of No Significant Impact, Amendment #1 to the *Revised Land and Resource Management Plan, Sumter National Forest*; Decision Notice and Finding of No Significant Impact, Amendment #22 to the *Nantahala and Pisgah National Forests Land and Resource Management Plan*; and, Decision Notice and Finding of No Significant Impact, Amendment #1 to the *Revised Land and Resource Management Plan Chattahoochee-Oconee National Forest* are also referred to in this document as the “2012 Decisions”.

American Whitewater – Kevin Colburn – October 28, 2014		
Number	Comment	Response
1.	American Whitewater has conducted additional review of the Chattooga River Boating Access Environmental Assessment (EA), as well as the 2012 Forest Plan Amendments relating to	This comment is an introductory statement or represents an opinion.

American Whitewater – Kevin Colburn – October 28, 2014		
Number	Comment	Response
	paddling on the Upper Chattooga. We were unaware until reading the 2012 decisions that the EA would, in addition to approving trails, also designate river access sites at the same time. Therefore we offer these comments <i>in replacement of</i> the comments previously filed, and dated October 22, 2014. Please disregard our prior October 22 comments, and consider these comments in their place.	
2.		
3.	American Whitewater has reviewed the Chattooga River Boating Access Environmental Assessment (EA) and offers our comments herein. The EA rightly considers the merits of designating the trails that are explicitly envisioned in the 2012 forest plan amendments. We feel that the EA generally takes a thorough approach to considering the impacts and merits of designating these trails and making any upgrades needed for the trails' sustainability. We offer our conditional support of the Proposed Action, Alternative 2, and voice our concerns and conditions below regarding designated launch sites.	This comment is an introductory statement or represents an opinion.
4.		
5.	<u>Support for Trail Analysis</u> We feel that Alternative 2 will ensure that the trails have negligible environmental impacts while providing high	This comment is an introductory statement or represents an opinion.

American Whitewater – Kevin Colburn – October 28, 2014		
Number	Comment	Response
	quality recreational experiences for hikers, paddlers, and anglers alike. Designating these trails will offer significant environmental safeguards over Alternative 1. We encourage the Forest Service to approve the trails in Alternative 2 and move forward with trail enhancements as soon as practicable.	
6.		
7.	<p>We recognize that the scope of the EA was intended to cover only the trails and access areas needed for paddlers to access the Upper Chattooga River, including those needed to avoid the reach closure imposed by the Forest Service. We appreciate though that the EA recognizes that these trails and access areas are all multi-use trails. The paddling use data in the EA strongly infer that paddlers are the smallest user group that will use and benefit from these trails. The EA correctly notes that the County Line Trail isn't a paddling access trail at all based on scoping comments and use data. <i>See EA, pg. 102.</i> In fact, only 0.43 miles of the 1.63 miles of proposed trails are likely to be used by paddlers.</p>	<p>This project tiers to three Forest Plans (Amendment #1 to the <i>Revised Land and Resource Management Plan, Sumter National Forest</i>; Amendment #22 to the <i>Nantahala and Pisgah National Forests Land and Resource Management Plan</i>; and Amendment #1 to the <i>Revised Land and Resource Management Plan Chattahoochee-Oconee National Forest</i>). The goal of the Forest Plans are to provide a spectrum of high quality nature-based recreational settings and opportunities including a range of accessible recreation facilities and trails. The rationale for including Norton Mill Creek (aka County Line Trail) as a designated trail is stated in the 2014 EA on page 7. The trail is currently used by hikers and anglers and has been maintained in the past. Cost are minimal to reconstruct and maintain it as a designated trail (2014 EA page 105).</p> <p>The 2012 EA page 1 states, "The purpose of the new</p>

American Whitewater – Kevin Colburn – October 28, 2014		
Number	Comment	Response
		management direction is to ensure enjoyment of the upper segment of the Chattooga WSR by a variety of recreationists consistent with protecting and enhancing the river’s Outstandingly Remarkable Values (ORVs),.....”
8.		
9.	<p><u>Request for Explicit Geographical Scope Limitation Consistent with USFS Position</u></p> <p>Earlier this year the Forest Service stated in a brief to the Fourth Circuit Court of Appeals that “In fact, the USFS neither permits nor prohibits floating on this part of the river,” referring to “the roughly 1.7-mile reach of river above Green Creek.” Given the fact that the USFS does not prohibit or explicitly permit floating upstream of Green Creek, it would be inappropriate for the Forest Service to draft the Record of Decision (ROD) for the Chattooga River Boating Access EA, or the resulting paddling permit, in a manner that prohibits or permits boating on the reach.</p>	<p>The Purpose and Need and the scope of the decision to be made in the 2014 EA tier to the 2012 EA.</p> <p>A decision about floating upstream of Green Creek is beyond the scope of this decision (refer to page 45 of the 2012 EA, section 2.4 A. Boating through private land on the upper segment of the Chattooga WSR).</p> <p>In January 2012, the Forest Supervisors signed the 2012 Decisions. Boater put-ins and take-outs were identified on page 39 and pages 133-134 of the 2012 EA. The 2012 Decisions state, “Require boaters to start or complete their trip only at specific boater put-ins and takeouts, which will be designated after site-specific NEPA analysis.....”.</p>
10.		

American Whitewater – Kevin Colburn – October 28, 2014		
Number	Comment	Response
11.	<p>We request that the ROD and resulting permit explicitly require a permit for floating The Chattooga River from a point 200 feet upstream of the junction of the Green Creek Trail and the Chattooga River, downstream to Lake Tugaloo. No permit would be required for floating above the point 200 feet upstream of Green Creek. We see this as the only legal and practical decision given the Agency position.</p> <p>This is a very small change to the EA that will have no practical effect on the rationale or structure of the document. The EA must simply clearly state that it's scope is, like the 2012 Amendments, limited to the river downstream of Greens Creek, and make no statements "permitting or prohibiting" river access upstream of that point. The permit language must follow suit.</p>	<p>Please refer to section 2.2 of the 2012 EA, Greens Creek. Once the decision becomes final, the permit conditions will be changed to "permitted from the Green Creek trail and the Chattooga River intersection to Lick Log Creek."</p>
12.		
13.	<p>Practically speaking what this request means is that if a paddler wishes to put in upstream of the Green Creek Trail junction with the river they would need to first secure a permit at the Green Creek trailhead. They would enter the managed section of river at the same point as if they had hiked in on the Green Creek Trail, so there is no difference in use of the managed section of river. The river upstream of</p>	<p>See response #11.</p>

American Whitewater – Kevin Colburn – October 28, 2014		
Number	Comment	Response
	Green Creek would simply be governed like any other river in North Carolina.	
14.		
15.	<p><u>Request for Changes to Proposed Designated Launch Areas</u></p> <p>Designating kayak launch areas while prohibiting launching in undesignated areas is, to our knowledge, without precedent. Even on front-country rivers like the Nantahala that sees hundreds of thousands of paddlers each year, and remote strictly regulated rivers like the Selway, paddlers can hike or paddle into the river where they choose. This practice of allowing visitors to choose their access and egress points encourages safe and good decision-making, and is consistent with the Forest Service practice of avoiding unneeded management constraints.</p>	The rationale behind designating access is described on page 4 of the 2014 EA.
16.		
17.	By designating high quality trails to the Upper Chattooga River with good launch points, the Forest Service will ensure that virtually all paddlers will use them. Additional limits on launching are unnecessary, especially given that only 29 paddlers launched on the river last year. With this said, we will not object to limiting river access to specific designated areas so long as these limits apply to all visitors seeking shore	Please see Section 1.3, pages 5 and 6 of the 2012 EA, for a discussion of the proposed actions affecting all public use of the Chattooga WSR.

American Whitewater – Kevin Colburn – October 28, 2014		
Number	Comment	Response
	or river access. We understand that the use and creation of user-created trails is a concern, and we share that concern, and we see no environmental objective or standard that limits on paddler river access will meet unless the same river access limits are applied to all visitors.	
18.		
19.	<p><u>Request to Strike Language</u></p> <p>We request that the following sentence be struck from the EA: “Current U.S.</p> <p>Forest Service management that separates recreational users by reach, time and flow seems to be having the desired effect of protecting the ORVs and reducing user conflicts in the upper segment.” <i>See EA, Pg. 103.</i> This statement has no basis and runs counter to the data presented, and no evidence of causation is presented. The data clearly show that paddling use is extremely low and socially and environmentally a non-issue. This would be true with or without the Forest Service’s reach, time, and flow limits. There never were nor would there ever be user conflicts to “reduce.” Paddling never did nor would it ever impact ORV’s. The agency limits on paddling do not protect the ORVs or prevent conflicts. Instead, the agency's bans on paddling violate the whitewater boating ORV of the Chattooga and impose unreasonable</p>	<p>This is analysis and conclusions presented by a resource professional and based on monitoring use data collected during the first two boating seasons.</p>

American Whitewater – Kevin Colburn – October 28, 2014		
Number	Comment	Response
	restrictions on a very small and low-impact user group.	

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
20.	<p>We write to comment on the Environmental Assessment (EA) released by the Supervisor’s Office of the Sumter National Forest, entitled Chattooga River Boating Access, dated September 26, 2014. These comments are submitted on behalf of the Chattooga Conservancy, a nonprofit conservation organization whose mission is to protect, promote and restore the natural ecological integrity of the Chattooga River watershed in harmony with a healthy human environment. The Chattooga Conservancy has many members who use and enjoy the national forest lands in the upper Chattooga River watershed and the unique natural and cultural resources housed there.</p>	<p>This comment is an introductory statement or represents an opinion.</p>
21.		
22.	<p>We submit these comments with the caveats that the Chattooga Conservancy believes that the three Decision Notices and Finding of No Significant Impact for the Environmental Assessment, “Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic Corridor,” are deeply flawed. We feel strongly that the 2012 decision failed to consider inevitable negative impacts to the sensitive, rich biological environment of the Upper Chattooga River and to the increasingly rare backcountry experience in the Chattooga River watershed. Nonetheless, this decision has withstood legal challenge and is now in effect. Ironically, the 2012 decision to pre-approve access in all reaches of the upper Chattooga has</p>	<p>Chapter 3 of the 2012 EA analyzes the increasingly rare backcountry experience (Section 3.2.1; 3.2.3 and 3.7), and the rich biological environment of the Upper Chattooga River (section 3.2.2; 3.4.1; 3.4.2; 3.4.3 and 3.5). The 2014 EA also evaluates the same factors and potential effects of the alternatives.</p>

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
	resulted in only two alternatives offered to the public for consideration in the purported “site-specific” Environmental Assessment of Boater Access in the Upper Chattooga River.	
23.		
24.	<p>We believe that the EA for Chattooga River Boating Access is deeply flawed and, if implemented, it will inevitably cause irreparable damage to the unique backcountry experience and to the biophysical environment in the headwaters of the Chattooga River. Specifically, we believe this to be true for the following reasons: 1) The Boater Access EA contains a procedural “tiering” defect which renders the proffered alternatives non-viable; 2) the EA fails to consider an adequate array of alternatives and provides no justification for this failure; 3) the EA is based upon insufficient information and data and fails to address other “connected” actions; 4) the EA misrepresents its scope of analysis; and, 5) the EA violates the Wild and Scenic Rivers Act (WSRA) and the Wilderness Act. We assert that these oversights constitute violations of the National Environmental Policy Act (NEPA), the Administrative Procedures Act (APA), the Wild and Scenic Rivers Act (WSRA) and the Eastern Wilderness Act.</p>	The specific aspects of this comment are addressed individually in the following responses (#26-66).
25.		
26.	I. A Substantial Procedural Defect is Contained in the Boater Access EA Concerning the Lower	Tiering is a procedure which allows an agency to avoid duplication of paperwork through the incorporation by

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014

Bullpen Bridge Trail Which Effectively Renders the Alternatives Completely and Comprehensively Untenable

The 2012 Decision and Finding of No Significant Impact for Recreation Uses in the Upper Chattooga River (“the 2012 EA”) was a “programmatic” NEPA document in that it was geared towards analyzing and identifying the environmental impacts of a broad management regime—recreational use in the Chattooga’s headwaters—as a whole. The Forest Service then purported to “tier” this initiative by implementing additional NEPA analysis of Alternative 13A, the course of action that was selected in the 2012 EA, at “site-specific” locations. While Courts have held that it is, at times, preferable to defer the detailed analysis of site-specific impacts until a “specific development action is to be taken,” the “site-specific” analyses contained in the Boater Access EA exceeds the scope of actions that were made permissible under the 2012 EA. *Resources Ltd., Inc. v. Robertson*, 35 F.3d 1300, at 1306 (9th Cir. 1993). Specifically, the 2012 EA explicitly permits *five* (5), and only five (5), boater put-in and take-out points to be designated at the following locations: Green Creek, Norton Mill Creek, Lick Log Creek, Bullpen Bridge and Burrells Ford bridge. Peculiarly, however, in the Boater Access EA, there are six (6) boater access points/trails proposed, as the Forest Service has added the lower Bullpen Bridge trail. This additional trail is simply unauthorized under the terms of the 2012 EA and, more importantly, raises a wealth of NEPA infractions.

reference of the general discussions and relevant specific discussions from an environmental impact statement of broader scope into one of lesser scope or vice versa.

While the 2012 EA identified five areas, it did not analyze the site-specific effects of designating trails in those locations, and the 2012 Decision Notices did not specifically limit, or constrain designation to these five locations, nor did it specify lengths or numbers of trails designated at these locations. The 2012 Decisions only deferred designations until site-specific analysis was completed.

During site specific analysis of the Bullpen Bridge location it was identified that the existing access for boaters requires boaters to immediately navigate a highly technical section of the river. In addition, the existing access used by both boaters and other forest visitors is steep and not practical to use by boaters. The site-specific analysis identified a solution to this issue that meets the purpose and need of the proposal as well as providing other forest visitors in the area a well designed and safe access point to the river at the Bullpen Bridge location.

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
		Both locations are located very near Bull Pen Bridge and the proposed location below the bridge would provide a safe access point for all recreational users of the river. The trail dead-ends at the river and does not tie into any other trails into Ellicott Wilderness.
27.		
28.	<p>The 2012 EA contains required NEPA analyses of the direct, indirect, and cumulative effects of Alternative 13A. Accordingly, the legality of the “tiered” decisions contained in the Boater Access EA is inextricably dependent upon the NEPA analysis contained in the 2012 EA regarding direct, indirect and cumulative impacts. Because the lower Bullpen Bridge trail was not mentioned in the 2012 EA, however, its direct, indirect and cumulative impacts were never assessed. To make matters worse, these impacts were not analyzed in the Boater Access EA either. Thus, as it would turn out, there are a wealth of presumptions made in the Boater Access EA that are baseless. For example, the Forest Service attempts to show that each of the proposed boater access trails/sites, including the lower Bullpen Bridge trail, are compatible with an existing Recreational Opportunity Spectrum (ROS) inventory by referencing the proposed trails, access sites and capacities established in the 2012 EA. Because the proposed lower Bullpen trail was not included</p>	<p>The 2012 EA analyzed the impacts of allowing boater use and deferred site-specific effects analysis of individual access points to the analysis that is disclosed in the 2014 EA.</p> <p>Direct, indirect, and cumulative impacts for the proposed lower Bullpen Bridge access were conducted by the Nantahala Ranger District, Nantahala National Forest, National Forests in North Carolina specialists in August and September 2013. This review was tiered to the 2012 EA and examined potential effects to biological and historic resources. This review determined that there were no extraordinary circumstances related to the proposed access downstream of Bullpen Bridge. See also Section 3.1 of the 2014 EA for an examination of past, present and</p>

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
	in the 2012 EA, however, it cannot be said that the allegedly comprehensive ROS analysis is, in effect, being satisfied.	<p>reasonably foreseeable future actions within the Chattooga WSR Watershed.</p> <p>The ROS is described for all the access sites on pages 23-24 including the trails at Bullpen bridge and the effects are described on pages 27 - 30. The addition of a trail less than 300 feet in length below the bridge at the Bullpen does not result in any measureable change to ROS effects.</p>
29.		
30.	In short, the impacts of the lower Bullpen Bridge trail have not been addressed by the Forest Service. While NEPA does not require an agency to select particular courses of action, it does require that certain impacts of a proposed action—namely, the direct, indirect and cumulative impacts— at a minimum, be considered. Failure to make this consideration, therefore, is contrary to legal mandate and, as such, constitutes an abuse of the Forest Service’s discretion.	Please see response #28.
31.		
32.	There is also a broader and undoubtedly more substantial concern that arises in connection with the Forest Service’s proposal to designate the lower Bullpen Bridge location. Having determined that the trail itself would be unlawfully designated if it were in fact designated, the question remains how this might impact the entire Boater Access EA. The	There is nothing to indicate that designation of the lower Bullpen Bridge trail would be considered “unlawful”. Since the 2014 EA will result in three separate unique decisions on three National Forests, there is nothing to preclude one National Forest from selecting the “No

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
	<p>Boater Access EA restricts the available alternatives to either an “action” or a “no action” course of action. Thus, because the lower Bullpen Bridge location cannot legally be proposed and/or designated under NEPA, the “action” alternative is not only non-viable, but legally impossible. There are two opposite consequences that surface from this realization. On the one hand, this would indicate that none of the trails could be designated, since the Forest Service has remained insistent on its “all or nothing” approach to the boater access trails. On the other hand, as will be discussed below, the alternatives proffered in the Boater Access EA are inappropriate given the circumstances, and do not constitute a hard look at the impacts of the proposed action.</p>	<p>Action” and another from selecting the “Action” Alternative.</p> <p>Please see response #28.</p>
33.		
34.	<p>II. The EA is Deficient Because it Fails to Consider An Adequate Array of Alternatives and Provides No Justification for the Selected Alternatives</p> <p>The “all or nothing” approach set forth in the Forest Service’s Environmental Assessment — that is, either all the boater access trails and sites will be designated or none will be so designated — effectively reduces discussion of other environmentally sound alternatives to a false “yes,” or “no,” dichotomy. This oversight is in breach of the regulatory requirement that an environmental assessment contain a “brief discussion ... of alternatives ... [and] the environmental impacts of [those] ... alternatives.” 40 C.F.R. §1508.9. While we do not</p>	<p>There is no requirement that an EA include more than one alternative. Alternatives are developed to address unresolved issues. Since the 2014 EA will result in three separate unique decisions on three National Forests, there is nothing to preclude one National Forest from selecting the “No Action” and another from selecting the “Action” Alternative. The potential permutations of this scenario need not be analyzed individually as long as they are within the range of effects considered.</p> <p>Alternative locations were considered, but not evaluated in</p>

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014

disagree with the Forest Service’s inclusion of the action and inaction alternatives in its assessment, the inference that these alternatives alone are sufficient to satisfy NEPA’s procedural requirements is the precise kind of agency solipsism that has been met by a skeptical glare from the judiciary.

detail for the reasons described below (page 17 2014 EA):

4. Bamford – This site was considered as an alternative to Greens Creek. While it would have required less trail construction than the Greens Creek location, it would have opened a shorter section of river to paddling access compared to Greens Creek. Although Greens Creek requires more trail construction, the presence of the existing old road bed minimizes impacts from the trail construction.
5. Garnett Ridge – This site was considered as an alternative to Greens Creek. This access would cross private property. The public has no legal access across private land to access National Forest System lands. This location also would have required trailhead parking on private land.
6. Cane Creek – This site was considered as an alternative to Greens Creek. This site would have required new trail construction to access the river at an acceptable grade. River access would have been more difficult since it is in a steeper section of the river corridor than other locations. This trail would result in more environmental impacts and public safety concerns than the proposed Greens Creek trail.

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
35.		
36.	<p>The Sixth Circuit Court of Appeals, for example, has explicitly stated that an environmental assessment may not discuss the “yes and no” alternatives of an action and no action without at least exploring other alternatives. <i>Save Our Cumberland Mountains v. Kempthorne</i>, 453 F.3d 334, at 345-46 (6th Cir. 2006). As was stated by the Seventh Circuit, moreover, while discussing an EA’s required alternatives analysis: “if an even less harmful alternative is feasible, it ought to be considered.” <i>River Road Alliance, Inc. v. Corps of Engineers</i>, 764 F.2d 445, at 452 (7th Cir. 1985). The question is whether the agency has taken a “hard look” at a reasonable range of alternatives and further explained its reasons for rejecting them. <i>See Baltimore Gas & Electric Co.</i>, 462 U.S. 87, at 97-98 (1983). Because the Forest Service has failed to consider an obviously feasible and less harmful alternative—namely, designating only those proposed trails and access points that have actually been used by boaters and not designating those that have rarely been used by boaters and which risk substantial environmental disruption—it cannot be said that they have adhered to this requirement.</p>	<p>The 2014 EA tiers to the 2012 EA and 2012 Decisions. Please see response #26.</p> <p>The following is from FSH 1909.15 41.22:</p> <p>An EA must include the following: Proposed action and alternative(s). The EA shall briefly describe the proposed action and alternative(s) that meet the need for action. No specific number of alternatives is required or prescribed. (36 CFR 220.7(b)(2))</p> <p>When there are no unresolved conflicts concerning alternative uses of available resources (NEPA, section 102(2)(E)), the EA need only analyze the proposed action and proceed without consideration of additional alternatives. (36 CFR 220.7(b)(2)(i))</p> <p>The EA may document consideration of a no-action alternative through the effects analysis by contrasting the impacts of the proposed action and any alternative(s) with the current condition and expected future condition if the proposed action were not implemented. (36 CFR 220.7(b)(2)(ii))</p>
37.		

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014

38.	<p>The “all or nothing” alternatives dichotomy, more particularly, is not appropriate given the current status of several of the proposed access points. For example, there are compelling reasons not to designate the County Line and Greens Creek Trails: 1) There was a sharp decline in the number of boaters who used the Greens Creek Trail between the 2012-13 and 2013-14 boating seasons; 2) there were no documented boaters who used the County Line trail during the first two official boating seasons; 3) boater use of the County Line trail is expected to remain the same -- essentially nil – into the future, and for the Green Creek trail is expected to taper off or remain the same into the future; and, 4) the Chattooga Cliffs reach is the most biologically sensitive area and least used section in the entire Chattooga River Corridor, and enhancing boater and multiple use access to this precious environment has un-explored potential to seriously diminish its rare ecological features.</p>	<p>Please refer to the 2014 EA sections 2.2, Norton Mill Creek, 3.2.1 and Response #52. The County Line Trail is used by hikers and fishermen and when used by paddlers it will help separate users.</p> <p>With only two years of use there is insufficient evidence to conclude that the access points will not be needed depending on the river flows and popularity of the area once it becomes established. If access points are determined in the future to be unwarranted or are causing unacceptable environmental harm, they can be decommissioned.</p> <p>Since the 2014 EA will result in three separate unique decisions on three National Forests, there is nothing to preclude one National Forest from selecting the “No Action” and another from selecting the “Action” Alternative. The potential permutations of this scenario need not be analyzed individually as long as they are within the range of effects considered.</p>
39.		
40.	<p>On the other hand, there are several compelling reasons in support of designating the upper Bull Pen Bridge and Burrells Ford access points: 1) Given the above</p>	<p>The decision on what reaches were available for boating has already been decided in the 2012 EA and 2012</p>

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
	information, they are both likely to be the primary boating access points; 2) the whitewater floating between these locations is far superior to that of the Chattooga Cliffs; and, 3) both locations are in need of officially designated boater access trails due to the high volume of user-created and “spur” trails. Clearly, then, there are considerations that are particular to each of the proposed sites, which require each proposed access point to be independently assessed.	Decisions. Site-specific NEPA, as documented in the 2014 EA, was needed to designate specific access sites and the respective access trails leading to and from these access sites.
41.		
42.	An action is “arbitrary and capricious,” within the purview of the APA, when the agency fails to consider the “relevant factors and articulate a rational connection between the facts and the choices made.” <i>Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.</i> , 462 U.S. 87, 105 (1983). In consideration of the above information, it is apparent that the Forest Service has failed to so consider each of the “relevant factors,” and, moreover, has failed to establish a “rational connection” between the demonstrable needs to designate <i>some</i> boater access trails and to refrain from designating others and its “all or nothing” approach.	<p>The environmental assessment, <i>Managing Recreational Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor</i> (2012 EA), and Decision Notices signed on January 31, 2012 (2012 DNs) selected alternative 13A. The 2012 EA (page 39) identifies put-in and take-out locations.</p> <p>The <i>Chattooga River Boating Access Environmental Assessment</i> (Boater Access EA) considered existing and new trail access to these specified locations. As stated on page 5 of the Boater Access EA, the FS hosted a field trip to the sites in the summer of 2012. At that time, other access routes were brought up by the public that the agency needed to consider. These other access routes were considered but eliminated (page 17, Boater Access EA). The 2014 EA provides the site-specific analysis that discloses that the trails and access sites are environmentally</p>

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
		sustainable and provide access consistent with management direction established in the 2012 EA and 2012 DNs.
43.		
44.	<p>III. The EA is Deficient Because it is Based Upon Insufficient Information and Does Not Adequately Consider Other “Interconnected” and “Inter-related” Uses</p> <p>Again, “[a]ccurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA,” and the information contained in a NEPA document, including an environmental assessment, must be of “high quality,” and “concentrate[d] on the issues that are truly significant to the action in question. 40 CFR 1500.1(b). Accordingly, in light of the general lack of monitored “other uses” during the previous two boating seasons, it is questionable as to whether future use trends have been accurately, or even realistically, predicted in the Boater Access EA. The Boater Access EA itself states that, “...[t]he Forest Service has not yet implemented a comprehensive use monitoring program, although a request for monitoring proposals is planned for 2015.” Monitoring boater use as well as “other uses” is critical to crafting viable alternatives for managing recreational uses in the headwaters, especially in light of the admissions that some of the proposed boater access locations are currently, and will continue to be, used by “other users.” This informational gap greatly hamstrings the Forest Service’s ability to adhere to NEPA’s procedural requirements.</p>	<p>The Forest Service has been monitoring various uses and impacts and intends to develop a comprehensive monitoring plan relative to Recreation (per the 2012 EA, Appendix G, page 482). The 2012 EA, page 42 section 2.3 discusses monitoring and adaptive management. Each of the 2012 Decision Notices include monitoring some aspect of the decisions and the information will be used to validate that the desired effects are being achieved. An adaptive management approach is also described.</p> <p>Large wood monitoring was completed in 2007 and in 2014 (per the 2012 EA, Appendix G, page 483). Both reports are referenced in the 2014 EA, pages 112 and 113, respectively. Analysis of this information can be found on page 37 relative to aquatic habitat.</p> <p>Plant monitoring (per the 2012 EA, Appendix G, page 483) has also been accomplished (reference pages 94 – 95 and page 116 of 2014 EA, “Chattooga River EA Plant Monitoring 2014 Report”).</p>

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
		The 2012 EA (pages 42-44) spells out the adaptive management strategy that could trigger a need for additional management actions to resolve specific problems revealed through monitoring.
45.		
46.	<p>In addition, CEQ Regulations provide that “connected actions”—actions that are closely related or interdependent, actions that “automatically trigger” other actions that may require NEPA analysis, and/or actions that cannot or will not proceed unless other actions are taken previously or simultaneously— should be considered in a single NEPA document. 40 C.F.R. 1508.25(a)(1); <i>see Hammond v. Norton</i>, 370 F.Supp. 2d 226, 247 (D.D.C. 2005). The Boater Access EA mentions on pages 7-8 that other users will have their access to the river enhanced as a result of the proposed boater access trails. Without the proposed boater access trails, this seems to indicate, other users would not have their access to the river enhanced. As such, access for other users and boaters are “connected actions” within the purview of CEQ Regulations and, as such, should have been considered together in a single environmental assessment that is tailored towards river access for all recreational users, not just boaters.</p>	While this comment represents a statement or opinion, the EA acknowledged that other general use access is occurring now and disclosed that this use would be enhanced through designated access points as an indirect effect (2014 EA, pages 27-30). This is an indirect effect, not a connected action.
47.		

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014

<p>48.</p>	<p>IV. The EA Misrepresents the Scope of Analysis, Thereby Depriving the Public of the Information Necessary to Make Informed Decisions About the Proposal</p> <p>In releasing the Chattooga River Boating Access Environmental Assessment (the EA) for public commentary, the US Forest Service, pursuant to the National Environmental Policy Act (NEPA), is required to provide information that is sufficient to ensure informed decision-making and public participation. 42 U.S.C. 4332. Because “[a]ccurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA,” this information must be of ‘high quality,’ and, [m]ost important[ly] must concentrate on issues that are <i>truly significant</i> to the action in question.” 40 CFR 1500.1(b) (emphasis added). Because it is apparent that the designation of the County Line trail is entirely unrelated to the core objective of the EA — namely, that boater “put-ins and take-outs, and access routes to and from,” be designated — a proposal to do so is not “truly significant” to this objective and is, accordingly, not warranted. There are several reasons that are readily observable in support of this position.</p>	<p>The 2014 EA tiers to the 2012 EA. The 2012 EA is a programmatic document that amends existing Forest Plans. Both EAs are in compliance with 42 U.S.C. 4332 and 40 CFR 1500.1(b).</p> <p>The Council on Environmental Quality (CEQ) issued guidance regarding “Effective Use of Programmatic NEPA Reviews”, December 18, 2014.</p> <p>Programmatic NEPA reviews address the general environmental issues relating to broad decisions, such as those establishing policies, plans, programs, or suite of projects, and can effectively frame the scope of subsequent site- and project-specific Federal actions. A well- crafted programmatic NEPA review provides the basis for decisions to approve such broad or high-level decisions such as identifying geographically bounded areas within which future proposed activities can be taken or identifying broad mitigation and conservation measures that can be applied to subsequent tiered reviews. Effective programmatic NEPA should present</p>
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Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014

		<p>document reviewers with the agency's anticipated timing and sequence of decisions, which decisions are supported by the programmatic NEPA document and which decisions are deferred for some later time, and the time-frame or triggers for a tiered NEPA review.</p> <p>One advantage of preparing a programmatic NEPA review for repetitive agency activities is that the programmatic NEPA review can provide a starting point for analyzing direct, indirect, and cumulative impacts. Using programmatic NEPA reviews allows an agency to subsequently tier to this analysis, and analyze narrower, site- or proposal-specific issues. This avoids repetitive broad level analyses in subsequent tiered NEPA reviews and provides a more comprehensive picture of the consequences of multiple proposed actions. An agency relying on a programmatic NEPA review must consider whether the depth of analysis needed for a tiered decision requires adding to, or building on, the analysis provided in the programmatic NEPA review. <u>A</u></p>
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Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014

		<p><u>programmatic NEPA review can also be an effective means to narrow the consideration of alternatives and impact discussions in a subsequent tiered NEPA review.</u> For example, a land management plan PEIS for “zoning” certain uses can narrow future alternatives to specific uses.</p> <p>Decisionmakers may also call for a programmatic NEPA review for other reasons. For example, programmatic NEPA reviews may serve to influence the nature of subsequent decisions, thereby providing for an integrated and sustainable policy, planning framework, or program. Programmatic NEPA reviews may also support policy- and planning-level decisions when there are limitations in available information and uncertainty regarding the timing, location, and environmental impacts of subsequent implementing action(s). For example, in the absence of certainty regarding the environmental consequences of future proposed actions, agencies may be able to make broad program decisions and establish parameters for subsequent analyses</p>
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Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014

		<p>based on a programmatic review that adequately examines the reasonably foreseeable consequences of a proposed program, policy, plan, or suite of projects.</p> <p>The 2014 EA builds upon information presented in the 2012 EA and the biophysical monitoring results which indicate that effects to plants and woody material are consistent with effects disclosed in the 2012 EA.</p> <p>Boater access sites selected in the 2012 Decisions provide access to those sections of the Chattooga River open for boating at specified times and flows. Therefore, the range of alternatives is in keeping with the programmatic document and consistent with direction provided by CEQ.</p> <p>Designating Norton Mill Creek Trail (aka County Line Trail) provides access to recreationists who are already using it (hikers, anglers, hunters, et.) and provides for the Forest Service to maintain it so as to reduce long-term resource impacts. Analysis indicates that it would not take much work to maintain it as a designated trail. See responses #50, #52 and #54.</p>
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Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
49.		
50.	<p>Primarily, it is unlikely that the proposed County Line trail would be used by boaters at all. In fact, over the course of two consecutive boating seasons, there was not one boater documented as having used the County Line trail. This is not surprising in light of the fact that the trail is 1.2 miles in length, thereby requiring boaters to carry their boats a significant distance across a rugged and uneven terrain. What is surprising, however, is that the Forest Service seems aware of this realization. On page 7 of the EA, which is, at the risk of repetition, a document entitled “Chattooga River <i>Boating Access</i>,” the Forest Service justifies the designation of the County Line trail by stating that the trail is currently used by “other users.” True as this may be, the EA was not prepared to address trails for “other users.” Instead, it was prepared to address boater access, and, pursuant to NEPA, must be focused on issues that are “<i>truly significant</i>” to that action. 40 CFR 1500.1(b) (emphasis added).</p>	<p>While the primary purpose of the 2014 EA was to address paddler access, a secondary purpose was to address access for other recreational opportunities that the trail might offer (2014 EA, page 7 states, “The trails would also provide foot access for other forest visitors.”)</p> <p>The 2012 EA page 1 states, “The purpose of the new management direction is to ensure enjoyment of the upper segment of the Chattooga WSR by a variety of recreationists consistent with protecting and enhancing the river’s Outstandingly Remarkable Values (ORVs),.....”</p> <p>Page 2 of the 2012 EA further states,</p> <p>While conducting its visitor use capacity analysis, the U.S. Forest Service identified several additional visitor impact concerns on the upper segment of the Chattooga, while recognizing that boating issues could not be resolved without a comprehensive review of all recreation uses and impacts in the</p>

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
		Chattooga WSR Corridor. A summary report integrated findings from several documents, analyses, workshops and studies involved in this review (Whittaker and Shelby 2007, hereafter referred to as the Integrated Report).
51.		
52.	<p>This misrepresentation aside, the Forest Service has provided no meaningful assessment of how the proposed designation of the County Line trail will impact the Outstandingly Remarkable Values of the Chattooga Cliffs Reach and its included backcountry experience, nor do they address the biophysical effects of probable increased use by “other users” due to the development and designation of the County Line trail. Again, one of the primary goals of NEPA is to ensure that sufficient information is available so that informed public participation can occur. 42 U.S.C. 4332. With the disjointed and deficient information provided concerning the County Line trail, however, it cannot be reasonably expected that a member of the public would be able to understand and make informed decisions about the potential threats to the same features that justified the Chattooga River’s designation as America’s 12th Wild and Scenic River.</p>	<p>The County Line Trail was a signed and maintained trail until a few years ago but since it was not on official records as a trail, it was considered a proposal for the 2014 EA. Therefore, the only new use expected is by occasional paddlers. County Line also would provide good access to the bottom of Chattooga Cliffs should emergency access be necessary.</p> <p>ORVs (recreation, biology, scenery, history, and geology) were assessed in the 2012 EA in sections 3.2.1 – 3.2.5, pages 61 – 259.</p> <p>Backcountry effects may be more detrimental to ORVs than the managed access (2014 EA at page 29, paragraph 4).</p>

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
53.		
54.	By proposing the designation of the County Line trail -- a trail that affords no apparent advantages to boater access on the Chattooga -- in a NEPA document that is dedicated specifically to assessing boater access, the Forest Service has misrepresented the scope of the EA. Moreover, the Forest Service has failed to provide the public with the information necessary to foster informed participation with the designation of the County Line trail, and, most importantly, has failed to show a “rational connection” between the facts and the decision to propose designation of the trail. <i>Id.</i> For these reasons, we believe that the Forest Service has acted arbitrarily and capriciously.	Please refer to response #48 and #52. The County Line Trail was included in the 2014 EA (page 7) and in the scoping letter sent to the public (letter dated July 24, 2013).
55.		
56.	<p>V. The EA Violates the Wild and Scenic Rivers Act (WSRA) and the Wilderness Act</p> <p>Construction of the proposed trails and access points is contrary to the Wild and Scenic River Act’s (WSRA) mandate that the Chattooga’s Outstandingly Remarkable Values (ORVs) be “protect[ed] and enhance[d],” and that uses which would “substantially interfere” with these values be limited. 16 U.S.C. 1271. While recreation is considered to be one of the Chattooga’s ORVs, it is not the only one. Moreover, the WSRA makes it mandatory for the Forest</p>	The programmatic decisions covering the construction of the proposed trails and access points in the 2012 Decision Notices (supported by the January 2012 environmental assessment entitled <i>Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor</i>) are in conformance with the “protect and enhance” mandate of the Wild and Scenic Rivers Act. Similarly, the ORV and Other River Values sections in Chapter 3 of the September 2014 <i>Chattooga River Boating Access</i> environmental assessment (pp. 21-72) show site-

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
	Service to place “primary emphasis” on a river’s “esthetic, scenic, historic, archaeological, and scientific features,” in its administration of the river. Promotion of the river’s recreational values alone, stated differently, cannot detract from the WSRA’s overall directive that Wild and Scenic River segments be managed so that each ORV is protected and enhanced. <i>Wilderness Watch v. U.S.F.S.</i> , 143 F.Supp.2d 1186, 1205 (D. Mont. 2000). Because the Forest Service’s proposal would pose direct and substantial interferences with the Chattooga’s ORVs and because the trails would not enhance these ORVs, the proposal is inconsistent with the WSRA, thereby in violation of the APA.	specifically how the construction of the proposed trails and access points are also in conformance with the Wild and Scenic Rivers Act.
57.		
58.	The ORVs that were responsible for the Chattooga’s designation as a WSRA segment, and which the Forest Service should “protect and enhance,” includes history, geology, recreation, scenery and biology. The WSR Report prepared by the Forest Service indicates that the Chattooga Cliffs reach is an area that is “in a near natural condition,” which includes “some beautiful whitewater,” but that it “should not be floated.” There are also some rare and precious biological ORVs that thrive in this area including nine species of sensitive or locally rare animal species and a wealth of rare plant species that are endemic to the Southern Appalachians. Designating boater access trails to the extent of that proposed, therefore, would “substantially interfere” with these ORVs because it would allow increased access to conditions that have only been able to	The “WSR Report” was produced by the Forest Service in 1971 and the recommendations on boating use were valid at that time. In the intervening 43 years, technological advancements in boating equipment and a greater body of knowledge and skill in the paddling community have made this stretch of water accessible to advanced kayakers. Please refer also to response #52 and to section 3.2 in the 2014 EA.

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
	exist because of their remoteness and seclusion.	
59.		
60.	<p>Additionally, designation of the proposed trails to the extent of that proffered by the Forest Service would not enhance the Chattooga’s recreation ORVs because, in actuality, they would deplete them. Over the last 35 years, to be more particular, access points within the Chattooga’s headwater corridor near the Chattooga Cliffs and Rock Gorge reaches have been very limited. During this time a unique and secluded backcountry fishing experience has ensued. Additionally, other recreational activities, including scenic viewing, wildlife tracking, photography, hiking, trail running and wildlife viewing have also resulted from this distinct sense of seclusion, isolation and solitude.</p> <p>Designation of the proposed boater trails to the extent of that set forth in the EA, specifically in reference to the Green Creek and County Line Trails, would reduce the ability for these other users to partake in these distinctive recreational experiences because the trails would make remote and secluded portions of the Chattooga more accessible. Moreover, in light of the fact that many of these other recreational uses have been pushed into the headwaters precisely because of the overuse of the lower portions of the river, this form of degradation has potential to be severe as these other users would have nowhere else to go.</p>	<p>A detailed examination of recreation ORVs and potential impacts from proposed paddler access, including impacts to solitude and user conflicts, is presented in section 3.2.1 of the 2012 EA, pages 61 – 140 and in section 3.2.1 of the 2014 EA, pages 21 – 30.</p>
61.		

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014

62.	Designation of the proposed boater trails to the extent of that proffered by the Forest Service would also not enhance the Chattooga's recreation ORVs because any advantages to boaters would be minimal. It is apparent that boaters are already able to reach the headwaters without official boater access trails. In addition, as was stated in the EA, "[b]oating is likely to remain low given the use levels that have occurred so far." The WSR report, perhaps most importantly, that addresses the Chattooga's headwaters concluded that only some portions of the headwaters were ideal for floating and, more specifically, that the Chattooga Cliffs reach contains "hazardous whitewater that should not be floated." There are also other considerations, such as a log jam extending across the entirety of the river .25 miles below the Norton Mill Creek access point and the presence of a major boating access point beneath the Lick Log Creek proposed location, that raise serious questions as to the necessity of the extent of the proposed trails and whether they would really enhance recreation.	Please refer to response #60 which addresses recreation ORVs and response #58 that addresses recommendations made in the 1971 WSR Report.
63.		
64.	The EA's proposed action violates Section 2(c) of the 1964 Wilderness Act which defines Wilderness as, "an area where the earth and its community of life are untrammelled by man... retaining its primeval character and influence... and which generally appears to have been affected primarily by the forces of nature with the imprint of man's	Existing trails in the Ellicott Rock Wilderness include (1) Chattooga River Trail; (2) Ellicott Rock Trail; (3) Bad Creek Trail; (4) Sloan Bridge Trail; (5) East Fork Trail; and (6) Foothills Trail. The combined mileage of these trails in the Ellicott Rock Wilderness is approximately 10.5 miles of trail, or approximately 55,400 feet of trail. The

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014

	<p>work substantially unnoticeable.” Public Law 88-577. The Upper Bull Pen Trail is completely sufficient to providing access to boaters. The Forest Service proposes to construct a second access point further downstream in the Ellicott Rock Wilderness Area: “For boaters that do not wish to put-in and immediately experience a highly technical section of whitewater, the Forest Service would construct a foot trail (less than 300ft. in length) below the bridge to the lower Bull Pen put-in on river left to get paddlers off Bull Pen Road, down the road bank to the river.” FSR 1128. This proposed lower put-in would be constructed in the Ellicott Rock Wilderness Area. Although trails are allowed in wilderness areas they must not significantly diminish the qualities as defined in Sec. 2 (c) of the Wilderness Act. The construction of a trail into the Ellicott Rock Wilderness would attract more users into an already heavily used eastern wilderness, and would cause harm to the wilderness experience and cause harm to many rare species of plant life in the spray zones immediately located in this area. Constructing a trail into a wilderness area at a place where adequate access already exists for the purpose of getting boaters off the road and for the “convenience” of providing a put-in for boaters to avoid putting in where “highly technical water” exists at the Upper Bull Pen put-in is not a sufficient reason to risk degrading the wilderness area immediately below.</p>	<p>Forest Service is proposing to add 300 feet of dead-end trail below Bullpen Bridge, which would increase the trail network in the Ellicott Rock Wilderness by 0.0054%. This action would be compliant with the 1964 Act and would not measurably diminish the qualities as defined in Section 2(c) of the Wilderness Act.</p>
65.		

Chattooga Conservancy – Nicole Hayler, Buzz Williams – October 28, 2014		
66.	For the foregoing reasons, the Chattooga Conservancy believes that the Boater Access EA is a flawed document. Generally speaking, in conclusion, we feel that it is not supported by the requisite statutory, practical and common-sense analyses. We also feel that moving forward with the Boater Access EA, as it stands presently, would constitute an abuse of the Forest Service’s discretion. With this in mind, therefore, we ask that the Forest Service select the “no action” alternative so that the proposed action can be reconsidered in light of a more thought out and complete range of alternatives and additional monitoring and evaluation. In addition, we ask that the mandatory procedural requirements be completely satisfied.	Refer to responses #32, #42 and #48.
67.		

Georgia Forest Watch – Mary Topa – October 31, 2014		
68.	<p>Please accept these comments from Georgia ForestWatch on the Chattooga River Boating Access Environmental Assessment announced on September 29, 2014. Per the Scoping Notice, the designated opportunity for submitting scoping comments is until November 1, 2014 - thus these comments are timely filed. Georgia ForestWatch has submitted comments under previous solicitations for these activities, and we would like to include all of our prior comments by reference, including but not limited to, our comments submitted by our attorney, Rachel Doughty of Greenfire Law, on: June 29, 2012, (“June 29 Comments”); September 17, 2012, to the Nantahala Ranger District; and September 27, 2012, to the Andrew Pickens Ranger District.</p> <p>These comments are attached, along with comments that I submitted on August 27, 2013.</p>	This comment is an introductory statement or represents an opinion.
69.		
70.	<p>General Comments</p> <p><u>Registration stations:</u> The actions proposed still do not address the fact that the current boater permitting system will encourage boaters to violate Federal Regulations. Providing "boating access" trails in the Sumter and Chattooga directly contradicts Forest Service regulations, which prohibit "using or occupying any area" of those Forests "abutting the Chattooga River for the purpose of entering or going upon the River in, on, or upon any floatable object or craft of every kind unless authorized by permit obtained through registration at Forest Service Registration Stations abutting the Chattooga River located at Highway 28, Low-Water Bridge, Earl's Ford, Sandy</p>	<p><u>2012 Decisions:</u> On January 31, 2012, the Chattahoochee, Sumter and Nantahala Forest Supervisors issued decisions to change some of the locations where, and conditions under which, boating will be allowed. Specifically, the previous terms and conditions of the permits/special use authorizations did not allow any boating above GA/SC Highway 28. However, under the 2012 decisions, boating is allowed from the time that flows reach 350 cubic feet per second or greater at the U.S. Geological Survey water gauge at Burrells Ford during daylight hours. Daylight hours will be 30 minutes before official sunrise to 30 minutes after official sunset. Once boating is allowed, it may continue until 30 minutes after official sunset on that same day.</p>

Georgia Forest Watch – Mary Topa – October 31, 2014		
	<p>Ford, Highway 76, Woodall Shoals, or Overflow Bridge or unless authorized under special use permit." 36 C.F.R. 261.77(s) (attached). The EA fails to discuss that registration stations are provided at the new upstream put-ins which are not among those permitted by Forest Service regulations. In the alternative, it fails to analyze the impacts of requiring boaters to register at downstream locations before putting in at the newly proposed upstream locations.</p>	<p><i>Future Rule Change:</i> Consistent with the requirements outlined at 36 CFR 261.70, the Forest Service is planning to change 36 CFR 261.77 to more clearly reflect this new management direction for the entire length of the Chattooga WSR on national forest system lands. The change will include all portions of the river located in all three National Forests and the three States at 261.77.</p>
71.		
72.	<p><u>Soil erosion and sedimentation:</u> In our June 29 Comments, Georgia ForestWatch stated that <u>user-created features should not be relied upon for access since they are “chronic sediment sources.”</u>¹ The soils of the Chattooga River area are described as having “high erosive potential.” Because of this, impacts to vegetation in riparian areas can occur even with low to moderate use. Soils are more susceptible to compaction and displacement in the winter season (when boating now is allowed on the Upper Chattooga, following the 2012 Decisions) when they are moist for longer duration and subject to freeze/thaw processes. Erosion is more likely during high river flows or intense rainstorms—the very times when boating access is proposed. ForestWatch supports the creation of legal, sustainable access trails that will minimize soil erosion and sedimentation of the Chattooga River and its tributaries.</p>	<p>Section 3.4.1 of the 2012 EA analyzed soil erosion and sedimentation. Erosion and sediment originating from user-created trails and campsites, as well as areas with chronic erosion, are minor when compared to chief contributors such as existing roads, bridges and parking lots (Van Lear et al., 1995, cited in the 2012 EA).</p> <p>The 2014 EA also analyzed the effects of soil erosion and sedimentation in sections 3.2.2 Fisheries, 3.4.1 Soils.</p>
73.		

Georgia Forest Watch – Mary Topa – October 31, 2014		
74.	As noted above, the Forest Service first proposed the five boater access trails over two years ago. Since that time, we have had two seasons of boating access and boaters have been using user- created trails. The 2014 Chattooga River Boating Access Environmental Assessment (“2014 EA”) identifies the current soil erosion conditions for the five proposed access sites and trail locations. All five trail activities were rated as having a medium potential effect on the soil resource, with mitigation likely needed (2014 EA, p. 74). This analysis assumes that designated trails would be located on grades of less than 12 percent, with dips and other structures that limit concentrated flows (p. 73), but grades are higher than this in some of the proposed trail locations. The 2014 EA (p.74) lists soil conditions specific to the five proposed access sites and trail locations:	The proposed trails fall within acceptable construction standards.
75.		
76.	<i>Non-designated or user-created trails</i> have more potential for erosion and sediment entering the stream because of their location and lack of design and maintenance. As a result, they are periodically eroded during storm and flood events and become more entrenched over time, as well as more capable of eroding and delivering sediment. Currently, the non-designated trails at Burrells Ford Bridge are heavily used and are eroding in some locations. The trails at Green Creek, Bull Pen Bridge and Lick Log are not used very much and have minimal erosion.(refer to section 3.2.1)	Part of the decision for the Chattahoochee-Oconee National Forest, Chattooga River Ranger District would include decommissioning two undesignated trails (approximately 375 feet) that lead from the Burrells Ford parking area (Boater Access EA, page 16). The river bank would be stabilized by wood and rock. Additional gravel would be put down and barriers would be replaced in the parking area. Water from the parking area and roadway would be diverted away from the river where possible.
77.		

Georgia Forest Watch – Mary Topa – October 31, 2014		
78.	<i>The parking area</i> of concern in this analysis area is at the Burrells Ford access site. The parking area is contributing sediment to the river via the existing non-designated trails.	Section 3.4.1 of the 2012 EA analyzed the environmental effects on soil erosion and sedimentation. Erosion and sediment originating from user-created trails and campsites, as well as areas with chronic erosion, are minor when compared to chief contributors such as existing roads, bridges and parking lots (Van Lear et al., 1995, cited in the 2012 EA).
79.		
80.	With all five proposed access trails, it is plausible that existing user-created trails might be used more frequently by all recreation trail users. ForestWatch would recommend that <i>all</i> user- created trails intersecting any of the five proposed access trails be closed and revegetated to encourage trail users to stay on the constructed, more sustainable trails. Advocates note that this is not only a boater issue—numerous user-created trails and unauthorized and trashed campsites were observed on the site visits, and visitors other than boaters may use trails established by boaters and vice-versa.	<p>The Boater Access EA considered use of user-created trails and described the likely effects. The following is a quote from page 27 for impacts of existing use (trout fishing) from alternative 2 (proposed action):</p> <p>Fishing opportunities would continue to be available in the vicinity of the five existing access locations. Improvements as described in the proposed action would reduce potential resource impacts. New trails at Bull Pen and Lick Log would improve access to the river and place less reliance on the poorly located user-created trails. The new access locations are not considered primary fishing access points and are not likely to induce new fishing use. They may encourage a few anglers to</p>

Georgia Forest Watch – Mary Topa – October 31, 2014		
		access the channel at specific locations (as opposed to accessing the channel via user-created spur trails). With increased hemlock downfall and heavy understory vegetation growth in the area, designated trails are likely to receive the most use and would discourage use on the old user-created spurs into the river.
81.		
82.	At earlier site visits, at least one ranger commented that the Forest Service would not finally identify and create access, portage, and scouting trails, and put-ins and take-outs until boaters had some experience with the sites during actual conditions. With two seasons of monitoring boater put-ins and take-outs, the Forest Service needs to stop relying on user-created access trails since these are responsible for considerable soil erosion, sedimentation and trampling of native vegetation. Unfortunately, the public is presented with only two alternatives in this EA for all the proposed trails - do nothing or accept the Agency's proposed action. Trail closure is not an option and should be.	<p>The rationale for proposed Forest Service action pertaining to user created trails and portage needs for boaters is presented in Chapter 3, section 3.2.1, section 3.2.3, and section 3.3.2 of the 2012 EA.</p> <p>See response #48.</p>
83.		
84.	Another concern of ForestWatch has to do with trail monitoring and enforcement of user group sizes, and designated put-ins and take-outs. With only two river	The Forest Service monitors the river corridor with river rangers, forest technicians, and law enforcement. Boaters who choose to utilize undesignated access and egress

Georgia Forest Watch – Mary Topa – October 31, 2014		
	rangers, it is clear that the Forest Service will have to rely on passive direction of use rather than active enforcement of rules. Lick Log, Norton Mill Creek and Green Creek all require hiking for some distance with boating gear. The Forest Service must consider its actions in light of its actual enforcement capacity. Are existing or expected resources adequate to prevent access at Grimshawes Bridge or by-passing the Lick Log take-out and using the Route 28 Bridge as a take-out by boaters who wish to avoid hiking?	points would be in violation and subject to penalty.
85.		
86.	The 2012 EA anticipates between five and 10 search and rescue operations per year. In developing access features, it makes sense to consider where emergency access may be needed at each point and to use that information to inform access feature selection and design. Access features will need to be made part of a search and rescue plan and a pre-accident plan that will both protect users and the River and the Ellicott Rock Wilderness. Such planning should be made part of a Comprehensive River Management Plan.	The 2012 EA considered search and rescue for alternative 13A (selected alternative) on pages 370 – 371 in the context of boater put-ins and take-outs as presented in Table 2.2-8, page 39.
87.		
88.	The management framework that the Forest Service has created through the 2012 Decisions to protect solitude and the outstanding recreational values of the upper sections of the Wild and Scenic Chattooga River can only work with monitoring, informed adaptive management, and enforcement. If the Forest Service is going to practice adaptive management when is it going to commence? Has it established the baseline that is critical to informed adaptive management? Georgia ForestWatch would like to see further development of a comprehensive river	<p>Monitoring per the 2012 Decisions has already started relative to plants and large wood as identified in Appendix G, page 483 of the 2012 EA and in the 2012 Decisions.</p> <p>The 2014 EA references include: pages 34, 35, 37, 69, 94 and 95. References include the second large wood inventory completed in 2014 (page 113) and the <i>Chattooga</i></p>

Georgia Forest Watch – Mary Topa – October 31, 2014

management plan as applied to access, with a clear articulation of monitoring and enforcement activities.

River EA Plant Monitoring 2014 Report (page 116).

Boater monitoring information is presented in Table 3.2.1-1, Table 3.2.1-2 and Table 3.2.1-3 and includes analysis of the two boating seasons (pages 21-23). Analysis of this information is placed in context with the proposed boater access sites. The following statement is from page 28 relative to boating:

Boating would continue to occur on the upper segment; boaters also would be able to use the improved five access locations. These locations are unlikely to induce additional boating use, which is attracted by the whitewater, not the access trails. Boating use levels have been relatively low since 2012 and seem unlikely to increase substantially in the future.

Effects are within levels evaluated in the 2012 EA and additional monitoring per the 2012 Decisions is expected to take place (see response # 44).

Georgia Forest Watch – Mary Topa – October 31, 2014		
89.		
90.	<p>Boaters report that there are two long-term portage areas identified at Big Bend Falls and Corkscrew rapids. No portage trails are considered or discussed in the scoping notices. Will the Forest Service monitor these portage sites and other portages certain to arise as the Hemlocks fall to minimize further degradation of the natural resources? For the longer-term portage areas, will any effort be made to make these trails more sustainable or add them as system trails so that resources can be directed toward their maintenance?</p>	<p>The 2012 EA specifies that portage areas will be monitored and they have been.</p> <p>The 2012 EA is also informed by a report <i>Capacity and Conflict on the Upper Chattooga River</i> (Whittaker and Shelby, 2007) which stated the following relative to portage trails:</p> <p>During the boater panel fieldwork, boaters scouted or portaged 5 to 7 rapids between Norton Mill Creek and Highway 28. At the flows during the fieldwork, boaters did not pioneer new routes, and were able to stay below the ordinary high water mark (where soils and vegetation begin) in all but one location. However, one might assume that regular boating use (if allowed) might develop five user trails that are above high water for scouting or portaging at some of these areas. If the average length of these trails is about 100 feet, about one-tenth of a mile of new trails would be developed. This would be less than 1/5th of 1% of existing</p>

Georgia Forest Watch – Mary Topa – October 31, 2014		
		<p>trail miles, about half of 1% of user-created trail miles, and about 4% of existing user-created trails within 20 feet of the river.</p> <p>In addition, the 2014 EA on page 95 states the following relative to plants:</p> <p>Existing log jams in the river also increase the likelihood of portage trail needs. Current boater use numbers combined with recent plant monitoring indicates that portage trail use if occurring is very sporadic. The report, <i>Capacity & Conflict on the Upper Chattooga River</i> (Whittaker and Shelby 2007) states that most portages would likely occur within the river channel itself and only a limited number of trails would occur on the river bank.</p>
91.		
92.	<p>Trail Specific Comments</p> <p>Norton Mill Creek (County Line Access)</p> <p>Earlier discussions with some paddler groups indicated that</p>	<p>The no action alternative includes no permitted access near Norton Mill Creek and not designating County Line as an official trail.</p>

Georgia Forest Watch – Mary Topa – October 31, 2014		
	they had little interest in using the County Line access point because the distance from parking to the River is too great. The boater user data in the 2014 EA supports this sentiment, with no boaters using this trail in both boating seasons. This begs the question as to whether the Forest Service should keep this as an access site for boaters. But closure is not an alternative in this EA.	Please refer to responses #38, #50, #52 and #54.
93.		
94.	County Line Road/Trail is neither a designated road nor a designated trail. It is a known illegal access point to the Chattooga River for motorized vehicles. As a temporary road, it should have been (or should be) obliterated, instead of offered as an access route to the River. Adding a trail at County Line will interrupt the 5.2 mile segment of the Chattooga River Trail from Whiteside Cove Road to Bull Pen, possibly destroying the unique remote experience along a mountain stream that is not available elsewhere by introducing more people to this area. The only reason to construct/reconstruct this trail would be to make this a sustainable trail for other trail users (anglers, hunters and hikers). But any trail reconstruction should deter motorized vehicles.	<p>Please refer to response #60 with respect to recreation ORV and to section 3.2.1 of the 2012 EA with respect to solitude.</p> <p>See response #52.</p>
95.		
96.	A launch site at the campsite below Norton Mill Creek was selected as the best site entering from County Line Road. This site seems to have been chosen primarily because it is already severely impacted. The bank in this area should be monitored and, if erosion is found, it should be moved 100 feet upstream to the rocks below Norton Mill Creek. One issue that must be addressed is how boaters and other users	Visitors who choose to utilize undesignated access and egress points would be in violation and subject to penalty.

Georgia Forest Watch – Mary Topa – October 31, 2014		
	will be dissuaded from entering the River at other points along the Chattooga River Trail if a new access is created.	
97.		
98.	<p>Green Creek Green Creek appears to be a preferred launch point. However, based on our previous visits, this access point poses the greatest challenge in creating a sustainable trail (please see our June 28 Comments for more detail). Since only two alternatives are proposed, do nothing (Alternative 1 which would further degrade the area) or Alternative 2, <u>Alternative 2 is the preferred alternative with the closure and revegetation of any user-created trails intersecting the proposed trail.</u> If Green Creek is going to serve as the preferred upper access point for boaters, the eight available parking spaces may not be sufficient if there is an increase in trail use by other trail users.</p>	<p>The Forest Service analyzed and disclosed visitor use levels and potential conflicts in section 3.2.1 of the 2012 EA and in section 3.2 of the 2014 EA.</p> <p>Parking capacity would not be increased.</p>
99.		
100.	<p>Bull Pen This put-in/take-out was one of the most popular access trails to boaters during both boating seasons. It is appealing to boaters because it does not require a long hike from the road. Less skilled boaters probably will not use the designated put-in above the bridge because it would immediately thrust them into a difficult rapid. The existing user-created trail below the bridge is steep, slippery, and subject to erosion. This trail would need to be reconstructed or closed to minimize soil erosion and sedimentation of the</p>	<p>The proposed action is to construct a trail (<300 feet) as described on page 8 of the 2014 EA. The effects of this action on user-created trails are described on page 28.</p>

Georgia Forest Watch – Mary Topa – October 31, 2014		
	Chattooga River.	
101.		
102.	<p>Burrells Ford</p> <p>User-created trails already line the riparian area near Burrell's Ford, and should be addressed. Given that only two alternatives were presented (do nothing or build a sustainable trail), ForestWatch supports the decommissioning and revegetation of two of these user-created trails, and all efforts to construct a sustainable trail that will minimize soil erosion, and degradation of the riparian area and water quality. If a sustainable trail cannot be constructed, then this access trail should be closed.</p>	<p>Section 3.4.1 of the 2012 EA analyzed the environmental effects on soil erosion and sedimentation. Erosion and sediment originating from user-created trails and campsites, as well as areas with chronic erosion, are minor when compared to chief contributors such as existing roads, bridges and parking lots (Van Lear et al., 1995, cited in the 2012 EA).</p>
103.		
104.	<p>Lick Log</p> <p>The creation of access points enables boating, but also necessitates take-out points. As the lowest access/take-out point on the Upper Chattooga, Lick Log Creek had 32 boaters use it in the 2012/13 season and 2 boaters the following season, representing 9% and 3% of the boating use access areas, respectively. Unfortunately, this takeout requires a mile-long hike so it is not surprising that its use was low. Georgia ForestWatch received anecdotal reports of boaters during the first boating season floating down to Highway 28 in order to easily exit the River and avoid the long hike, and this would explain the discrepancy in put-ins/take-outs in the 2012/13 boating season data. The Forest Service should monitor activity at the Highway 28 bridge during active floating days to determine whether boaters are observing the exclusion in that area.</p>	<p>Use monitoring has occurred during the first two boating seasons and violators are subject to penalty for not adhering to the conditions of their permit.</p>

Georgia Forest Watch – Mary Topa – October 31, 2014		
105.		
106.	<p>The decision under consideration in this EA and the environmental analysis for the January 2012 decisions reversing decades of prior management direction on the Upper Chattooga, as connected actions, should not have been segmented into two separate EAs; doing so is a NEPA violation. Boating only makes sense if there is appropriate access--a consideration that should have been addressed before allowing boating on the Upper Chattooga. Segmenting the project improperly and unnecessarily limited the scope of review and available alternatives. Because of this segmentation, the only alternative presented to the proposed alternative is to allow continued use of user-created access trails. This presented to the public and decision-makers only the false choice of the impacts of boater access during high erosion wet events on wet gravel roads and user-created features, or on wet gravel roads and forest-service maintained trails (in locations pre-determined for boater access, not because they present the lowest erosion concerns). Had you properly implemented NEPA, a far greater range of alternatives would have been available, including more limited or no access for boaters.</p>	<p>The 2014 EA tiers to the 2012 EA. Please see response #48.</p> <p>The 2012 EA considered the boating put-in and take-out locations (refer to page 39, Table 2.2-8, Table 3.1-6 – pages 56-58 discusses past, present, reasonably foreseeable future actions – this information used in cumulative effects analysis, pages 233-234 discusses boater put-in/take-outs and connector trails, page 256 discusses potential effects to heritage resources, page 291 discusses effects on soils, page 327 informs the public that site-specific NEPA will be used for the put-ins and take-outs and page 358 discusses impacts to plants. The 2014 EA incorporates analysis and findings and builds on information presented in the 2012 EA. The 2014 EA discloses that designating access points would reduce risk of sedimentation compared to user-created points.</p>

R. Stephen Doughty, Representing Rust Family – October 27, 2014

107.	<p>Thank you for providing the opportunity to review and comment on the Upper Chattooga River Boating Access Environmental Assessment (EA). The EA continues to ignore that a segment of the designated Chattooga Wild and Scenic River corridor is privately owned and therefore not controlled by the Forest Service or affected by the Wild and Scenic River administrative statutes. Privately held segments of the Chattooga Wild and Scenic River should not be inventoried as available for public recreational use by the Forest Plans. By ignoring boundaries and property rights, the Forest Plan fails to consider whether it is in compliance with the Wild and Scenic River Act itself.</p>	<p>The 2012 EA disclosed that private property is located in the upper reaches of the Chattooga River. The following is excerpted from the 2012 EA:</p> <p>Navigability and public access rights on this reach have not been formally analyzed by any federal or state agency or authority, nor has its navigability been adjudicated by a court of law. Public access rights and navigability are complex topics, and the outcome of a formal analysis or adjudication for the upper segment of the Chattooga WSR is uncertain. According to FSM 2354.14 - Navigability of Rivers, “Most rivers in the country have not been adjudicated as navigable or non-navigable. Consider them non-navigable until adjudicated otherwise.” Until decisions about boating are made for the sections of the river with public land along them, or public access rights on this reach are determined, the U.S. Forest Service considers this decision to be beyond the current scope of analysis.</p>
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R. Stephen Doughty, Representing Rust Family – October 27, 2014		
		<p>The 2014 Boater EA therefore limits the scope of the decision to establishing boater put-in and take-out locations on national forest system lands and is consistent with the decisions signed in 2012.</p> <p>Reference is also provided to the published ruling of US Court of Appeals for the Fourth Circuit - US Court of Appeals for the Fourth Circuit, No. 13-1960, 11/05/2014 pages 25-27.</p> <p>Please see response #48.</p>
108.		
109.	<p>Record of Review for This Assessment</p> <p>The basis for this Boater Access Decision is an incomplete 2012 upper Chattooga Recreational capacity Decision. Therefore, the record associated with the 2012 Decision is, and must be, part of this Boater Access Decision. Also, the District Court proceedings associated with CV#8:09-2665-MGL, is used to limit the scope of this EA making it a foundational element to this EA and the ultimate Decision. The records used in this assessment are in contradiction to one another. By reference the Agency incorporates the record of the Court proceedings and the full administrative record for</p>	<p>The Boater Access EA (page 5) is tiered to and is consistent with the 2012 EA, Forest Plans and the following court opinions: Civil Action No.: 8:09-2665-MGL, Amended Order and Opinion, 7/30/2013 and US Court of Appeals for the Fourth Circuit, No. 13-1960, 11/05/2014.</p> <p>In January 2012, the U.S. Forest Service released three Decision Notices and Findings of No Significant Impact for the Environmental Assessment, Managing Recreation</p>

R. Stephen Doughty, Representing Rust Family – October 27, 2014		
	<p>the 2012 Decision into this EA. By reference with this letter, the Rust Family incorporates ALL records associated with these two proceedings into this NEPA and Planning process, the Rust Family’s previous comments, and the comments of the Whiteside Cove Association.</p>	<p>Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor (USFS, 2012), hereafter referred to as the 2012 EA. Pursuant to Alternative 13A in the 2012 EA, put-ins and take-outs, and access routes to and from, will be designated after site-specific analysis under the National Environmental Policy Act (NEPA). Page 39, Table 2.2-8 of the 2012 EA defines the location of the boater put-ins and take-outs and the analysis also supports these locations as feasible access for consideration in future NEPA (as an example, see page 327 of the 2012 EA).</p> <p>The Purpose and Need and the scope of the decision to be made in the 2014 EA is therefore limited by the previous 2012 Decisions and the need to establish sustainable designated trails and access points to the river that reduce adverse impacts to resources. This is consistent with CEQ direction regarding “Effective Use of Programmatic NEPA Reviews”, December 18, 2014. See response #48.</p>
110.		

R. Stephen Doughty, Representing Rust Family – October 27, 2014		
111.	<p>Misrepresentation of the District Court Order and 2012 Decision</p> <p>The EA’s reliance on the District Court finding to justify avoiding all issues related to private property or boating is misplaced. The EA misleadingly states the Court found the Forest Service “complies with federal law”, suggesting that all aspects of Federal laws were adjudicated during the Kayak Lobby’s lawsuit against the Forest Service. This erroneous interpretation of the Court’s decision is then used to justify limiting the scope of the current EA to exclude reasonable alternatives that would avoid interference with property rights or consideration of the effects on the privately owned segments of the Chattooga Wild and Scenic River.</p>	See response #48, #107 and #109.
112.		
113.	<p>The Court did not adjudicate all issues and specifically limited its findings to those issues raised and analyzed in those proceedings. “The court finds that the Forest Service’s 2012 Plan for Management of the Chattooga WSR complies with the federal law <i>as set forth and analyzed above.</i>” (Emphasis added), p. 41, <i>Amended Order</i> 7/30, CV#8:09-2665-MGL. By omitting the phrase “as set forth and analyzed” from the Order, the EA claims <i>carte blanche</i> judicial approval for every aspect of the previous Decision, thereby avoiding assessment related to recreation in the current assessment about recreational access. The actual</p>	See response #48, #107 and #109.

R. Stephen Doughty, Representing Rust Family – October 27, 2014		
	<p>Court Order does not provide a basis for circumventing the agency planning mandates, WSR law, and the NEPA process. The obligations of the Forest Service to address issues related to this Planning Decision could not have been premature for judicial review in 2013 and now suddenly adjudicated by the same Court proceedings. The basis for the abbreviated EA is erroneous.</p>	
114.		
115.	<p>In contradiction to having adjudicated Forest Service compliance with federal law, Judge Lewis ruled narrowly to address <i>only</i> those issues raised <u>and analyzed</u> within the scope of the Kayak Lobby's lawsuit. Judge Lewis did not deny the claims raised by the Rust Family, rather the Court found the scope of agency authority and property issues not ripe for judicial review within the Kayak Lobby's litigation and dismissed the claims made by the Rust Family without prejudice. <i>Id.</i> at 27 and 34. The Court also precluded from judicial review issues raised by Georgia ForestWatch and did not rule on those issues not yet presented to the Court for review. <i>Id.</i> at 13. Therefore, the findings of the Court provide no basis for the Forest Service to evade Planning and NEPA regulatory requirements raised in this NEPA process covering recreational impacts due to the 2012 and now 2014 Decision regarding recreation on the upper Chattooga, an area which contains both public and private property.</p>	<p>See response #48, #107 and #109.</p>

R. Stephen Doughty, Representing Rust Family – October 27, 2014		
116.		
117.	<p>Impacts to the Affected Environment</p> <p>The Affected Environment for this EA includes private property held by the Rust Family. As documented by the South Carolina District Court, the Forest Service is not empowered to manage, and has not authority to manage, the private segments of the Chattooga WSR. By law, the public has no right to travel across private property. The location of the Rust Family property is within the designated Wild and Scenic River and within the upper Chattooga WSR at issue here. Despite this, the EA continues to include this private property, and now suggests that public recreation will occur on private property, a suggestion denied by the Forest Service in Federal Court. By acknowledging public use of private property is likely as a result of agency actions is not an assessment as to the direct, indirect and cumulative impacts such policy will have on the Rust Family or its property rights. The EA fails to consider the effects the Forest Service policy has had with respect to interference with the desired use of the private segment by the property owners.</p>	<p>See response #107 and 109. In addition, the 2014 EA does not authorize public recreation on private property and the scope is limited to providing boater access sites and designated trails at specific locations entirely on national forest system lands.</p>
118.		
119.	<p>The Forest Service Plan now suggests public use, fishing, hiking, boating, etc., would extend across the designated Wild and Scenic River including the private segment of the Chattooga. Such interference with an existing property right</p>	<p>See response #107 and 109.</p>

R. Stephen Doughty, Representing Rust Family – October 27, 2014		
	is in violation of Federal Law and contradicts the District Court Order which documented the Forest Service concession that it does not suggest use of private property and has no authority over private property, and that the capacity for public recreation on this private segment is zero. The Forest Service cannot institute a Plan in violation of Federal law, or in excess of statutory authority. The plan also fails to follow the Forest Service’s own planning process, and the executive orders established to prevent inverse condemnation.	
120.		
121.	<p>Fails to Offer More Reasonable Alternative</p> <p>By ignoring the potential impacts to property rights, the EA offered no reasonable alternative to avoid such impacts. The current EA concedes interference with private property is expected but provides no reasonable alternative for avoiding such impacts. Interference with private property could be simply avoided by moving boating downstream to a point where private property would not be affected. If boating were not allowed above Bull Pen Bridge over two miles of new trails would become unnecessary and increased impacts to the Chattooga Cliffs segment minimized. If boating were not allowed above Norton Mill Creek, interference with property rights could be avoided and the need for trails and maintenance on the uppermost boater access point could be avoided. Both of these alternatives would prevent</p>	<p>Please refer to the 2012 EA and to the Nantahala-Pisgah Forest Plan Amendment Section 1.7. The Nantahala Ranger District has 350 miles of trail, numerous trail heads, 750 miles of road, and 1,200 miles of public/private boundary. Trespass complaints over access to the forest are rare. When it occurs it is a matter of law between landowner and the trespasser. Due to the terrain, easy access to the Greens Creek trail head and location of the put-in well downstream of private property (700 feet) and the experience from the 2013 and 2014 paddling seasons, no trespass is expected. In addition, paddlers coming to this section are much more highly skilled and research their trip to a very high degree. Please refer also to response #11. In this case, the public is easily able to access national forest system lands from the trail head located along the state</p>

R. Stephen Doughty, Representing Rust Family – October 27, 2014		
	interference with private property and, as admitted by the Forest Service, impact only a handful of boaters who could simply initiate their trips a short distance downstream. Simply treating the Chattooga main stem above Norton Mill Creek as it treats the tributaries (which are of similar size) would also be consistent with the Forest Plan.	road.
122.		
123.	Egregiously, the Forest Service continues to permit boats to start from Greens Creek, while the Plan only considers how boaters will access the Chattooga a few hundred yards below Greens Creek. As admitted by the Forest Service, this encourages and will likely result in public use of private property. Simply maintaining the boating prohibition on the segment between Greens Creek (approximately 300 yards below the Rust Family property) would discourage public use of private property. Such a policy would not impact any ‘legal’ boating use of the Chattooga River. It is now clear the only possible rationale of the current boating policy will encourage public use of private property.	Please refer to response #121.
124.		
125.	The Boater Access assessment omits consideration of moving downstream the uppermost limit for where boating is permitted to the actual location of the boater access trail, in order to eliminate interference with the Rust Family property. Proposed alternatives which would move boaters downstream	Please refer to responses #11, #48 and #121. The scope of the decision is limited to boater put-ins and take-outs. The decision on where boating is permitted was already decided with the 2012 Decisions. As stated, the decision only applies to National Forest lands. The Forest Service does

R. Stephen Doughty, Representing Rust Family – October 27, 2014		
	<p>of Greens Creek to either Bull Pen Bridge or Norton Mill Creek were presented to the Forest Service and dismissed without regard to property rights interference. None of these alternatives were considered in the 2012 Assessment, nor considered in the recent EA. The recent Assessment again disregards the effects to existing property rights and ignores interference with the landowners' desired use of their property. The deficient EA ignores the requirements of the WSRA, NEPA, and the NFMA and turns a blind eye to the impacts the Forest Service Plan will have on the Rust Family and adjacent private property.</p>	<p>not expect boaters to paddle up stream during high flows in an effort to access private land.</p>
126.		
127.	<p>The Rust Family Requests a Meeting with the Chief of the Forest Service</p> <p>For ten years the Sumter Forest (SC) and Nantahala Forest (NC) have avoided addressing or even acknowledging private property issues created by Forest Service management Plans. Each local forest assessment asserts that the opposite Forest is responsible for management of the Chattooga Wild and Scenic River in North Carolina, and offer to the public contradicting interpretations of the Forest Plans. This decade long game of ping pong over property rights can only be resolved at an agency level with oversight over both the Sumter and Nantahala Forest Supervisors. As provided by 16 U.S.C. §1282, the Rust Family requests a meeting with the</p>	<p>This comment is not relevant to the decision to be made.</p>

R. Stephen Doughty, Representing Rust Family – October 27, 2014		
	Chief of the Forest Service to assist with resolution of this pressing matter without the need for litigation, or further use of judicial and private resources.	
128.		
129.	In 2007, the Kayak Lobby requested the Forest Service set policy which would result in harassment of private landowners. The Forest Service has in part complied with this request, with complete disregard for property rights. Forest Service policy has incited conflict between private property owners and the public by misrepresenting the scope of Forest Service authority, the Wild and Scenic Rivers Act, State law and by misinforming the recreating public through Plan Documents. This situation created by the Forest Service Plan needs to be addressed in order to prevent further conflict.	This comment is an introductory statement or represents an opinion.

Whiteside Cove Association – Michael Bamford – October 6, 2014		
130.	Thank you for providing the opportunity to review and comment on the <i>Upper Chattooga River Boating Access Environmental Assessment</i> (EA). It is disappointing that the published Assessment continues to ignore that a segment of the designated Chattooga Wild and Scenic River corridor is privately owned, and again fails to assure the Forest Plan does not interfere with existing property rights as legally required.	The 2014 EA does not authorize public recreation on private property and the scope is limited to providing boater access sites and designated trails at specific locations entirely on national forest system lands. The decision on where boating is permitted was already decided in the 2012 EA. Also, see response #107 and #109.
131.		
132.	As justification for ignoring all issues associated with recreational use on the private segment of the Chattooga River, the EA misrepresents to the public the District Court findings of Judge Mary Lewis. The EA misleadingly states the court found the previous agency Decision ‘complies with federal law’ (id 5), suggesting that all aspects of Federal laws were adjudicated during the Kayak Lobby’s lawsuit with the Forest Service. This false assertion is then used as the rationale for limiting the scope of the published EA.	See response #48 and #109.
133.		
134.	The SC District Court limited its’ findings to those issues raised and analyzed: “The court finds that the Forest Service’s 2012 Plan for Management of the Chattooga WSR complies with the federal law <u>as set forth and analyzed above.</u> ” (p.41 <i>Amended Order 7/30, CV# 8:09-2665-MGL</i>). While, the published EA misleadingly removes the phrase “ <u>as set forth and analyzed</u> ”; and asserts	See response #107 and #109.

Whiteside Cove Association – Michael Bamford – October 6, 2014

	<p><i>carte blanche</i> judicial approval as a basis for evading consideration for issues raised in this NEPA. During the 4th circuit appeal hearings on September 17th, Judge Robert King made clear that the ‘merits’ of Forest Watch issues raised were not adjudicated and are therefore still open for judicial review.¹ Similarly, issues raised by other parties -also aggrieved by the agency actions- have never been adjudicated. Importantly, the District Court never concluded the Forest Service complied with all aspects of Federal law involving private property rights within a WSR corridor. Rather the court found these issues not ripe for review within the context of the kayak lobby lawsuit, because the Forest Service conceded it does not and is not empowered to manage the privately owned segment for recreational use. The court also made clear the issue of property rights in the NEPA context would become ripe upon completion of the Boater Access Decision, which is now. (<i>Amended Order</i>, @34).</p>	
135.		
136.	<p>Further denigrating the Courts findings, the Forest Service cites the pre-amended Order in April –rather than the Amended Order on July 30th- as the basis for avoiding planning and assessment requirements. The Forest Service cannot ignore the existence of an <i>Amended Court Order</i> in which the Forest Service concedes they do not manage, and have no authority to manage, the Private Segment of the Chattooga WSR. (id@ 24)</p>	<p>The boater Access EA will be corrected to include:</p> <p>Amended Order and Opinion, 7/30/2013;</p> <p>and US Court of Appeals for the Fourth Circuit, No. 13-1960, 11/05/2014.</p>

Whiteside Cove Association – Michael Bamford – October 6, 2014		
		See responses #107 and #109.
137.		
138.	<p>In contradiction to having adjudicated agency compliance with ‘all federal laws’, Judge Mary Lewis ruled narrowly to <u>only</u> address those issues raised and analyzed within the scope of the Kayak lobby’s lawsuit. Judge Mary Lewis did not deny the due process rights owned all other aggrieved parties’ on different grounds brought to the court within the six-year window of statutory limitations. The Court found the scope of agency authority and property issues <u>not ripe</u> for judicial review within the kayak lobby’s litigation and dismissed claims made by the property owners without prejudice.(id @27,34). The court also precluded from judicial review issues raised by Forest Watch,(id@13), and did not rule on those issues not yet presented to the court for review. Therefore, the findings of the Federal Court provides no basis for the Forest Service to evade planning and NEPA regulatory requirements raised in this NEPA process regarding recreation policy on the upper Chattooga, an area which contains both pubic and <u>private property</u>.</p>	See response #136.
139.		
140.	As requested by the Forest Service in pleadings during the Kayak lobby lawsuit, the District court did to reach the	The 2014 EA tiers to the 2012 EA concerning impacts to

Whiteside Cove Association – Michael Bamford – October 6, 2014		
	<p>merits of the property rights issues raised, nor reviewed interference with the landowner’s desired use of their own property, nor did it find ripe the adequacy of the Environmental Assessment with respect to all potential deficiencies. The Court accepted the agency’s explanation that the assessment deficiency raised by Georgia Forest Watch and the Rust Family would be part of the ‘site-specific NEPA’ published here as the <i>Boating Access EA</i>.(id[@] 34). However, the EA contains no such assessment connecting the issue of boating to the issue of boating access, nor considers any indirect impacts to private property, nor the interference with the existing rights associated with the private segment. Under a false premise, the agency circumvents their own planning process and the NEPA mandates, by misrepresenting a Federal Court Order.</p>	<p>private property.</p> <p>The boater access sites being site-specifically evaluated in the 2014 EA were identified in Alternative 13A, page 39 of the 2012 EA.</p> <p>All boater access sites and trails proposed for designation are located on national forest system lands. These access sites will be the only sites permitted for launching boats into the Chattooga River once the decisions are made.</p> <p>See responses #107 and #109.</p>
141.		
142.	<p>In the published EA, the Forest Service completely ignores any direct or indirect affects related to boating in an assessment entitle <i>Chattooga River Boating Access</i>. Such avoidance of their own mandates is based solely upon the misrepresentation of a Federal Court Order as having approved through adjudication all aspects of the Agency 2012 Decision. Simply, the Forest Service previously convinced a Federal Court that any judicial review of interference with private property was premature, while the</p>	<p>See response #140.</p>

Whiteside Cove Association – Michael Bamford – October 6, 2014		
	recent EA presents the Decisions on boating as a <i>fait accompli</i> . Remarkably, the agency asserts this Chattooga Management Plan to have been adjudicated in compliance with all Federal Laws prior to any judicial review. By first misleading a Federal Judge, then misrepresenting the courts narrow finding to the public as a <i>carte blanche</i> judicial approval, the Forest Service attempts to circumvent <u>ever</u> having to conduct the required Assessment of the potential effects to the private segment, interference with landowner use of their property, and the effects on existing property rights.	
143.		
144.	The published EA omits the Forest Service concession to the District Court that it does not, and is not empowered to, manage boating, or any form of recreation, over privately held segments of the Chattooga WSR. (id @24). The EA fails to address the kayak lobby’s demands that the Forest Service permit boating through	The 2014 EA tiers to the 2012 EA that includes a discussion on private land concerns (pages 13 and 45). See responses #107 and #109.
145.		
146.	private property, by omitting the lack of such Forest Service authority over the private segments of the Chattooga. The agency instead asserts the Chattooga WSR (as a whole) is under the management of the Forest Service, both private and public segments. This assertion is presented without basis. The Forest Service contradict	See response 144.

Whiteside Cove Association – Michael Bamford – October 6, 2014

	<p>their own concessions to the District Court that the management provisions under the WSR Act do not pertain to segments in private ownership. Whatever WSR obligation or discretion the Forest Service has over public property within a designated WSR corridor, such discretionary authority does not apply to the segments privately held. Federal jurisdiction cannot be based on a presumption which blatantly contradicts federal law. Further, Congress specifically prevented the Forest Service from interfering with property rights within a designated the Wild and Scenic River corridor, therefore the Forest Service are prevented from inventorying private property as available for public recreation. The limits of agency authority and discretion within the designated Chattooga WSR exclude privately owned segments. As written, the EA presumes agency jurisdiction in excess of delegated statutory authority, and/or makes some illegal claim of property title against vested title in an attempt to nullify property rights.</p>	
147.		
148.	<p>Had the Forest Service expended a fraction of the resources objectively conducting the necessary assessment it spent on avoiding this issue, these property issues could have easily been settled a decade ago. Instead the Forest Service set policy to placate the litigious Kayak lobby, and deceive a federal court. This while ignoring all others affected by their management policy. Only by clearly defining the agency actions, mapping the Forest Service boundary, and providing the rationale for such actions as required by law; would the</p>	<p>This comment represents an opinion.</p>

Whiteside Cove Association – Michael Bamford – October 6, 2014		
	Forest Plans be in compliance with federal law. Under the US constitution, the Forest Service must provide this information to both the public and the court in order that any agency action which impacts basic rights, liberties or interests can be judicially challenged and transparently adjudicated. Through ambiguity in the published Plans, and inconsistency between the proposed Nantahala and Sumter Plans across the same segments of the designated Chattooga WSR, the agency creates a legal quagmire which has wasted millions of dollars in agency resources, judicial resources and those resources of stakeholders aggrieved by the agency in-actions.	
149.		
150.	The SC District Court did not adjudicate all aspects of the previous agency Decision, nor did the Court release the agency from meeting its' future Planning regulatory requirements here. Attempts by the agency to circumvent their own planning and NEPA requirements through an erroneous interpretation of a Federal Court Order fails to meet their own requirements.	See response #136.
151.		
152.	By ignoring the <i>Amended</i> Federal Court Order on July 30 th , and only citing the redacted Court Order, the <i>Chattooga River Boating Access Environmental Assessment</i> (EA) attempts to circumvent any planning and assessment mandates. The Court Order never granted the USFS license to evade any consideration of affects to private property or the associated interests. Property issues are not perpetually unripe for judicial	See responses #107, #109 and #136.

Whiteside Cove Association – Michael Bamford – October 6, 2014		
	review and effects to private property are no longer ‘speculative’ based upon the public record presented in this NEPA. The Forest Service Actions in this assessment makes a mockery of their own planning requirements, violates numerous federal laws protecting private property and landowner rights, and importantly misrepresents the findings of the Court in order to shirk its’ regulatory responsibilities.	
153.		
154.	We again ask the Forest Service to restrain from establishing policy that circumvents regulatory requirements, and knowingly interferes with property rights in violation of Federal Law. Because the area of dispute is primarily within the uppermost Chattooga Cliffs Segment, we propose the USFS restrain itself from taking actions to designate boater access trails, and Stay any Decision to allow any boating on the three miles segment above Bull Pen Bridge, until the property disputes raised here by Forest Service Actions <u>are</u> resolved either administratively, or by a court of law. Such a policy would allow the remaining 14 of the 21.8 miles of the upper Chattooga to remain open for boating, until all property related issues are resolved. Alternatively, the USFS could modify its’ Forest Plans <u>now</u> so that they do not interfere with property owner rights or the desired uses of private property by the property owners.	<p>The 2012 Decision Notices established which sections of the river were available for boating. The 2014 EA proposes a boater access site at Greens Creek approximately 700 feet downstream from private property.</p> <p>See response #109.</p>
155.		
156.	Forest Service policy has incited confrontation between property owners and the recreating public; this situation has become volatile and needs to be addressed. Shirking	This issue is outside of the scope of the project. The USFS does not encourage trespass on private lands.

Whiteside Cove Association – Michael Bamford – October 6, 2014		
	<p>planning mandates based upon the misrepresentation of a Federal Court Order fails to comply with the ‘hard look’ NEPA mandates required here.</p>	<p>See responses #109 and #136.</p>

Whiteside Cove Association (2 nd letter) – Michael Bamford – October 28, 2014		
157.	<p>The Association add the following comments to the recent scooping EA..</p> <p>The association request the agency change the location as to where boating is permitted to start further downstream of Greens Creek. Such a change in policy will both reduce impacts to the resource as well as discourage public use of private property. The facts in the record support such a Decision. Also, see map attached</p>	See response #154.
158.		
159.	<p>I: Adding Access Will Increase Resource Impacts.</p> <p>For 40 years the USFS has protected the upper segment of the Chattooga Wild and Scenic River through trail and old road closures. The 1985 Forest Plan documented that the 1976 trail closures prevented easy access to the river but had reduced recreational impacts to the resource. The scooping EA contradicts these previous Forest Service findings -and forecasts without basis- that additional access will reduce impacts to the resource. The 1985 Forest Plan documented improvements to the resource as a result of closing old roads and easy access to the River. The documented beneficial River management policy which had reduced resource impacts through access closures is now being replaced under the pretense that additional access will reduce impacts along the Chattooga resource. The assumption that increased access will protect the resource is unsupported by the record.</p>	The 2012 EA and 2012 Decisions establish new management direction for the upper segment of the Chattooga Wild and Scenic River. The 2014 EA is a site-specific analysis of the impacts of one aspect of that new management direction. Also, see response #48.

Whiteside Cove Association (2 nd letter) – Michael Bamford – October 28, 2014		
160.		
161.	<p>The 2012 EA to which this EA is based was premised upon a net reduction of designated and user created trails offsetting the increase in trails to accommodate boaters (both at access sites and at portages). The trail closures and redesign was never done and instead the 2014 scoping EA ignores this need to redesign the site-specific trails. Under the 2012 Plan and this scoping EA, access trails and recreational impacts are projected to proliferate as new user types create new trails to gain greater access (or portage along) the Chattooga. The 2007 Biological assessment and subsequent EA's have been premised upon mitigation action whereby overall impacts would be reduced in order to meet the administrative obligation to protect resource impacts over protecting recreational use. 16 USC 1281(a). The 2014 has not decreased the number of trails, campsites, but instead has increased the number of trails and overall ease of access to more remote areas within the designated Wild and Scenic River corridor. Because over 1.5 miles of boater access trails are being proposed above Bull Pen Bridge in the North Carolina, simply moving boating downstream to below the Bridge would eliminate these trails. Such a proposal of changing where boaters are allowed was never considered.</p>	<p>This comment is an introductory statement. Also, a broad range of alternatives were considered in the 2012 EA (Chapter 2). See response # 154.</p>
162.		
163.	<p>II: Fishing Flow Levels: The data within the record for the 2012 EA does not support the Forest Service claim that fishing is unlikely during</p>	<p>This decision was already made in the 2012 Decision Notices and is supported by an environmental assessment, <i>Managing Recreation Uses in the Upper Segment of the</i></p>

Whiteside Cove Association (2 nd letter) – Michael Bamford – October 28, 2014		
	<p>boatable flows. The USFS own findings in the 2007 Recreational Flow Study documented that acceptable flow levels for fishing and boating “significantly overlap”. The 2004 Sumter FEIS documented that fishing remained popular up until 2000cfs, and did not “drop off” until flows were above the 97 percentile.(see Appendix H). The Whiteside Cove presented the USFS with 60 years worth of data which shows fishing remains popular in North Carolina segment throughout the 99% of high water flows. For this EA to assert fishing during boatable flows is unlikely, has no basis in fact and disparages the extensive record. Such an assertion is not based upon the collected recreational usage data, or the Forest Service own Plan Documents. Such an assertion within a Plan Document should be corrected in order to accurately present facts which may be used in the future for adoptive management decisions.</p>	<p><i>Chattooga Wild and Scenic River Corridor</i>, January 2012, and is outside the scope of this analysis.</p> <p>The 2012 and 2014 EAs are informed by Whittaker and Shelby 2007 report, <i>Capacity and Conflict on the Upper Chattooga River</i>.</p>
164.		
165.	<p>Moving boating further downstream to Bull Pen Bridge would protect a few miles of the Chattooga main-stem (classified as NC Trout waters) available for NC anglers looking to also enjoy a public section of the Chattooga without boater disturbances. Such a policy would prevent anglers from having to move to smaller more delicate tributaries in order to avoid boating created disturbances. Protecting the smaller tributaries is aligned with the 2014 strategy to prevent recreational impacts on smaller stream segments.</p>	<p>This decision was already made in the 2012 Decision Notices and is outside the scope of this analysis. Please refer to the user conflict analysis presented in section 3.2.1 and Appendix D of the 2012 EA. See response #154.</p>
166.		
167.	<p>III: No Alternative Avoids Interference with Property Rights.</p>	<p>Please refer to responses #121 and #154.</p>

Whiteside Cove Association (2nd letter) – Michael Bamford – October 28, 2014

The effects of the 2012 Decision -and now the 2014 boater access EA- onto adjacent private property are ignored; therefore, no alternative that would mitigate interference with the adjacent to private property was ever considered. The 2014 EA, again offers no reasonable alternative that would discourage public use of private property, and specifically inventories private property as available for public use. Moving the start of the boatable section of the Chattooga downstream to Bull Pen Bridge would certainly avoid interference with the Private Segment and associated property rights. Continuing the boating prohibition above Norton Mill Creek would similarly avoid interference with property rights. Even continuing the prohibition starting 400 yards below Greens Creek, would avoid inciting public use of private property. Because the Forest Service failed to consider the negative impacts to property rights -and private use of the Private segment- the Forest Service failed to consider any reasonable alternative that would have avoided such effects on private land use or the associated property rights.

Robert L. Alexander – October 8, 2014		
168.	<p>RE: Chattooga River Boating Access: Appeal- 218.24(B) (6).</p> <p>I find very little evidence of what is presented as actually "an on the ground review" within the EA. Statements are made that various projects were Initiated and perhaps they were; however; there is no listed substantial evidence as to verification in defense of some of the actions considered.</p>	This comment is not relevant to the decision to be made.
169.		
170.	<p>36 CFR 219.5(a)(4) the forest Service is to develop a broad range of alternatives which identify the benefits and costs of land and resource management. The way I read the EA there are only two (2) alternatives and this is not a "broad range11 • And, there are no financial entities presented as to the costs for implementing the EA.</p>	<p>This decision was already made in the 2012 Decision Notices and is supported by the environmental assessment, <i>Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor, January 2012.</i></p> <p>Costs are disclosed on page 105 of the 2014 EA.</p> <p>See response #48.</p>
171.		
172.	<p>36 CFR 219.5(4) (b) The Forest Service has presented much redundant information but has not presented to the Public, "diverse specialized areas of professional and technical knowledge applicable to the planning areas as it applies to expertise in ... "scientific" information to defend its position within the confines of the EA. There are many words but very little in the way of a presentation of "scientific" information in the EA to go along with its decisions. The Forest Service</p>	<p>Public involvement is described in Section 1.5 of the 2012 EA where it describes the three initial public meetings, open houses and other ways that the USFS engaged in public outreach.</p>

Robert L. Alexander – October 8, 2014

	<p>did well in the area of MIS and various Sensitive, Threatened and Endangered species but did not provide information in many other areas. Redundancy comes in the form of “past, present and foreseeable” statements with no scientific evidences presented as to how the conclusions were reached. Only pure speculation is presented. There are other similar statements throughout the EA with no scientific evidence presented to substantiate the decisions made. 40 CFR 1502.1, "statements shall be concise, clear, and to the point, and shall be supported by evidence that the agency has made the necessary environmental analyses; 40 CFR 1502 .16. The Forest Service is to, "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public. "</p>	<p>The 2014 EA tiers to the 2012 EA and references cited are provided in both EAs. In addition, a project record exists for both EAs that provide additional support information.</p>
173.	<p>There is just to much speculation and personal observation presented in the EA with no evidence presented to comply with Laws and Regulations. Opinion is presented as a viable substitute for scientific information and this is in violation of the 36 CFR's and the 40 CFR's; also 16 USC 1604 Sec. 6(d).</p>	<p>The techniques and methodologies used in this analysis consider current and accurate science. The analysis includes a summary of the credible scientific evidence which is relevant to evaluating reasonably foreseeable impacts. The analysis also identifies methods used and references scientific sources relied on. When appropriate, the conclusions are based on the scientific analysis that shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information. Literature reviewed and considered by specialists in the analyses is listed in References Section.</p>

Robert L. Alexander – October 8, 2014		
		See response #172.
174.		
175.	<p>As stated in the EA, Boating was permissible as early as 2012 into 2014 on the upper Chattooga River: page 2(b) boating, of the EA and page 21, 3.2, 3.2.1, Outstanding Remarkable Values ((ORVs Affected Values)). This allowance is in direct violation of 40 CFR 1500.1(b) "NEPA procedures must insure that environmental information is available to public officials and Citizens before decisions are made and before actions are taken... Since the EA did not come out until on/or about September 29, 2014, the Forest Service authorized unlawful boating access to the Chattooga river. Since the unlawful acts were authorized, the EA is null and void; the Forest Service cannot lawfully justify a good intent or action while committing a known infraction of the law; 36 CFR 219.27 (a) (7) also, which deals with "Prior" information; also, 40 CFR 1502(f), 1506.1(c) (3), 1508.8.18(b) (4), 1508.7, 8, and 1508.27b. Because of Forest Service actions NEPA was violated pursuant to unlawful deeds by Forest Service personnel. The Forest Service has prejudiced the decision making process and prejudiced the consideration of (my) appeal. The EA must be thrown out and the boaters must cease and desist immediately. The Forest Service is responsible to maintain the law.</p>	<p>The 2012 Decisions (signed January 31, 2012) permitted boating during an interim basis. The following is excerpted from the 2012 Decisions:</p> <p>1. Require boaters to start or complete their trip only at specific boater put-ins and takeouts, which will be designated after site-specific NEPA analysis and will be a condition of the self-registration boating permit. In the interim, require boaters to start or complete their trip only at existing trails at the following locations:</p> <ul style="list-style-type: none"> a) Within one-quarter mile downstream of the Green Creek confluence; b) Within 500 feet of the Norton Mill Creek confluence; c) Within one-quarter mile of Bullpen Bridge; d) Within one-quarter mile of Burrells Ford Bridge; and e) Within one-quarter mile downstream of the Lick Log Creek

Robert L. Alexander – October 8, 2014		
		confluence.
176.		
177.	In addition the implementation of boating practices and activities on the Chattooga River (Chattooga River Boating EA that is being appealed) is injurious to me as a concerned citizen (and various other parties) because it allows an irretrievable commitment of resources. The decision to go ahead with the activities (the permitting of unlawful boating) indicates that the Forest Service 's inertia will prejudice the meaningful review of my appeal. Therefore I request that all management activities be stayed as the (my) appeal is undergoing review and that the Forest Service throw out the present Chattooga River Boating Access EA and consider it null and void immediately.	The 2012 Decisions informed by the 2012 EA is beyond the scope of the current decision to be made. Please refer to response #109.
178.		
179.	36 CFR 219.27 (a)(4). "Conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land." I am familiar with the Burrells Ford area dating back to the 1950's. There has been a great unwelcome change there. The area around the bridge and below was one of deep holes, that is, over 10' deep, with long rock ledges. Trout lived in this area that exceeded 24 inches. These entities are non-existent at the present time. In fact the river was full of sand; and, one could wade easily in these areas the last time I fished that area of the River. The Burrell' s Ford Road was a major factor in the degrading of the River and the Forest Service used their "Best Management Practices". I expect your "Best Management Practices" to fall by the way side and the River, and it's banks, to end up	Section 3.4.1 and 3.4.2 of the 2012 EA analyzed the environmental effects on soil erosion and sedimentation. Erosion and sediment originating from user-created trails and campsites, as well as areas with chronic erosion, are minor when compared to chief contributors such as existing roads, bridges and parking lots (Van Lear et al., 1995, cited in the 2012 EA).

Robert L. Alexander – October 8, 2014		
	desecrated. Example: the West Fork of the Chattooga river from Warwoman Road to the first bridge over the River on Overflow Road. Regardless of "Best Management Practices" the Forest Service has not enough manpower to keep vegetation and The River bank from being ruined.	
180.		
181.	Page 76, Boater Put-ins and Take-out Access Sites: The soil impacts will only get worse because the general public does not care about conservation; and, they will do pretty much what they want to. The River is already inundated with red, yellow, green, blue rocks where the canoes slide over them. This will only get worse and cause more of a "scenic" degradation.	Section 3.4.1 of the 2012 EA analyzed the environmental effects on soil erosion and sedimentation. Erosion and sediment originating from user-created trails and campsites, as well as areas with chronic erosion, are minor when compared to chief contributors such as existing roads, bridges and parking lots (Van Lear et al., 1995, cited in the 2012 EA).
182.		
183.	36 CFR 219.6(g): Any notice requesting written comments on regional planning shall allow at least 60 calendar days for response ... The EA has only listed 30 days.	This EA is under regulations set at 36 CFR 218 subparts A and B as stated in the July 24, 2013 scoping letter.
184.		
185.	No mention was presented as to who was to pay persons hurt or lost on the Chattooga River. should be billed for all expenses. for the rescue of boaters or persons hurt or lost on the Chattooga River. I believe the people rescued should be billed for all expenses	This comment is not relevant to the decision to be made.
186.		
187.	40 CFR 1500.2(c): Each agency shall: study, develop and	The 2012 EA includes a discussion of conflicts as does the

Robert L. Alexander – October 8, 2014		
	describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources as provided by section 102(2) (c) of the act. There are plenty of "unresolved conflicts" between fishermen, aesthetic enthusiasts, and boaters concerning the upper River use.	Whittaker and Shelby 2007 report, <i>Capacity and Conflict on the Upper Chattooga River</i> . The 2014 EA is tiered to the 2012 EA. Please see response #26 regarding tiering and response #48 regarding programmatic NEPA documents.
188.		
189.	All pertinent information must have been gathered within the past 6 months and that appears to be not totally the case with the Chattooga River Boating EA.	See response #187. Information for the 2014 EA relies on information from various resource professionals and includes field visits for surveys and monitoring to inform site-specific effects analysis completed for the 2014 EA. Resource professionals also relied on data and analysis completed in the 2012 EA.
190.		
191.	Fishing for Trout: Prior to about the mid 1980's Trout were still in abundance in the Chattooga River. After this era The Georgia State Game and Fish Commission found that because the Trout had disappeared, there was no longer a need to purchase a Trout Stamp below the confluence of Warwoman Creek. The only large projects to affect the River were the Clear cutting, Seed tree, and Shelter wood cutting, road construction, etc., in the watersheds. These projects were in accord with Forest Service "Best Management Practices with "no adverse affects" . Some years ago I took the temperature at the confluence of the West prong (Overflow)and the main confluence of the Chattooga River and found it to be 75 degrees. I have no confidence in the abilities of the Forest Service to be able to maintain the	This comment represents an opinion.

Robert L. Alexander – October 8, 2014		
	Chattooga River as a scenic, multiuse entity, especially with boating; it has not done so effectively yet.	
192.	There has been very little mentioned concerning the Clean Drinking Water Act that I noticed. In the old days when we got thirsty; we just drank out of the River. Can that be safely done now? The answer is No! Boating on the upper Chattooga River will not enhance the water quality.	This comment represents an opinion. Effects to water quality are addressed in section 3.3.2 of the 2014 EA.
193.	Georgia has a law concerning the development of land along Trout streams. The Forest Service did not mention compliance with Georgia law. The Forest Service in 36 CFR 219.27(e) states that, "Special attention shall be given to land and vegetation for approximately 100 feet from the edges of all perennial streams ... Within a few years after the implementation of this EA the river banks will be trampled.	The USFS 2012 Decision Notice is consistent with all the Forest Plans (SC, NC and GA) and all the key laws, regulations and requirements. The 2014 EA addresses water quality, soils, wetlands, floodplains and riparian corridors and other vegetation in sections 3.3.2, 3.4.1, 3.4.2 and 3.5, respectively.
194.	Due to the magnitude of the decisions being made the Forest Service should have prepared an EIS instead of an EA. 40 CFR 1502.1 ...supported by evidence: 1502.14, 15, 16.	This comment is not relevant to the decision to be made. The 2012 Decision Notices also include a Finding of No Significant Impact relative to the ten CEQ significance factors (CFR 40,1508.27).
195.	There was no mention of the Ospreys along the Chattooga river. I have seen them numerous times both way below and above the Hwy 28 bridge. Surely, they have a listed status as I never saw any from the 1940's until the 1990's. I see these during the summer months.	Migratory birds considered in analysis are listed on page 55 of the 2014 EA with and explanation of why some birds were not further evaluated.
196.	Also, did you know that there is an Albino Copperhead snake living along the Chattooga River? I saw it and my grandson with me saw it. Is this unusual snake protected? We did not harm the snake.	This comment is not relevant to the decision to be made. Table 3.2.2B-2, Table 3.2.2B-3, Table 3.2.2B-4 and Table 3.2.2B-5, pages 39-51 of the 2014 EA provide information on the species evaluated. Threatened, endangered and sensitive species were addressed in the Biological

Robert L. Alexander – October 8, 2014		
		Assessment/Biological Evaluation signed on October 3, 2014.
197.	The Migratory Bird Treaty Act 16 USC 703: even a Crow is considered a migratory Bird and I did not notice its inclusion.	See response #195.
198.		
199.	In conclusion, we ask the USFS to treat the main-stem of the Chattooga above Bull Pen Bridge –or at least above Norton Mill Creek- as a tributary where boating would remain prohibited. Such a policy would avoid increased impacts to the most ecologically sensitive segment of the resource, reduce angler disturbance in North Carolina, eliminate interference with property rights, and would be consistent with the 2012 Decision to keep the more narrow streams (i.e. tributaries) boat-free and protected from associated recreational impacts.	The upper segments of the river available for boating have already been determined based on the 2012 Decisions and information presented in the 2012 EA. This is beyond the scope of the 2014 EA.

Bill Floyd – November 5, 2014

200.	<p>Ladies and Gentlemen:</p> <p>These remarks and exhibits respond to the Forest Service’s request for comments on the Chattooga River Boating Access Environmental Assessment, which was published for the Nantahala National Forest in the publication of record, the Franklin Press, on October 8, 2014. These comments are timely filed in compliance with the Administrative Procedures Act.</p> <p>Since 1978, I have frequently visited and enjoyed the esthetic sense of solitude and wilderness type scenery that characterizes the river from Ellicott Rock to the Greens Creek Cemetery off Whiteside Cove Road. Unlike the West Fork or Three Forks area in North Georgia, or all the other ragged out places on the river from Earls Ford to Woodall Shoals and beyond, this area of the Chattooga remains relatively pristine.</p> <p>In order to prevent degradation of the esthetic, scenic and water quality associated with this part of the Chattooga River corridor, the Forest Service should abandon its ill-conceived proposal to build new trails for boaters. Such trails would be duplicative and over accommodating, as the existing Chattooga River trail already provides sufficient access for all recreational users.</p> <p>The agency has not based its decision on a the relevant</p>	<p>The environmental assessment, <i>Managing Recreational Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor</i> (2012 EA), and Decision Notices signed on January 31, 2012 (2012 Decisions), established river reaches, flow levels and times when boating could take place in the upper segment of the Chattooga River.</p> <p>The 2014 EA discloses effects to natural resources from trail construction and boater access sites. Trails can be constructed and maintained consistent with current Forest Plan direction including the amendments signed in the 2012 Decisions. The effects on resources were evaluated and disclosed in the 2014 EA (pages 18-109).</p>
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Bill Floyd – November 5, 2014		
	<p>factors, has not articulated a rational connection between the facts found and the reasons for its decision made, and is making a clear error in judgment. There is no reason for constructing the proposed trails other than to cater to the litigious demands of the boating lobby.</p> <p>Please incorporate my comments attached hereto to the administrative record. I would appreciate your adding my email address to your mailing list.</p>	
201.		
202.	<p>If the Forest Service proceeds with construction of the proposed new recreation trails in the upper Chattooga Cliffs reach, the Forest Service will do so by administrative sleight of hand and legal gymnastics while ignoring its responsibilities under the Wild And Scenic Rivers Act, (“WSRA”) and the National Forest Management Act 16 U.S.C. §1600 et al.</p>	<p>Both the 2012 EA and 2014 EA are consistent with the Wild and Scenic Rivers Act and the National Forest Management Act. Both EAs contain a detailed analysis of the effects to the Chattooga’s free flow condition, water quality and the Outstandingly Remarkable Values. Also, refer to the following court opinions: Civil Action No.: 8:09-2665-MGL, Amended Order and Opinion, 7/30/2013 and US Court of Appeals for the Fourth Circuit, No. 13-1960, 11/05/2014.</p>
203.		
204.	<p>Moving forward with the proposed Greens Creek trail and the proposed Bull Pen bridge trail would violate the Forest Service’s protect and enhance responsibilities set forth in the Wild And Scenic Rivers Act. It would also violate the best scientific evidence standard of the Forest Management Rule</p>	<p>The programmatic decisions covering the construction of the proposed trails and access points in the 2012 Decision Notices (supported by the January 2012 environmental assessment entitled <i>Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor</i>) are in conformance with the “protect and</p>

Bill Floyd – November 5, 2014		
	adopted in March 2012. 36 CFR 219 et al.	enhance” mandate of the Wild and Scenic Rivers Act. Similarly, the ORV and Other River Values sections in Chapter 3 of the September 2014 <i>Chattooga River Boating Access</i> environmental assessment (pp. 21-72) show site-specifically how the construction of the proposed trails and access points are also in conformance with the Wild and Scenic Rivers Act. Finally, the best available scientific information (BASI) was used in both the January 2012 Decision Notices and their supporting environmental assessment, as well as in the September 2014 environmental assessment.
205.		
206.	Congress passed the Wild and Scenic Rivers Act by announcing the following policy: “It is hereby declaredthat certain selected riverswith their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values,and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.” 16 U.S.C. §1271 (emphasis added).In announcing this public policy purpose for Wild and Scenic Rivers designation, Congress offered this non-exhaustive list of the types of characteristics that would qualify as an outstandingly remarkable value or ORV. Rivers seeking designation as a Wild and Scenic River must possess at least one of these ORVs that can be cataloged at the time of	See response #202.

Bill Floyd – November 5, 2014		
	designation. After designation as a Wild and Scenic River, the policy makes clear that these ORVs must be preserved and enhanced for the benefit of future generations---not just the current generation.	
207.		
208.	Congress also offered instructions how to manage these ORVs when they are in conflict. “Each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its esthetic, scenic, historic, archeologic, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area.” 16 U.S.C. §1281(a) (emphasis added).	See response #202.
209.		
210.	Congress mandated that forest management plans must give prioritized emphasis to protecting and enhancing five special categories of ORVs: (1) esthetic, (2) scenic, (3) historic, (4) archeologic, and (5) scientific features of the river.	See response #202.

Bill Floyd – November 5, 2014		
211.		
212.	Congress chose the imperative “shall” as opposed to the precatory word “may” or “should”. This word choice demonstrates the Forest Service must develop management plans for Wild and Scenic Rivers that prioritize and elevate the protection and enhancement of these five enumerated categories of values.	See response #202.
213.		
214.	In stark contrast, although listed in the policy declaration, the recreational ORV was specifically left out of this list of five ORVs to be prioritized for special enhancement and special protection by the Forest Service.	See response #202.
215.		
216.	Hence, management of recreational uses (such as building boating put-in trails or infrastructure tailored to any particular recreational use) must remain subordinate in level of importance compared to the enhancement, preservation, and protection, of these five special categories of ORVs: (1) esthetic, (scenic) (3) historic, (4) archeologic, (5) scientific. This makes perfect sense. In contrast to recreational pursuits which may have other physical locations where they can be pursued, these five ORVs constitute the “special attributes” of the Chattooga. They constitute the unique physical flesh and bones, and soul of the river, which cannot be replaced or	See response #202.

Bill Floyd – November 5, 2014		
	substituted if allowed to be broken or destroyed. Once these values are diminished or degraded they are gone forever. These values are both concrete and intangible. The true intended beneficiaries of this mandate to provide enhanced protection for these five types of ORVs are the future generations who would be denied the opportunity to appreciate and experience the esthetic, scenic, historic, archeologic and scientific features of the Chattooga if these five values were not prioritized and instead were allowed to be diminished or even destroyed while accommodating secondary values such as recreational hobbies.	
217.		
218.	In short, the Forest Service must not elevate the enhancement of recreational pursuits at the expense of these five categories of values. That makes sense. After all, the enabling statute was popularly named the Wild And Scenic Rivers Act, and not the Boater's Playground Act.	See response #202.
219.		
220.	Whitewater paddling, in and of itself, does not fall within one of these five special categories of ORVs deserving of special protection. In fact, despite the boating lobby's claims, in July 2013, the South Carolina District Court made clear that whitewater paddling does not constitute an ORV in and of itself. Instead, the Court held that ".....contrary to American Whitewater's arguments,recreation, not whitewater	See response #202.

Bill Floyd – November 5, 2014		
	floating, is the protected ORV and that fishing, whitewater canoeing, hiking, and camping are alltypes of recreation that can take place on the river.” American Whitewater v. Tidwell, 959 F. Supp 2nd 839, 852 (D.S.C. July 30, 2013).	
221.		
222.	Under the Wild and Scenic Rivers Act, the Forest Service has neither the duty, nor the right, to construct and designate new recreational trails, including boater portage trails, on the Chattooga Cliffs reach if such actions will either directly or indirectly degrade or diminish any of these five specifically enumerated ORVs.	This decision was already made in the 2012 Decision Notices and is supported by an environmental assessment, <i>Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor</i> , January 2012, and is outside the scope of this analysis.
223.		
224.	The statute does not speak about balancing recreational interests against these five special categories of ORVs. Rather, the statute makes clear that when the enhancement of a recreational interest conflicts with or adversely impacts one of these five special categories, it is the recreational interest that must sacrifice----and not the other way around.	See response #202.
225.		
226.	Water quality and the esthetic of solitude and wilderness are ORVs that must be enhanced and defended over all other competing ORVs, (including recreational ORVs).	See response #202.

Bill Floyd – November 5, 2014		
	Unfortunately, if the Forest Service pushes forward this plan to build unnecessary new trails for boaters, it will be violating this mandate.	
227.		
228.	In its January 2102 Environmental Assessment (published to support its Finding of No Significant Impact in allowing boating on the Chattooga Cliffs reach), the Forest Service indicated that the state of North Carolina has responsibility for monitoring water quality in the Chattooga River. P. 261 Environmental Assessment, Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor, (January 2012)(hereafter referred to as the “2012 EA’). The Forest Service went on to report, accurately, that per the North Carolina Division of Water Quality, the Chattooga River in North Carolina constitutes an outstanding resource water (ORW) with a supplemental classification of Class B trout water capable of supporting wild trout propagation. See P. 299 Environmental Assessment, Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor, (January 2012)(hereafter referred to as the “2012 EA’).	This comment provides background information.
229.		
230.	By referencing North Carolina’s §305(b) report, the Forest Service implied that the water quality was excellent and not	The environmental assessment, <i>Managing Recreational Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor</i> discloses that the selected alternative

Bill Floyd – November 5, 2014		
	impaired in any way over its entire length in North Carolina.	<p>will “continue to meet the eligibility criteria for the “Wild River” designation and continue to be protected .” (page 268)</p> <p><i>The Chattooga River Boating Access Environmental Assessment</i> discloses the effects of the proposed action (alternative 2) on water quality (Boater Access EA page 71).</p>
231.		
232.	<p>In addressing the river’s water quality in North Carolina, the Forest Service explained that “[u]nder the Clean Water Act, each state is required to publish a 305(b) report that summarizes water quality conditions for state waters. If the stream does not have high enough water quality to meet its designated beneficial uses, it is listed as not supporting or impaired based on the presence of certain pollutants. Streams that are not supporting their designated beneficial uses are added to the state’s 303(d) list of impaired streams.”</p> <p>P. 261 , Environmental Assessment, Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor, (January 2012)(hereafter referred to as the “2012 EA’).</p>	This comment provides background information.
233.		

Bill Floyd – November 5, 2014

234.	<p>Because the Chattooga did not appear on the 2010 North Carolina §303(d) list, the Forest Service concluded that the North Carolina segment of the Chattooga was not impaired by either sediment or any other pollutant. Id. at p. 261. This assertion of water quality was based on a report that was already stale by two years by the time the 2012 EA was published. The Forest Service made this broad generalization even though it knew that sediment had been a pollutant of concern on the river in the past in various places. Id. at p.261.</p>	<p>The <i>Chattooga River Boating Access Environmental Assessment</i> discloses the effects of the proposed action (alternative 2) on water quality (EA pages 68-72). Page 69 of the Boater Access EA discloses sediment impacts on the Chattooga River,</p> <p>Sediment is the primary pollutant of concern in forested watersheds in the Southeast (Coats and Miller, 1981); this area is no exception. Excess fine sediment in stream systems fills interstitial space between larger rocks and reduces the amount of available fish and macroinvertebrate habitat. Many of the streams in the Chattooga WSR watershed have excess stored sediment from past land management activities as well as the high erosive potential of micaceous soils in the region (Van Lear et al., 1995).</p> <p>Unpaved dirt and gravel roads with fine aggregate surfacing and roads with poor surface drainage are the primary contributors to stream sedimentation in the Chattooga WSR watershed (Van Lear et al., 1995). Another source of sediment comes</p>
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Bill Floyd – November 5, 2014		
		<p>from recreation sites and user-created recreation areas. Managing recreation impacts can reduce sedimentation and improve overall water quality. Recreation uses have increased since 1995; therefore, recreation impacts from existing users to water quality in the Chattooga WSR watershed are likely higher today. Managing impacts from these uses can improve water quality in the Chattooga WSR watershed.</p> <p>The proposed action would designate sustainable trails that would reduce impacts to water quality from sediment.</p>
235.		
236.	<p>More recently, in September 2014, the Forest Service published another Environmental Assessment. As before, the Forest Service concluded that the entire length of the river in North Carolina is supporting its designated beneficial uses. It reached this conclusion because the Chattooga was not on the §303(d) list prepared two years earlier in 2012. See page 70, Environmental Assessment, Chattooga River Boating Access, (USFS September 26, 2014) (the “2014 Boater’s Trail EA”).</p>	<p>Under the terms of the Federal Water Pollution Control Act Amendments of 1972, the Clean Water Act of 1977 and the Water Quality Act of 1987 (collectively now commonly referred to as the Clean Water Act), the states reserved the autonomy to monitor, assess, and classify surface waters. By utilizing state classification, the Forest Service is utilizing the best available science and employing official Clean Water Act standards.</p> <p>Water quality was evaluated in section 3.3.2 (pages 261 – 268) of the 2012 EA and 3.3.2 (pages 68 – 72) of the 2014</p>

Bill Floyd – November 5, 2014		
		EA.
237.		
238.	The Forest Service’s willingness to make such broad characterization of the river’s water quality is troubling because it was neither based on nor verified by any field research by the Forest Service. Instead the Forest Service relied solely on the general water quality classifications appended to the Chattooga by the North Carolina Division of Water Resources.	Please refer to response #236.
239.	This unquestioning reliance on North Carolina’s §305(b) report is troubling because the Forest Service is required to apply the best science available in managing a Wild and Scenic River Corridor. 36 CFR §219.3. The Forest Service has not employed the best science available in managing the Chattooga for water quality concerns---because it has not done any scientific investigation of the river’s water quality to substantiate the validity of a report prepared by a North Carolina agency that has no responsibility for managing the resource.	Please refer to response #236.
240.		
241.	The Chattooga Cliffs reach of the river flows though miles of wilderness like areas in North Carolina where the closest road is over a mile or more away from the river. A water quality technician seeking to take §305(b) samples over the entire	The Forest Service does not set forth any requirements for monitoring protocols or funding for other agencies. Water quality was evaluated in section 3.3.2 of the 2014 EA.

Bill Floyd – November 5, 2014		
	<p>length of the Chattooga Cliffs reach of the river would have to make multiple difficult hikes of at least a mile or more over mountainous terrain and a rugged trail just to reach the river. There is no logging road to facilitate the use of a vehicle. They would then have to wade up or down in the stream-bed for miles since the trail does not follow beside the river all the time. They would need to carry their equipment for taking samples under storm flow conditions. If asked, I fear the North Carolina agency that conducted these prior 305(b) surveys would have to acknowledge that budget and personnel constraints necessitated that it only take samples at those places where the river conveniently passed under public bridges crossing the river.</p>	
242.		
243.	<p>Without more detail about the quantity and types of water samples taken in compiling the</p> <p>§305(b) report on the Chattooga, the conditions under which such samples were taken (storm event or non storm event) and the precise locations where those samples were taken, it is difficult to understand how the Forest Service can assert that it has used the best science available in making this promise to the public. The Forest Service lacks any credible foundation for extrapolating that the entire length of the Chattooga river in North Carolina is free of impairment from excessive sediment, etc. The Forest Service might like to</p>	Please refer to response #236.

Bill Floyd – November 5, 2014		
	claim that the §305(b) report is sufficient and constitutes the best available science to render an opinion that neither sedimentation nor other pollutants have impaired or degraded the water quality and aquatic habitats of the Chattooga Cliffs reach.	
244.		
245.	While the Forest Service is free to consider North Carolina's §305(b) report as informative, it is neither entitled to rely on the state agency's work-product nor to substitute it for the Forest Service's responsibility to investigate and monitor the river's water quality through its own field research. This is the Forest Service's obligation under the Wild and Scenic Rivers Act.	Please refer to response #236.
246.		
247.	Furthermore, excessive sedimentation has been occurring in the Chattooga Cliffs reach at the same time that the Forest Service has been promising the public that all is well with water quality on the Chattooga.	Sedimentation is evaluated in sections: 3.2.2A Fisheries; 3.3.2 Water Quality; 3.4.1 Soils; and, 3.4.2 Wetlands, Floodplains and Riparian Corridors of the 2014 EA.
248.		
249.	Please see the compilation of pictures that I took on October 31, 2014 attached as Exhibit A. These pictures document the excessive sedimentation occurring from Cane Creek all the way up to the proposed Greens Creek put-in.----sedimentation	Sedimentation of the Chattooga River has been documented in the 2012 EA and 2014 EA.

Bill Floyd – November 5, 2014		
	that I believe has accelerated by an order of magnitude over the last twelve to twenty four months.	
250.		
251.	Just downstream of where the Forest Service proposes to build a new trail and boater put-in below Greens Creek, there is one place where the silt is approximately 18 inches deep. One of my pictures reflects this condition.	See response #249.
252.		
253.	Despite knowing in the past how sediment has been a perennial problem on the Chattooga's lower reaches in Georgia (resulting in litigation and periodic attempts to remedy that condition), as well as in the vicinity of Norton Mill Creek in North Carolina, the Forest Service has done little, if anything, to measure, monitor, or try to remediate the sedimentation that is taking place on the Chattooga Cliffs reach. Instead, it references the North Carolina §305(b) studies.	Please refer to response #236.
254.		
255.	Despite being compelled under the forest management rule to use the best available science when considering Federal actions on national forests and despite its duty to protect and enhance the river's water quality under the Wild and Scenic Rivers Act, for whatever reason, the Forest Service has not	Please refer to response #236.

Bill Floyd – November 5, 2014		
	seen fit to conduct any credible field sampling and analysis to refute what my pictures demonstrate: namely that the river's water quality is becoming impaired, if not already impaired, from excessive siltation.	
256.		
257.	To give additional context as to why this is troubling, the North Carolina's 2014 Draft 305(b) report reflects at least one Parameter of Interest, pertaining to at least one location on the Chattooga, exhibiting an integrated reporting category classification of 4t---which means that this parameter of interest exceeds the satisfactory criteria associated with that parameter of interest. To give additional context, an Integrated Reporting Category of 5 would require listing on the §303(d) list and the preparation of a TMDL plan. Despite the negative implications of this parameter of interest being present on the most recent 2014 Draft §305(b) report, the Forest Service makes no mention of it in the 2014 Boater's Trail EA. Draft 2014 Water Quality Assessment page 720 of 1069, downloaded from http://portal.ncdenr.org/web/wq/ps/mtu/assessment (November 2 2014).	Please refer to response #236.
258.		
259.	By promoting the recreational interests of boaters, while ignoring this obvious degradation of the river's water quality in the Chattooga Cliffs reach, the Forest Service fails to	Please refer to response #236.

Bill Floyd – November 5, 2014		
	discharge its responsibilities under the law to protect and enhance the river's water quality.	
260.		
261.	The Forest Service has argued that trails and campsites are significant sources of sediment when there is too much bare ground exposed. Nevertheless, the Forest Service wants to build new trails, that are duplicative in purpose, and which can only serve to increase sediment run off, no matter how well the trails are constructed initially. It is irrational for the Forest Service to expect that these new trails will prove to be magical solutions to erosion or to claim that the Forest Service will be able to maintain these new trails to Forest Service specifications.	Potential impacts associated with any increases in runoff are addressed in the 2014 EA, pages 68-77. This includes any cumulative impacts from existing trails and/or campsites.
262.		
263.	The facts on the ground demonstrate that the Forest Service cannot even monitor and maintain its existing designated trails within the Chattooga corridor. Personnel and resources are inadequate to do the job.	This comment represents an opinion.
264.		
265.	Consequently, the Forest Service must immediately set aside its plans to construct new trails for boaters. Instead, today, not months or years from now, the Forest Service must concentrate its limited resources and personnel to fixing	The proposed action would address existing user-created trails or old roads that are currently being used by recreationists to get to the Chattooga River (Greens Creek, Norton Mill Creek, Bull Pen Bridge, Burrells Ford and

Bill Floyd – November 5, 2014		
	existing trails and campsites to reduce any potential for further erosion from that inventoried source of pollution.	Lick Log). Even before boating was permitted, starting in the 2012/2013 season, these access routes were being used by recreationists. Designating, constructing and reconstructing these trails as described in Table 2.2-1 would reduce adverse impacts to resources. Costs for construction, reconstruction and maintenance and the obliteration of undesignated trails at Burrells Ford are minor as described in Table 3.6.3-1. Burrells Ford receives some of the highest recreation use in the area. In particular, the analysis on pages 27-29 specifically points out the likely effect that the proposal would have on user-created trails. Costs for this work would be spread over three ranger district budget allocations.
266.		
267.	To be clear, the existing number of trails and campsites in the Chattooga Cliffs reach are de minimis. They are not the fundamental source of this pollution. The larger quantities of sediment present, coupled with the brevity of time and the accelerated speed with which this sediment has choked the Chattooga Cliffs suggests another upstream source of sediment is driving this pollution. The Forest Service must find the source and reverse this trend.	The Forest Service has no jurisdictional authority over nonpoint-source water pollution that does not originate from National Forest System lands. Also, see response #236.
268.		

Bill Floyd – November 5, 2014		
269.	Today, not months from now, the Forest Service must initiate ecological and sediment yield studies to determine how much this sediment is impacting the biological habitat quality, channel morphology, water chemistry, etc.	Please see response #267.
270.		
271.	In January 2012, the Forest Service promised the public that its decision to allow boating on the Chattooga Cliffs reach, subject to certain limiting conditions, would “protect the river’s water quality.” p. 6, Decision Notice and Finding of No Significant Impact (USFS, January 2012). The Forest Service indicated that the decision to allow boating above Highway 28, subject to certain conditions, would “minimize impacts to soils, riparian areas and other biological values.” Id. @ p. 6.	This comment is an introductory statement.
272.		
273.	In January 2012, the Forest Service also promised to monitor , through direct survey, how aquatic habitats were being affected by the change initiated by amendment #22 to the Nantahala Land and Resource Management Plan. Id. at p. A-20. The Forest Service also acknowledged that the non-degradation standard requires it to “.... document baseline conditions, develop management objectives and establish a monitoring program ...and identify when management action is needed to protect values. <u>Environmental Assessment for Managing Recreation Uses in the Upper Segment of the</u>	<p>The monitoring requirements for task number 43 in amendment #22 to the Nantahala Land and Resource Management Plan items b and c have been completed and are referenced in the 2014 Boater Access EA (see page 35).</p> <p>Dolloff, C. A., Roghair C., Krause C., and Steele, J.. 2008. Executive Summary: Large wood in the upper Chattooga Watershed, November 2007. Unpublished Report.</p>

Bill Floyd – November 5, 2014		
	<p><u>Chattooga Wild and Scenic River Corridor</u> at page 3 January 2012 (emphasis added).</p> <p>The Forest Service has failed miserably to do what it promised.</p>	<p>Blacksburg, Virginia: U.S. Department of Agriculture, Forest Service, Center for Aquatic Technology Transfer.</p> <p>Krause, Colin, Roghair C., Inventory of Large Wood in the Upper Chattooga River Watershed, June 2014. Unpublished Report. Blacksburg, Virginia: U.S. Department of Agriculture, Forest Service, Center for Aquatic Technology Transfer.</p> <p>These two reports together provide trend information on large wood in the Chattooga River over a seven year period.</p>
274.		
275.	<p>The administrative record lacks any evidence that the Forest Service has made any effort to seriously look at how boating over the last two seasons has impacted the river. Such a report would have identified this sediment buildup. I am unaware of any report in the administrative record, based on recent field surveys, that evaluate or document the water quality or the current condition of the aquatic macro invertebrates and wild brown trout populations that are sensitive to the accelerated sedimentation that is occurring within the stream bed. In other words the Forest Service has no baseline from which it can</p>	<p>Please refer to section 3.2.2 and section 3.3 of the 2012 EA for analysis and discussion about potential impacts to aquatic resources and water quality.</p>

Bill Floyd – November 5, 2014		
	make intelligent evaluations about the current condition of the water quality in the Chattooga Cliffs reach or the biological condition of its ecosystems.	
276.		
277.	The level of siltation has now reached a point that makes it impossible to see the rock riverbed anywhere within the width of its channel. This condition is present in many, many places on the river. Silt is more than a foot thick in places. Upstream undercuts in the stream wide rock shelves that used to provide hiding places and habitat for the wild brown trout fishery have been filled in with sediment like cement. The stream's bedform diversity is being degraded while the average width of the channel relative to the average depth of the water appears increasingly shallow because of this accelerated level of siltation. This river is sick.	See response #247.
278.		
279.	Before anything else is done to promote recreational interests that might exacerbate this sedimentation, the Forest Service must first remedy this serious problem. The Forest Service must conduct a sediment yield study to identify the source of the accelerated degradation and to determine if this sediment is causing physical and biological impairment to the Chattooga.	The intent of designated access sites is to provide recreation access based on the 2012 Decision Notices signed by the Forest Supervisors. Effects to water quality would be reduced with the construction and maintenance of the boater access sites as stated on pages 71-72 of the Boater Access EA.

Bill Floyd – November 5, 2014		
280.		
281.	Given the highly visible nature of the sedimentation that is occurring, the Forest Service should be devoting its limited resources to monitoring the river, in real time, to identifying and quantifying with specificity the ongoing sources of excessive silt, and to stopping and remedying any damage being caused to the fragile ecosystems in the Chattooga Cliffs reach. Only then could the Forest Service try to assert that it is discharging its responsibilities under the non-degradation mandate of the Wild And Scenic Rivers Act.	Please refer to response #202 and #267.
282.		
283.	Reams and reams of paper have been consumed by “experts” retained by the Forest Service to conclude that there is a need to reduce degradation being precipitated by user created trails and campsites on the Chattooga. I question if any of these hired experts ever bothered to go walk or wade the stream bed. The Forest Service’s own statistics suggest that the damage being brought about by the accelerating volume of silt (from Cane Creek up to Greens Creek) is unlikely to have resulted from erosion of poorly constructed and undesignated user created trails and campsites on that reach of the river. According to the Forest Service’s own 2007 survey of Biophysical Impacts, the amount of user created trails and campsites on that section of the Chattooga is de	See response #273. Forest Service personnel collected the biophysical data in 2007 that was used in the analysis presented in the 2012 EA. The 2012 EA page 156 states: Van Lear et al. (1995) found that 80 percent of observable sediment sources in the Chattooga River watershed were associated with open graveled and unsurfaced roads. The use of these roads contributes to their erosion through heavy trafficking and by increasing the need for maintenance, both of which aggravate sedimentation. Van Lear et al. (1995) also found that the wild and

Bill Floyd – November 5, 2014		
	minimis.	scenic corridor of the main stem Chattooga River contributes relatively little new sediment. Recreational trails and facilities accounted for 2.6 percent of the total number of sediment sources in the Chattooga River watershed during the study 16 years ago.
284.		
285.	The Forest Service has spent considerable time and monetary resources to study the number of boaters that might be able to use the upper Chattooga without causing a resource capacity problem---a study largely dependent on broad generalizations and assumptions built on self-reporting by boaters. In contrast, the Forest Service cannot produce scientific monitoring reports to document actual trends in the physical condition of the river measured in terms of stream temperatures or pH or the amount of fine silt found in the upper Chattooga over the last decade.	Please see responses #273 and #283.
286.		
287.	The administrative record is missing any official report documenting prior or current fish sampling counts by electrical shock to establish population trends. The record lacks any scientific monitoring report on the quantity of newly spawned or less than one year old wild brown trout to ascertain how well wild brown trout are reproducing on that	The Brown Trout is a non-native species managed by the North Carolina Wildlife Resources Commission (NCWRC) and maintained as a wild trout population within the upper Chattooga River (this reach of the river is not listed as hatchery supported waters). Electrofishing surveys were conducted within the upper Chattooga River from 1992

Bill Floyd – November 5, 2014		
	part of the river. The failure to publish such monitoring trends, if they even exist, makes it impossible for the Forest Service to refute what a layperson, with any familiarity of the river, can see for themselves: significant ecological degradation appears to be occurring on the upper Chattooga river.	through 1996 by the NCWRC. Young-of-the-year Brown Trout densities appeared to be lower than other North Carolina trout populations during the same sampling period; however, a self-sustaining population continues to persist. The North Carolina Department of Environment and Natural Resources (NCDENR) has monitored macroinvertebrates in the upper Chattooga River in 2004 and 2009. The river received an Excellent bioclassification rating as a result of these monitoring efforts (NCDENR 2010; online report accessed January 5, 2015).
288.		
289.	The Forest Service has not addressed the critical threat that this excessive siltation poses to the aquatic invertebrates and naturally reproducing population of wild brown trout on this part of the Chattooga. Instead the Forest Service has blindly relied on NCDENR's §305(b) sampling report to assert that all is well---when our eyes tell us something different.	Section 3.2.2A; 3.4.1; and 3.4.2 of the 2012 EA analyzed the environmental effects on aquatics, soil, water and riparian corridor. Erosion and sediment originating from user-created trails and campsites, as well as areas with chronic erosion, are minor when compared to chief contributors such as existing roads, bridges and parking lots (Van Lear et al., 1995, cited in the 2012 EA).
290.		
291.	The public has not been adequately informed of the impacts of the proposed new trails by either the 2012 EA or the current 2014 Boaters Trail EA. These proposed trails were not legally approved as part of the changes to the Chattooga river land use management plan. Furthermore, the South Carolina District Court did not opine on the appropriateness or legality	Public involvement is described in Section 1.5 of the 2012 EA where it describe the three initial public meetings, open houses and other way that the USFS outreached the public to inform about this project.

Bill Floyd – November 5, 2014		
	of building new trails specifically designed to benefit boaters at the expense of the five ORVs specifically enumerated as deserving of special protection and enhancement.	Public involvement is summarized on page 5 of the 2014 EA.
292.		
293.	Since the January 2012 EA was published, in addition to the excessive siltation that has occurred, numerous old growth hemlocks have died and fallen into the river off the steep slopes along the river—especially in the area from the confluence of Cane Creek up to Greens Creek. Some of these fallen hemlocks have created dangerous stream wide strainers that will make this section of the river even more dangerous to boaters during qualifying high water flows. This problem of hemlocks falling into the river is particularly relevant to the Forest Service’s proposal to build a new trail and put-in proximate to Greens Creek.	Hemlock mortality is a forest-wide phenomenon due to the detrimental effects of the hemlock wooly adelgid, a non-native invasive species. The Forest Service clears trails and roads of hemlock and other downed trees to facilitate public access to designated recreation areas.
294.		
295.	Please see Exhibit B, a compilation of pictures documenting the presence of a stream wide logjam (more than six feet tall) that is located just minutes downstream of the proposed boater put-in proximate to Greens Creek. Please note that significant silt is being trapped upstream from this logjam. When these pictures were taken on October 31, 2014, the Burrells Ford gauge reported average flows at approximately 84 cubic feet per second (CFS) and .94 feet height on the	See responses #247 and #273.

Bill Floyd – November 5, 2014		
	gauge.	
296.		
297.	<p>These pictures demonstrate that when waters are high enough to lawfully boat (>350CFS), boaters are likely to have to portage around this logjam to avoid getting pinned. The riparian areas on both sides of the river are heavily choked with thick rhododendron and laurel, etc. that grow right down to the water's edge. It is clear that attempts to portage on either side of this logjam (with boats) will disturb these woody shrubs that are attempting to hold the river's banks together. There is evidence, on river right, that this portaging may have already occurred at some point in the recent past. The associated foot traffic and trampling of a user created portage path can be reasonably foreseen and the consequences of this are obvious: it will create an additional source of erosion and silt to the river. This must not be allowed to occur.</p>	<p>Please refer to issue B, "New access points and portage trails", section 1.7 of the 2012 EA, at pages 12 and 13 for a discussion regarding portage trails. Please refer also to section 3.5, page 95 of the 2014 EA for discussion of potential effects of portage trails.</p>
298.		
299.	<p>Furthermore, given this logjam is located just minutes downstream from the proposed boater put-in below Greens Creek, why would the Forest Service agree to designate Greens Creek as the starting point for boaters when boaters are going to have to evacuate the river at this first logjam just minutes after putting in? This need to portage via a user created trail in the riparian area of the river will cause</p>	<p>The Forest Service has proposed designating access at a point 700 feet downstream from the Green Creek confluence to accommodate boaters who wish to experience as much of the upper section as is authorized.</p>

Bill Floyd – November 5, 2014		
	significant degradation within the riparian area on either side of the river.	
300.		
301.	Boaters will want to cut/saw out these large woody strainers in order to partially or fully remove these obstructions to boating. It is foreseeable that this will happen, either with or without the Forest Service's approval. The Forest Service has previously admitted that unapproved removal of LWD has already taken place in the Overflow, Holcomb Creek and West Fork portions of the Chattooga.	<p>Members of the public who choose to engage in prohibited activities are in violation and are subject to penalty. See response #273 relative to the inventory of large wood.</p> <p>Data from the 2014 large wood (LW) inventory states:</p> <p>We did not find an increase in the number of pieces of cut LW during our most recent inventory. Most of the cut LW we did observe was near campsites presumably for firewood, or in the case of Holcomb Creek were historical logging remnants. We did find several pieces of cut LW in Overflow Creek during our first inventory, but did not observe any new cuts during our most recent inventory. <u>We also did not find any evidence of cut LW in the newly opened paddling reach in the upper Chattooga River mainstem.</u> Additional monitoring for cut LW is advised, particularly in the vicinity of campsites on streambanks and in stream reaches known to be used by boaters.</p>

Bill Floyd – November 5, 2014		
302.		
303.	By proposing a boater put-in just above this logjam the Forest Service implies that it intends to approve the boater's removal of this large wood debris (LWD). Alternatively, the Forest Service implies that it is giving boaters "wink, wink, nod " approval by virtue of the Forest Service's unwillingness/incapacity to enforce its own rules on this remote section of the river. The removal of this logjam would release substantial amounts of currently trapped siltation to who knows what adverse result. This must not be allowed.	Please refer to response #301.
304.		
305.	Furthermore, there is an even larger, much taller, stream wide logjam located on the river just above where Cane Creek comes in. It poses even greater dynamic risk to the river if it were to be suddenly cut out. But this is what is likely to occur in those areas that are so remote that they cannot be actively monitored without wading up or down the streambed.	Please refer to response #84 regarding monitoring and law enforcement.
306.		
307.	Exhibit C contains pictures taken October 31, 2014 that evidence prior and recent LWD removal by sawing, cutting or hacking by human hands, both proximate to the proposed put-in, and shortly downstream but above this first stream wide logjam. This of course is in violation of the Forest Service's condition for allowing boating on this part of the river—	Please refer to response #301.

Bill Floyd – November 5, 2014		
	which prohibits LWD removal. Of course, the willingness of the Forest Service to move forward with this new trails proposal in the face of this evidence demonstrates the pretense and arbitrariness of the Forest Service’s proposal for constructing a new trail and put-in below Greens Creek.	
308.		
309.	Facilitating the removal of natural downfalls in order to tailor the river environs to accommodate boaters is not what Congress intended in legislating the Wild And Scenic Rivers Act. The river’s environs are supposed to be preserved in their natural state, as they existed when the river received designation and as Mother Nature sees fit to shape it in the future---especially since these LWD may be serving critical in-stream biological functions that may help offset some of the degradation of excessive siltation and the loss of the shade canopy of these evergreens.	Please refer to response #301.
310.		
311.	Furthermore, the proposed construction of new trails at Greens Creek and below Bull Pen Bridge will only benefit boaters, and will only serve to exacerbate the water quality degradation that the Forest Service is ignoring---no matter how well such new trails are originally constructed. They will encourage a spiderweb of user created trails by a variety of users. Look at the condition of the environment in proximity to Earl’s Ford and Woodall Shoals to see what is reasonably	Please refer to Chapter 1 and section 3.2.1 of the 2012 EA and to Chapter 1 and section 3.2.1 of the 2014 EA for the purpose and need and rationale for designating river access.

Bill Floyd – November 5, 2014		
	foreseeable in the future for the upper Chattooga. The unintended consequence of building these new trails will be to import the terrible conditions on the lower Chattooga to the upper Chattooga. Despite this reasonably foreseeable consequence, the Forest Service will never admit that the lower river's degradation has been precipitated by the presence of commercial boating. Instead, the Forest Service will continue to argue that conditions on the lower Chattooga are irrelevant and beyond the scope of the current evaluation.	
312.		
313.	Please see Exhibit D, a compilation of pictures of Earl's Ford and Woodall Shoals taken in 2011. Exhibit D documents the Forest Service's failures in addressing the degradation occurring on the lower reaches of the Chattooga. Go look at the physical condition of the riverbanks on those reaches of the river. Count the length and condition of user created trails in those reaches. Look at the trash littered along the "highway" like trails that the Forest Service has designed and constructed specifically for boaters at Woodall Shoals and Earl's Ford. The upper Chattooga simply cannot be allowed to suffer the same fate as the lower Chattooga.	<p>The locations are on the lower segment of the Chattooga River and not within the area of analysis under the 2014 EA.</p> <p>The 2012 EA for the upper segment collected biophysical data in its analysis regarding the number and length of user created trails. The 2012 Decisions includes direction for management of trails (see item 9). Also note that item 9 in the 2012 decisions includes designation of trails based on site-specific NEPA analysis. The 2014 EA is a site-specific analysis that tiers to the 2012 EA.</p>
314.		
315.	In connection with its 2012 Rationale For The Decision, the	This decision was already made in the 2012 Decision

Bill Floyd – November 5, 2014		
	Forest Service trumpeted its efforts to conduct a careful balancing act. The Forest Service asserted that the future designation of permanent boater put-ins and take-outs would mitigate potential conflict between boaters and other users seeking a solitude experience. Specifically, the Forest Service stated: “The appropriate district ranger will designate the specific put-in and takeout locations after site-specific NEPA analysis is completed. Like other users, boaters will be encouraged to use system trails to access these points.” 2012 Rationale For The Decision at page 5, (emphasis added).	Notice and is supported by the environment assessment, <i>Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor</i> , January 2012.
316.		
317.	These representations suggested that boaters would be using the existing designated Chattooga River trail to gain access to the “to be designated” take-outs and put-ins on the river, just like all the other hikers, swimmers, birders, etc. do. There was no indication that the Forest Service intended to build boaters their own special trail, to tailor make the environment to allow boaters to avoid having to hike so far from the trailhead near Greens Creek cemetery to reach the boat lobby’s chosen place to put-in.	See responses #175 and #315. The purpose and need for the trails is stated on page 4 of the 2014 EA.
318.		
319.	Contrary to the Forest Service’s claims, the proposed Greens Creek access trail will not benefit other hikers, swimmers or naturalists. The proposed Greens Creek trail dead ends at the proposed put-in on the Chattooga. Hikers can’t continue	Please see responses #50 – 54.

Bill Floyd – November 5, 2014		
	hiking downstream because there is no riverside trail, and they can't hike upstream because they would be trespassing on private property, even if there were a trail.	
320.		
321.	Nevertheless, if the Greens Creek trail is constructed, an unintended consequence will occur. Because the proposed trail will dead end at the river, this will encourage non-boating recreational users, over time, to create another undesignated trail downstream along the bank of the river---in order to avoid retracing their steps and in order to short cut the existing Chattooga River trail which runs much further up on the steep, steep ridge.	Please refer to response #84 regarding monitoring and law enforcement. This is unlikely given the steep topography in the Chattooga Cliffs reach. The most likely scenario is that the Greens Creek trail would benefit anglers either putting in (fishing downstream) or taking out of the river (fishing upstream) from some lower access point on the river.
322.		
323.	The Forest Service's stated purpose is pretense and the adverse environmental impacts are foreseeable. The Forest Service explanation for undertaking this Federal action simply do not square with the facts on the ground. Hence it will be arbitrary should the Forest Service decide to go forward with its proposal.	<p>The purpose and need for the 2012 EA is stated on pages 1-5 of the 2012 EA. Chapter 2 describes the alternatives developed and effects are disclosed in Chapter 3.</p> <p>The 2014 EA is a site-specific document tiered to the 2012 EA. The purpose and need for the 2014 EA is stated on page 1 of the 2012 EA. Chapter 2 describes the alternatives developed and effects are disclosed in Chapter 3.</p>
324.		

Bill Floyd – November 5, 2014		
325.	<p>The existing Chattooga River trail affords boaters with multiple access points to the upper Chattooga at locations well above the interesting point where the Narrows dumps into Norton Mill Creek pool. There is nothing remarkable in terms of whitewater above the Narrows but below Greens Creek. In fact, as discussed, there is a logjam minutes below the proposed boater put-in at Greens Creek. Consequently, boaters would not be unfairly inconvenienced by being required to use the existing Chattooga River trail.</p>	<p>The proposed boater put-in site at Greens Creek (as proposed in the 2014 Boater EA) is an old existing road off of the Chattooga River Trail that when reconstructed would provide foot trail access to the Chattooga Cliffs section of the river consistent with the 2012 EA and 2012 Decisions.</p>
326.		
327.	<p>The Forest Service acknowledged in its own arguments to the South Carolina District Court and the Court explicitly agreed that the Administrative Record contains ample evidence that whitewater paddling interferes with the outstandingly remarkable values of the Headwaters. American Whitewater v. Tidwell at 853. Nevertheless, the Forest Service now proposes new access trails on the upper Chattooga that will benefit only boaters, while insisting that such trails are not inconsistent with its Congressional mandate to design management plans that prioritize “protecting its esthetic, scenic, historic, archeologic, and scientific features” for all users. 16 U.S.C. § 1281(a).</p> <p>Nothing could be further from the truth.</p>	<p>The Boater Access EA (page 5) is tiered to and is consistent with the 2012 EA, Forest Plans and the following court opinions: Civil Action No.: 8:09-2665-MGL, Amended Order and Opinion, 7/30/2013 and US Court of Appeals for the Fourth Circuit, No. 13-1960, 11/05/2014.</p> <p>The 2014 EA discloses that other recreation users a likely to benefit from the access site (see pages 27-30 of the 2014 EA).</p>

Bill Floyd – November 5, 2014		
328.		
329.	<p>By tailor making new trails to accommodate the boater constituency, and trying to shorten the distance that boaters must hike to reach the river, the Forest Service encourages more intense use of the resource by less passionate but perhaps more curious front-country users who would not normally venture beyond the existing trail. The Forest Service would have us believe that the new trails are needed (1) to minimize the potential for conflict between boaters and (2) that the new trails will be beneficial to all recreational users of the river. Unfortunately, such claims contradict the Forest Service's prior arguments made elsewhere in the administrative record. The Forest Service has insisted the minimal use by boaters during the winter at high water conditions (when hikers and anglers are presumed to be in hibernation) will self-regulate and minimize the likelihood of conflicts and contacts between these different users. Hence, there is no need for new trails to avoid conflicts. How many complaints has the Forest Service received about undesirable interactions between boaters and other users? I'll bet that the Forest Service won't admit to a single complaint.</p>	<p>The 2014 EA (Purpose and Need, page 4) is a site-specific document that is consistent with and tiers to the 2012 EA and 2012 Decisions.</p>
330.		
331.	<p>Other users have never asked for additional trail access. In fact, the record shows that other users do not wish any additional trails be created to grant easier access to the river</p>	<p>Please refer to the purpose and need as stated on page 4 of the 2014 EA. Trail designation was described in the 2012 EA decision letter: "Identify boating access areas via</p>

Bill Floyd – November 5, 2014		
	<p>for boaters or anybody else. While a Court might defer to the judgment of the Forest Service, the Chattooga River Trail which runs from Greens Creek Cemetery to Bull Pen Bridge offers excellent access to the river at multiple points where the trail touches the river. This is the same trail used by many recreationalists for many years since the Chattooga was designated as a Wild And Scenic River. Boaters have already successfully used this trail for several boating seasons to pursue their hobby. It is only now that the Forest Service arbitrarily announces that they are insufficient and in need of further expansion.</p>	<p>existing trails. Specific put ins and take outs will be designated after site specific NEPA (pages two and six). Please also refer to response #311 regarding the objectives, purpose, and need for the proposed actions.</p>
332.		
333.	<p>The proposed new trails will be built to accommodate the wish list of boaters and not to avoid conflicts and not to make things better for all resource users. By prioritizing the requests of the boating lobby at the expense of the specifically prioritized ORVs of esthetic and scenic considerations, the Forest Service acts arbitrarily and contrary to the facts as they exist. There is no need to construct boating access to Green Creek so as to provide boaters with only a marginal benefit at a significant cost for all other users of the river----other users who have expressed no interest in new trails. Boaters already have sufficient access to acceptable river put-ins via the existing Chattooga River trail. It only takes about thirty-five minutes to reach the banks of the river, in a long flat stretch of the river, if you depart from the parking lot proximate to the</p>	<p>Please see response #311.</p>

Bill Floyd – November 5, 2014

	Greens Creek cemetery and use the existing Chattooga River trail. Somewhere here could easily be used as the upper most put-in. Such a put-in would still be well up river from the interesting and scenic Chattooga cliffs as well as the famous river Narrows above Norton Mill Creek pool. Boaters would only bypass a short section of the river, which is blocked by at least on stream wide logjam, and which is not characterized by any remarkable whitewater spots. Of course, if boaters wish to see the scenery in the bypassed area, they can do what others do and wade up and down the streambed.	
334.		
335.	Even if new access trails were justified as being of some benefit to multiple users, and they aren't, there is a much more logical location for a new put-in/take-out trail that would minimize adverse impacts while providing benefits to multiple constituencies. This would be at Cane Creek.	Please see response #34.
336.		
337.	By putting in at a Cane Creek location, this would eliminate the need to portage both of the significant logjams that exist above Cane Creek. This would prevent degradation in the riparian area caused by boaters need to portage.	Please see response #34.
338.		

Bill Floyd – November 5, 2014		
339.	The use of a Cane Creek designated put-in would mean boaters could not float the Narrows down into Norton Mill Creek pool. But they could still enjoy the scenery by just hiking the Chattooga River trail.	Please see response #34.
340.		
341.	I am concerned that the second, much larger logjam, that exists upstream from Cane Creek but downstream of Norton Mill Creek pool, has the potential for being quietly dismantled one stick of wood at a time. The rock grotto that lies just below the logjam and above Cane Creek is probably just too tempting for boaters to leave this second logjam alone which blocks its entrance. Boaters have already indicated their willingness to drag their boats over the top of this logjam. There is a huge amount of silt trapped in front of this logjam. If it were to be removed without this silt being addressed, the release of this silt downstream will have unquantified but definitely adverse consequences on the river.	Please see response #301.
342.		
343.	Unfortunately, the 2014 Boater's Trail EA refused to fully develop the Cane Creek option as a less intrusive alternative to the proposed Greens Creek trail. The Forest Service's cursory explanation for failing to consider the details of a Cane Creek trail runs counter to the evidence. This demonstrates the Forest Service had its mind made up and that its decision making process was both arbitrary and	The Forest Service disclosed the rationale for not developing a Cane Creek alternative on page 17 of the 2014 EA.

Bill Floyd – November 5, 2014		
	capricious in selecting Alternative 2 in the 2014 Boater's Trail EA.	
344.		
345.	The 2014 Boater's Trail EA states that using Cane Creek instead of Greens Creek was not evaluated in detail because it "would have been more difficult since it is in a steeper section of the river corridor.....This trail would result in more environmental impacts and public safety concerns than the proposed Greens Creek trail." 2014 Boater's Trail EA 2 page 17.	Please refer to response #343.
346.		
347.	Unfortunately, these self-serving and conclusory statements do not detail why or how Cane Creek would cause greater environmental impacts or why it would entail elevated safety concerns when compared to the proposed Greens Creek trail. In fact, all these assertions are wrong and do not square with the facts as they exist on the ground. Cane Creek would bypass the dangerous logjam just south of Greens Creek as well as the even larger log jam that exists just north of Cane Creek. This would enhance the safety of boaters.	Please refer to response #343.
348.		
349.	An existing Forest Service road tracks to the west/southwest of Cane Creek. This road begins on Whiteside Cove road. I	Please refer to response #343.

Bill Floyd – November 5, 2014

	<p>have walked this road many times. It has a gentle grade and is mowed. This Forest Service road is gated but is in excellent condition and is already used by Forest Service vehicles, tractors and mowers, etc. In the event of a boating emergency, this road would afford the Cashiers/Glenville rescue squad vehicle access to within approximately a quarter mile of the river. A quick glance at a topo map confirms that the contours on both sides of Cane Creek are farther apart and that a connecting trail could be constructed on an area that would be less steep than the contours immediate to the area proposed for the new trail to be built at Greens Creek. This foot path could run parallel to the existing contours. A Cane Creek put-in/take-out would result in fewer adverse impacts to the esthetics of solitude and scenery for people who wish to avoid interaction with boaters in the uppermost part of the Chattooga headwaters and along the trail.</p>	
350.		
351.	<p>The Cane Creek Forest Service road could be easily connected to the Chattooga River trail by constructing a short section of footpath trail that could cross over Cane Creek, via wooden bridge, to the north side of Cane Creek, just before the confluence of Holly Branch on the west/southwest side of Cane Creek. This foot trail could then be constructed to follow the gentle contours around the bottom of the ridge to meet up with the existing Chattooga River trail at a point just north of where it crosses Cane Creek. The length of the foot</p>	<p>Please refer to response #343.</p>

Bill Floyd – November 5, 2014		
	trail that would need to be built would actually be shorter than the proposed Greens Creek trail. Also, the total distance that boaters would have to hump with their boats from the trailhead on Whiteside Cove road down to Cane Creek would be less than the distance that they would have to hike were they required to continue using the existing Chattooga River trail via the trailhead located below Greens Creek cemetery.	
352.		
353.	Finally, unlike the Greens Creek alternative, a Cane Creek trail would also serve the needs of other recreationalists besides boaters because it would provide another way to transit on/off the river, whether coming up from Bull Pen Bridge or passing down from Greens Creek Cemetery---since the trail would connect with the existing Chattooga River trail. In contrast, the proposed Greens Creek boaters trail would dead end into the river and would only serve the transit needs of a single user group---boaters.	Please refer to response #343.
354.		
355.	Consequently, the EA is deficient under NEPA because the Forest Service's explanation for preferring the Greens Creek alternative and rejecting a Cane Creek trail runs counter to the evidence and is arbitrary. There is no compelling reason to push this agenda other than a desire to enhance accommodations for boaters of other specifically prioritized ORVs like the esthetics and scenery of the Chattooga. To do	Please refer to response #343.

Bill Floyd – November 5, 2014		
	so in the face of the District Court’s holding is clearly arbitrary and capricious.	
356.		
357.	The proposed 2014 Boater’s Trail EA is also deficient under the requirements of the National Environmental Policy Act (“NEPA”) because it fails to inform the public how wide the reconstructed and new trails will be. The Boater’s Trail EA fails to take a hard look at how wide the proposed trail will be built or how an excessive width could produce significant adverse impacts on the outstanding remarkable values (ORVs) of esthetics and scenery that are singularly present on the river above Bull Pen Bridge. If the reconstructed/new trails planned for any of the locations, but in particular at Greens Creek and Bull Pen bridge, are built to an unnecessarily wide dimension, it most certainly will diminish the “esthetic” and “scenic” wilderness like qualities that still remain associated with the upper Chattooga. Nothing wider than a footpath is necessary but the Forest Service has not attested that their plans will be limited to such a footpath.	Greens Creek and Bull Pen Trails would be built to an 18” to 36” tread width standard. County Line’s past use as a road has kept it wider than 36”. The old road bed would be allowed to grow in over time.
358.		
359.	In the past, the Forest Service has constructed car width boating trails from the parking areas at both Earl’s Ford and Woodall Shoals down to the banks of the Chattooga. In reality, these Forest Service introduced improvements at Earl’s Ford and Woodall Shoals resemble obscene highways	This comment is not relevant to the decision to be made for the Boater Access Environmental Assessment as these locations are in the lower segment of the Chattooga River.

Bill Floyd – November 5, 2014		
	<p>rather than trails that one might expect to find in a pristine wild and scenic area---which is how the upper Chattooga environs was when the river was designated as a Wild and Scenic River. Along with the excessive number of commercial rafting trips permitted in that reach, the car width trails at Woodall Shoal and Earl's Ford have contributed to a widespread physical degradation of the Chattooga environment downriver. There is no good reason for the Forest Service to have constructed those trails to the width of a car other than to provide special accommodation to the commercial whitewater rafters/paddlers who walk two abreast with their bright colored rafts held high over their heads (like turtles) as they move back and forth to the commercial outfitter's transportation buses.</p>	<p>Trails would be reconstructed and maintained consistent with Forest Service Handbook 2309.18 direction.</p>
360.		
361.	<p>Other users of the upper Chattooga above Bull Pen Bridge (hikers, campers, swimmers) do not need nor desire for a car width trail to be constructed down to the banks of the river below the Bull Pen bridge. The construction of car width trails like the ones already in existence at Earl's Ford and Woodall Shoals will destroy the unique and only remaining part of the river where one can reasonably expect to experience the "esthetic" sense of solitude and wilderness that the river affords above Ellicott Rock.</p>	<p>The tread width for above and below Bull Pen is 18" to 36".</p>
362.		

Bill Floyd – November 5, 2014		
363.	The rafting/paddling crowd has already eliminated this ORV on the lower reaches of the Chattooga. The absence of any specific trail construction detail (other than incorporation by reference to Forest Service general specifications for trail construction) also leaves in question whether the trail might ever be used for commercial purposes---a reasonably foreseeable expectation should the trail be constructed to the same widths as the those found at Earl's Ford and Woodall Shoals.	Please refer to response #357.
364.		
365.	The EA must be much more precise in detail with respect to how these trails will be constructed, their specific width, and the precise GPS locations of these trails. It is insufficient to simply state that they will be built in accord with Forest Service manual designs.	Please refer to the "Trail Construction and Maintenance Notebook", USDA Forest Service • Missoula Technology and Development Center, 5785 Hwy. 10 West • Missoula, MT 59808-9361, Phone: 406-329-3978 • Fax: 406-329-3719, E-mail: wo_mtdc_pubs@fs.fed.us for details of Forest Service trail construction objectives, guidelines, and methods.
366.		
367.	The rough drawings incorporated in the 2014 Boater's Trail EA depict only generally where the trails will be built. This also violates NEPA. They provide insufficient detail in terms of precise GPS coordinates where the trails will be built. Because the drawings do not plot and overlay the actual and accurately scaled location of the proposed trails onto a topographical map of the land, a concerned citizen cannot	Potential impacts from trail construction are presented in Chapter 3 of the 2014 EA. The trails shown in the EA are mapped with a GPS unit.

Bill Floyd – November 5, 2014		
	discover and understand what kinds of trees will have to be removed in order to achieve the plan and whether or not such reconstructed and new trails might have other adverse environmental impacts.	
368.		
369.	<p>The old growth forest is rapidly being denuded of shade canopy formerly provided by old growth hemlocks that have succumbed to the woolly adelgid. This shade canopy is important to preserving an average water temperature that is cold enough in the middle of the summer to preserve the fragile ecosystems that provide homes to a multitude of creatures. At a minimum the tops of the hemlocks are falling out. Worse case, on some steep slopes where these huge trees have died immediately adjacent to the banks of the river, there is even a greater risk of erosion as these dead trees are wind blown over causing their root balls to be pried up in entirety.</p>	<p>The 2014 EA contains the following effects analysis relative to old growth (2014 EA page 65).</p> <p>4. Old Growth Communities</p> <p>Old growth communities are not impacted because none are located within or adjacent to the proposed project area. This alternative would not affect old growth communities at the access sites since only minimal understory vegetation would be impacted during trail reconstruction and maintenance.</p>
370.		
371.	The forcible removal/cutting of any other large deciduous trees by the Forest Service to accommodate any of the boater's trails will further contribute to the loss of shade canopy. The loss of shade canopy along with the increase siltation threatens a rise in the average temperature of the	The Forest Service anticipates that primarily small trees and a few larger trees would need to be cut to construct access. Given that there is a potential for the need for limited tree removal, and given the terms and conditions under the Endangered Species Act for protecting listed

Bill Floyd – November 5, 2014		
	river which could have catastrophic results for the insects and the wild trout fishery that exists in that part of the river. With the availability of GPS, the Forest Service should not find it difficult to document with precise latitude and longitude where they plan to reconstruct/build new trails so that the threat to the shade canopy could be accurately assessed.	species (northern long-eared bat and Indiana bat), the Forest Service is legally obligated to consult with the U.S. Fish and Wildlife Service if habitat for proposed or listed species may be affected by federal actions. While a few trees may be removed from the river's shade canopy, doing so would have insignificant effects. Also, please refer to response #367.
372.		
373.	Will old growth hickory and walnut trees (which provide important forage for wildlife) have to be cut down? There are numbers of black walnuts and hickorys proximate to Greens Creek. The Forest Service must provide an accurate and scaled drawing on a topographical map of where the proposed trails will be built. The Forest Service has already had a couple of years to think about and plan for its new trails. Surely, the Forest Service can provide such GPS detail. Only then can the public go out and walk the proposed design and give valuable feedback about what the least intrusive alternative might be.	Please refer to responses #367 and #371.
374.		
375.	The proposed new trail to be constructed downstream of the Bull Pen bridge is unnecessary. There is an existing sufficient boater access points just above the Bull Pen bridge using the current Chattooga River trail. If boaters are unable to negotiate the challenging whitewater that exists just above the	Please refer to response #64.

Bill Floyd – November 5, 2014		
	bridge, then they have no business being on this portion of the river. The Wild And Scenic Rivers Act does not allow for this recreational need to be enhanced at the expense of diminishing the sense of solitude and scenery of the area below the bridge by adding another spot for people to congregate.	
376.		
377.	In closing, I would request that the Forest Service abandon any efforts to construct new trails at Green Creek or below the Bullpen Bridge. Reconstructing and reinforcing the existing Chattooga River trail to minimize erosion and silt is welcomed.	The purpose of the 2014 EA is to consider effects and inform the public and the responsible official regarding the proposed action. The decision will consider all the tradeoffs associated with making this decision.

Travis Dockins		
378.	<p>I'd like to submit my response to the Chattooga river access team. I really like the idea of constructing new trails for boating access. I am also an avid trout fisherman, and the trails would benefit me in the summer when boating is not allowed as well. I think Alternative 2 is the best course of action.</p> <p>As far as the permits go, I don't think paddlers should be required to use specific river access point unless all users of the river are required to use the same points. Paddling doesn't have a negative impact on the environment any more than hikers or trout fisherman. I would argue that wading trout fisherman do more damage to the shore and streambed than kayakers who are floating on top of the water. I myself have been wading in the upper Chattooga and seen all of the silt and debris I kick up while wading.</p> <p>I appreciate the step in the right direction of allowing paddlers at certain times of the year and at certain flows on certain sections of the river. I would like to see the Chattooga be open to paddlers year round, on every section of the river. Being a fisherman and a kayaker, I know that when the water is too low to kayak, it's good for trout fishing, and vice versa. I don't see a conflict of interest for either group. Also, by limiting boating access, you are limiting the area of water that</p>	<p>Alternative 2 of the Boater Access EA is consistent with management direction set in the 2012 EA and Decision Notices that establishes that there would be designated boater put-in and take-out points. The decision about not having specific river access points, year round paddling and what sections are available to float are beyond the scope of this decision.</p>

	<p>I can fish to sections that I can hike to and wade.</p> <p>I appreciate the request for public comment. Thank you for your time.</p>	
379.		

gccabinet@aol.com		
380.	<p>As a trout fisherman / Trout Unlimited member, I often fish the upper sections of the Chattoga River. I believe that the river is too small to absorb the traffic from kayaks and canoes tubers, etc. without damaging the " life and spirit " of a wild and scenic river.</p> <p>I've never met a boater (helping) during any of our trash pick-ups or work sessions on the river.</p> <p>- Gary Coldren, member of TU Cattoga River chapter.</p>	The decision about boating on the upper segment of the Chattooga River was made in 2012 and is beyond the scope of this decision.
381.		
Chris OCleary		
382.	I oppose building new trails for boating access. Would like to see that area stay more remote. Please vote for "no action"	The "No Action" alternative was evaluated in the 2014 EA.
383.		
Patterson, Bobbi (Barbara)		
384.	<p>As a kayaker myself, I applaud well designed trails that provide boaters access to fun and healthy rivers for paddling. But the proposal you've offer, which appears to be an "all or nothing" approach is not acceptable. Well-designed trail access is good for everyone and the river, but 6 new trails is to much. I welcome all-year round access and hope you will give us a better choice than this over-extension of trails.</p> <p>As you have posed it, I oppose 6 new trails and am left to choose "nothing". Surely we can all value our natural wildernesses with more compromise than this "nothing" option.</p>	<p>The locations selected provide access to the river segments available for boating based on the 2012 Decisions. The Greens Creek and Norton Mill Creek access trails would be located on old road beds that would be converted to and maintained as designated trails with a minimal amount of work. The Bull Pen access site above Bull Pen bridge currently provides access via an already existing trail that takes you out onto the rocks above the class five rapids.</p> <p>The proposed access trail below the bridge would be a new constructed trail providing a safer access point to the river</p>

		for less experienced boaters below the class five rapids. An existing user-created trail at the Burrells Ford access site would be improved and designated as a system trail. At the same time, two other user-created trails would be decommissioned to prevent further use and to reduce resource impacts. The Lick Log take-out trail location would be new but should eliminate use of existing user-created trail in the vicinity.
385.		
Larry Walker		
386.	Any new trails will create soil disturbance and ultimately sedimentation into the river and/or its tributaries. Only stable existing trails and roads should be used.	<p>The effects on soil disturbance and sedimentation are discussed in the Boater Access EA, pages 72-77 and 68-72, respectively.</p> <p>The decision to be made is to construct, reconstruct and designate stable trails as you describe.</p>
387.		
Rick Posey		
388.	It would be great for South Carolina Fly Fishing to pave the road for Burrells Ford Bridge. It is a great area for hiking and fishing, but the gravel road makes it a bit inconvenient. Wish it had concrete or asphalt so that we could protect our vehicles better when driving on Burrells Ford Bridge road.	Paving the Burrells Ford road is beyond the scope of this EA.

389.		
John Carothers		
390.	<p>I'm emailing my comments regarding the proposal to allow boating on the Chattooga. I still think that you should have stuck to your original guns and not allowed any kayaking on the river. This is a camel with its nose under a tent, and it WILL NOT stop unless you shoe it away! These trust fund kayakers need to be stopped. You don't even propose the numbered items as alternatives.</p> <p>Do NOT construct a Greens Creek trail. Bullpen Bridge and below is the ONLY compromise I could make. No construction needed so no cost for that or maintenance. And even with that there's the camel in the room, as I noted above.</p>	<p>The decision about boating on the upper segment of the Chattooga River was made in 2012 and is beyond the scope of this decision. Some existing user-created trails can be converted to Forest Service system trails with some minor improvements. The 2014 EA includes cost for construction/reconstruction and maintenance (EA page 105).</p>
391.		

<p>Josh White</p> <p>Brad Preslar</p> <p>Ben Fleming</p> <p>Peter Hubbard</p>		
392.	<p>I support the trail analysis and Forest Service proposal for trails in Alternative 2. High quality sustainable trails are good for forest visitors and the river.</p> <p>The Forest Service does not need to require that paddlers use specific river access and egress points, but if they do, they should likewise require that all visitors seeking shore and water access use those same points.</p> <p>The Environmental Assessment should be clear that it does not cover the section of the Upper Chattooga upstream of the Green Creek Trail, and that the resulting Paddling Permit should only be required for paddling downstream of Green Creek.</p>	<p>The decision about boater put-in and take-out points and segments available for boating on the upper segment of the Chattooga River were made in 2012 and is beyond the scope of this decision. The permit will reflect designated boater put-in and take-out locations once the decision is made.</p>
393.		
<p>Donna Patterson</p>		
394.	<p>It seems that 6 new access points is excessive. I suggest you look at several reasonable access points that will be utilized to provide access but will maintain the wild and scenic character of the river. Once new access points are established they cannot easily be closed if it determined they are underused or detrimental. You need to be cautious about opening these</p>	<p>See response #384.</p> <p>The effects of boater access sites on the wild and Scenic river have been disclosed on pages 21 – 72 of the boater</p>

	access trails.	Access EA.
395.		
Hank Klausman		
396.	<p>It is encouraging that the Forest Service is promoting boating on the Chattooga upper reaches. But I don't see any need for six more trails when a good boater trail already exists.</p> <p>So I oppose designating and building new boater access trails at the County Line Road, Green Creek, and into the Ellicott Rock Wilderness Area below Bull Pen Bridge. Boaters do not use the County Line and Green Creek trails in sufficient numbers to justify building new access, and an appropriate access trail already exists just upstream of the wilderness at Bull pen Bridge. Building these new trails would attract year-round use and more use, which will irreparably damage one of the last places in the headwaters that can provide a true backcountry experience. Building these trails would also harm the rare and very sensitive ecological values in the Chattooga Cliffs reach, where 70% of the rare plants in the Chattooga River Corridor occur.</p> <p>Therefore, I insist that the Forest Service choose the EA's "No Action" alternative until they comply with federal law that compels them to offer a full range of viable alternatives to protect the Chattooga River headwaters, while providing adequate boater access.</p>	<p>The effects of boater access sites and proposed construction, reconstruction designation and maintenance of the trails are disclosed in the 2014 EA including effects to recreation and plants. Monitoring has been completed relative to plants identified in the 2012 EA and has determined that no adverse effects are occurring.</p> <p>See responses #34, #38 and #52.</p>
397.		

David Reid		
398.	<p>Would love to run the upper section of this beautiful stream</p> <p>Please open these sections of the Chattooga for boating access</p> <p>used to live in the area and still drive over to run the lower sections</p>	The 2012 decisions opened specified sections of the river subject to season and flow restrictions. A permit is required.
399.		
Kelly Cochran		
400.	<p>Even though I kayak weekly on the Chattooga River, I am oppose to building new boater access trails at the County Line Road, Green Creek, and into the Ellicott Rock Wilderness Area below Bull Pen Bridge. . Please let's keep the headwaters a true back-country experience, and protect the sensitive ecosystem on and around the Chattooga River.</p> <p>I am demanding that the Forest Service choose the EA's "No Action" alternative.</p>	The effects of boater access sites and proposed construction, reconstruction designation and maintenance of the trails are disclosed in the 2014 EA including recreation and biological impacts.
401.		
Rhys Gratz		
402.	Based on the Environmental Assessment I think the proposed trails are a good idea as long as the construction and management is done in a matter to help prevent soil erosion and user created trails that lead to soil erosion. However, I believe there needs to be more done too educate the	The effects on soil disturbance and sedimentation are discussed in the Boater Access EA, pages 72-77 and 68-72, respectively. As stated on pages 27-28 of the Boater Access EA:

	community and on the impacts of user created trails and erosion on the beautiful wild and scenic Chattooga River.	<p>“New trails at Bull Pen and Lick Log would improve access to the river and place less reliance on the poorly located user-created trails.”</p> <p>“With increased hemlock downfall and heavy understory vegetation growth in the area, designated trails are likely to receive the most use and would discourage use on the old user-created spurs into the river. “</p>
403.		

Michael Eber		
404.	<p>As a member of American White Water, an avid kayaker, and one concerned with maintaining our precious resources I would like to provide feedback on the Boating Access Proposal for the Chattooga River.</p> <p>We support the trail analysis and Forest Service proposal for trails in <u>Alternative 2</u>. High quality sustainable trails are good for forest visitors, the visitors, and the wildlife.</p> <p>The Forest Service does not need to require that paddlers use specific river access and egress points, but if they do, they should likewise require that all visitors seeking shore and water access use those same points. This is a way of ensuring that the fauna and insect life is minimally impacted by all visitors.</p> <p>The Environmental Assessment should be clear that it does not cover the section of the Upper Chattooga upstream of the Green Creek Trail, and that the resulting Paddling Permit should only be required for paddling downstream of Green Creek.</p>	See response #392.
405.		

Kyle Kraft-Culkin		
406.	<p>Hello, I would like to provide some comments for the Upper Chattooga Access.</p> <p><input type="checkbox"/> I support the trail analysis and Forest Service proposal for trails in Alternative High quality sustainable trails are good for forest visitors and the river.</p> <p><input type="checkbox"/> The Forest Service does not need to require that paddlers use specific river access and egress points, but if they do, they should likewise require that all visitors seeking shore and water access use those same points.</p> <p><input type="checkbox"/> The Environmental Assessment should be clear that it does not cover the section of the Upper Chattooga upstream of the Green Creek Trail, and that the resulting Paddling Permit should only be required for paddling downstream of Green Creek.</p> <p>Thank you for your time and efforts!</p>	See response #392.
407.		
Tclarke916		
408.	<p>Please leave the access to this River the way it is....It does not need another six (6) access trails cut into this area as it is too pristine and too delicate. The access it has now is adequate and serves those who use it quite well!</p>	See response #394.

	I now live in Savannah, GA but am concerned about all of the State of Georgia and it's incredible beauty.	
409.		
Katie May		
410.	The Environmental Assessment should be clear that it does not cover the section of the Upper Chattooga upstream of the Green Creek Trail, and that the resulting Paddling Permit should only be required for paddling downstream of Green Creek!	See response #392.
Will Norris		
411.	<p>I would like to present my stance regarding the proposed boater access trails into the Chattooga Headwaters region. As an avid outdoorsman, kayaker, and professional kayak instructor, my love for the Chattooga River runs deep. My passion and desire to keep wild places wild, stands equally strong as well. While the dissolve of an antiquated ban on kayaking the upper reaches of the Chattooga has been heart lifting, we must remain diligent in our efforts to protect and maintain the integrity of this unique watershed.</p> <p>Yes, paddlers will need some new access points, but six? A huge part of what makes paddling the upper reaches of the Chattooga unique and special is just how remote a location it</p>	The effects of boater access sites and proposed construction, reconstruction designation and maintenance of the trails are disclosed in the 2014 EA and include effects to recreation, biological resources (fisheries, wildlife botanical), scenery, soils, wetlands and floodplains.

	<p>is. These remote and advanced sections of river should only be attempted by competent, very experienced paddlers. The lack of easy access alone will undoubtedly turn lesser experienced boaters away from this challenging section.</p> <p>Also, with access trails for boaters comes access deserved by non-boaters as well. Hikers, fishermen, hunters, and nature enthusiasts will welcome these new inroads to the forest and river.</p> <p>But each new trailhead becomes a gateway for negative impact users as well. Poachers of plants and animals, indiscriminate campsites and fire rings, weekend "party" goers that may end up in dangerous situations along the river.....we know where this is going.</p> <p>To summarize; I would like to see new access trails accompany the newly opened sections of the Chattooga. I would however, like to see the number of trails reduced to two or three at most, and only in places that optimize safety access concerns (for boaters and fisherman alike), while minimizing impacts on the most unique of forest habitats in concern.</p> <p>Thank you for your considerations toward acknowledging the desires and rights of all outdoor enthusiasts to enjoy this beautiful portion on National Forest.</p>	
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Donald Spude		
412.	<p>I demand that the Forest Service choose EA's "No Action" alternative until they comply with federal law that compels them to offer a full range of viable alternatives to protect the Chattooga River headwaters while providing adequate boater access.</p> <p>It makes no sense to put in six new trails for boater access potentially damaging the fragile and possibly rare plant resources at this location. There is no need for this many trails. Improving boater access at the Bull Pen Bridge is all that is necessary.</p>	See responses #34, #394 and #396.
413.		
Radio Bob <raydiobob@yahoo.com>		
414.	<p>My vote is a definitive, emphatic, NO! How much is enough to satisfy EVERYONES "needs"?! Let's erect heliopads every ten square miles throughout this special wilderness so that ANYONE can fly to walmart/dollar general stores for a critically needed "wilderness shopping experience"- what say?!!! I mean, wilderness shoppers are people too! ... write it all down as the progress of man.....and one great leap(off!) for mankind! Please- call me a liberal(NOT!), but, ...all I am saying, is give PEACE a chance. No trail access! I mean do we REALLY even need what we have at....Bull Pen?!!! C'mon man(kind?!). Let the record state, I am not a danger to</p>	The "No Action" alternative was evaluated in the 2014 EA.

	<p>society. M</p> <p>Understand that my name belongs NOT on any such lists. Thank You and God Bless America!</p>	
415.		
rocketroy@windstream.net		
416.	<p>We oppose designating and building new boater access trails in the Chattooga Wild and Scenic river corridor. Please choose no action alternative for the present. Thanks, Roy and Patty Lowe, Clarkesville, Georgia.</p>	<p>No response necessary as this represents a comment relative to preference for the no action alternative.</p>
417.		
Walter Evins P		
418.	<p>I have hiked, swam, boated and fished the Chattooga river extensively for over six decades and believe that my knowledge and appreciation of this rare treasure is greater than most.</p> <p>The proposal to create six new boating access trails high in the watershed makes no sense. This much access is unnecessary and would certainly threaten this undisturbed wilderness area.</p> <p>I believe the fact that I have both fished and boated the Chattooga gives me a valuable perspective on this frequently</p>	<p>The effects of boater access sites and proposed construction, reconstruction designation and maintenance of the trails are disclosed in the 2014 EA and include effects to recreation, biological resources (fisheries, wildlife botanical), scenery, soils, wetlands and floodplains. All the sites that are currently being used already have user-created trails to them. Some can be converted to Forest Service system trails with some minor improvements.</p>

	<p>contentious issue.</p> <p>I wish to express my strong opposition the proposal to create six new boating trails in the upper Chattooga watershed.</p>	
419.		
Ken Mitchell		
420.	I request you take the NO trail access building until you have complied with federal law and offered more options for this area of the Chattooga river.	See responses #34 and #394.
421.		
Ken Baerwalde		
422.	<p>I am firmly opposed to permitting access to boaters on this pristine section of the Chattooga River. Boaters would basically destroy this section of the river for fly fishermen. It is the only remaining area that is fishable in the warmer weather months. We fishermen joke about the "tube hatch" that comes out late morning in the warmer months on the boater access areas. Unfortunately this is not a joking matter when talking about this section of the river..</p> <p>Boaters, tubers, swimmers and others presently have an extremely large area in which to recreate. This section is the last bastion for fishermen.</p> <p>I do also want to point out that we fishermen pay a significant fee for licenses to fish these waters. I have yet to see any kayakers, tubers, and swimmers pay a recreation fee.</p>	The decision boating on the upper segment of the Chattooga River was made in 2012 and is beyond the scope of this decision.

	<p>I can't tell you how many times kayakers and tubers have floated through these waters even today while I was fishing and ruined my day. Explaining the situation to these interlopers only led to a confrontation on more than one occasion.</p> <p>I only request that boater access be denied. If approved I can assure you I will fish in other states that recognize the value that a pristine area adds to the environment.</p>	
423.		
Marc Brenner		
424.	<p>We support the trail analysis and Forest Service proposal for trails in Alternative 2. High quality sustainable trails are good for forest visitors and the river.</p> <p>The Forest Service does not need to require that paddlers use specific river access and egress points, but if they do, they should likewise require that all visitors seeking shore and water access use those same points.</p> <p>The Environmental Assessment should be clear that it does not cover the section of the Upper Chattooga upstream of the Green Creek Trail, and that the resulting Paddling Permit should only be required for paddling downstream of Green Creek.</p>	See response #392.

425.		
jbrcolumbia@aol.com		
426.	I join whole-heartedly in the reasons expressed in opposition by Chattooga Conservancy.	This comment represents an opinion.
Stuart Alston		
427.	<p>I believe the Chattooga WSR is a truly rare treasure in this part of the US. The upper sections are even more special.</p> <p>Although I am a retired whitewater boater, I think that adding additional trails to accommodate a handful of paddlers who want to risk their lives on the river, during a very short period of the year makes absolutely no sense.</p> <p>Construction will create environmental damage and dump more silt into the river. The boaters need to be content paddling the other sections and leave this area as an unspoiled wilderness.</p>	The effects of boater access sites and proposed construction, reconstruction designation and maintenance of the trails are disclosed in the 2014 EA and include effects to recreation, biological resources (fisheries, wildlife botanical), scenery, soils, wetlands and floodplains. All the sites that are currently being used already have user-created trails to them. Some can be converted to Forest Service system trails with some minor improvements.
428.		
Anderson Jr, William D		
429.	I oppose new boater access trails at the County Line Road, Green Creek, and into the Ellicott Rock Wilderness Area below Bull Pen Bridge because boaters do not use the County Line and Green Creek trails in numbers that would justify building new access, and an adequate access trail already exists just upstream of the wilderness at Bull Pen	See responses #394 and #396.

	<p>Bridge. Building new trails would lead to year-round use, which will seriously damage one of the last places in the Chattooga headwaters allowing a true backcountry experience. Construction of these trails would also harm the very sensitive ecology of the Chattooga Cliffs reach, where 70% of the rare plants in the Chattooga River Corridor are found.</p> <p>The Forest Service should choose the Environmental Assessment's "No Action" alternative until a full range of viable alternatives are offered for the protection of the Chattooga River headwaters, while providing adequate boater access.</p>	
Laura A Garren		
430.	<p>I am writing about the new access trails that have been proposed throughout the Chattooga River corridor. I think it's a bad idea, because if you build it, people will use them, thereby disturbing fragile habitat. Plenty of trails—the Chattooga River Trail, the Foothills Trail, and the Bartram Trail—provide access to the river; why is there a need for more? Some places, in order to remain wild, need to be difficult to access. After all, the river is designated as Wild and Scenic. Don't make it a theme park.</p> <p>As to trails to allow easier access for boating, I would like to endorse the Chattooga Conservancy's proposed solution to allow boating from Bull Pen Bridge to Highway 28. Don't allow special interest groups to set a precedent here.</p>	<p>See responses #379 and #381.</p> <p>The decision about where to allow boating was made with selection of Alternative 13A in the 2012 EA.</p>

431.		
Laura Garren		
432.	<p>I would like to respectfully oppose the construction of any new access trails to the Chattoog River, specifically those proposed for Green Creek, Norton Mill Creek, Bull Pen Bridge, Burrell's Ford Bridge and Lick Log Creek.</p> <p>New trails, of course, would increase traffic through some of the most biologically rich areas of the river corridor that should be protected. While I am not opposed to allowed restricted access by boaters on the upper Chattooga, I believe that part of the responsibility for the stewards of the forest is to also provide a backcountry experience, which would be compromised with increased traffic.</p> <p>Please resist pressure to provide new routes of access so that the unique experience of the forest may be preserved.</p>	See responses #392 and #411.
433.		
Tom Dunken		
434.	<p>Please stop making it easier for people in plastic boats to visually, aurally and physically pollute/damage the river. The Chattooga river corridor doesn't need our improvement. There're plenty of places for paddlers to re-create themselves.</p>	This comment represents an opinion.

	And other ways for entrepreneurs to make money, instead of off the taxpayers' property. I myself paddle the aneurisms downstream. Please keep the river as wild as possible.	
435.		
Cotten Tyler		
436.	Another. "thank you to our Forest Service",	No response needed.
437.		

norm.sharp		
438.	<p>I am commenting in regard to the above proposed action. Specifically, I have concerns regarding the proposed access trail on river left below the iron bridge on Bullpen Road. This is in a designated wilderness area. The EA indicates the proposed trail will divert traffic from the existing user created trail to the river. I don't agree with that assessment. I believe it will add to the existing user created access to the river and degrade the "undeveloped" aspect of wilderness character.</p> <p>The existing user created access appears to be primarily for sunbathing and swimming at the large rocks on river left below the bridge. The river access point for the new trail would not be nearly as advantageous for that. People would continue to access the large rocks as before.</p> <p>The proposed trail has erosion potential where it starts from Bullpen Road and has a few level spots on the way to the river that would be subject to overuse and littering, thereby degrading the "undeveloped" aspect of wilderness character, similar to what exists in other parts of the wilderness close to the river. This would especially happen in the warmer months when boating isn't even allowed. I have attached a few pictures of the area and existing littering, even though there isn't even a trail there now.</p> <p>Please keep me informed on this.</p>	<p>Once the trail is built the permit will specify that boaters have to use the designated put-in location at Bull Pen.</p> <p>Other recreation effects are discussed on page 28 of the Boater Access EA under "Other Recreational Uses". The effects on wilderness are discussed on pages 106-108.</p>

Hank Berard		
439.	As an avid fisherman, I would oppose the trails to permit the access for boaters above and below Bull Pen Rd on the Chattooga River.	The “No Action” alternative was evaluated in the 2014 EA.
440.		
Truman Nicholson		
441.	<p>Right now, the existing trails and roads are used very little during high water flows from fishing, hunting , and hiking. Creating these boating access/egress points will be used during high water flows from heavy rains which will lead to more trail and road erosion.</p> <p>I attended the meetings held in Walhalla several years ago and expressed my opinion there. I remember in the first meeting held at St. Johns Church. A Forest Service personnel member in the beginning stated that “No New Construction Would Take Place” to</p> <p>aid with the additional use of these potential impacted areas. I see things have changed, as usual. Most of the original local people have very little respect for the Forest Service in my area because of the way it handles issues such as this. Boating organizations</p> <p>will not stop until they have full use and control of the entire</p>	<p>See response #386.</p> <p>The 2014 EA includes cost for construction/reconstruction and maintenance (EA page 105).</p>

	<p>river.</p> <p>How much will this cost? Not very long ago (a couple of years)picnic tables, and high dollar bear proof trash cans in the Andrews Pickens District of The Sumter National were removed because of the so called “cutting maintenance cost and resources “ according to Mike Crain.</p> <p>These areas were used for years by local people to enjoy the Mountains with their families on the weekends and holidays. The Forest Service quit maintaining these areas years ago.(ten or more years) So how did this really cut cost? Where was the money be used that was supposed be going</p> <p>toward the maintenance of the these areas? The picnic shelters that were built by the CCC were let go for so long that roof members were damaged from leaking roofs.</p> <p>Lastly, I don’t have a problem with anyone wanting to use our natural resources for recreation. However, I think that it’s the Forest Service’s responsibility to make sure that equal use is given to everyone. Don’t close areas to some(picnickers, hikers, campers, backpackers, fishermen, and hunters)</p> <p>because of laziness and open some areas others.</p>	
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442.		
Steve Best		
443.	Have the courage to deny boaters access to the upper Chattooga. They have plenty of water in this watershed as it is.	The decision to allow boating on the upper segment of the Chattooga River was made in 2012 and is beyond the scope of this decision.
444.		
Earl Nutz		
445.	<p>The upper regions of the Chattooga River were my favorite fishing grounds in South Carolina. I and my partner Dr. Emmitt Williams fished through the 709 entry road the Big Bend falls area. We also fished the gorge area by taking the back road past Village Creek Church off Highway</p> <p>107. In a few of our expeditions we found parts of destroyed Kayaks and wondered who had ventured into the hazardous area. Big Bend falls from my observation is not a falls that can be paddled or portaged around. The falls pour over the broad expanse of the river that is at least 70 or 80 feet across. The falls are at least 25 or 30 feet high. On the west side of the river a rocky shelf protrudes out and into the pool below the falls. To hike around the falls my friend and I carried a rope that we secured around a tree to swing unto the rock ledge and then down into to west side of the pool below where the fishing has always been good. The pool below the falls is not deep enough to land a kayak of any sort, and the</p>	The decision to allow boating was made in the 2012 Decisions informed by the 2012 EA. The 2014 EA is tiered to that decision and is intended only to designate site-specific access for the previously authorized use.

	<p>falls are practically vertical. My son, Hans Nutz, is one of the leading kayak designers for Confluence. Perception, Wave Sport, and Dagger Kayaks are made by Confluence. Hans designs the national and international Wave Sport competition kayaks, and now he is designing the new fishing kayaks. He is not in favor of opening those waters to the kayakers.</p> <p>The gorge presents some additional problems. The entry point would probably be Burl's Ford. That means a kayaker would have to run Big Bend Falls. Then, when the kayaker floated into the gorge he would find himself in a region of no return. The overhanging cliffs on both sides literally mean that there are no portage areas in the gorge itself. It is an area that is rather difficult to hike. Just below the gorge a road on the Georgia side existed but is now overgrown. To exit the river by the marked trails you need to hike an additional mile and a half down river and past Hog Pen Creek. The isolation of the entire area makes safety an issue, and rescue hazardous if not close too impossible.</p> <p>I would recommend that the existing law regarding the wild-scenic Chattooga River remain in place for everybody's benefit. South Carolina has a very limited number of trout streams.</p>	
446.		
Jim Mabrey – North Carolina Council of Trout Unlimited		

Jim Hopkins – South Carolina Council Trout Unlimited		
447.	<p>The following are the comments and opinion of the South Carolina Council of Trout Unlimited representing over [1,600/ 4,600, this represents two separate letters]members regarding the above referenced proposal covering five proposed trails on national forests in South Carolina, North Carolina and Georgia:</p> <p>Since the USFS proposal is to Improve the access and sustainability of the five (S) trails; the proposed trails are multi-use trails (i.e., for hikers, fishers, boaters, and others); the trails would continue to exclude motorized recreation; the proposal has no material effect on the trout or its habitat in the river and its feeder streams: and the proposal does not affect the 2012 USFS decision regarding the management of recreation on the upper segment of the river (i.e., limitation of boater access), the South Carolina Council of Trout Unlimited is not opposed to this proposal. Our position is, however, based on the condition that the USFS will use best practices in trail location, design and construction, including taking all precautions to prevent siltation of the river and its feeder streams.</p> <p>Thank you for this opportunity to provide our opinion on this important matter. We look forward to continuing to work closely with the US Forest Service and its partners in protecting the Chattooga River as a "Wild and Scenic River".</p>	Trail construction and maintenance will adhere to Forest Plan standards and handbook direction.
448.		

Russ Buskirk		
449.	<p>Please open all sections of the Chattooga to boating.</p> <p>The National Forests exist for the benefit and enjoyment of the American people. Preservation and responsible recreational uses can co-exist with proper management. Giving one specific use access to the river; at the exclusion of other compatible activities is not "proper management". River access via well designed trails will reduce disturbance of natural areas and other activities.</p> <p>The issue of "navigable waterways" comes into play here as well. <u>All US rivers</u> should be open for citizens to safely traverse in non-powered craft. It is a heritage of the people of this country that should not be taken away from us; on any river.</p> <p>I support and rely on American Whitewater to represent me in these matters.</p> <p>Thank you for your consideration of more boating opportunities,</p>	<p>The 2012 EA evaluated alternatives that would allow boating as well as alternatives that would continue the prohibitions on boating in the upper segment of the Chattooga River.</p>

<p>450.</p>	<p>I am a whitewater canoeist who waited decades for the opportunity to paddle the Upper Chattooga River where paddlers were wrongfully and discriminatorily denied access for so many years. The first season the river was opened to boating under the arbitrary and unnecessary flow restrictions, I felt fortunate to paddle the two sections below Bull Pen Bridge. I recently read that an environmental analysis found that last year only eight groups ran the river on seven days, down from the first year when boaters ran the river on only 17 days. This proves what paddlers have been saying all along: there would be no stampede of use on these sections and natural flow conditions should be the only restricting factors. There have been high flows during the summer months when paddlers should have been able to run the river, but were kept off by the illogical seasonal restrictions which continue to treat boaters as less legitimate than all other users – for absolutely no reason. I hope the Forest Service will see fit to lift the seasonal and flow restrictions and let paddlers, anglers and hikers share the river as they do on all other rivers that flow across the public's national forest lands in the US.</p> <p>As for the trail considerations, I object to the fact that boaters are still prohibited from accessing the four miles above 28 bridge. There is a good boater access at Highway 28, yet we were forced to hike out what seemed like a mile the time we ran this section. Along with a couple of difficult portages due to rapids blocked by wood, this rendered this section hardly worth the effort involved. I felt like these rules were designed</p>	<p>The flow, season and reach that boaters can access the river was decided in the 2012 Decisions based on the 2012 EA. The 2012 EA considered a range of alternatives and access sites and decided that alternative 13A would best meet resource protection while providing boating as a recreational opportunity.</p> <p>The trails proposed in the 2014 EA can be used by other recreationists as well as for boaters putting-in and taking-out of the Chattooga River.</p>
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	<p>for that purpose: to dissuade paddlers from running Section 1. This is a shame, and boaters should be allowed to paddle out to Highway 28.</p> <p>I support the Forest Service's work to maintain a good, environmentally sound trail system around the river. These should in no way be considered "boater trails" as they will see a lot more use from other users. With or without the nonsensical seasonal and flow restrictions, the Upper Chattooga will remain a sparsely used wilderness experience for the few users who choose to venture there. That is as it should be.</p>	
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