

ENVIRONMENTAL ASSESSMENT FOR THE ANDERSON CREEK OHV TRAIL SYSTEM PROJECT

**Blue Ridge Ranger District
Chattahoochee-Oconee National Forest
Gilmer County, Georgia**

**United States
Department of Agriculture**

**Forest Service
Southern Region**



December 2007

United States Department of Agriculture - Forest Service, Southern Region

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**Blue Ridge Ranger District
Chattahoochee-Oconee National Forest**

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Chapter 1

PROPOSAL AND PURPOSE

1.1 INTRODUCTION

The Chattahoochee National Forest includes approximately 750,502 acres of National Forest system lands extended over three National Forest Ranger Districts and eighteen counties in northern Georgia. It is one of two national forests in the state of Georgia. The project area, which consists of the Anderson Creek OHV Trail System, is located along the southern boundary of the Blue Ridge Ranger District (formerly the Toccoa Ranger District prior to April 29, 2007) off of State Highway 52 in Gilmer County (Figure 1). The Blue Ridge Ranger District manages approximately 301,427 acres and features the Brasstown Bald Visitor Center, Springer Mountain National Recreation Area, as well as, numerous Wildlife Management Areas (WMAs), Scenic Areas, and recreation opportunities including camping, hiking, fishing, scenic driving, hunting, biking, and off-highway vehicle (OHV) use.

The Anderson Creek OHV Trail System is one of eleven OHV trail systems on the Chattahoochee and Oconee National Forests which provide a total of 116 miles of trail riding. Of the 116 miles of designated OHV trails offered on the Chattahoochee and Oconee National Forests, 34 miles (within the Whissenhunt, Anderson Creek, Beasley Knob and Davenport Mountain OHV Trail Systems) are managed by the Blue Ridge Ranger District, constituting roughly 29 percent of all off-road mileage on the forest.

The Anderson Creek trail system consists of approximately six miles of authorized trails. It is one of three trail systems on the Chattahoochee and Oconee National Forests which allows for full-size passenger vehicles. The system accounts for approximately 5 percent of all off-road mileage and 30 percent of full-size vehicle mileage available on the two forests. Interestingly, it also accounts for approximately 5 percent of off-road mileage available on public land in the entire state of Georgia considering that the U.S. Forest Service is the only governmental agency to offer this type of recreation on public land.

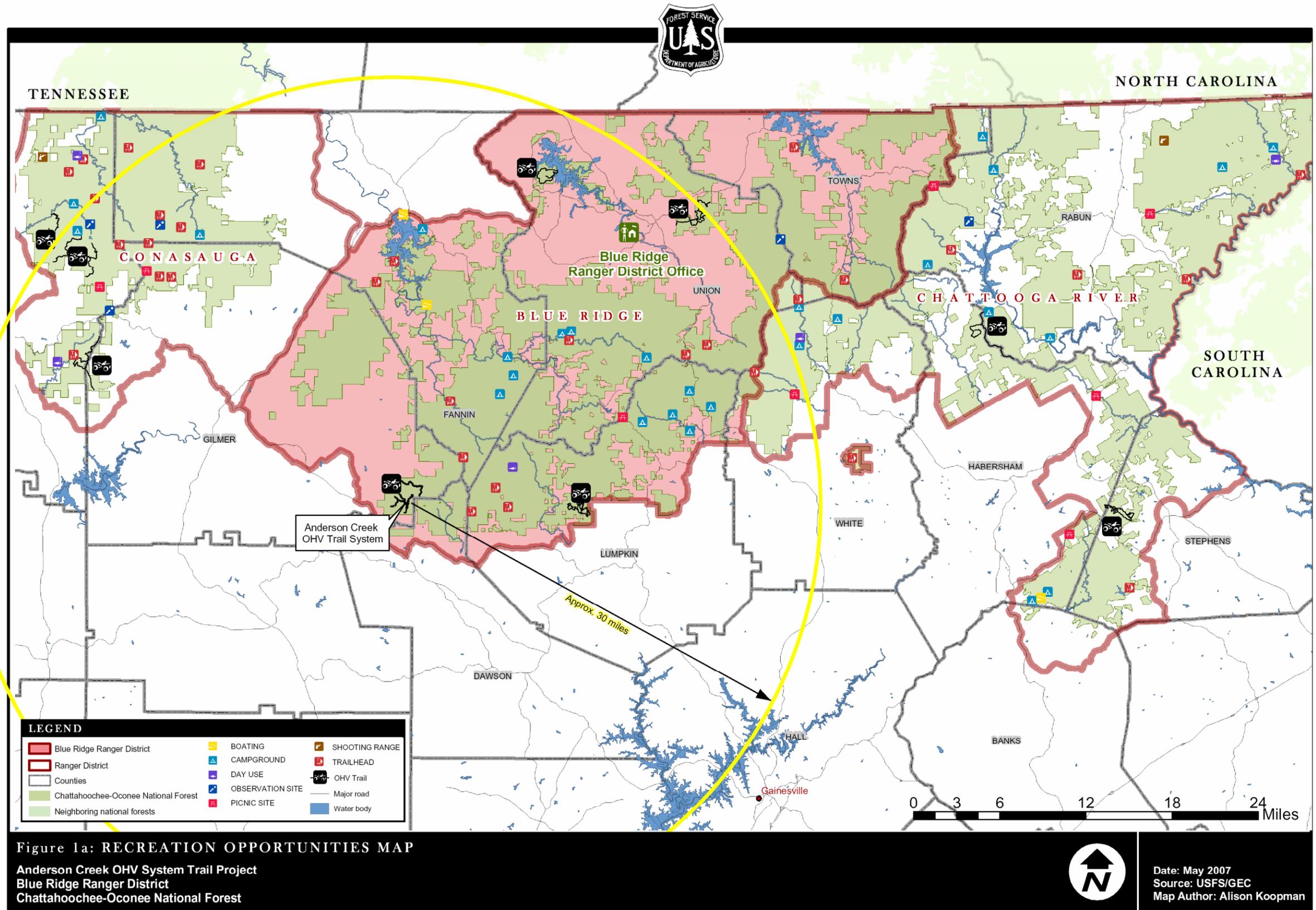
The next closest public opportunity for ATV and trail bike riding is at the Whissenhunt OHV Trail System, approximately twelve miles due east, or a thirty – forty minute drive. The next closest public opportunity for four-wheel drive vehicle riding is at the Beasley Knob Trail System, located two miles east of Blairsville, Georgia. It requires an approximate seventy – ninety minute drive from the Anderson Creek vicinity.

In addition to those OHV trails systems on public land, there are over 200 miles of privately operated OHV trails in the state of Georgia. Use of these private systems is limited to trail bikes and all-terrain vehicles, primarily. Enthusiasts seeking to ride full-size four-wheel drive vehicles, such as jeeps and buggies, must travel to the neighboring states of North Carolina and Tennessee for private riding opportunities.

Figure 1. Location Map



Figure 1a. Recreation Opportunities Map



1.2 BACKGROUND

It was during the 1980's that Anderson Creek was established as an OHV *area*. Each Ranger District was directed to identify at least one OHV use area under the 1985 Forest Land Management Plan.

The rationale for designating this area for motorized use was based on the following information:

1. OHV recreation was considered a low-use activity at the time of implementation;
2. Anderson Creek lay outside of Wildlife Management Areas (WMA);
3. Logging operations provided an access road in good alignment for OHV trail use; and
4. Few environmental concerns were identified at the time of decision.

The original intent for this area was to develop a system of loop trails and roads that would easily accommodate dirt bike riders, which were the majority users at that time. Anderson Creek provided, what management thought, would be an ideal recreational "playground."

For more than ten years, OHV use received low intensity management, until noticeable illegal use and resource damage called for the designation of an official OHV trail system. These mitigation efforts were furthered by State funding (Tea-21) in 2001 which granted assistance to the forest for trail restoration and improved designation markers. As a result, the Anderson Creek OHV Trail System was fully established and provided approximately nine miles of designated trail, open to motorized vehicles, including four-wheel drive vehicles, all-terrain vehicles (ATVs), and trail bikes.

Augmented concerns about resource damage to the forest environment, including erosion, compaction, and damage to vegetation, riparian areas and aquatic habitat, as well as, raised awareness of unauthorized OHV routes, warranted a closer and more critical examination of the Anderson Creek OHV Trail System in 2003. Pursuant to the provisions of 16 U.S.C., Section 551, and Title 36 C.F.R., Sections 261.50 (a) and (b) which state that a, "Forest Supervisor may issue orders which close or restrict the use of described areas...(and) the use of any National Forest System road or trail", the Anderson Creek OHV Trail System, including approximately 14,000 acres of National Forest Lands, was temporarily closed to the public in order to develop a new management strategy for the existing trail system. Goals intended for incorporation into this new strategy were the following:

1. Reduce the amount of soil and water damage occurring within the area;
2. Designate and redesign the Anderson Creek Trail System; and
3. Provide a wider range of opportunities for safe use and enjoyment of OHVs.

Inventory of illegal user created trails, Center for Aquatic Technology Transfer (CATTeam) stream inventory, and photo point monitoring were among the methods of data collection employed during 2004 to help make determinations about the future use of Anderson Creek. It was found that the configuration of designated trails included a number of dead-end trail spurs and approximately two miles of trail inappropriately located within riparian corridors or on steep slopes. In addition to the designated network of trails, Anderson Creek allowed access to over fifteen miles of user-created trails. User-created trails were identified as often being located along streams, forming inroads onto private lands, or leading away from designated trails into the forest. In all occasions, significant impact to the forest environment was noted. As a result, a Decision Memo was signed March 18, 2004 to close approximately five to seven miles of unauthorized vehicle trails, maintain

approximately six miles of authorized trails, block unauthorized vehicle entry from adjacent ownerships and rehabilitate existing dispersed campsites. In April 2004, the Toccoa Ranger District successfully completed the work as outlined.



March 2004

Anderson Creek- Stream channel restoration



March 2004

Anderson Creek- Illegal stream entry

Today, the Anderson Creek OHV Trail System is unavailable to the public. Access road, FDR #357, is currently gated closed under the direction of the District Ranger. As such, the trail system will remain inaccessible until a subsequent decision is made.

1.3 PURPOSE AND NEED FOR ACTION

In 2004, Forest Service Chief Dale Bosworth named the four threats to the health of the nation's forests and grasslands. These include the threat of increased fuels and fires, invasive species, loss of open space, and unmanaged recreation. Chief Bosworth's ideas towards keeping America's forests and grasslands healthy requires restoring and rehabilitating damaged areas to: (1) prevent severe wildfires, (2) stop the introduction, establishment, and spread of invasive species, (3) reduce the conversion of forest and grasslands that leads to fragmentation of rural landscapes through subdivision, and (4) manage impacts of motorized recreation vehicles by restricting use to designated roads and trails.

Unmanaged OHV use can have serious impacts on the physical and social environment. Increased motorized use on national forest lands in recent years led to new national policy on OHV use to guide local designation of roads, trails and areas, as well as, to prohibit cross-country travel. According to this direction, the Chattahoochee-Oconee National Forest now allows for OHV recreation on designated trails, only. However, despite this clear forest policy, illegal cross-country travel remains prevalent across the forest, both within designated trail systems and outside of these areas.

In the last 30 years, OHV owners and users have increased sevenfold, and now represent over 11 million visits to national forest lands. Each year, hundreds of miles of new, unplanned roads and trails are created. There is a growing concern that if actions are not taken for long-term management, Forest users, both now and in the future, would suffer due to failure of addressing erosion, sedimentation, recreation use conflicts, unmanaged areas, spread of invasive species, damage to cultural resources and historical sites, disturbance to wildlife habitat, and risks to public safety.

Rising pressures are becoming apparent from surrounding metropolitan populations as more and more users arrive to the Forest, as well. The Chattahoochee-Oconee National Forest is the only designated urban national forest in the eastern United States. The Chattahoochee-Oconee National Forest is readily accessible from many metropolitan areas in Georgia, North Carolina and Tennessee and is a popular OHV riding ground. Increased use requires the Forest Service to be more strategic in how environmental concerns, public issues, management obstacles, and legal requirements are balanced.

The purpose and need for this proposal is to:

1. Reduce the amount of soil and water damage occurring within and adjacent to the Anderson Creek OHV Trail System. (**Forest-wide Goals 22, 24, 26, & 34**)

1.4 FOREST PLAN DIRECTION

The scope and purpose of this proposal is consistent with the revised *Land and Resource Management Plan for the Chattahoochee-Oconee National Forests (January 2004)* (Forest Plan) goals. The Anderson Creek OHV Trail System is allocated to the 8.A.1 Management Prescription; Mix of Successional Forest Habitats. The emphasis of this management prescription is to provide a mix of mid- to late- successional forest habitats. Management activities are designed to:

1. Retain a forested canopy across at least 50 percent of the prescription area,
2. Maintain or enhance hard and soft mast production,
3. Increase vegetative diversity (structural and spatial), and
4. Limit motorized access across the prescription area.

In addition, sections of the Anderson Creek OHV Trail System fall within the 11 Management Prescription; Riparian Corridors. The emphasis of this management prescription is to retain, restore and/or enhance the inherent ecological processes and functions of the associated aquatic, riparian, and upland components within the corridor.

Forest-wide goals apply to the entire Forest unless superseded by specific management prescription direction. Forest-wide goals relevant to this proposal are:

Forest-wide Goals

Water Quality and Soil Protection

- **Goal 22:** Watersheds are managed (and where needed, restored) to provide resilient and stable conditions to support the quality of water necessary to protect ecological functions and support intended beneficial water uses.
- **Goal 24:** Maintain or restore soil productivity and quality.

Aquatic Habitats

- **Goal 26:** Restore and/or maintain aquatic ecosystems in amounts, arrangements, and conditions capable of supporting viable populations of all native and desired nonnative species of aquatic flora and fauna within the planning area.

Recreation Opportunities and Experiences

- **Goal 31:** Provide a spectrum of high quality, nature-based recreation settings and opportunities, that reflect the unique or exceptional resources of the Forest and the interests of the recreating public *on an environmentally sustainable, financially sound, and operationally effective basis. Adapt management of recreation facilities and opportunities as needed to shift limited resources to those opportunities.*
- **Goal 32:** Provide for the physical security of the forest visitor commensurate with the recreation setting.
- **Goal 34:** Trails do not adversely affect soil and water resources.

1.5 DECISION TO BE MADE

Based on the analysis and description of the Need for the Proposed Action documented in this environmental analysis, the District Ranger, the responsible official, will make the following decision:

1. Whether the Proposed Action, to close the Anderson Creek OHV Trail System, should be implemented at this time, or whether an alternative to the Proposed Action should be implemented at this time.

Should a decision be made to select all or part of an action alternative, those alternatives would be implemented in the next five-year period. The District Ranger would also decide what site-specific management requirements and monitoring is necessary to protect other resources and to achieve other resource goals and objectives.

1.6 PUBLIC INVOLVEMENT

The Anderson Creek OHV Trail Project Interdisciplinary Team (IDT) conducted public involvement with the primary objective of discovering the concerns of the public. The IDT took the following steps to gather issues from the public:

- Public scoping for the Anderson Creek OHV Trail System was initiated July 5, 2005 and ended September 7, 2005. A letter of invitation to comment on the Proposed Action was mailed to 51 individuals and organizations that had expressed interest in local Forest Service projects. 206 responses were received from initial public scoping efforts.
- Simultaneous with the mailing, the District issued a press release to the local newspaper, *The News Observer*, seeking comments from the “scoping letter”.
- During the scoping period, the District Ranger and Deputy District Ranger made a presentation in Cumming, GA to 54 attendees from various clubs including Southern Jeeps, Georgia Bounty Runners, Georgia Cruisers and Southern Land Rover, to discuss the Anderson Creek proposal.

1.7 ISSUES

The Anderson Creek OHV Trail Project ID Team, with assistance from the Forest Supervisor's staff, identified the following significant issues:

Issue A: Soil and Water Quality; Wildlife and Fisheries

1. OHV activities and continued use of the Anderson Creek OHV Trail System may cause increased erosion and result in siltation into nearby streams.

2. Continued use of the Anderson Creek OHV Trail System may impact local trout fisheries and other aquatic species.

Issue B: Recreation and Socioeconomic Factors

1. Changes in the operational status and condition of the Anderson Creek OHV Trail System may impact recreational opportunities for OHV users, especially full-size four-wheel drive enthusiasts.
2. Changes in access and condition of FDR #357 may impact recreational, particularly hunter, access to the surrounding area.
3. Continued use of the Anderson Creek OHV Trail System may result in noise pollution and illegal trespass onto surrounding landowners.
4. Closure of the Anderson Creek OHV Trail System may result in congestion and increased pressure on nearby Forest Service roads and other OHV areas.
5. Changes in access and status of the Anderson Creek OHV Trail System may increase illegal OHV use of the immediate area.

Nonsignificant Issues

Some issues were identified as non-significant because of one or more of the following conditions (Table 1):

- The issue is outside the scope of the proposal
- The issue is already decided by law or in the Forest Plan
- The issue is not in conflict with the proposed action
- The issue is addressed through mitigation measures common to all alternatives

Table 1. Nonsignificant Issues

Issue	Reason for Nonsignificance
According to CEQ regulations, alternatives must be presented in a comparative form.	This issue is already decided by law. Alternatives will be considered as comparison to the proposed action.
According to the current Forest Plan, Objective 34.2, “bi-annually maintain to established standards 100 percent of designated OHV trails”- If this had been done, trails would not have to be closed.	This issue is outside the scope of the proposed action. FP Objective 34.2 does not consider the creation of user-created trails and other financial & operational concerns that are a primary consideration.
The use of FS roads and the surrounding area will affect the integrity of the nearby Appalachian Trail.	This issue is outside the scope of the proposed action. The proposed action only involves the future management of the Anderson Creek OHV Trail System and the area where OHV trails are permissible.

Anderson Creek OHV Trail System Project

Include within the proposal that the FS will gate FS road 28-2 & 28-3 in the scope of the project.	This issue is outside the scope of the project. The proposed action only involves the future management of the Anderson Creek OHV Trail System.
An enforcement plan is needed to ensure adequate closures.	This issue is outside the scope of the project. Law enforcement is not a NEPA decision, and can only be strategized in relative items.
How will the FS monitor the effectiveness of the closures?	This issue will be addressed in the monitoring plan, tied to each action proposal.
Cultural/Historical sites of significance may be compromised during construction/rehabilitation.	No known sites exist. Issue not in conflict with any proposals.

Source: USDA Forest Service, 2006.

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CHAPTER 2

ALTERNATIVES CONSIDERED

2.1 INTRODUCTION

Alternatives were developed by the Anderson Creek OHV Trail Project ID Team in response to the most relevant issues presented in Section 1.3, Purpose and Need. In this chapter are found:

- A detailed description of the Proposed Action and the other alternatives analyzed;
- A comparison of how the alternatives achieve the purpose and need for the action;
- A comparison matrix of the actions proposed in each alternative, and
- A comparison of how the alternatives affect the issues identified in Chapter 1 and presented in Chapter 3.

2.2 DEVELOPMENT AND DESCRIPTION OF ALTERNATIVES

2.2.1 Alternative 1 (No-Action)

Under this alternative, the Anderson Creek OHV Trail System would be managed and operated within its current structure. The situation as it currently exists reflects the Selected Alternative from the Decision Memo signed March 2004 by District Ranger Cassius Cash, to maintain approximately six miles of authorized trail. No additional measures other than current regulations would be taken to protect resources, except to close illegal trails as needed to protect the integrity of the system.

This alternative is required by NEPA and serves as a benchmark for other alternatives in order to analyze the effects on the environment from implementation of management activities.

The trail system described under Alternative 1 is shown in Figure 2.

2.2.2 Alternative 2 (Proposed Action)

Under this alternative, the following actions would occur within the Anderson Creek OHV Trail System:

- Close all trails within, and connected with, the Anderson Creek OHV Trail System, including approximately six miles of authorized trails and several miles of unsigned and undesignated trails.

- Prevent illegal access from adjacent private ownerships and enforce closures through placement of physical barriers such as gates, fallen trees or any combination thereof.
- Decommission the trail system and ensure rehabilitation through any combination of techniques including natural re-growth, earth reshaping, earthen blockades, fallen trees or any combination thereof. Erosion control measures, such as the installment of hay bales and/or silt fences may be used to prevent soil movement. Heavy equipment may be used to form blockades in those areas which have been surveyed by the District Archeologist, including those portions identified in the cultural report.
- Maintain FDR #357 as a system road.

2.2.3 Alternative 3

This alternative would designate approximately nine miles of diverse, user experienced OHV trails that support ATV, motorbike, and OHV use. Approximately four miles of the existing trail would be utilized, approximately five miles would be added to the trail system, and approximately two miles of existing trail would be obliterated. This alternative was developed in response to issues identified through the scoping periods. Alternative 3 attempts to provide quality off-highway motorized recreation, while mitigating against negative environmental effects. The design of the proposed trail system incorporates existing trail and new construction in order to find the best suitable locations for motorized trails in the Anderson Creek area. The following environmental parameters were set forth as guidance in the design of the proposed trail system:

- Where is could be avoided, trails were limited to upland areas and were designed not to cross streams or enter riparian areas. As outlined in Chapter 3, *Section 11: Riparian Corridors* of the Forest Plan, no new trails for off-highway vehicles were to be constructed within the Riparian Corridor, except to approach and cross at designated crossings or where the trail location requires some encroachment.
- In order to allow for the greatest use, all trails were designed to accommodate four-wheel drive vehicles and those smaller.
- As directed in Appendix I of the Forest Plan, to “minimize conflict with adjacent private ownerships,” all new trails were to be located further than 200 yards from private lands.
- As directed in Appendix I of the Forest Plan, to “be operationally feasible” and “provide a desirable user experience,” all new trails were designed to create an entire loop system, to avoid the need for user created trails.
- As directed in Appendix I of the Forest Plan, to “be operationally feasible” and “provide at least 20 miles of route in total,” all new trails were designed to maximize distance while fulfilling the accompanying parameters.
- As much as possible, trails were designed to lie along topographical contours to avoid steep grade changes.

The following briefly describes the proposed trail segments:

- **Trail 1.** Trail 1 is approximately **3.5 miles** in total length and utilizes existing trail bed and new contour trail construction.
- **Trail 2.** Trail 2 is approximately **2.2 miles** in total length and utilizes, primarily, existing road and trail bed. Only a short section, approximately ¼ mile would require new trail construction where the trail adjoins FDR #357.
- **Trail 3.** Trail 3 is approximately **3.4 miles** in total length and utilizes a combination of existing trail bed, existing Forest Service skid roads, and new contour trail construction.

Implementation of Alternative 3 does not include approximately 3.6 miles of FDR #357, except for a small portion where it intersects with Trail #2. The proposed trail described under Alternative 3 is shown in Figure 3.

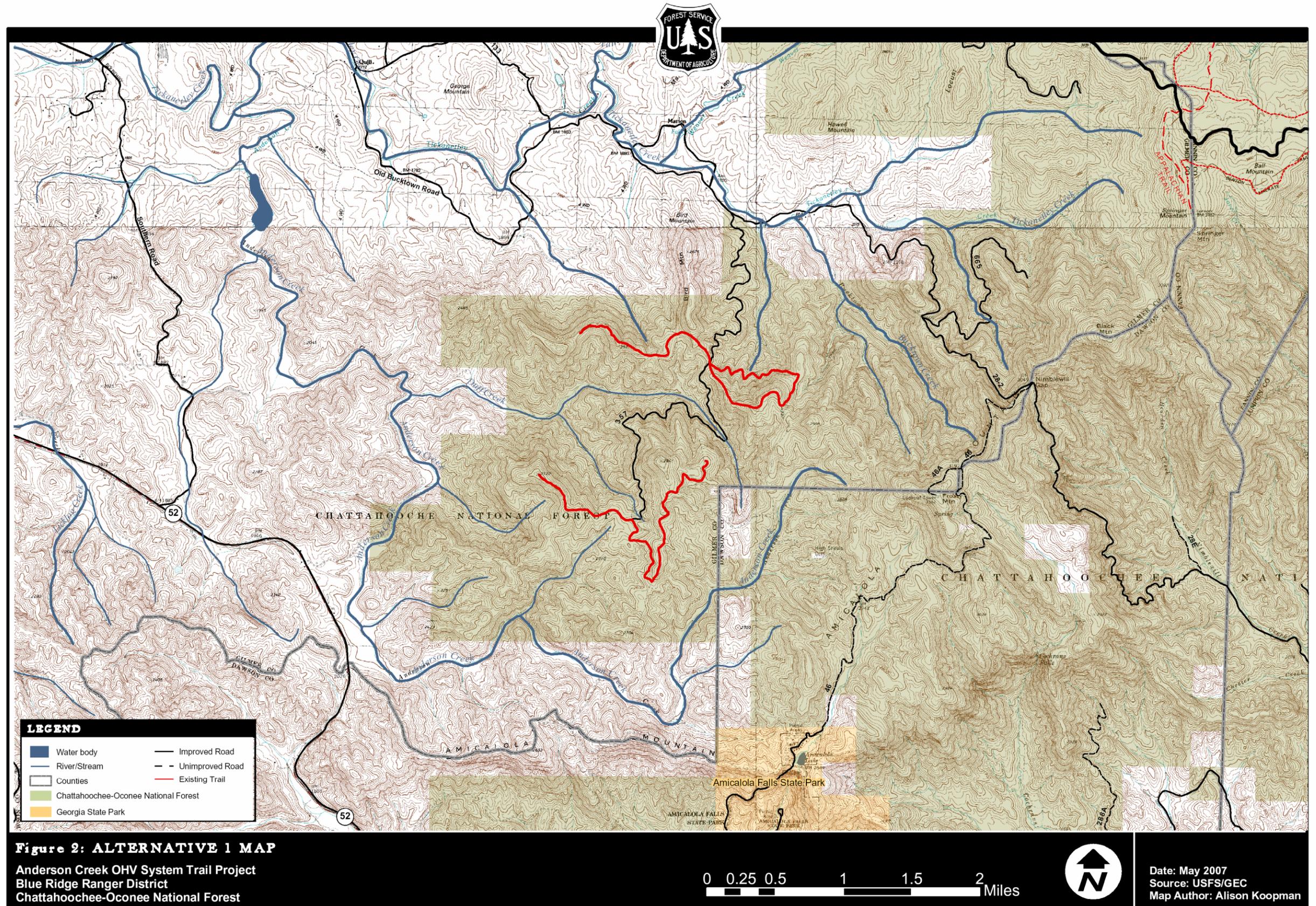
Trail construction would follow the trail design standards set forth by the Forest Service. These design standards provide guidance for the assessment, survey and design, and repair and maintenance of the trail. As previously mentioned, the proposed trail would be designed to accommodate ATVs, motorbikes and OHVs. Therefore, the trail would be constructed using the standards developed for four-wheel drive vehicles. In order to attempt to achieve Goal 31 of the Forest Plan and to provide recreational opportunities which are financially sound and operationally effective, all new trail sections were designed at the “easiest” level to accommodate Forest Service vehicles and maintenance equipment. Table 2 provides an overview of the trail design standards for four-wheel drive vehicles.

Table 2. USFS Trail Design Standards for Four-wheel Drive OHVs

	Easiest¹
Grade	
Max Sustained (200-300)	20%
Max Pitch	20%
Clearance	
Width	Ample clearance for logging truck
Height	Ample clearance for logging truck
Travel Way	
Width	10'
Surface	Rough, irregular. Travel with low-clearance vehicles is difficult.
Obstacles (optional)	None
Flow	Two-way traffic. Difficult and require backing to pass.
Travel Way Plain (outslope)	Level only as necessary
Average Speed	Some slow-speed sections.
Length of Day Trip	30 to 40 miles

¹Easiest trails are usually built for other purposes.
Source: USDA Forest Service, Trails Management Handbook, 1991.

Figure 2. Alternative 1 Map



2.3 MITIGATION MEASURES AND MONITORING COMMON TO ACTION ALTERNATIVES

Mitigation measures are defined as actions taken to avoid, minimize, reduce, eliminate, or compensate for adverse effects of implementing the Proposed Action or other action alternatives. Mitigation measures for the protection of soil, water, recreation, wildlife and vegetation include directions and standards found in the Land and Resource Management Plan for the Chattahoochee-Oconee National Forest, January 2004. As such, these standards are consequentially incorporated into the design of the proposal and alternatives as mitigation measures.

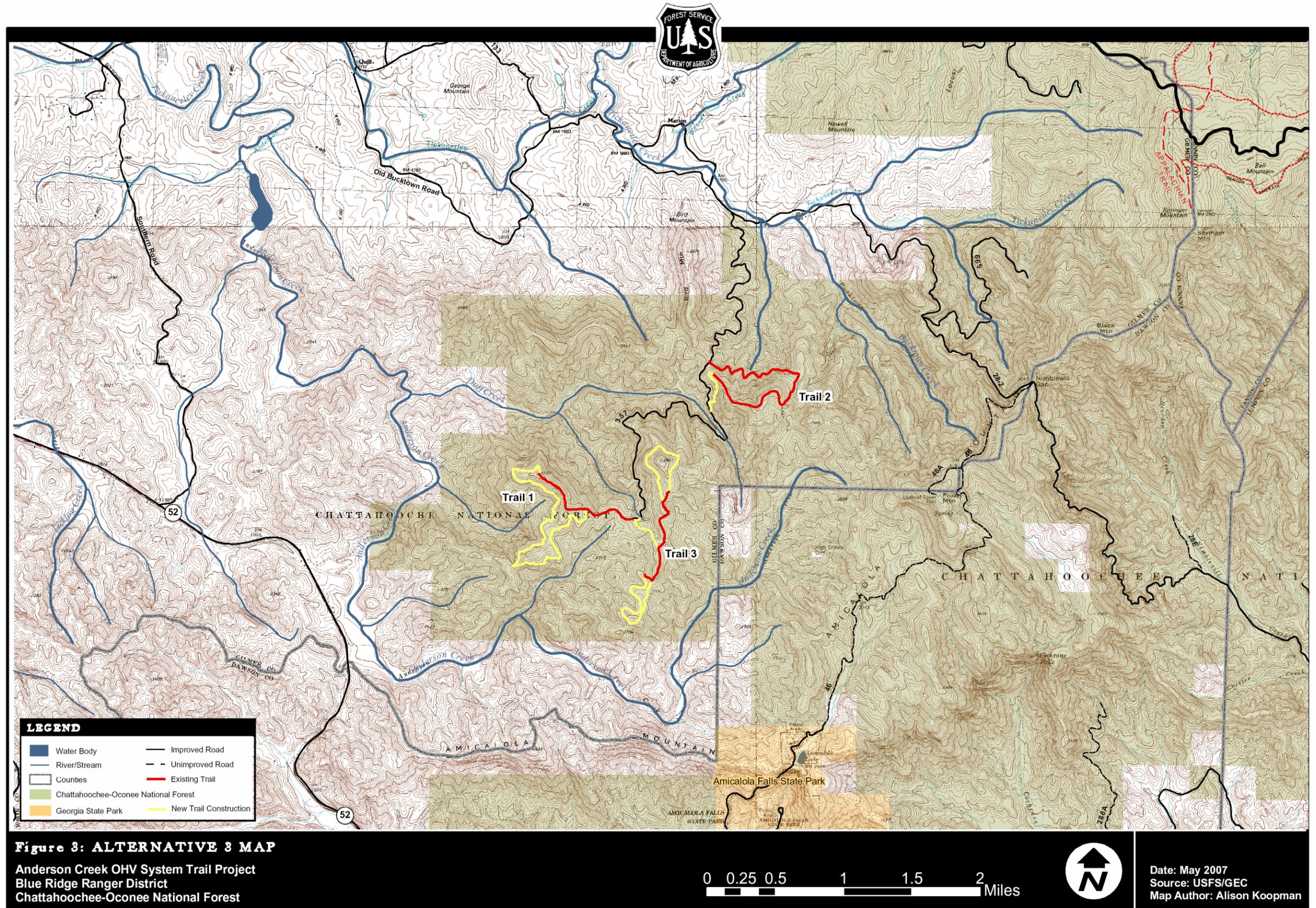
Additional mitigation measures were developed by the Forest Service ID Team and its associated resource specialists to reduce possible adverse effects. They include:

- Trails (authorized and unauthorized) will be monitored for encroachment by illegal motorized use and corrective action will be taken as needed based on the capabilities of the District.
- Illegal access from adjacent private land will be discouraged through the placement of physical barriers such as gates, earthen blockades, fallen trees, etc. based on the capabilities of the District.
- Appropriate erosion control measures will be used to minimize potential impacts from the proposed activities. Examples may include the use of silt fences, hay bales, brush barriers, and prompt re-vegetation of exposed soils. The Manual for Erosion and Sediment Control in Georgia (Fifth Edition, 2000) and Forest Service engineering technical handbooks are sources for design specifications for erosion and sediment control measures.
- Riparian corridors are designated on all perennial and intermittent streams within the trail system as directed by the Management Prescription 11 in the Forest Plan. The corridors will provide protection of streams and aquatic habitats.
- Forest Supervisor Closure Orders will be developed to establish the seasonal and/or permanent closure status of the trail system. Information will be provided to the public to make them aware of the current trail system status.
- Law Enforcement presence will be maintained to ensure compliance with the Decision. Also, in the event that OHV users continue to generate or utilize user-created trails or enter the trail system by means of illegal access, the District will increase the presence of law enforcement personnel throughout the trail system to the best of their ability.

Monitoring:

Field reviews will be conducted by District and Forest-level staff to ensure that the appropriate Forest Service standards and mitigation measures are implemented and that these measures are effective in protecting soil productivity, water quality, and other resources as they were designed to do. Annual field reviews will also occur for detection of illegal OHV use on non-designated trails and to determine any further needs.

Figure 3. Alternative 3 Map



2.4 COMPARISON OF ALTERNATIVES

Table 3 provides an overview of the differences among the three alternatives considered in this environmental analysis. A quantitative comparison of the environmental effects of the alternatives is summarized in Table 4.

Table 3. Comparison of Alternatives by Actions

Proposed Activities	Alternative 1 No-Action	Alternative 2 Proposed Action	Alternative 3
Miles of trail to be decommissioned	0 miles	6 miles	2 miles
Miles of trail to be constructed	0 miles	0 miles	5 miles
Miles of trail to be maintained	6 miles	0 miles	4 miles
TOTAL TRAIL MILES TO REMAIN	6 miles	0 miles	9 miles

*All units of measurement are approximate.

Source: USDA Forest Service, 2006.

Table 4. Summary Comparison of the Alternatives

Issues	Alternative 1*	Alternative 2*	Alternative 3*
SOIL/WATER/WILDLIFE/AQUATIC RESOURCES			
Soil Productivity			
*Total acres of soil potentially affected	7.4	0	10.8
*HUC #031501020101 (Tickanetley Creek)			
*Acres by erosion hazard			
+Severe	2.2	0	1.6
+Moderate	0	0	0
+Slight	0	0	0
*Acres by rutting hazard			
+Severe	0.2	0	0.2
+Moderate	2.0	0	1.4
+Slight	0	0	0
*HUC #031501020102 (Anderson Creek)			
*Acres by erosion hazard			
+Severe	5.2	0	9.2
+Moderate	0	0	0
+Slight	0	0	0
*Acres by rutting hazard			
+Severe	0.6	0	1.6
+Moderate	4.6	0	7.6
+Slight	0	0	0
Water Quality			
*Total number of stream crossings	8	0	7
*HUC #031501020101 (Tickanetley Creek)			
+Miles of streams	465	0	465

Issues	Alternative 1*	Alternative 2*	Alternative 3*
+Miles of trail	1.8	0	1.3
+Acres of trail	2.2	0	1.6
+Miles of trail in Riparian Corridor	0.34	0	0.34
* HUC #031501020102 (Anderson Creek)			
+Miles of streams	341	0	341
+Miles of trail	4.3	0	7.6
+Acres of trail	5.2	0	9.2
+Miles of trail in Riparian Corridor	0.16	0	0.03
Forest Vegetation			
*Total acres of shrub and herbaceous vegetation potentially affected	7.4	0	10.8
* PETS and Locally Rare species	No effect	No effect	No effect
Wildlife			
*PETS and Locally Rare species	Negligible	Beneficial	Negligible
Aquatic Resources			
*PETS and Locally Rare species	May impact	Beneficial	May impact
RECREATION/SOCIOECONOMIC			
Recreation			
*Effects on recreational opportunities for OHV users	Beneficial	Negligible	Beneficial
*Effects on recreational opportunities for other dispersed recreation	Negligible	Beneficial	Negligible
*Total miles of trail available to OHV users	6	0	9
Noise			
*Effects of noise disturbance on other dispersed recreation and adjacent private landowners	Negligible	Beneficial	Negligible
Local Economy			
* Effects on merchants in the local economy	Beneficial	Negligible	Beneficial
Law Enforcement and Public Safety			
*Total miles of trail OHV users may encounter hazards/risks	6	0	9
*Effects of law enforcement presence on recreation	Beneficial	Beneficial	Beneficial

*All units of measurement are approximate.

*Summaries will be discussed in detail in effects sections.

Source: GEC, Inc., 2006

2.5 ALTERNATIVES CONSIDERED BUT NOT ADDRESSED IN DETAIL

2.5.1 An alternative was considered to develop a high challenge system for full-size, four-wheel drive passenger vehicles, only (i.e. rock crawl, hill climb, etc.). In this alternative, the trail system would be substituted for this highly concentrated form of recreation. Allowing this area to serve as a four-wheel drive challenge ride is not within the purpose and need of the decision to be made since it is a proposal outside of the scope of the Anderson Creek Trail System itself. The proposal would have no effect on the issues at hand concerning erosion, sedimentation and water quality along the Anderson Creek OHV Trail System. Nor would it provide an alternative riding system. However, this type of recreation may be a consideration for future use on the forest. A separate decision would be made to implement such an activity.

An additional alternative was considered to designate the Anderson Creek OHV Trail System as a

full-size, four-wheel drive vehicle riding system, only. In this alternative, ATVs and two-wheeled vehicles would be prohibited from riding the trail system. This alternative is not addressed in detail because restricting use to particular types of vehicles, in itself, would not fulfill the purpose and need of the decision to be made. Again, the purpose and need is to reduce erosion and sedimentation and to improve water quality. Restricting vehicle type may be a consideration for future management action, but would require a separate decision.

Chapter 3

ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This section of the EA provides a discussion of the expected effects of the action alternatives with respect to the issues and concerns presented in Chapter 1.

Programmatic environmental impact statements were prepared during development of the Forest Plan, and as part of an examination of vegetation management activities in the Piedmont/Ridge and Valleys. The *Final Environmental Impact Statement for the Revised Land and Resource Management Plan of the Chattahoochee-Oconee National Forests* (FEIS) presents analyses of general effects expected from practices such as those described for alternatives considered in this document. Discussions of effects in this chapter are tiered to this document to avoid repetition.

For the purpose of analyzing the site-specific environmental effects for the proposed action and its alternatives, a study corridor was developed along the existing trail (Alternative 1) and proposed trail (Alternative 3). The study corridor land area is approximately ten feet wide to compensate for the maximum travel way width during trail construction and/or maintenance. The width of the study corridor was determined using the trail design standards for four-wheel drive OHVs (see Table 2, Chapter 2, Section, 2.2.3). The study corridor consists of approximately seven acres for Alternative 1 and approximately 11 acres for Alternative 3. Access road, FDR # 357 was not included in the study corridor for either alternative. Furthermore, a 100-foot riparian corridor on both sides of all perennial and intermittent stream channels was evaluated.

Of importance to note, Forest Service GIS databases are comprised of several sources and are continually updated as current data becomes available. All units of measurement for the proposed action and its alternatives were based on the best available data at the time of analysis. Similarly, in preparation of the specialists' reports, the best science available was utilized for analysis based on the most current data available.

PHYSICAL ENVIRONMENT

3.2 SOIL PRODUCTIVITY

3.2.1 Existing Conditions

The Anderson Creek OHV Trail System is ecologically located within the Blue Ridge Mountains section (M221D) and the Southern Blue Ridge Mountains subsection (M221Dc). More specifically, the trail system is located within two Land Type Associations (LTAs), the Toccoa River LTA (M221Dc17) and the Suches LTA (M221Dc18). A more detailed description of the Toccoa River and Suches LTAs follows:

- **Toccoa River LTA:** This LTA is characterized by rugged mountainous terrain with numerous peaks above 3,000 feet. Average elevation is 2,200 to 3,500 feet with steeply

descending side ridges heavily dissected by numerous small perennial streams in narrow V-shaped valleys. Slope extremes are estimated to range from 10 to 70 percent, but slopes of 25 to 45 percent are typical. Average annual precipitation is 62 inches with driest periods occurring in the fall and wetter periods in late winter and early spring. A short dry period is typical in late May through April. Periodic droughts as well as periodic wet years also occur. Average annual temperature is 59°F, with an average growing season of approximately 200 days.

- **Suches LTA:** This LTA is the prominent southern face of the Blue Ridge Mountains rising above the Southern Appalachian Piedmont Section. This LTA is characterized by rugged mountainous terrain with steep to very steep upper side slopes, narrow, descending side ridges with a generally north-south orientation. Average elevation is 1,800 to 3,700 feet with steeply descending side ridges heavily dissected by numerous small perennial streams in narrow V-shaped valleys. Slope extremes are estimated to range from 5 to 70 percent, but slopes of 25 to 45 percent are more common. This LTA receives higher rainfall than either the adjacent Piedmont or the interior of the Blue Ridge to the north. Average annual precipitation is 75 inches with driest periods occurring in the fall and wetter periods in late winter and early spring. A mild spring dry period usually begins just before green-up and lasts until just after. Summer rainfall is typically afternoon thunderstorms and lower rainfall amounts are typical of the “fall fire season”. Average annual temperature is 61°F, with an average growing season of approximately 195-200 days, with lower elevation having the longer period and higher elevations the shorter one.

A site-specific soil analysis is used during project planning to identify the suitability and management limitations of the soils in the project area. The soil series found along ridge tops, saddles and side slopes within the project area are the Ashe, Ashe and Edneyville, Porters, and Tusquitee series. The Alluvial land soil series is located along riparian areas throughout the project area. Each of the soil-mapping units found throughout the trail system are described in the Cherokee-Gilmer-Pickens (CGP) counties Soil Survey. A more detailed description of the soil-mapping units is discussed below.

AcG – Ashe stony loam, 60 to 80 percent slopes: This soil formed on mountains and escarpments at high elevations. The surface layer is dark-brown loam. The subsoil is strong brown or dark yellowish-brown loam about 15 inches thick. The surface layer and the subsoil contain stones and cobblestones. Included in the mapping are areas of similar soil in which the combined thickness of the surface layer and the subsoil is roughly 12 inches. Also included are rock outcrops.

AEE – Ashe and Edneyville stony loams, 10 to 25 percent slopes: These soils occur on ridges and saddles of the higher mountains. The profiles of the two soils are similar to those described as representative for their respective series. The texture of the surface layer ranges from loam through sandy loam. Included in the mapping are small areas of Porters soils and areas of similar soils that have a black surface layer high in organic content.

AEF – Ashe and Edneyville stony loams, 25 to 60 percent slopes: These soils occur in fairly large areas on narrow ridge tops and on long irregular, mountainous side slopes. Their profiles are those described as representative for the respective series. The surface layer is stony loam to sandy loam. Included in the mapping are areas of a similar soil that has a black surface layer high in organic matter content.

AjC – Alluvial land, cobbly: This soil is well drained and somewhat poorly drained alluvial and colluvial material on stream flood plains. It is gravelly and cobbly and varies from place to place but is mainly brown or dark grayish-brown, coarse-textured loam, fine sandy loam, and silt loam. In places at a depth of 10 to 24 inches, it is about 90 percent pebbles or cobblestones. The organic matter is low.

PcD – Porters loam, 6 to 15 percent slopes: This soil occurs on rolling ridges and saddles of the higher elevation. Typically, the surface layer is very dark grayish-brown loam in the upper 7 inches and dark-brown loam in the lower 3 inches. The subsoil is generally dark yellowish-brown loam to clay loam that extends to a depth of about 36 inches. Included in mapping are small areas of Ashe and Edneyville soils that contain common to many cobblestones and stone fragments.

TIE – Tusquitee loam, 10 to 25 percent slopes: This soil formed in colluvial deposits on benches and at the base on long hillsides. It has the profile described as representative of the series. Included in mapping are areas where shallow gullies and a few gullies 3 to 5 feet deep have formed, a few areas of soils steeper than 25 percent, and small areas of Porters, Ashe, and Edneyville soils.

TmE – Tusquitee stony loam, 10 to 25 percent slopes: This soil formed in colluvial deposits on foothills and at the base of slopes. The surface layer is dark-brown loam that contains stones, gravel, and a few cobblestones. The subsoil is yellowish-brown and strong-brown loam or clay loam. Large stones make up about 25 to 40 percent of the surface layer and the subsoil. Included in mapping are small areas of soils steeper than 25 percent and small areas of Porters, Edneyville, and Talladega soils.

Soils in riparian areas differ from upland areas because they are made of sediments with different textures subjected to fluctuating water levels and degrees of wetness. These soils and site conditions typically exist 50 to 150 feet on either side of most streams, commonly referred to as a riparian corridor. Repeated OHV use often denudes vegetation from these areas. As a result, riparian areas that become disconnected from adjacent creeks or are altered may lose their ecological function. By protecting riparian areas, adjacent creeks are being protected from erosion and sedimentation.

A soil type map showing the location of the soil series along the existing trail system is presented in Figure 4. The soil series, characteristics, and suitability ratings found within the Anderson Creek OHV Trail System project area are presented in Table 5.

Most of the soils located throughout the project area have a moderate suitability rating for trails. The primary goal of soil management is to maintain or enhance long-term productivity (FEIS, page 3-20). Although the extent of the impacted areas is usually small, dispersed recreation (OHV use) inherently causes increased compaction, rutting, erosion and sedimentation.

Compaction is the lowering of the air space in the soil by passage of heavy weight, e.g. OHV vehicles, which packs more soil particles into the same amount of space. Air and water holding capacity is reduced, typically resulting in loss of vegetation growth. Initially, the landscape is stripped of surface vegetation, resulting in root abrasion and compaction of surface soil layers. Increased compaction results in lowered ability of the soil to absorb rainfall, causing an increase in surface runoff. Surface runoff then removes soil through erosion, with the potential to become sediment if it reaches streams. In addition, soil compaction often leads to surface subsidence, which occurs when the trail becomes lower than the adjacent ground surface. This now lower surface drains water from adjacent surfaces and channels, increasing the risk of soil erosion on sloped areas

and the pooling of water in low-lying areas. During times of saturated soil conditions, all soils are more susceptible to rutting. Those soils with higher water tables and those that are subject to

Table 5. Soil Series, Characteristics and Suitability Ratings for the Anderson Creek OHV Trail System Project, Chattahoochee National Forest

Soil Series	Dominant Texture	Depth to bedrock	Acres &% of Total Area	Erosion Hazard	Rutting Hazard	Drainage	Suitability for Trails and Paths
Ashe: 60-90% slope	Loam; stony	20-40"	596 6 %	Slight	Moderate	Somewhat excessively drained	Severe: slope; rocks
Ashe and Edneyville: 10-25% slope	Loam; stony	20-40"	488 4%	Severe	Moderate	Somewhat excessively drained	Moderate to severe: slope
Ashe and Edneyville: 25-60% slope	Loam; stony	20-40"	7469 75%	Severe	Moderate	Somewhat excessively drained	Moderate to severe: slope
Alluvial land	Loam, fine sandy loam, silt loam		30 <1%	Severe	Moderate	Wet	Moderate: frequent, extremely brief flooding
Porters: 6-15% slope	Loam	40-60"	366 3%	Severe	Severe	Well Drained	Slight
Tusquitee loam: 10-25% slope	Loam	>60"	319 3%	Severe	Severe	Well Drained	Moderate: slope
Tusquitee stony loam: 10-25% slope	Loam	>60"	836 8%	Severe	Severe	Well Drained	Moderate: stoniness; slope

Source: USDA Forest Service, 2005; Cherokee-Gilmer-Pickens counties Soil Survey, September 1973; USDA Natural Resource Conservation Service (NRCS) Tabular Data Version 4, September 2006.

flooding will have longer periods of saturated soil conditions during which they would be more susceptible to rutting. OHV users often enjoy the challenge of “mudding” in wet areas, further degrading wetlands and riparian areas. Soil compaction can be mitigated by locating access routes outside of riparian areas and by suspending use during periods of high rainfall. Mitigations include locating travel routes on well-drained soils and keeping tread widths to a minimum to reduce area extent of compaction to the area within the immediate tread.

In addition, on any soils, the steeper the slope, the greater the susceptibility to soil erosion, especially when vegetation is damaged by OHV use. Soil erosion can be mitigated by locating trails and trailheads on grades less than 10 percent, maintaining ground cover (vegetation or other material), providing adequate drainage on trails, and minimizing use during wet seasons. Erosion hazard ratings in Table 5 are based upon erodibility and the likelihood of erosion occurring without the use of proper design, construction and maintenance to control water and soil movement.

3.2.2 Effects on Soil Productivity

Effects on soil productivity with respect to soil rutting and erosion potential for the project area are discussed below. These discussions present the total combined impacts on both Tickanetley and Anderson Creek watersheds. Impacts for each watershed are provided in Table 4, Chapter 2, Section 2.4.

3.2.2.1 Alternative 1.

Direct Effects –Direct effects would include compaction and rutting along the existing trail system. Generally speaking, soils containing higher amounts of clay tend to become more compacted than soils containing high amounts of sand or silt. The dominant texture of the soils located along the trail system is characterized as loam. Over time, continued use of the trail system would directly contribute to the development of compacted soils, which can lead to gully formation and increased surface water runoff, if not controlled through maintenance or rehabilitation.

The process of compaction and rutting occurs when the soil is wet and highly susceptible to damage. Drainage of the soils in the project area rated as somewhat excessively drained to well- drained. As a result, 11 percent (less than one acre) of the soils along the existing trail system are rated as severe for rutting hazard. While the majority, 89 percent (approximately 6.6 acres) are rated as moderate for rutting hazard.

Indirect Effects – Indirect effects along the existing trail system would include erosion and off-trail sedimentation. As compaction increases, the ability for the soil to absorb rainfall is decreased, resulting in an increase in surface runoff. As a result, sediment can move into streams.

Cumulative Effects – Under this alternative, no additional measures, other than current regulation, would be taken to protect soil productivity. Soils along the existing trail system are poorly rated for both rutting and erosion hazard. In the past, long-term repeated use of the trail system resulted in a general decline to soil productivity, which prompted the trail system closure in 2004. No additional activities are currently proposed or expected in the reasonably foreseeable future within the project area that would contribute to adverse cumulative effects on soil productivity.

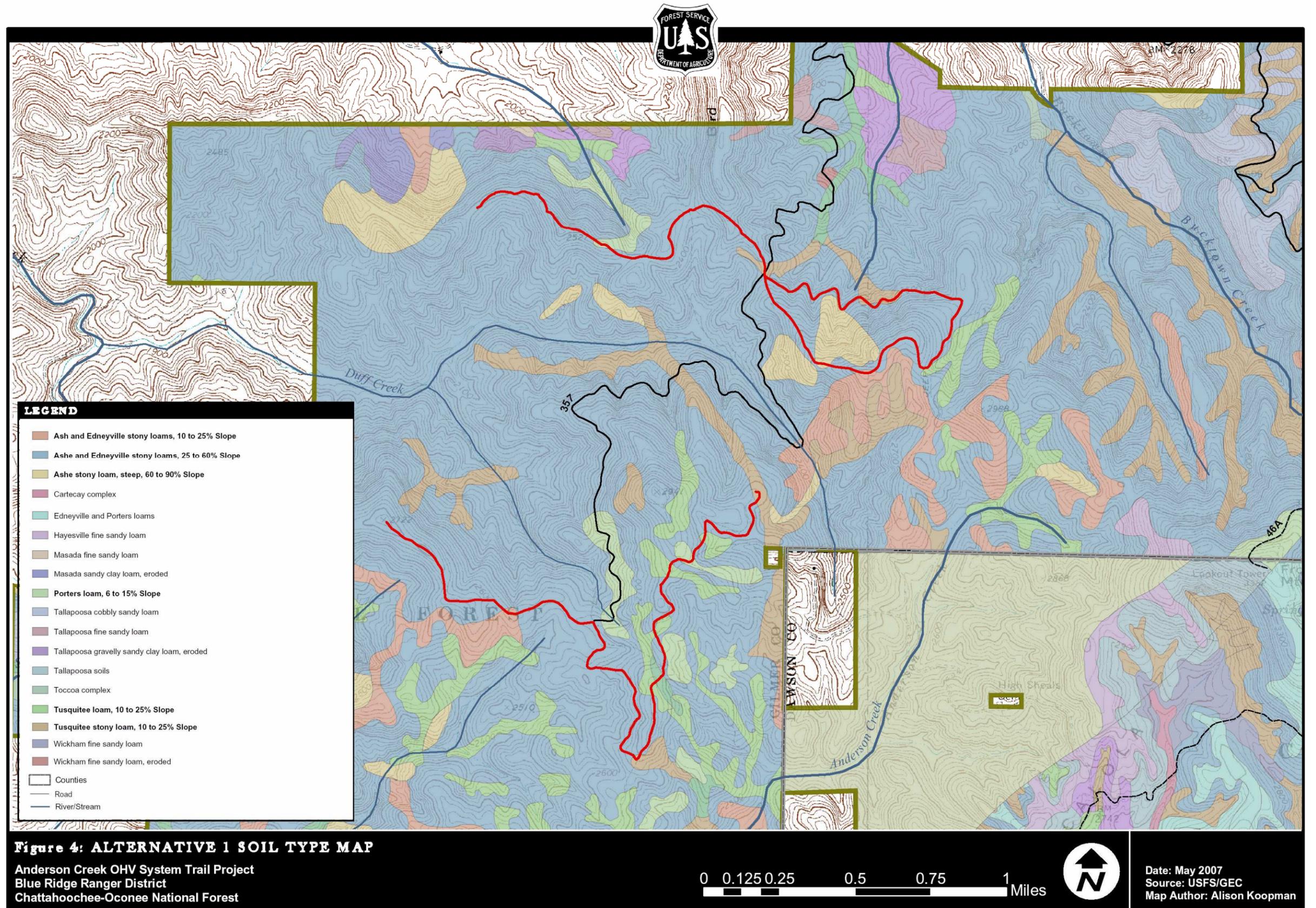


August 2002



Anderson Creek- Trail gully formation

Figure 4. Alternative 1 Soil Type Map



3.2.2.2 Alternative 2.

Direct Effects – Decommissioning the existing trail system would allow for the recovery of soil productivity. Prohibiting OHV use would likely restore vegetation cover, reduce compaction and eliminate rutting.

Indirect Effects – Implementation of this alternative includes rehabilitation measures for many sections of trail, which would restore normal drainage patterns and stream crossings to natural functions. OHV use would be prohibited throughout the trail system, which would allow vegetation cover to become reestablished. As a result, storm water run-off would return to near normal conditions resulting in near natural erosion rates.

Cumulative Effects –Overall conditions have improved and soil productivity has recovered since the trail system closure in 2004. In most areas, vegetation has become reestablished on bare and compacted soils. Subsequently, only natural erosion would take place, reducing the amount of sediment released into the watershed.



*March 2004
Ridge Trail*



*October 2006
Ridge Trail*

3.2.2.3 Alternative 3.

A soil type map showing the location of the soil series for Alternative 3 is presented in Figure 5.

Direct Effects –Direct effects from implementing this alternative would be greater than those discussed under Alternative 1 because approximately five miles (approximately 6 acres) of trail would be newly constructed. Construction of new trail would disturb surface soils, but would be limited to the trail bed. Use of the newly constructed trails would result in soil compaction and rutting.

As a result, 17 percent (approximately 2 acres) of the soils along the existing trail system are rated as severe for rutting hazard. While the majority, 83 percent (approximately 9 acres) are rated as moderate for rutting hazard.

Indirect Effects – Indirect effects for erosion and sedimentation from implementing this alternative would be similar to those discussed under Alternative 1. Soils located throughout the entire trail system (approximately 11 acres or 100 percent) of the proposed new trail corridor are rated as severe for erosion hazard.

Cumulative Effects – Several guidelines have been developed for new trail construction under this alternative (see Chapter 2, Section 2.2.3) to reduce cumulative effects on soil productivity. Adverse effects on soil productivity would be minimized through implementation of BMPs and proper layout and application of erosion control measures during new trail construction. Specifically, all newly constructed trails would be designed to lie along topographical contours to avoid steep grade changes and would be limited to upland areas and designed not to cross streams or enter riparian areas. This would reduce soil erosion, thereby reducing sediment released into streams throughout the project area. Also, all trails would be designed to create an entire loop system, avoiding the need for user created trails, which are not permitted and nearly impossible to manage as seen in the past.

In addition, implementation of mitigation measures and monitoring provided in Section 2.3 would further protect soil productivity. However, despite these mitigation actions, five additional miles would be subject to the cumulative effects of prolonged OHV use. No additional activities are currently proposed or expected in the reasonably foreseeable future within the project area that would contribute to adverse effects on soil productivity.

A more detailed discussion of the general effects of recreation on soil productivity can be found in the FEIS, on page 3-24.

3.3 WATER QUALITY

3.3.1 Existing Conditions

Hydrologic Unit Codes (HUCs) are used by many agencies to consistently delineate, identify, and manage watersheds. The Anderson Creek OHV Trail System lies within the fourth-level Coosawattee River watershed, HUC #03150102, which includes the fifth-level Cartecay River watershed HUC #0315010201. More specifically, the trail system lies within two unnamed, sixth-level HUCs. The northern portion of the trail system skirts the southern boundary of HUC #031501020101, commonly referred to as Tickantley Creek Watershed. The southern portion of the trail system traverses Anderson Creek and lies within HUC #031501020102, commonly referred to as the Anderson Creek Watershed. Several other streams and tributaries including Bucktown Creek and Duff Creek, among others, drain the project area. The location of the existing trail system within these watersheds is shown in Figure 6.

Most of the perennial streams in the project area have an assigned water use classification, or beneficial use, of fishing, and are further classified as primary trout waters by the Georgia Department of Natural Resources (GA DNR). Streams designated as primary trout waters are those that are capable of supporting a self-sustaining population of rainbow, brown, or brook trout. In addition, no streams within the project area are currently identified as partially supporting or not supporting on the Georgia 305(b) listing maintained by the GA DNR Environmental Protection Division.

The riparian corridor management prescription (#11) in the revised Forest Plan includes a 100-foot riparian corridor for both perennial and intermittent streams. This prescription includes standards for management activities within the corridor, which help achieve desired conditions and maintain water quality.

In 2004, baseline water quality monitoring using benthic macroinvertebrates (aquatic insects) was completed at five sites within the project area. Macroinvertebrate assemblages are good indicators of localized conditions because many benthic macroinvertebrates have limited migration patterns or a sessile mode of life. Biological criteria or indices, using macroinvertebrates, provide an evaluation benchmark for direct assessment of the condition of the biota that live either part or all of their lives in aquatic systems (Barbour et al., 1999). An inventory of stream conditions was also completed for the 100-meter stream reaches where invertebrates were collected, and these data are summarized in Roghair et al, 2004.

The macroinvertebrate sample sites and selected indices are presented in Table 6. These biological data provide a snapshot of stream conditions and water quality in the project area, and can provide a baseline to add to with future monitoring. Each site was sampled one time, in 2004. With only one sample, it's not possible to assess trends and overall stream health is also difficult to determine. However, these indices can be compared to a DRAFT Georgia Department of Natural Resources (GA DNR) report of reference stream conditions for the Blue Ridge Ecoregion (Gore et al., 2006). Several macroinvertebrate indices were used by GA DNR, including the North Carolina Biotic Index (NCBI). The NCBI was developed by David Lenat and the North Carolina Division of Environmental Management to establish water quality ratings for streams. The remaining indices are standard taxonomic-based criteria often used in rapid bioassessment protocols. A full description of each of these indices can be found in Barbour et al. (1999). The reference range, mean, and median values for several macroinvertebrate indices as reported by Gore et al. (and GA DNR) are presented in Table 7.

Figure 5.
Alternative 3 Soil
Type Map

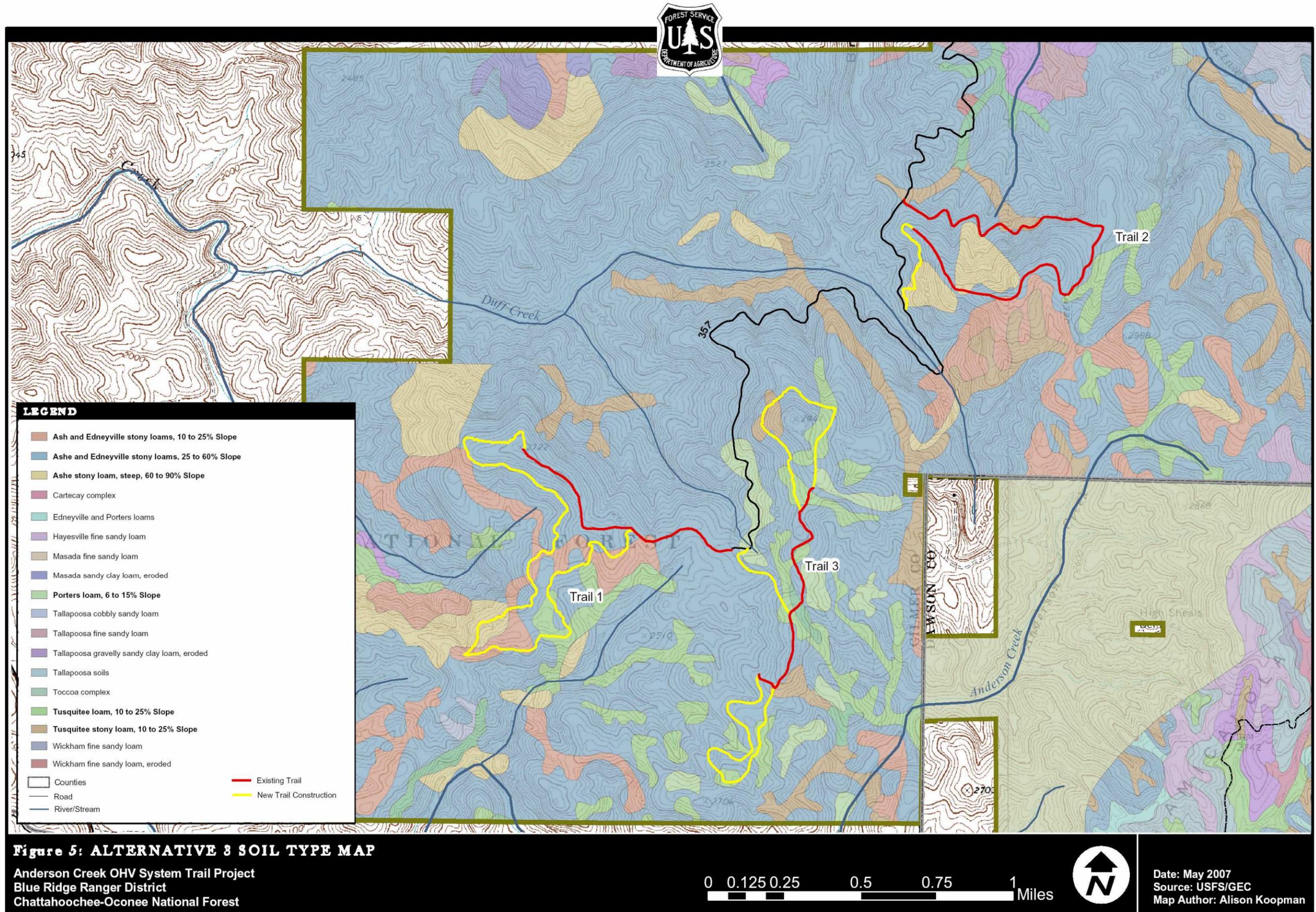
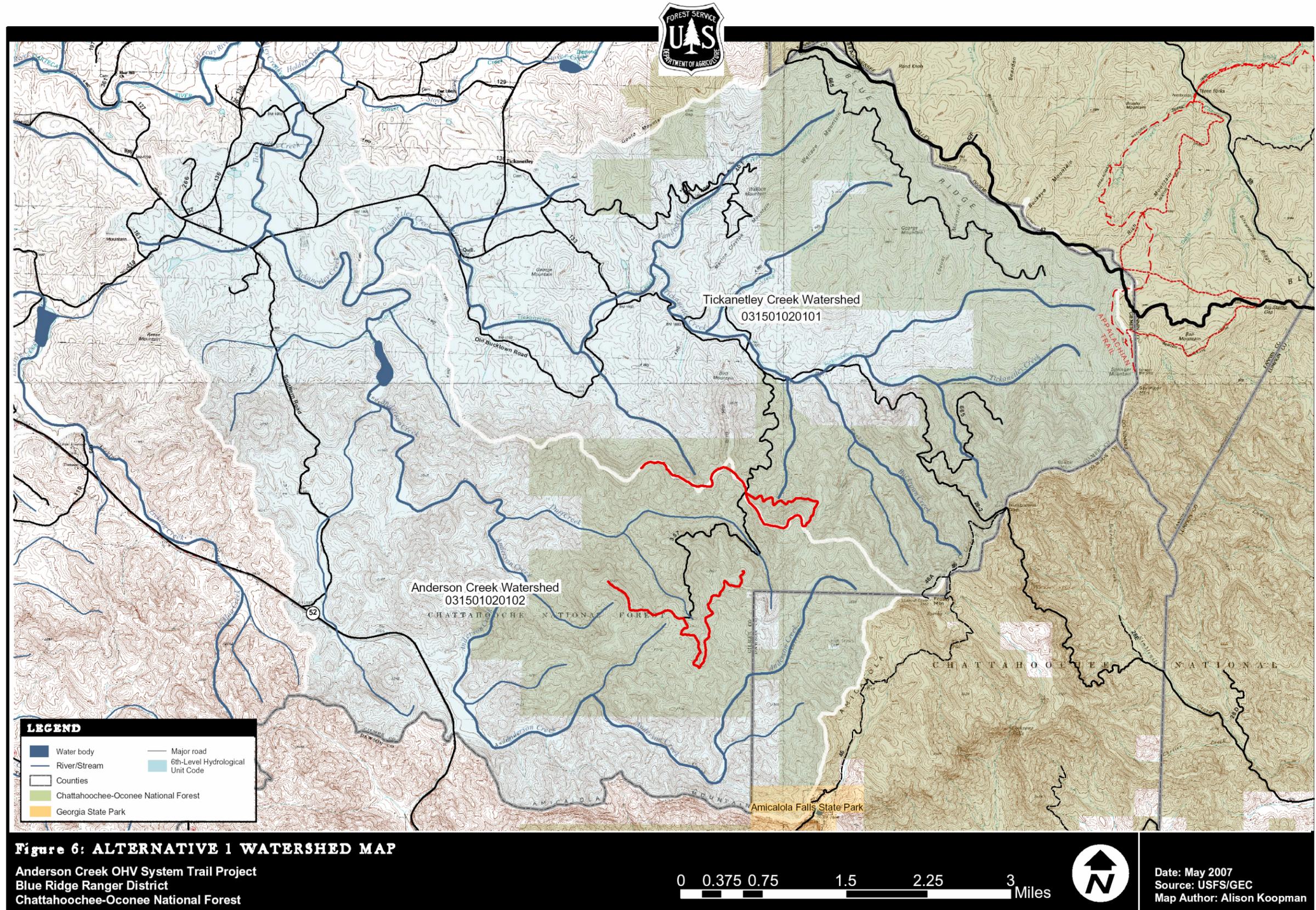


Figure 6.
Alternative 1
Watershed Map



For the Blue Ridge Ecoregion, the range for EPT in reference reaches was 11-37, with a mean of 24.4. One site in Anderson Creek was not within this range, and the remaining four were on the lower end of the range. For NCBI, GA DNR’s draft report includes a range of 3.3 – 5.5, with a mean of 4.2. All Anderson Creek/Duff Creek sites were within this range, but below the mean. For Plecoptera taxa, GA DNR’s draft report includes a range of 3-12 and all sites were on the lower end of the range. For percent Tricoptera, four sample sites were within reference range. These data indicate there may be some stream impacts in the project area, but more data is needed to assess instream habitat conditions or long-term water quality trends.

Table 6. List of Sample Sites and Selected Macroinvertebrate Indices

Site	EPT Taxa	NCBI	Percent 1 Dom Taxa	Percent 2 Dom Taxa	Plecoptera Taxa	% Tricoptera
Anderson 01	14	4.05	36.09	55.03	7	13.04
Anderson 02	15	3.57	36.11	50.00	6	25.00
Anderson 03	10	4.02	29.24	53.22	4	15.79
Duff 01	17	4.04	51.74	58.14	4	34.78
Duff 02	13	4.12	37.58	54.14	6	13.04

Source: Roghair, C.N. et al. 2004

Table 7. Draft Metric Values for Reference Streams in the Blue Ridge Ecoregion

Metric	Mean	Median	Range
EPT Taxa	24.4	25.0	11.0-37.0
NCBI	4.2	4.2	3.3-5.5
Plecoptera Taxa	7.7	9.0	3.0-12.0
% Tricoptera	19.6	20.0	9.6-26.3

Source: Gore et al. 2006.

3.3.2 Effects to Water Quality

Sediment is the best measure to determine the effect of management activities on water quality and its associated beneficial uses on forested lands (Coats and Miller, 1981; cited by the USDA Forest Service, 1999). Sedimentation is the suspension and transfer of eroded, detached soil particles into a water body. Substrate or sediment in streams refers to different size particles (boulder, cobble, gravel, sand, and silt particles) found in the stream channel. The smaller size substrate (gravel, sand) can fill interstitial spaces between large boulders and cobbles, reducing fish habitat. Sediment can also adversely impact water quality by increasing turbidity, affecting the morphology and capacity of channels, changing streambed material size, and altering stream temperature resulting in a reduction of the overall quality of aquatic habitat. The primary mechanism for this transport is storm water runoff, moving particles from a source overland into a stream or other water body. Sediment often goes through a repeating sequence of transport and deposition. It may eventually reach a stream

channel or be prevented from entering the stream by a vegetated filter strip or other Best Management Practice (BMP).

3.3.2.1 Alternative 1.

Direct Effects – Of the approximately six miles of existing trail, less than one mile (0.49 mile) is located along riparian corridors throughout the trail system. In addition, approximately eight stream crossings are located along the existing trail system. Erosion from the existing trail system would continue. Stream crossings will continue to be used, resulting in additional sediment sources to streams. Obliteration of user created trails would result in reduced erosion and sedimentation from unofficial trails.

Indirect Effects – Indirect effects include the delivery of sediment into stream channels resulting in the degradation of aquatic habitats, the loss of total pool volume downstream, and a shift in substrate particle size downstream of the exiting trail system.

Cumulative Effects –Cumulative effects from OHV use would contribute to additional erosion and sedimentation currently occurring along the existing trail system or stream crossings. Implementation of mitigation measures and monitoring provided in Section 2.3 would further protect water quality and aquatic habitats. Existing roads in the project area are the result of access for timber prior to FS land ownership, old public roads, or roads created by FS for management activities. These roads are often used by OHV users to create longer or more challenging routes. Without proper maintenance and layout, degraded sections of these user created trails would continue to contribute to cumulative stream effects. No additional activities are currently proposed or expected in the reasonably foreseeable future within the project area that would contribute to adverse effects on water quality and aquatic habitats.

3.3.2.2 Alternative 2.

Direct Effects –Under this alternative, the entire trail system would be decommissioned. Areas of erosion contributing to sedimentation will be reduced approximately 6 miles or 7.4 acres, and all stream crossings for the trail system would be eliminated. Erosion will be reduced on most of the disturbed acres along the trail template to low levels with decommissioning treatments. Rehabilitation measures include reshaping the existing trail surface, where needed, to restore normal drainage patterns and restoring stream crossings to natural conditions. OHV use would be prohibited throughout the trail system which would allow vegetation to become reestablished and reduce bare soil. As a result, infiltration would be restored and new vegetation would reduce erosion by reducing rain drop impact or functioning as a filter strip near stream channels.

Indirect Effects – Indirect effects from erosion would be reduced, resulting in improved water quality and aquatic habitats over time.

Cumulative Effects – Overall conditions have improved and water quality and aquatic habitats have recovered since the trail system closure in 2004. In most areas, vegetation has become reestablished on bare and compacted soils, reducing the amount of sediment released into the watershed. Only natural erosion would take place. Existing roads in the project area are the result of access for timber prior to FS land ownership, old public roads, or roads created by FS

Figure 7. Riparian Corridors and CATT Survey Points

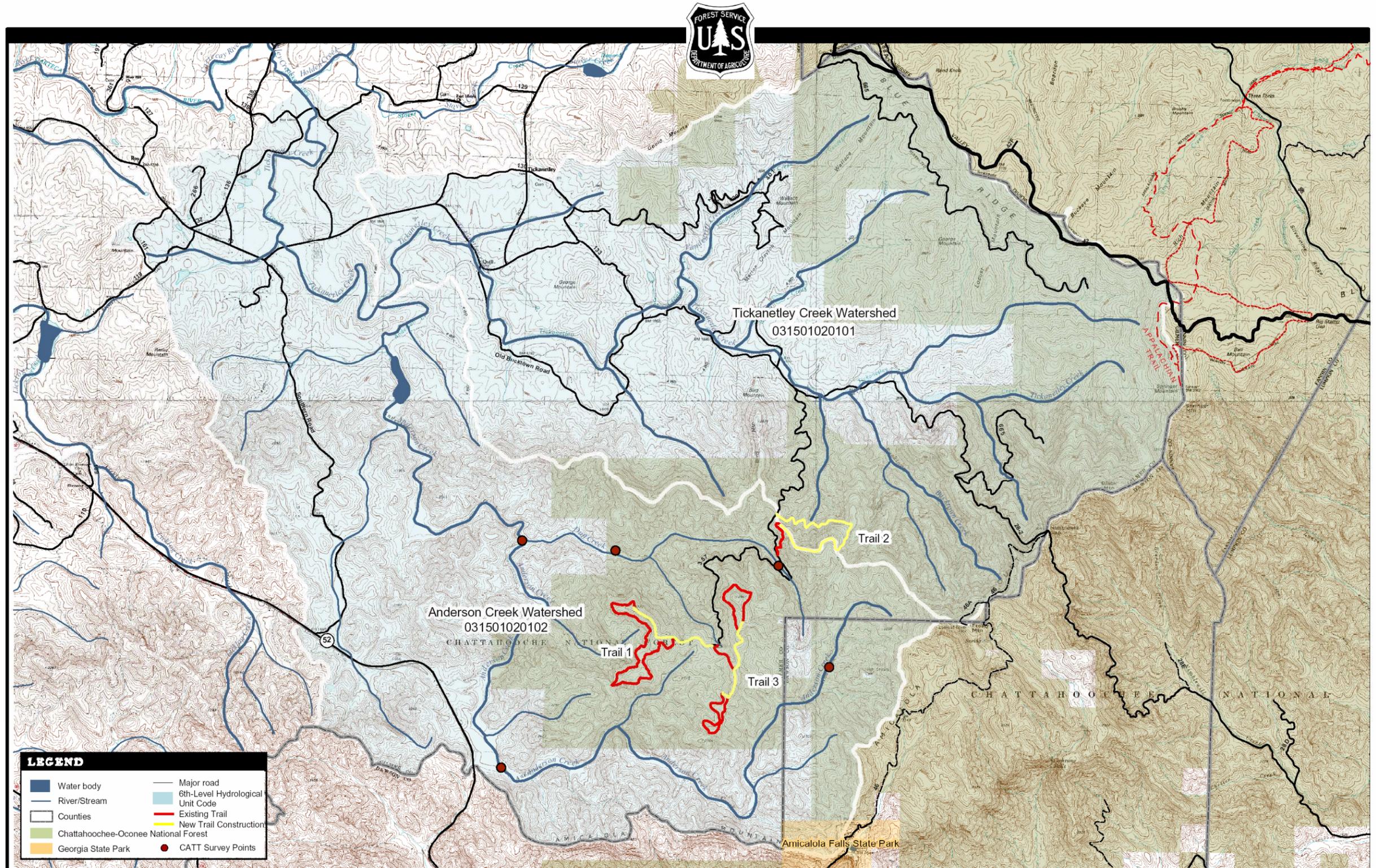


Figure 7: ALTERNATIVE 3 WATERSHED MAP & CATT STREAM SURVEY POINTS

Anderson Creek OHV System Trail Project
 Blue Ridge Ranger District
 Chattahoochee-Oconee National Forest

0 0.375 0.75 1.5 2.25 3 Miles



Date: May 2007
 Source: USFS/GEC
 Map Author: Alison Koopman

for management activities. These roads are often used by OHV users to create longer or more challenging routes. Without proper maintenance and layout, degraded sections of these user created trails would continue to contribute to cumulative stream effects. Cumulative effects from these travel-ways would be reduced in this alternative as a result of user-created trail decommissioning, improving road drainage, and eliminating stream crossings. No additional activities are currently proposed or expected in the reasonably foreseeable future within the project area that would contribute to adverse effects on water quality and aquatic habitats.

3.3.2.3 Alternative 3.

A watershed map for Alternative 3 is presented in Figure 7.

Direct Effects – Direct effects from implementing this alternative would be less than those discussed under Alternative 1 because newly constructed trails would be designed to lie along topographical contours to avoid steep grade changes, as much as possible. Additionally, one ridge-top trail is obliterated in this alternative due to concerns about location and sustainability over time. As with alternative 1, user created trails would be eliminated, thus reducing direct effects from this erosion.

Indirect Effects – Indirect effects from implementing this alternative would be similar to those discussed under Alternative 1, in that all newly constructed trails would be limited to upland areas and would not be designed to cross streams or enter riparian areas. Trail construction will result in soil disturbance that would be short in duration. Indirect effects, including degradation of aquatic habitats, would be less than Alternative 1 due to trail design improvements and one less stream crossing. Indirect effects from user created trails would be reduced when these trails are obliterated.

Cumulative Effects –Several guidelines have been developed for new trail construction under this alternative (see Chapter 2, Section 2.2.3) to reduce cumulative effects on water quality and aquatic habitats. Adverse effects on water quality and aquatic habitats would be minimized through implementation of BMPs and proper layout and application of erosion control measures during new trail construction. Specifically, all newly constructed trails would be designed to lie along topographical contours to avoid steep grade changes and would be limited to upland areas and designed not to cross streams or enter riparian areas. This would reduce soil erosion, thereby reducing sediment released into streams throughout the project area. Also, all trails would be designed to create an entire loop system, avoiding the need for user created trails.

In addition, implementation of mitigation measures and monitoring provided in Section 2.3 would further protect soil productivity. Existing roads in the project area are the result of access for timber prior to FS land ownership, old public roads, or roads created by FS for management activities. These roads are often used by OHV users to create longer or more challenging routes. Without proper maintenance and layout, degraded sections of these user created trails would continue to contribute to cumulative stream effects. In this alternative, cumulative effects from these existing travel-ways would be reduced or eliminated. No additional activities are currently proposed or expected in the reasonably foreseeable future within the project area that would contribute to adverse effects on soil productivity.

A more detailed discussion of the general effects of recreation on watersheds can be found in the FEIS, on page 3-58 and on riparian areas, floodplains, and wetlands in the FEIS, on page 3-78.

3.4 HERITAGE RESOURCES

3.4.1 Affected Environment

To ensure that historic properties (resources eligible for inclusion on the National Register of Historic Places (NRHP)) are not affected, implementation of proposed actions are preceded by a routine cultural heritage resource survey of the proposed Area of Potential Effect (APE) under the Programmatic Agreement (PA) between the Southern Region, USDA Forest Service, the Advisory Council on Historic Preservation (ACHP), and the Georgia State Historic Preservation Officer (SHPO), and the Memorandum of Understanding (MOU) between the Chattahoochee-Oconee National Forests and the Georgia SHPO.

The Blue Ridge Ranger District Archaeologist completed a routine cultural resource survey of the project area. All trails were surveyed, walked, and shovel tested where needed, i.e. crossing gaps or flat areas. During the course of the survey, no new sites were found; however, a few isolated quartz flakes were noted throughout the entire trail system. It was determined that no cultural resources (historic properties) were found within the APE, and thus the proposed project would have no effect on any sites. The proposed project is recommended to proceed as planned. The EBCI THPO concurred with the findings of the report.

In the event that additional or previously unknown historic properties are discovered at any time during project implementation, the activity would cease immediately and the Blue Ridge Ranger District Archaeologist shall be notified. The activity in that location shall be suspended until an evaluation of the resource has been made in consultation with the Georgia SHPO, the appropriate THPOs, and the ACHP (36CFR800.13).

3.4.2 Effects on Heritage Resources

3.4.2.1 Alternatives 1 through 3.

Direct Effects – Because no historic properties were found within the APE, direct effects to cultural resources would be negligible. Only naturally occurring effects such as erosion, natural weathering, wildfire, burrowing animals, etc. would occur.

Indirect Effects – Because no historic properties were found within the APE, indirect effects to cultural resources would be negligible. Only naturally occurring effects such as erosion, natural weathering, wildfire, burrowing animals, etc. would occur.

Cumulative Effects – Based upon the intensity of the surveys conducted and the mitigation measures applied, there is no reasonable expectation of adverse cumulative effects on cultural resources considered to be eligible for the NRHP. For a cumulative effect to occur, sufficient information would have to be lost over time and over the forest, such that understanding of prehistoric and

historic settlement activities would be lost. The monitoring of known archaeological resources would not only protect the resources against potential land disturbance from proposed management actions, but it would also allow for the protection of sites against vandalism and unauthorized excavation (e.g. looting). Likewise monitoring would allow measurement of the effects of natural disturbances such as erosion, natural weathering, wildfire, burrowing animals, or other ongoing processes on the resource.

A more detailed discussion of the general effects of dispersed recreation on heritage resource can be found in the FEIS, on pages 3-531.

BIOLOGICAL ENVIRONMENT

3.5 FOREST VEGETATION

3.5.1 Affected Environment

The Chattahoochee National Forest is divided into eight broad vegetation community types (Table 3-30, FEIS, page 3-100). Within these community types, the habitat is divided into more specific forest cover types. Forest cover types describe the dominant vegetation occurring within each of the forest stands. A detailed description of the community types are provided in the FEIS along with the forest cover types associated with each community type. The Anderson Creek OHV Trail System traverses through small portions of six forest types, including Virginia Pine-Oak, Chestnut Oak-Scarlet Oak-Yellow Pine, Chestnut Oak, White Oak-Red Oak-Hickory, Yellow Poplar-White Oak-Red Oak, and Chestnut Oak-Scarlet Oak.

In order to manage the Forest more efficiently, the Forest Service has assigned Management Prescriptions to specific areas of the Forest. The Anderson Creek OHV Trail System is located within 8.A.1 Management Prescription area. This management prescription is described as a mix of successional forest habitats. The canopy in this area generally consists of a mixed hardwood forest composed primarily of oaks and hickories in the uplands. Poplars, birch, and hemlock increase as moisture availability increases down slope to the coves. Southern yellow pines increase as sites become drier toward the ridge tops. The overstory is relatively closed, multi-layered, and moderately to densely stocked. The midstory is also multi-layered composed of a diversity of shrubs, vines, grape arbors, and saplings. To monitor the affects of management of the Forest, the Forest Service has selected several species and Management Indicator Species (MIS). These species were chosen for the ability to monitor any changes in population health or density from the implementation of management actions. The only plant MIS is the smooth coneflower (*Echinacea laevigata*); however, trail system is not located within the range of this species, nor does it provide its preferred habitat.

Embedded within the community types of the Chattahoochee National Forest are smaller-scale, unique habitats, which support many sensitive and rare plant species. The Forest Service has compiled a list of 150 Federally-listed proposed, endangered, threatened, and (Regional Forester's) sensitive (PETS) and locally rare plant species that occur or have the potential to occur within the Chattahoochee-Oconee National Forest. Upon review of Forest Service records and the Georgia Natural Heritage Program (GNHP) database, there are no known locations of PETS or locally rare plant species within the project area nor does the project area provide suitable habitat for any of these plant species due to the past OHV use. Furthermore, a survey for PETS and locally rare plant species was conducted within the project area by Forest Service personnel and contract botanists

; no PETS or locally rare plant species were observed.

3.5.2 Effects to Forest Vegetation

3.5.2.1 Alternative 1.

Direct Effects – OHV use on approximately six miles of authorized trails would result in the removal of some vegetation within the trail footprint that had reestablished during the temporary closure of the trail system. In addition, the closure of user-created trails would involve some ground disturbance from the placement of gates or construction of earthen berms and the felling of trees to block unauthorized trail entrance, which would directly impact any vegetation within that immediate project area. PETS species or locally rare species would not be directly affected, since there were none found within the project area.

Indirect Effects – Closure of the unauthorized trails would allow those areas to recover from past OHV use and allow the vegetation to reestablish. The additional vegetation would also reduce soil erosion in those areas. Along the existing trail system, there would be no vegetation and the soils would have no protection from stormwater runoff carrying silt into nearby streams. Since there are no PETS or locally rare species found within the project area, this alternative would have no indirect effects on these species.

Cumulative Effects – Cumulative effects of this alternative would be a result of increased OHV use, which would remove vegetation within the trail bed. As a result, soil compaction and erosion from OHV use would not allow reestablishment of vegetation within the trail bed. Since there are no PETS or locally rare species found within the project area, this alternative would have no cumulative effects on these species.

3.5.2.2 Alternative 2 (Proposed Action).

Direct Effects – Methods used to close, decommission, and rehabilitate the trail system would involve some removal of vegetation and disturbance to the soil. Areas heavily damaged from past OHV would require earth reshaping. Earthen berms, gates and felled trees, would be used to discourage prohibited OHV use, which would directly impact any vegetation within that immediate project area. As a result, the closed trails would be allowed to mend and vegetation would become reestablished within the closed trail paths. Since there were no PETS or locally rare species observed within the project area, the actions required to close, decommission, and rehabilitate the trail system would have no direct effects on PETS species.

Indirect Effects – Indirect effects from the trail closure would consist of the reestablishment of vegetation along the trail system, which would likely reduce adverse effects from soil compaction and erosion on vegetation adjacent to the trails. Since there were no PETS or locally rare species observed within the project area, the trail closure would have no indirect impacts on these species or their habitats

Cumulative Effects – In addition, no additional activities are currently proposed or expected in the reasonably foreseeable future within the project area that would contribute to adverse effects on PETS, locally rare, or other plant species. Any potential effects would be avoided by closing and decommissioning the existing trail system. Rehabilitation of the existing trail system would mitigate damage from past OHV use.

3.5.2.3 Alternative 3.

Direct Effects – The construction of approximately five miles of new trail would require the removal of vegetation along the trail system. Newly constructed trails would be designed to avoid as many trees as possible, but some trees would possibly be removed to accommodate the trail construction. There were no PETS or locally rare plant species found within the project area; therefore, implementation of this alternative would have no impacts on these plant species.

Indirect Effects – OHV use along the trail system would eliminate any vegetation within the trail bed. This would cause soil erosion and off-site sedimentation, which would likely impact adjacent habitats and vegetation along the trail system. There are no PETS or locally rare plant species found within the project area; therefore, implementation of this alternative would have no indirect impacts on these species.

Cumulative Effects – Cumulative effects from implementation of this alternative would be similar to those discussed under Alternative 1., with slightly more area being affected.

3.6 WILDLIFE

This section includes a discussion on the potential effects of the No-Action and other alternatives on wildlife species, including MIS, PETS and Locally Rare species.

3.6.1 Proposed, Endangered, Threatened, Sensitive (PETS) and Locally Rare Terrestrial Species

3.6.1.1 Affected Environment. Occurrences of PETS and Locally Rare species within the project area were determined through the review of Forest Service GIS records of the Blue Ridge Ranger District and personal communication with the District personnel (Personal Communication, Jim Wentworth, July 2006). Species evaluated were selected from the 2006 Chattahoochee-Oconee National Forest, Threatened and Endangered Species List, Regional Forester's Sensitive Species list, revised 08/07/2001, and the Chattahoochee National Forest, Locally Rare Species list (2006). There are four Federally-listed threatened or endangered, 13 sensitive, and 24 locally rare terrestrial wildlife species listed as occurring or potentially occurring on the Chattahoochee-Oconee National Forest. According to the GNHP, two sensitive, and three locally rare species have been documented within Gilmer County and could potentially occur within the project area. The remaining species were eliminated from the analysis either because the range of the species did not extend into the project area or the habitat for the species did not occur within the project area.

The following are brief descriptions of the species with potential to occur within the project area.

- Diana Fritillary (*Speyeria diana*): Diana fritillary is a large butterfly with a wingspan ranging from 3 7/16 to 4 7/16 inches. Male and female specimens have different wing colors and patterns. These butterflies prefer edges and openings within moist, rich mountain forest for breeding and foraging.
- Rafinesque's big-eared bat (*Corynorhinus rafinesquii*): Rafinesque's big-eared bat is a medium-sized bat that occurs throughout the southeastern United States from southern

Virginia west to northwestern Arkansas and south to the northern Gulf Coast and into central Florida. This bat roosts in attics of old abandoned buildings in rural areas, barn lofts, open cisterns, bridges, and culverts. In the northern part of its range, the species hibernates in caves, cisterns and similar places, but even then it appears to be active off and on throughout the cold months. This bat is seldom, if ever, seen airborne during daylight hours, for it emerges only after dark. Nursery colonies of a dozen or more females are usually found in the spring.

- Star-nosed mole (*Condylura cristata*): The star-nosed mole is dark brown to black, growing to 4 ½ to 5 inches in length. The nose is surrounded by many fleshy projections giving it a star-like appearance. This mole prefers low wet areas near lakes and streams.
- Coal skink (*Eumeces anthracinus*): The coal skink is a four-lined skink with the light lines extending onto the tail but not onto the head. This skink is between five and seven inches long. Males of this species have red on the sides of the heads during the breeding season. The coal skink prefers humid, wooded hillsides and rocky habitats adjacent to creeks and springs.
- Northern pine snake (*Pituophis melanoleucus melanoleucus*): This snake ranges from 48 to 100 inches in length. The Northern pine snake is white, pale gray or yellowish with black blotches near the front of the body, possibly turning brownish towards and on the tail. The preferred habitat for this species is dry, sandy pine-oak woodlands, pine barrens and dry mountain ridges.

3.6.1.2 Effects to Proposed, Threatened, Endangered, Sensitive and Locally Rare Species. There are no PET species that occur or potentially occur within the project area; therefore the no-action and other alternatives would have no effects on these species.

3.6.1.2.1 Alternative 1.

Direct Effects – Implementation of this alternative would have no direct effects on PET species because none of these species occur or potentially occur within the project area. As for sensitive and locally rare species, there are two sensitive and three locally rare terrestrial species that have been recorded or have the potential to be found in this portion of the forest. However, no individuals of these species have been observed in the project area. Implementation of this alternative would only allow OHV use on approximately six miles of existing trail; therefore, operation of the trail system would have no direct effects on the listed species or their preferred habitats, because the habitat within the trail bed is disturbed and is not suitable for these species. Potential habitat for these species is present adjacent to the trail system and surrounding the unauthorized trails. Closure activities associated with blocking these unauthorized trails would cause some ground disturbance in the immediate vicinity of the closure. Construction of earthen berms and ground reshaping of areas along the unauthorized trails could potentially impact habitat for the star-nosed mole, Diana fritillary, coal skink, and Northern pine snake. However, because of the limited amount of new ground disturbance outside of the existing trails these effects are expected to be negligible. To reduce potential impacts on Rafinesque’s big-eared bats in the project area, no hollow trees would be cut to block access to unauthorized trails.

Indirect Effects –Noise from OHV use within the project area could disrupt the normal behavior of wildlife species at the time OHVs are utilizing the trail system. However, these impacts would be

minor to non-existent. Continued use of the trail system could also increase erosion and sedimentation of areas adjacent to the trail, which could damage suitable habitat for the Diana fritillary, coal skink, Northern pine snake, and star-nosed mole. However, because of the limited amount of new ground disturbance outside of the existing trails these effects are expected to be negligible. Rafinesque's big-eared bat is active at night and roost in hollow trees, old buildings or other abandoned structures; therefore, noise from OHV use would not interfere with the activities of this species.

Cumulative Effects – Currently, there are no additional activities planned within the reasonably foreseeable future for the Anderson Creek area that would adversely impact PETS or locally rare wildlife species. Impacts to PETS and locally rare species within the project area from past and present actions have been minimal, if not non-existent. Therefore, implementation of this alternative is not expected to contribute to adverse cumulative effects on PETS or locally rare species on the Forest.

3.6.1.2.2 Alternative 2.

Direct Effects –Implementation of this alternative would have no direct effects on PET species because none of these species occur or potentially occur within the project area. As for sensitive and locally rare species, there are two sensitive and three locally rare terrestrial species that have been recorded or have the potential to be found in this portion of the forest. However, no individuals of these species have been observed and recorded in the project area, but potential habitat for these species is present along the trail system. The closure and decommissioning of the trail system would encourage wildlife to utilize the project area again. Also, the closure and decommissioning of the existing trail system would prohibit OHV use, thereby reducing the chance of individuals of these species being injured or killed by trail users. Construction activities utilized for rehabilitation and trail closure would disturb small areas of ground in the immediate vicinity of the trail closure sites and would potentially affect any coal skink, star-nosed mole, or northern pine snake present at the site. However, these impacts would be minor, because individuals of these species are very secretive and would likely retreat to safer locations during the disturbances. Overall the trail closure would be beneficial for these species. The Rafinesque's big-eared bat would not be active during the hours of the rehabilitation and trail closure efforts and these efforts would not remove or disturb potential roosting sites for this species. Therefore, Rafinesque's big-eared bat would not be directly affected by this alternative. Diana fritillary would not utilize the existing trails for foraging or breeding; however, areas adjacent to the trails could provide suitable foraging and/or breeding habitat. Constructing earthen berms or reshaping trails would disturb small areas of suitable habitat within the immediate vicinity of these locations and would potentially disturb any eggs or larvae present at the site during the construction. However, because of the limited amount of new ground disturbance outside of the existing trails these effects are expected to be negligible.

Indirect Effects – Closure and decommissioning of the trail system would eliminate noise associated with OHV use, which would reduce disturbance on any sensitive or locally rare species or other wildlife species in the project area. These efforts would allow the existing trail system to develop into usable habitat for each of the sensitive and locally rare species within the project area. Noise generated from the rehabilitation efforts would be temporary and would only have minor to no effects on these species.

Cumulative Effects – Currently, there are no additional activities planned for the Anderson Creek project area that would adversely impact PETS or locally rare terrestrial wildlife species. Any future

projects planned for the Anderson Creek project area would be analyzed using current data and the effects would be documented. Impacts to sensitive and locally rare terrestrial wildlife species would be minimized to the extent possible using approved mitigation measures. Impacts to Federally-listed terrestrial wildlife species would be avoided. This alternative in conjunction with any other actions in the area would enhance the habitat for all PETS and locally rare species occurring within the area.

3.6.1.2.3 Alternative 3.

Direct Effects – Under this alternative, the number of stream crossings on the trail system and miles of trail in the riparian corridor would decrease. Therefore, potential impacts to the coal skink, and star-nosed mole, which occur in the low moist areas adjacent to the streams, would be reduced from current conditions. Construction of approximately five miles of new trails has the potential to impact individuals of these species, but it is unlikely because these species are very secretive and would retreat from the areas of disturbance. All new construction would occur outside of the riparian corridor which would minimize impacts to these species. Rafinesque’s big-eared bats are only active at night; therefore, OHV use during the daytime would have no direct impacts on this species. Any hollow trees that could be utilized by this bat as roosting sites would be avoided, thereby eliminating any direct impacts to habitat for this species. Within the portions of the trail system with sandy soils, there is a potential for the Northern pine snake to be impacted by construction activities or OHV use. However, this species is very secretive and retreats to burrows when disturbed, which makes it very unlikely that this species would be impacted during the construction or OHV use along the trail system. Adult individuals of Diana fritillary could potentially utilize habitat within the vicinity of the trail but, only during the flight period from June to September. In addition, adult female individuals of Diana fritillary could potentially deposit eggs within the leaf litter adjacent to the trails during this flight period. However, since cross country travel would be prohibited, this habitat and the deposited eggs would not be directly impacted by OHV use.

Indirect Effects – Excessive noise generated by OHV use may disrupt the normal behavior of wildlife species in the area. These disruptions could interfere with the breeding habits of the sensitive and locally rare species within the area; however, these impacts would be very minor. Continued use of the trail system could also increase erosion and sedimentation of areas adjacent to the trail system, which could damage suitable habitat for the Diana fritillary, coal skink, northern pine snake, and star-nosed mole. However, because of the limited amount of new ground disturbance outside of the existing trails these effects are expected to be negligible. Rafinesque’s big-eared bat is active at night and roost in hollow trees, old buildings or other abandoned structures; therefore, noise from OHV use would not interfere with the activities of this species.

Cumulative Effects – Cumulative effects on PETS and locally rare wildlife species would be similar to those discussed under Alternative 1. Even with the increased miles within the trail system, the minimal impacts, if any, would not contribute to adverse cumulative effects on PETS or locally rare wildlife species on the Forest.

3.6.2 Terrestrial Management Indicator Species

3.6.2.1 Affected Environment. The Forest Service has collected population data for Management Indicator Species (MIS) for the Chattahoochee National Forest as part of the revised Forest Plan. The Forest Plan identified certain vertebrate and/or invertebrate species present in the Chattahoochee National Forest as MIS (Forest Plan, Table 2-1, pages 2-5).

Population trends for all forest MIS are monitored at the Forest Plan level and reported annually in the Forest’s *Monitoring and Evaluation Report* (M&E Report). Annual forest-wide validation monitoring evaluates the cumulative effects of planned actions combined with past management actions on MIS population trends and provides a context for evaluating the effects of management on future MIS trends.

Fifteen wildlife species are listed in the Forest Plan as terrestrial management indicator species for habitats they represent (Forest Plan, Table 2-1, page 2-5). Of the 15 species listed, only ten potentially occur within the project area. The ten that were evaluated for this EA are presented in Table 8.

Table 8. Terrestrial Management Indicator Species for the Blue Ridge Ranger District

Management Indicator Species	Habitats Represented
Ovenbird	Forest Interior
Scarlet tanager	Upland Oak Forests
White-tailed deer	Demand Species
Black bear	Demand Species
Pine warbler	Mid to Late Successional Pine and Pine/Harwood Forests
Pileated woodpecker	Snags/Mature Forest
Hooded warbler	Forest Interior
Prairie Warbler	Early Successional Forests
Acadian flycatcher	Riparian Forest
Chestnut-sided warbler	High Elevation Early Successional Forests

Source: Forest Plan, 2004.

Habitat requirements of each MIS species:

- Ovenbird. The ovenbird was selected to represent species associated with interior forest habitats. Typically, this species forages for insects and other vertebrates in the leaf litter or soil within mature deciduous forest containing interior forest habitat. The ovenbird is also known to occur within mixed forests and occasionally within bottomland hardwoods with closed canopies. This bird is common on the Chattahoochee National Forest with relative abundance trends from bird point-count monitoring data showing a high number of occurrences for this species. This data indicates that the Forest has an abundance of mature, forest interior habitat preferred by this species. Standards and guidelines in the revised Forest Plan will insure an abundance of mature forest in the future. (M&E Report, 2003).
- Scarlet tanager. The scarlet tanager represents those species associated with mature upland hardwood habitats. It is a tree-nesting, tree foliage-gleaning insectivore. The scarlet tanager prefers mature deciduous forests usually in the uplands with a relatively closed canopy (Hamel, 1992). According to bird survey data, this species has a fairly high occurrence on the Forest and an increase in population is expected. The Anderson Creek project area

provides an abundance of its preferred habitat and the Forest Plan standards would maintain this upland hardwood forest for the future (MIS Trend Report, 2005)

- Pileated woodpecker. The pileated woodpecker was selected to represent the primary excavators and secondary cavity users of mature forest habitats. This species utilizes large snags for nesting and forages on these snags as well as other fallen trees. The preferred habitat of the pileated woodpecker is mature extensive bottomland hardwood forest, swamps, dense river bottoms. It can also be found within open upland mixed forests (Hamel, 1992). Survey data for the pileated woodpecker shows that this species is stable on the Forest and in the State. With the standards and guidelines of the Forest Plan designed to maintain mature hardwood forest and snags within these habitats, the pileated woodpecker populations would continue to thrive and possibly increase in the future (MIS Trend Report, 2005).
- Hooded warbler. The hooded warbler was selected to represent those species that utilize mature deciduous forest. This species inhabits mature mixed hardwood forests with a rich understory layer, sometimes in the deciduous understory of mature pine forests (Hamel, 1992). Data collected annually indicates that hooded warbler numbers are increasing slightly on the forest and within the state. This is due to an increase in the amount of older hardwood stands available on the forest. Through implementation of the standards provided in the forest plan, mature hardwood stands and other late successional habitats will be maintained for the hooded warbler and other species preferring these habitat types (MIS Trend Report, 2005).

Prairie Warbler. The prairie warbler was selected to represent species associated with early successional shrub land habitats. This species is a bush-gleaning insectivore inhabiting abandoned fields with scattered saplings, scrubby thickets, cutover or burned-over woods, woodland margins, and other sapling-shrub growth (Hamel, 1992). It is a neotropical migrant, present only during breeding season. Survey data suggest that the population trends for prairie warblers on the forest are relatively stable, with some fluctuations over the years. These trends should remain unchanged in the future with the standards set forth in the revised forest plan to provide protection and enhancement of early successional habitats (MIS Trend Report, 2005).

- Acadian flycatcher. The Acadian flycatcher, a neotropical migrant, was selected to represent those species associated with mature riparian habitats. This species inhabits moist deciduous forests near streams during its breeding season on the forest (Hamel, 1992). Population trends gathered from bird survey data indicates that this species is fairly stable with slight increases in the abundance trends over the last four years. These slight increases in trends have also been shown in the annual Breeding Bird Surveys statewide. The forest contains an abundance of riparian habitat suitable for the Acadian flycatcher. Continued protection of riparian habitats through the management standards provided in the revised forest plan will allow these acreages to remain stable in the future (MIS Trends Report, 2005).
- Pine warbler. The pine warbler represents species associated with pine and pine/hardwood forest types. This species is a tree-nesting insectivore-omnivore inhabiting open pine stands and dense pine plantations (Hamel, 1992). Populations of this species on the Forest appear to be stable, according to population data collected since 1997. Statewide, the Breeding Bird Survey Data also suggest an increase in population trends. This could be attributed to a slight

increase in the available mature pine stands on the forest have increase on the forest in the past few decades (MIS Trends Report, 2005).

- Chestnut-sided warbler. This species was chosen to represent those species associated with high elevation, early successional habitats. Occurrences of the chestnut-sided warbler on the Chattahoochee National Forest are generally at or above elevations of 2000 feet. The chestnut-sided warbler is a bush nesting and gleaning insectivore, that prefers deciduous saplings or open, middle-aged woods. Trends from bird monitoring data show that this species has a relatively low abundance within the forest along with declining trends across the state. Through wildlife improvements and timber harvesting activities proposed at higher elevation locations in the Forest Plan, preferred habitat for this species would be maintained in the future (MIS Trends Report, 2005).
- White-tailed deer. The white-tailed deer was selected as a MIS to represent game species on the Chattahoochee National Forest. Within the mountains of Georgia, the white-tailed deer densities range from 10 to 30 deer per square mile as apposed to 20 to 70 deer per square mile in the piedmont. This is due to the reduced amount of early successional habitat, poorer soil fertility, and inconsistent mast production. However, according to deer harvest data, the white-tailed deer populations of Georgia are fairly stable (MIS Trends Report, 2005).
- Black bear. This species was selected as a MIS to represent game species on the Chattahoochee National Forest. According to the 2005 “MIS Population Trends Report”, the black bear population in northern Georgia has been increasing for the past 25 years. This is attributed to an increase in older hardwood stands, sustained hard mast production, and enhanced soft mast production through forest management activities. Therefore, the black bear population is very healthy and viable on the forest and is believed to be reaching the carrying capacity of the forest (MIS Trends Report, 2005).

3.6.2.2 Effects to Management Indicator Species.

3.6.2.2.1 Alternative 1.

Direct Effects –The existing trail system previously impacted the habitat when those trails were established. Therefore, maintenance and OHV use of the existing trail system would have minimal direct impacts on MIS habitat. However, the closure of the unauthorized trails would require the construction of earthen berms, ground reshaping of some trail areas and tree felling to block trail access. Efforts would be made to minimize the disturbances from these activities and confine the disturbances within the immediate vicinity of the activity. Still these activities could impact any individuals of MIS utilizing the area at the time of the work. However, these species are very mobile and would retreat from the area during closure activities. Therefore, direct effects from these disturbances would be minor on individuals and habitat

Indirect Effects –Noise generated by OHV use could disrupt breeding and nesting attempts by avian MIS in areas adjacent to the trail system during those periods of the year and could deter the white-tailed deer and black bear from using these areas. However, these impacts would be very minor and would not cause adverse indirect impacts to any MIS species.

Cumulative Effects – Suitable habitat for each of the MIS is common throughout the forest. Continued management of the Forest according to the revised Forest Plan will provide the necessary

habitats required to maintain MIS population goals. The relatively minor impacts to small areas of habitat along the trail system combined with other similar actions in the Forest are not expected to result in cumulative adverse impacts to any of the MIS.

3.6.2.2.2 Alternative 2.

Direct Effects – Under this alternative, the entire trail system would be closed and decommissioned. This would have no direct adverse effects on MIS. However, to close these trails to OHV use would require the ground reshaping of some trail areas, construction of earthen berms, and tree felling to block trail access. The reshaping and berm construction would disturb small portions of habitat within the immediate vicinity of the work. These portions would be minor relative to the project area and would not cause any adverse direct effects to MIS species. The tree felling would only require the felling of a tree or two at each trail access to be blocked. This would be relatively minor impacts on habitat within the project area and would not cause adverse direct effects to MIS. Closure and rehabilitation of the trail system would cause temporary minor impacts on habitat possibly utilized by MIS but, over the long-term, the habitat would be improved. This would also provide additional habitat for MIS without the disturbance of OHV activity.

Indirect Effects – Effects from the closure and decommissioning of the trail system would be beneficial to MIS by providing additional habitat as the vegetative cover is established on the closed trails.

Cumulative Effects – Management activities, whether it past, present, or future are analyzed to determine the impacts prior to implementation. Through these assessments, management projects that minimize the impacts to MIS are selected to benefit the overall forest health and resource protection. Therefore, implementation of this alternative along with past and future management actions would provide beneficial cumulative impacts on MIS within the project area.

3.6.2.2.3 Alternative 3.

Direct Effects – Direct impacts associated with this alternative would be similar to those discussed under Alternative 1; however, these impacts would potentially increase due to the increased trail miles. Construction activities during trail establishment and trail closure would have the potential to directly impact more individuals of MIS utilizing the project area during that time. However, trail construction would clear all shrub and herbaceous vegetation within the trail paths, but would avoid removing mature trees. The closure of the unauthorized trails would require some tree felling, berm construction and ground reshaping along the paths to be closed. These efforts would also clear some habitat, but impacts would be minimized as much as possible and would be temporary. The increased use of the trails after construction would also provide for some potential impacts to individual MIS, but again, these species would more than likely avoid the trails during high usage, minimizing potential encounters between OHV users and MIS individuals.

Indirect Effects – Indirect impacts expected from the implementation of this alternative would be similar to those discussed under Alternative 1. However, this alternative would increase the mileage of trails and the number of trail users in the project area, which would increase the potential for individuals of MIS to be injured by trail users over that of Alternative 1. Noise generated by the trail users would also increase, causing some disruption in the normal behavior of MIS in the area. Again, as stated under Alternative 1, these potential impacts would only occur during use of the

trails; therefore, the impacts would be temporary. Habitat availability would not be changed under this alternative, so, there would be no adverse impacts to MIS.

Cumulative Effects – Suitable habitat for each of the MIS is common throughout the forest. Continued management of the Forest according to the revised Forest Plan will provide the necessary habitats required to maintain MIS population goals. Since this alternative would have only relatively minor impacts to small areas of habitat along the trail system, there are no expected adverse cumulative impacts to any of the MIS.

3.6.3 Aquatic Resources

3.6.3.1 Affected Environment.

Major streams located within the project area are Tickanetley Creek and Anderson Creek. Smaller streams within the project area are generally small ephemeral or intermittent tributaries of these creeks. These tributaries generally contain small streams of flowing water for the majority of the year, however, the smaller tributaries on the upper slopes may become dry during periods of the year when rainfall is low. Habitat within these streams is suitable for a variety of aquatic insects as well as small fishes such as minnows and darters. There are 12 endangered or threatened, 34 sensitive, and 31 locally rare aquatic species listed for the Chattahoochee National Forest. According to GNHP, several of these PETS and locally rare species have been recorded within Gilmer County. Review of these species and their habitats determined that three sensitive and one locally rare species have the potential to occur within the small headwater stream habitat available within the project area. The other species are more likely to occur within larger streams and tributaries down stream of the project area. Table 9 provides the species potentially occurring within the project area.

Table 9. Aquatic PETS and Locally Rare Species Likely to Occur Within the Project Area

Common Name	Scientific Name	Status
Appalachian snaketail	<i>Ophiogomphus incurvatus</i>	Sensitive
Margarita river skimmer	<i>Macromia margarita</i>	Sensitive
Georgia Beloneurian stonefly	<i>Beloneuria georgiana</i>	Sensitive
Rainbow shiner	<i>Notropis chrosomus</i>	Locally Rare

The following provides a brief description of preferred habitat and known distribution for each of the species likely to occur within the project area.

Appalachian snaketail – The larvae of this species of dragonfly prefers shallow sand or gravel riffles within clear low gradient streams. The Appalachian snaketail ranges from Alabama to Maryland within the piedmont/foothills along both sides of the Appalachians (NatureServe, 2006). There has been only one single record of this species within Georgia, which was collected in 1979. Suitable habitat for this species occurs within the streams of the project area; however, there are no records of the Appalachian snaketail within the streams of the project area.

Margarita river skimmer – The margarita river skimmer is a large fast moving dragonfly found within mountain and piedmont streams with high water quality. The larvae of this species prefer streams containing rocky substrate with silt deposits among the rocks. Occurrences of

this species have been recorded in the Appalachians and piedmont of Alabama, Georgia, North Carolina, South Carolina, Tennessee, and Virginia (NatureServe, 2006). Some streams in the project area contain habitat suitable for this species, but no occurrences have been recorded.

Georgia Beloneurian stonefly – This species of stonefly prefers small spring seeps and splash zones in southern Appalachian streams. Occurrences of the Georgia Beloneurian stonefly have been recorded in Georgia, North Carolina, South Carolina, and Tennessee (NatureServe, 2006). Streams suitable for this species occur within the project area, but no occurrences have been recorded.

Rainbow shiner – The rainbow shiner is a small minnow that occurs in small clear streams with moderate water flow and sand or gravel bottom pools or riffles. Occurrences of this species have been recorded in Alabama, northwest Georgia, and southeast Tennessee. The proposed project are occurs within this range and streams within the area contain suitable habitat for the rainbow shiner. However, there are no records of this species occurring within the project area.

3.6.3.2 Effects to Aquatic Resources

3.6.3.2.1 Alternative 1.

Direct Effects –Implementation of this alternative would permit OHV use on approximately six miles of existing trails. OHV users would continue to cross the streams at designated locations. At stream crossings that have been fitted with culverts or bridges, OHV use would not cause any rutting and would not directly impact any aquatic species. OHV use at the crossings without culverts or bridges, would cause rutting of the stream bed at that location and would directly impact any aquatic species present within the trail bed. Even though there have been no records of PETS or locally rare species within the streams of the project area, there is the potential for the above listed invertebrate species to occur within these streams. Therefore, OHVs crossing through the streams could potentially impact or kill individuals of these species occurring within the stream.

Indirect Effects – Indirect impacts expected under this alternative would include sedimentation of aquatic habitat down stream of the stream crossings. There is the possibility of additional sediment entering the streams from portions of the trails traversing the riparian corridors. Sedimentation from either of these sources would indirectly impact aquatic resources by degrading the water quality of the streams. Since the PETS and locally rare species with the potential to occur within these streams require clear flowing water, individuals occurring within the streams would be impacted by the increased turbidity and decreased available oxygen in the water and would also prevent the successful reproduction of new individuals of the species.

Cumulative Effects – There are currently no management actions planned for this area in the foreseeable future. Cumulative impacts from past actions in conjunction with the implementation of this alternative would reduce the quality of aquatic habitat within the streams of the project area. The variety and quantity of aquatic species within these streams would potentially decrease. This would also decrease the chances of any PETS or locally rare species becoming established within the streams of the project area in the future.

3.6.3.2.2 Alternative 2.

Direct Effects – This alternative would close the area to OHV use and rehabilitate the trail system and stream crossings. Efforts to restore the stream crossings to original conditions are unlikely to directly impact aquatic species occurring within the streams where rehabilitation activities will occur. This would include those PETS or locally rare species with the potential to occur within the area. However, aquatic habitat would also be disrupted during these efforts, but these disruptions would be temporary. Water quality would decrease in the streams during the rehabilitation efforts. However, after the rehabilitation is complete and the area is closed to OHV use, water quality within the streams would improve and continue to provide suitable habitat for a variety of aquatic species, including PETS and locally rare species.

Indirect Effects – The rehabilitation efforts would cause some sedimentation downstream of the crossings. These efforts would damage aquatic habitat downstream and possibly harm aquatic PETS or locally rare species occurring within the project area. However, these impacts would be temporary and the mitigation efforts would restore the stream to original conditions, which would provide improved aquatic habitat and water quality within the stream and the project area for all aquatic species, including PETS and locally rare species. Prohibiting OHV use would remove the actions responsible for damaging the streams and provide ongoing protection of the aquatic habitats.

Cumulative Effects – There are currently no management actions planned for this area in the foreseeable future. Cumulative impacts from past actions in conjunction with the implementation of this alternative would improve the quality of aquatic habitat within the streams of the project area. In addition, the variety and quantity of aquatic species within these streams could potentially increase, including PETS and locally rare species.

3.6.3.2.3 Alternative 3.

Direct Effects – Construction of the new trails under this alternative would be completed in accordance with the guidelines provided under Section 2.3. Impacts on the aquatic resources would be similar to those discussed under Alternative 1 within the crossings along the existing trail. The newly constructed trails would not be allowed to cross any streams or be located within riparian corridor areas. Therefore, the construction of new trails would not directly impact aquatic resources along the newly constructed trails. This alternative would eliminate one of the stream crossings along the existing trails, thereby slightly decreasing the impacts to aquatic resources along the portions of the existing trails. In addition, the water quality of the streams should improve slightly with the elimination of one crossing.

Indirect Effects – Indirect impacts to the aquatic resources from sedimentation along the existing crossing and existing trail segments within riparian corridors would be similar to those discussed under Alternative 1. However, this alternative would slightly decrease potential sedimentation by eliminating one existing stream crossing. The new trails would not cross the stream or be constructed within the riparian corridors. Therefore, these trails should not contribute to sediment loads within the streams.

Cumulative Effects – Currently, the project area is not scheduled for any future management actions that would contribute to cumulative impacts on aquatic resources. As for past actions and the implementation of this alternative, there is the potential for a slight increase of adverse effects on aquatic resources that would contribute to a slight increase in cumulative impacts.

SOCIOECONOMIC FACTORS

3.7 RECREATIONAL USE

3.7.1 Affected Environment

OHV use is a legitimate use of National Forest lands, provided resources can be protected. The Forest Service is responsible for providing recreational opportunities while protecting resources so current and future generations can benefit from the Forest. The Chattahoochee-Oconee National Forest is a designated urban national forest in the Southern Region. Increasing demand for recreational opportunities is becoming more apparent as the surrounding metropolitan and rural populations expand. Increased recreation use requires the Forest Service to be more strategic in how environmental concerns, public issues, management obstacles, and legal requirements are balanced.

According to National Visitor Use Monitoring (NVUM) data collected from October 2002 through September 2003, the Chattahoochee-Oconee National Forest is visited by more than 2 million recreationists per year. Of those visitors, approximately 3% of all users are participating in OHV activities. Only 2.2% of all visitors who participated in this survey considered their primary activity/use on the national forest to be related to OHV riding. Similarly, of those surveyed, only 1.7% identified using designated OHV trailhead facilities while they visited the national forest. (NVUM methodology and analysis is explained in detail in the research paper entitled: Forest Service National Visitor Use Monitoring Process: Research Method Documentation; English, Kocis, Zarnoch, and Arnold; Southern Research Station; May 2002)

No site specific use data exists for the Anderson Creek OHV Trail System. Historically, there has never been a fee charged for use of the area or trail system. As such, it is difficult to estimate the approximate visitation of this OHV trail system. While the NVUM forest data shows, conclusively, that only a small portion of national forest visitors are coming to the Chattahoochee-Oconee National Forest to ride OHVs, industry statistics for the state of Georgia show that the number of ATVs being sold statewide and nationwide is increasing every year. It can therefore, be inferred that OHV use is on the rise. In looking at comparable OHV trail systems on the Chattahoochee National Forest, fee collections show that while few areas are steady, many have doubled their collections in recent years. Houston Valley OHV Trail System, located on the Conasauga Ranger District, and Whissenhunt OHV Trail System, also located on the Blue Ridge Ranger District, have tripled their revenue from 2002 to 2005, indicating a sharp rise in interest for the sport.

Forest revenue data also reveals an obvious correlation between number of visitors and length of OHV trails being offered in a particular area. Those trail systems offering 10+ miles have more visitors than those with less than 10 miles of riding.

The Anderson Creek OHV Trail System is located within the Roaded Natural-Natural Appearing landscape character setting. This setting is characterized by a predominantly natural appearing forested landscape with access by moderate standard roads (sometimes a gravel surface). Some areas are classified as naturally evolving if they are within wilderness or wild and scenic river corridors. (FEIS, page 3-490).

FDR #357 provides access to the trail system, which is primarily used by OHV enthusiasts. Other recreation use in the project area consists of dispersed recreational use such as hiking, horseback

riding, hunting, fishing, camping, wildlife viewing and access into the forest. Several other recreational opportunities are located near the trail system including Amicalola State Park, the Appalachian Trail, Rich Mountain Wilderness, and the Ed Jenkins National Recreation Area.

3.7.2 Effects on Recreational Use

3.7.2.1 Alternative 1.

Direct Effects – Alternative 1 would provide approximately six miles of recreational trail riding for a diverse range of vehicle types, including but not limited to, motorcycles, all terrain vehicles (ATV) and four-wheel drive vehicles. In this alternative, as in Alternative 3, the trails are designed to take-off from FDR #357, which serves as the spine of the system and sole access to the area. In Alternative 1, three of the four trails being offered are dead-end segments, requiring the user to turn around and return upon the same route. In addition, the layout and design of this alternative does not provide for more than a 2-mile segment of trail throughout the system. Depending on multiple factors such as vehicle type, rider experience and condition of trail, these short segments would only offer a 20-40 minute riding experience per segment. As such, it is foreseeable that visitors could complete the entire system within a half-day ride. No additional trailhead or staging facilities are being offered as part of this alternative.

Alternative 1 would potentially provide access to the surrounding forest environment for non-motorized dispersed recreational activities via FDR #357. Such activities include hunting, fishing, camping, hiking and wildlife viewing.

Indirect Effects – As the populations of nearby metropolitan areas grow rapidly, the demand for recreational opportunities on the Chattahoochee-Oconee National Forest will likely increase. Considering its location along the southern boundary of the Chattahoochee National Forest and its proximity to the city of Atlanta, visitation to the Anderson Creek Trail System will likely increase, as well. As more and more people utilize the area for recreational use, OHV activities would perpetuate user conflicts with other recreationists such as fishermen and hikers, as well as with local land owners.

In the spring of 2004, nearly 10 miles of user-created and unauthorized trails were inventoried in the Anderson Creek area (see Figure 8: Unmanaged Recreation Map). Based on this precedence, there is a high potential for the creation of user-created trails, as well as the use of unauthorized trails, to occur again. In addition, there would be high potential for illegal access from adjacent private landowners to occur. This was evidenced in 2004 during district monitoring, as well. The Anderson Creek project area is buffered on three sides by private land. New single-family homes are being constructed within this area at an alarming rate. This increase in adjacent population would increase the likelihood for illegal access to the trail system. Although all trails are located at least 200 yards from private lands, as directed in the Forest Plan, in some instances they are only 600 yards set back.

Cumulative Effects – By not providing an interconnected loop trail system and offering only six miles of riding experience, it is likely that user needs and desires will not be satisfied over time. As a result, it is inevitable that route proliferation will occur within the Anderson Creek area.

Active management, with regard to enforcement, maintenance and monitoring, is critical to providing a successful and sustainable OHV trail system. Active management requires a frequent presence by managers to operate the area. Considering the changes which have occurred within the organization

of the Chattahoochee National Forest and the Blue Ridge Ranger District, it is questionable whether the current structure of the recreation program can sufficiently manage the Anderson Creek Trail System. In April 2007, the Brasstown and Toccoa Ranger Districts consolidated to form the Blue Ridge Ranger District. The Blue Ridge now manages more than 300,000 acres of national forest system land, located across seven counties in north Georgia. The Ranger District Office is located in Blairsville, Georgia – a seventy to ninety minute drive to the Anderson Creek vicinity. Increased use of the trail system would require additional management and monitoring by Forest Service personnel for resource damage. Operation and maintenance would be more difficult considering the location of employees and management staff.

3.7.2.2 Alternative 2.

Direct Effects – Under this alternative, the existing trail system would be decommissioned, thereby eliminating all recreational trail riding for OHV users within the Anderson Creek area. FDR #357 would remain a Forest Service system road and potentially be open for public use; however, access away from FDR #357 for other recreational users such as hunters, fishermen, etc. would be limited to non-motorized methods. In addition, game retrieval would also be limited to non-motorized methods.

Indirect Effects – Decommissioning the existing trail system would increase pressure on other recreational areas near the project area to satisfy the demand for OHV use, including the Whissenhunt OHV Trail System, Rock Creek and Tatum Lead OHV Trail System and Beasley Knob Trail System. Surrounding areas would likely become more congested, contributing to an increase in user conflicts. Resource damage in the surrounding areas would increase given that more demand would be placed on those areas to meet the recreational needs of OHV users, especially the Beasley Knob OHV Trail System.

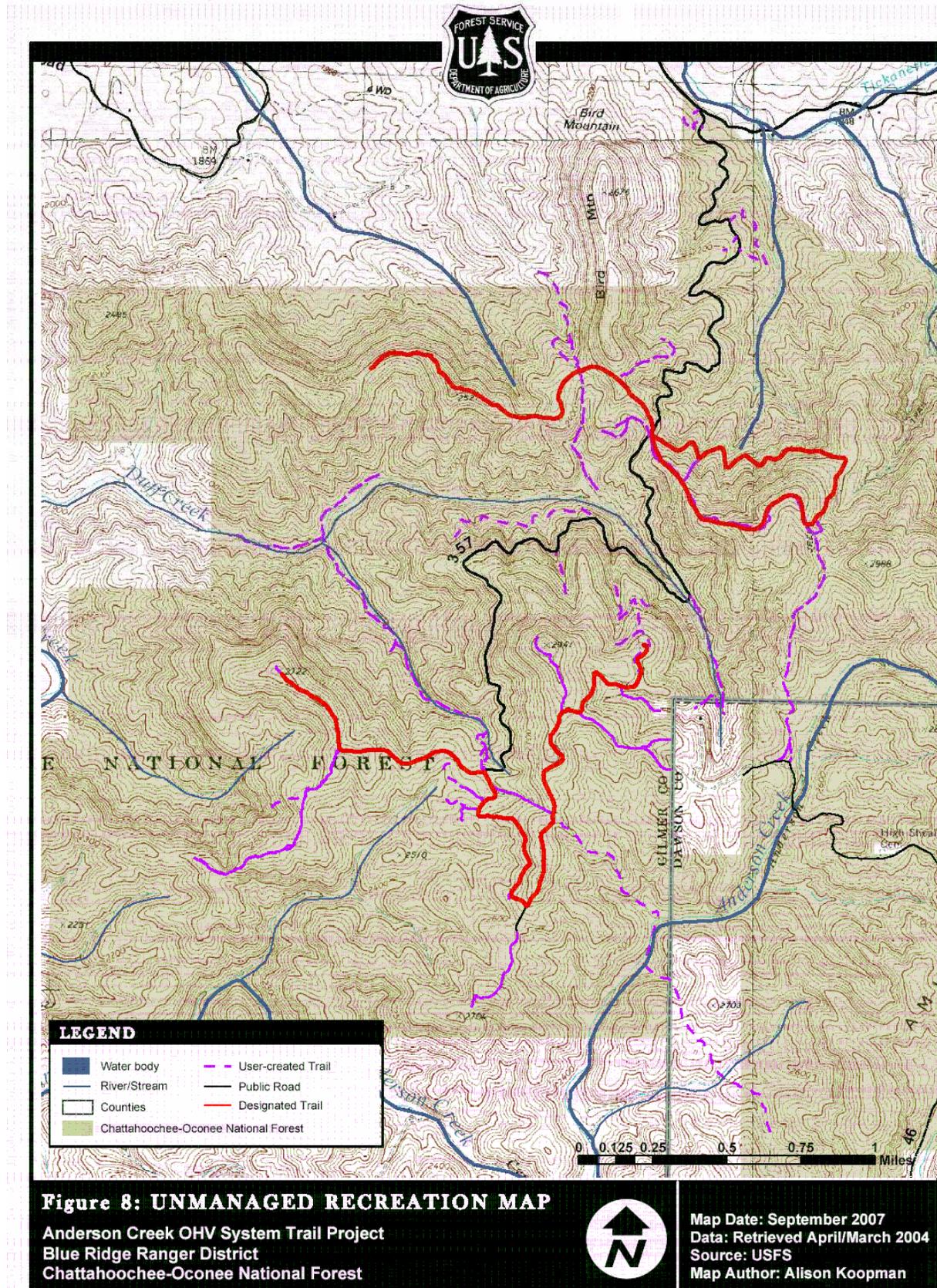
Eliminating all trails within Anderson Creek would not likely prevent OHV use throughout the area, especially those accessing national forest from adjacent private landholdings. It would, however, make enforcement more efficient by eliminating the need to decipher between legal riding versus illegal riding.

Cumulative Effects – Decommissioning the Anderson Creek Trail System would allow Forest Service personnel to concentrate their time at other recreational areas. Currently, the Blue Ridge Ranger District manages more than 300 miles of trails, the Brasstown Bald Visitor Center, portions of seven Wildernesses, 10 developed campgrounds, 4 boat launches, 3 major trailheads, and many day-use and dispersed recreation areas.

3.7.2.3 Alternative 3.

Direct Effects – Direct effects from implementing this alternative would be similar to those discussed under Alternative 1. However, Alternative 3 would provide approximately nine miles of recreational trail riding for motorcycles, all terrain vehicles (ATV) and four-wheel drive vehicles. In this alternative, as in Alternative 1, the trails are designed to take-off from FDR #357, which serves as the spine of the system and sole access to the area. In Alternative 3, all segments are designed to form loop trails. However, each trail functions independently from one another, being connected only by FDR #357. The lengths of trail range from 2.2 to 3.5 miles. No additional trailhead or staging facilities would be provided as part of this alternative.

Figure 8. Unmanaged Recreation Map



Similar to Alternative 1, alternative 3 would potentially provide access to the surrounding forest environment for non-motorized dispersed recreational activities via FDR #357. Such activities include hunting, fishing, camping, hiking and wildlife viewing.

Indirect Effects – Indirect effects from implementing this alternative would be similar to those discussed under Alternative 1. However, it is likely that less user-created trails would be formed due to the Alternative 3 layout and loop configuration.

Cumulative Effects – Cumulative effects from implementing this alternative would be similar to those discussed under Alternative 1. While Alternative 3 provides three additional miles of trail for recreation riding, this negligible amount is not likely to meet user needs and desires for the area over time.

A more detailed discussion of the general effects of motorized trails on dispersed recreation can be found in the FEIS, on pages 3-460.

3.8 Noise

3.8.1 Existing Conditions

A number of Forest visitors enjoy the solitude of remote Forest settings. Projected future increases in OHV use would likely increase noise disturbance and may lessen the recreation experience of other recreationists such as hikers, hunters, fishermen, campers, and those seeking solitude (FEIS, page 3-461). As previously discussed, hunt quality and other user conflicts are often a result of noise associated with OHV use. Additionally, private landowners adjacent to the trail system have expressed that noise generated by OHV use is an annoyance. Conflicts with adjacent private landowners concerning noise would be minimized through proper trail layout, taking into consideration the proximity of adjacent private land. Also, noise emissions from OHVs manufactured after 1986 cannot exceed 94 dB (decibels).

3.8.2 Effects of Noise

3.8.2.1 Alternative 1.

Direct Effects – Noise levels would increase with increased OHV use. This would have an adverse affect on public enjoyment throughout the area.

Indirect Effects –OHV use would contribute to user conflict with other recreationists, such as hunters, fishermen, campers, etc. utilizing the project area. Increased engine noise levels would continue to annoy adjacent private landowners.

Cumulative Effects – An increase in OHV use and associated engine noise would lessen the natural recreation experience for Forest visitors, other than OHV users, within the project area.

3.8.2.2 Alternative 2.

Direct Effects – Prohibiting OHV use would decrease noise disturbance throughout the project area.

Indirect Effects – Recreationists, other than OHV users, would enjoy the solitude provided by the

Forest environment. Adjacent private landowners would enjoy the decrease in noise levels.

Cumulative Effects –A beneficial effect would result to hunt quality, other non-motorized, dispersed recreation opportunities, and adjacent private landowners as noise disturbance associated with OHV would be eliminated.

3.8.2.3 Alternative 3.

Direct Effects –Noise disturbance associated with OHV use would increase as the trail system is expanded.

Indirect Effects – Indirect effects from implementing this alternative would be similar to those discussed under Alternative 1; except that the disturbance experienced by adjacent private landowners, generated by engine noise, would be slightly less, as all trails would be located further away from private lands.

Cumulative Effects – Cumulative effects from implementing this alternative would be similar to those discussed under Alternative 1.

3.9 LOCAL ECONOMY

3.9.1 Existing Conditions

Over time, the Anderson Creek OHV Trail System project area has experienced increased recreational use year-round. With the increasing popularity for OHV use on both National Forest and private lands, there is a great demand for OHV equipment and related supplies. Local merchants and the community are benefiting from the purchase of gas, food, hunting, fishing, and camping supplies related to this recreational niche.

3.9.2. Effects on Local Economy

3.8.2.1 Alternative 1.

Direct Effects – Due to increased interest in OHV recreational opportunities, the local economy would benefit from dollars generated from the sale of groceries, fuel, lodging, and OHV parts and repair services, among other various items and services purchased by OHV users. Nominal economical benefits can be expected for the towns of Dahlenega and Ellijay, as well as, local businesses along State Road 52.

Indirect Effects – As OHV use becomes more popular, perhaps generating local “challenges” or other competitive events, the local economy would benefit from dollars generated from the sale of personal protective equipment, food, lodging, camping, hunting equipment, etc. In addition, increased OHV sales and service would also generate dollars in the local economy.

Cumulative Effects - Users of the Anderson Creek OHV Trail System provide a small benefit to the local economy through the purchase of groceries, fuel, lodging, hunting, fishing, and camping supplies, OHV sales and service, and related items. However, no cumulative effects on the local economy are expected.

3.8.2.2 Alternative 2.

Direct Effects – Under this alternative, the entire trail system would be closed and decommissioned. This would significantly decrease access for other recreational users such as hunters, fishermen, campers, etc. These users would still be able to access the area using FDR #357, but without OHV access, use would likely decline. This would decrease the expenditures of these users in the local economy.

Indirect Effects – Closing and decommissioning the entire trail system would eliminate all use by OHV users, resulting in a complete loss of the local economy expenditures by this user group.

Cumulative Effects – Users of the Anderson Creek OHV Trail System provide a benefit to the local economy through the purchase of gas, food, hotel reservations, hunting, fishing, and camping supplies, and related items. Other recreational areas on the National Forest and State lands are available nearby, which would likely help sustain the contribution of recreational users in the local economy. With a wide variety of opportunities for recreational users in the area, no cumulative effects on the local economy are expected.

3.8.2.3 Alternative 3.

Direct Effects – Direct effects would be similar to those discussed under Alternative 1, with the exception that as the trail system is improved and expanded, it may encourage more OHV users to visit the area. As more users utilize the area, additional benefits to the local economy would be likely.

Indirect Effects – Indirect effects would be similar to those discussed under Alternative 1.

Cumulative Effects – Users of the Anderson Creek OHV Trail System provide a benefit to the local economy through the purchase of gas, food, hotel reservations, hunting, fishing, and camping supplies, and related items. Other recreational areas on the National Forest and State lands are available nearby, which would likely help sustain the contribution of recreational users in the local economy. With a wide variety of opportunities for recreational users in the area, no cumulative effects on the local economy are expected.

3.10 LAW ENFORCEMENT AND PUBLIC SAFETY

3.10.1 Existing Conditions

In general, OHV use can be an inherently dangerous activity. The degree to which individuals employ safe riding/driving practices varies greatly because it is dependent on the user's behavior and attitude toward oneself and others. Although safety is highly variable, factors such as the overall setting and trail conditions may have some influence on a user's actions and safety. Choices a user makes such as speed traveled, use of personal protective equipment, and risks taken ultimately determine whether physical features of the landscape become hazards to safety.

The project area currently does not pose any special threat to public health and safety. Visitors to the Forest generally assume some hazards/risks. These hazards may include uneven terrain, falling snags and rocks, biting/stinging insects, poisonous snakes, poisonous plants, etc. Each Forest visitor needs to be aware of these hazards and take the necessary measures to prevent or reduce some of the risks

from recreating in the outdoors.

Initially, the location of the trail system was considered “ideal” for OHV use because of its isolated location. Nonetheless, the remoteness of the project area has placed strain on Forest Service personnel to affectively monitor and manage the existing trail system. Temporary closure of the trail system was warranted by substantial resource damage and unauthorized OHV routes. There is a large network of user-created trails within the project area that are located along streams, forming inroads onto private lands, or leading away from designated trails into the forest. There are safety concerns associated with user-created trails. In particular, these trails are not properly maintained or signed and pose significant risk to riders as they may become confused or lost, fatigued, or experience equipment failure. Forest Service personnel have made attempts to discourage the use of user-created trails through the placement of physical barriers such as gates, earthen blockades, fallen trees, etc.

In addition, there is a concern regarding management of the Anderson Creek OHV Trail System. Changing physical conditions surrounding the Chattahoochee National Forest and the restructuring within its own organization lead one to question the sustainability of maintaining the trail system. Currently, the closest office to the trail system, the Blue Ridge Ranger District, is located more than thirty miles away in Blairsville, Georgia. Drive time is estimated at approximately one hour to one and one-half hour, considering no major routes connect the two locations. The most direct route from the Blue Ridge Ranger District Office would require one to drive a series of paved county and graveled Forest Service roads.

Although at times it is not popular, the presence of law enforcement and patrols helps to prevent resource damage, illegal access, off-trail use, and reckless behavior. Forest Service personnel would periodically monitor the project area for signs of resource damage, user-created trails, and illegal access. In the event that use of user-created trails or entry into the trail system by means of illegal access continues, the District would increase the presence of law enforcement and patrols throughout the trail system. As a last resort, Forest Supervisor closure orders for existing trails would be used when necessary to manage resource damage and to protect public safety in any alternative scenario.

3.10.2 Effects on Law Enforcement and Public Safety

3.9.2.1 Alternative 1.

Direct Effects – Public safety issues related to OHV use would likely increase as more people utilized the trail system. An increase in law enforcement personnel and patrols would be necessary to prevent illegal access, off-trail, and reckless behavior.

Indirect Effects – Increased use of the trail system would require additional management and monitoring by Forest Service personnel for resource damage.

Cumulative Effects – An increased presence of law enforcement and Forest Service personnel would be needed to patrol, monitor, and manage the trail system. The recent relocation of the Toccoa Ranger District to Blairsville, forming the Blue Ridge Ranger District, has nearly doubled the drive time for Forest Service personnel to drive to the trail system. For this reason, the ability to affectively manage and monitor the trail system is becoming an increasingly difficult task. Additional cost associated with monitoring and restoration of damaged resources would be time consuming and expensive.

3.9.2.2 Alternative 2.

Direct Effects –Although FDR #357 would remain open for public use, OHV use would be prohibited. The need for law enforcement personnel and patrols would decrease, yet patrols would still be necessary to enforce the trail closure. Public safety issues related to OHV use would decrease.

Indirect Effects – Decommissioning the Anderson Creek Trail System would free up law enforcement and Forest Service personnel needed on other recreational areas.

Cumulative Effects –Cumulative effects would likely be beneficial to both public safety and law enforcement with the overall decrease in the occurrence of injuries related to OHV accidents and the need for the presence and patrol of law enforcement personnel.

3.9.2.3 Alternative 3.

Direct Effects – Direct effects from implementing this alternative would be similar to those discussed under Alternative 1. However, the expansion of the trail system would generate an increased need for law enforcement personnel and patrols. Public safety issues related to OHV use would also increase.

Indirect Effects –Expansion of the trail system would place additional strain on law enforcement and Forest Service personnel.

Cumulative Effects –Cumulative effects from implementing this alternative would be similar to those discussed under Alternative 1.

Chapter 4

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4.4 ACRONYMS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
ATV	All-Terrain Vehicle
BE	Biological Evaluation
BMPs	Best Management Practices
CEQ	Council of Environmental Quality
CGP	Cherokee, Gilmer, and Pickens Counties
EA	Environmental Assessment
EBCI	Eastern Band of the Cherokee Indians
FEIS	Final Environmental Impact Statement
GADNR	Georgia Department of Natural Resources
GIS	Geographical Information System
GNHP	Georgia Natural Heritage Program
HUC	Hydrologic Unit Code
ID Team	Interdisciplinary Team
LTA	Landtype Association
M&E	Monitoring and Evaluation
MA	Management Area
MIS	Management Indicator Species
MOU	Memorandum of Understanding
NEPA	National Environment Policy Act
NF	National Forest
NFMA	National Forest Management Act
NRHP	National Register of Historic Places
OHV	Off-Highway Vehicle
ORV	Off-Road Vehicle
PET	Proposed, Endangered, and Threatened (species)

PETS	Proposed, Endangered, Threatened, and Sensitive (species)
RD	Ranger District
SHPO	State Historic Preservation Office
T&E	Threatened and Endangered (species)
TES	Threatened, Endangered, and Sensitive (species)
THPO	Tribal Historic Preservation Office
USDA	United States Department of Agriculture
USGS	United States Geological Survey
USFWS	United States Fish and Wildlife Service
WMA	Wildlife Management Area

4.5 GLOSSARY

Accessibility: The relative ease or difficulty of getting from or to someplace, especially the ability of a site, facility or opportunity to be utilized by persons of varying physical and mental abilities.

Adverse Effect: An action that has an apparent direct or indirect adverse effect on the conservation and recovery of a species listed as threatened or endangered. Such actions include, but are not limited to:

1. Any action that directly alters, modifies, or destroys critical or essential habitats or renders occupied habitat unsuitable for use by a listed species, or that otherwise affects its productivity, survival, or mortality. (FSM 2670.5)
2. Any action that directly results in the taking of a listed species. (FSM 2670.5)
3. Any action involving the disposal of land that is essential to achieving recovery objectives. (FSM 2670.5)

ATV: Any motorized, off-highway vehicle 50 inches or less in width, having a dry weight of 600 pounds or less that travels straddled by the operator. Low-pressure tires are 6 inches or more in width and designed for use on wheel rim diameters of 12 inches or less, utilizing an operating pressure of 10 pounds per square inch (psi) or less as recommended by the vehicle manufacturer.

Best Management Practices (BMPs): Methods, measures, or practices to prevent or reduce water pollution, including, but not limited to:

1. Structural and nonstructural controls,
2. Operation and maintenance procedures, and
3. Other requirements and scheduling and distribution of activities.

Usually BMPs are applied as a system of practices rather than a single practice.

BMPs are selected on the basis of site-specific conditions that reflect natural background conditions and political, social, economic, and technical feasibility.

(Unified Federal Policy)

Biological Evaluation (BE): A documented Forest Service review of its programs or activities in sufficient detail to determine how an action or proposed action may affect any proposed, endangered, threatened, or sensitive species. (FMS 2670.5)

Clearing: The corridor, both vertical and horizontal, from which vegetation is cleared.

Conservation Species: A species that is considered rare within the State of Louisiana although it is commonly found in other states.

Cultural Resources: *See Heritage resources.*

Cumulative Effects Analysis: An analysis of the effects on the environment resulting from the incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions- regardless of what agency (Federal or non-Federal), or person undertakes such other action.

Decision Notice (DN): A concise written record of a Responsible Official's decision based on an environmental assessment and a find of no significant impact. (36CFR215.2)

Decommission: Activities that result in the stabilization and restoration of unneeded roads to a more natural state. (36 CFR 212.1), (FSM 7703)

Designated Stream Crossing: Area designated by Forest Service officials where vehicles are allowed to cross a stream.

Endangered Species: Any species which in danger of extinction throughout all or a significant portion of its range. This does not include a species of the Class Insects determined by the Secretary [of Interior] to be a pest whose protection under the provision of the Endangered Species Act [of 1973] would present an overwhelming and overriding risk to humans. (FSM 2670.5)

Environmental Analysis: The process required by the National Environmental Policy Act and Forest Service policy in looking at the effects of a decision before it is made and informing the public of them.

Environmental Assessment (EA): An EA is a concise public document that provides sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact. (36CFR215.2)

Erosion: The wearing away of the land surface by the action of wind, water, or gravity.

Habitat: The total environment conditions on a unit of land including food, cover, and water within the home range.

Habitat Type: The collective land area which one association occupies, or will come to occupy, as succession advances.

Heritage Resources: Evidence of human behavior. They may be divided into four, often overlapping, data areas, which can be represented by the following disciplines:

- a. **Archeology.** That branch of anthropology, which studies the physical remains (artifacts) and other products and by-products of human behavior. (FSM 2361.05)
- b. **Architecture.** The art or science of building, including plan, design, construction, and decorative treatment. (FSM 2361.05)
- c. **Ethnology.** That branch of anthropology, which studies the behavior of living people. (FSM 2361.05)

d. **History.** That disciplines which studies the human past through the analysis of written documents. (FSM 2361.05)

Historical Resource: Any structural, architectural, archaeological, artifactual, or other material remains of past human life or activities that are of historical interest and are at least 50 years of age, and the physical site, location, or context in which they are found. (36CFR261.2)

Horizon (soil): A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. The **A-horizon** is the mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material.

Hydrologic Unit Code (HUC): A watershed of a specific scale used by multiple agencies to organize and catalogue hydrologic data.

Interdisciplinary Team (ID Team): Consists of persons with different professional backgrounds useful in preparing an environmental analysis.

Intermittent Stream: A stream that flows seasonally (10 to 90 percent of the time) in response to a fluctuating water table, with a scoured channel that is at least three feet wide.

Land and Resource Management Plan (Forest Plan): A plan developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended (95-125, 129, 130). This plan guides all natural resource management activities, and establishes management activities, standards, and guidelines for each national forest.

Landscape: An area composed of interacting ecosystems that are repeated because of geology, land form, soils, climate, biota, and human influences throughout the area. Landscapes are generally of a size, shape and pattern which are determined by interacting ecosystems.

Management Indicators: Plant and animal species, communities, or special habitats selected for emphasis in planning, and which are monitored during forest plan implementation in order to assess the effects of management activities on their populations and the populations of other species with similar habitat needs which they may represent (FSM 2620.51).

Management Indicator Species (MIS): Any species, group of species, or species habitat element selected to focus management attention for the purpose of resource production, population recovery, maintenance of population viability, or ecosystem diversity (FSM 2605).

Management Type: A forest vegetation type that has been selected as the species that will best achieve desired future conditions and meet the goals and objectives of the Forest Plan.

Mineral Soil: A soil consisting predominately of, and having its properties determined predominately by, mineral matter.

Mitigation: An action taken during a project's implementation to lessen adverse impacts or enhance beneficial effects. These measures may take place before, during, or after implementation of the project.

Monitoring: To watch, observe, or check, especially for a specific purpose, such as to keep track of, regulate, or control.

National Environmental Policy Act (NEPA) of 1969: Declares that it is the policy of the Federal Government to preserve important historic, cultural, and natural aspects of our national heritage, the National Environmental Policy Act (NEPA) directs that, to the fullest extent possible . . . the policies, regulations and public laws to the United States shall be interpreted and administered in accordance with the policies set forth in this act. Compliance with NEPA, therefore, includes a demonstration of compliance during project planning and execution with other measures for the protection of environmental values. (FSM 2361.01)

National Forest Management Act (NFMA): A law passed in the 1976 amending the Forest and Rangeland Renewable Resources Planning Act that requires the preparation of Regional and Forest plans and the preparation of regulations to guide development of these plans.

National Forest System: All national forest lands and waters reserved or withdrawn from public domain of the United States; national forest lands and waters acquired through purchase, exchange, donation, or other means; national grasslands and land utilization projects and waters administered under title III of the Bankhead-Jones Farm Tenant Act (50 Stat. 525, 7 U.S.C. 1010-1012), and other lands, waters, or interests therein acquired under the Wild and Scenic River Act (16 U.S.C. 1271-1287) or National Trails System Act (16 U.S.C. 1241-1249). (36CFR261.2)

National Register of Historic Places: The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Park Service administers the National Register, which is part of the U.S. Department of the Interior.

Off-Highway Vehicle (OHV): Any vehicle capable of being operated off established roads e.g., motorbikes, four-wheel drives, and snowmobiles. (Also referred to as OHV or off-highway vehicle)

Off-Road Vehicle (ORV): Any motorized vehicle designed for or capable of cross county travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain; except that term excludes (A) any registered motorboat, (B) any fire, military, emergency or law enforcement vehicle when used for emergency purposes, and any combat or combat support vehicle/when used for national defense purposes, and (C) any vehicle whose use is expressly authorized by the respective agency head under a permit, lease, license, or contract.

Overstory: The uppermost canopy in a forest with more than one layer. (SAA)

Perennial Streams: A stream flows year-round (more than 90 percent of the time) with a scoured channel that is always below the water table.

PETS: An acronym for species proposed for listing, or already listed, as [proposed], endangered, threatened, or sensitive pursuant to the Endangered Species Act. (SAA)

Proposed Species: Any species of fish, wildlife, or plant that is proposed by the [U.S.] Fish and Wildlife Service or National Marine Fisheries Service to be listed as threatened or endangered. (FSM 2670.5)

Recreation Opportunity Spectrum (ROS): A method of classifying types of recreation experiences available or for specifying recreation experience objectives desired in certain areas. Classes are: Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, Roded Natural, Rural, and Urban.

Roded Natural (ROS): An area 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 moderate, 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 recreation opportunity experience level provided would be characterized by the probability for equal experiencing of affiliation with individuals and groups and for isolation from sights and sounds of humans. Opportunities for both motorized and non-motorized forms of recreation may be provided.

Rehabilitate: The process of restoring or returning a site, such as a skid road, to a condition that existed prior to the disturbance, or returning that site to a condition that is not contributing to further environmental deterioration and that is consistent with the aesthetic values of the site.

Riparian Areas: Geographically delineable areas with distinctive resource values and characteristics that are comprised to the aquatic and riparian ecosystems. (FSM 2526)

Riparian Areas Protection Zone (RAPZ): An area that may extend beyond the SHPZ to at least the extent of the flat, level area or alluvial floodplain landform. This area is provided to protect or enhance those distinctive resource values and characteristics that comprise the aquatic and riparian ecosystems.

Riparian Habitat: Habitat that is related to and influenced by surface or subsurface waters, especially the margins of streams, lakes, ponds, wetlands, seeps, and ditches. Riparian habitat refers to the transition zone between aquatic and upland habitat.

Roded Natural 2: This is a sub-classification of Roded Natural that accounts for areas on the National Forest that adjoin **SPNM** areas or stand alone as areas of 1,500 acres or larger with combined open road density and motorized trail density of 1.5 miles per 1,000 acres or less. Areas managed as RN2 are maintained to conserve their relative remoteness.

Road Obliteration: Removal of FS systems road from the NFs transportation network with no plans for future road maintenance or reconstruction. Typically, road obliteration embodies terminating the physical function of the road as well as implementing a remedy for environmental problems (RAP). Decommissioning included various levels of treatments to stabilize and rehabilitate unneeded roads such as blocking the entrance, revegetation, and water barring, removing fills and culverts, re-establishing drainage-ways, and removing unstable road shoulders, or full obliteration by recontouring and restoring natural slopes (Definition from Forest RAP and Forest Plan DEIS).

Rutting: A track worn by a wheel or habitual passage of anything.

Scoping: The process of deciding what should be considered in an environmental analysis. Scoping includes, but is not limited to, public involvement.

Sediment: Soil particles that have been detached and transported into water during erosion.

Sensitive Species: Those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by:

1. Significant current or predicted downward trends in population numbers or density. (FSM 2670.5)
2. Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. (FSM 2670.5)

Short-Term Effects: Those effects that will usually occur within the next ten years.

Snag: A standing dead tree used by wildlife for nesting, roosting, perching, and food gathering.

Species: A population of series of populations of organisms that is capable of interbreeding freely with each other but not with members of other species.

State-Licensed Vehicles: Vehicles licensed by the State for highway use. This includes vehicles such as 4-wheel drive pick-ups, SUVs, motorcycles, and passenger cars.

Streamside Habitat Protection Zone (SHPZ): A designated area of varying width adjacent to the banks of streams and bodies of water where management practices that might affect water quality, fish, or other aquatic resources are modified.

Threatened Species: Any species that is likely to become an endangered species within the foreseeable future throughout all, or a significant portion of its range, and that appropriate Secretary has designated as a threatened species. (Some States also have declared certain species as threatened through their regulations or statutes.) (FSM 2670.5)

Trail bed: The trail tread, along with the soil underneath and around it.

Trailhead: The beginning of a trail system; a staging area.

Tread (or tread surface): The portion of a trail on which users actually travel. A tread is more difficult to ride if its surface is loose, rough, slippery, etc.

Tread Width: The width of the portion of the trail used for travel.

Understory: A structural layer of a forest consisting of trees, shrubs, and herbs that are growing far beneath the canopy. Some tree species will never reach the tree canopy. They are the understory species. Others will eventually reach the canopy.

Vegetation Management: Manipulating plant communities to achieve desired objectives.

Watershed: A land area that collects and discharges excess surface or ground water through a single outlet

Wilderness: A Congressionally-designated area that is part of the National Wilderness Preservation System established through Wilderness Act of 1964; also defined in the Act as a wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this chapter an area of underdeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

Wildlife Management Area (WMA): Area of the forest for which the Forest Service and the Division of Wildlife Resources of the Georgia Department of Natural Resources have a written agreement about the management of wildlife and their habitat.

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