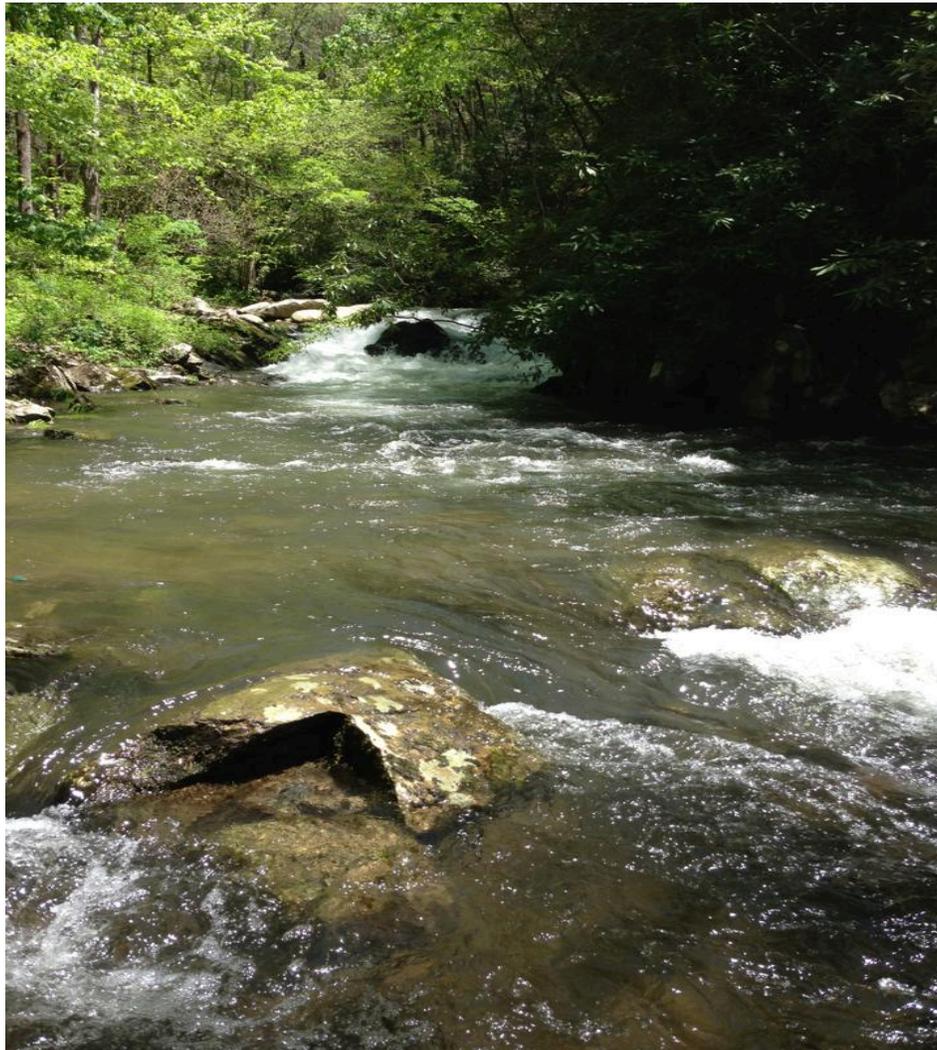


# Assessing Recreation Settings, Opportunities and Access, and Scenic Character



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## 9.0 Introduction

Many types of recreation and tourism are dependent on the presence of natural amenities such as beaches, lakes, forests, and mountainous terrain (English, Marcouiller, and Cordell 2000). National forests managed by the United States Forest Service (Forest Service) are popular tourism and outdoor recreation locations. In addition, outdoor recreation contributes to social and economic sustainability and provides opportunities to connect people with nature. The focus of the Forest Plan (the Plan) assessment for recreation is to identify and evaluate information about recreation settings; use; trends and sustainability of recreation opportunities in the plan area; recreational preferences of the public; recreational access; and scenic character.

The Blue Ridge Mountains are among the oldest in the world and though old and weathered, still boast the highest peaks in the eastern United States. The North Carolina (NC) mountains also include the massive Great Smokies and transverse ranges such as the Black Mountains, Great Craggies, Great Balsams, and Nantahalas. This patchwork of mountain ranges has given rise to a stunning diversity of ecosystems, plants, and wildlife. In addition, the area draws outdoor enthusiasts from around the world to hike, climb, rappel, botanize, bird-watch, or simply enjoy the views. Western NC is a place of natural beauty and the region includes several popular recreation areas including the Blue Ridge Parkway; the Great Smoky Mountains National Park (located in western NC and Tennessee) which the most visited national park; and the Nantahala and Pisgah NFs, two of the most visited national forests in the United States (USDA Forest Service 2011; See Table 9.0.1).

*Table 9.0.1 Top Ten Most Visited National Forests in the National Forest System*

<b>National Forest Name</b>	<b>Total Estimated Visits</b>	<b>State</b>
White River NF	12,286,922	CO
Uinta-Wasatch-Cache NF	7,628,757	UT
<b>National Forests in North Carolina*</b>	<b>7,510,712</b>	<b>NC</b>
Lake Tahoe Basin Management Unit	5,786,395	CA
Arapaho-Roosevelt NF	5,413,906	CO
Tonto NF	4,800,833	AZ
Pike-San Isabel NF	4,327,816	CO
National Forests in Texas	3,779,613	TX
Angeles NF	3,636,263	CA
Humboldt-Toiyabe NF	3,634,122	NV

\*Includes the Croatan, Nantahala, Pisgah, and Uwharrie National Forests

Source: USDA Forest Service 2008 National Visitor Use Monitoring Survey.

Located in western NC, the Nantahala and Pisgah NFs comprise more than one million acres and provide an abundance of clean air and water, scenic beauty, timber, wildlife habitats including old growth forests, and recreational opportunities. Visitors to Nantahala and Pisgah NFs take advantage of a vast array of natural resources and outdoor recreation opportunities including abundant rivers and waterfalls such as Whitewater Falls, the highest in the eastern United States; Joyce Kilmer Wilderness which contains a large old-growth stand; Biltmore Forest School, the first forestry school in America, now an educational and interpretive center known as the Cradle of Forestry in America.

Additionally, visitors to the Nantahala and Pisgah NFs enjoy a wide variety of outdoor recreational activities such as birding, boating, camping, canoeing, fishing, hiking, horseback riding, hunting, mountain biking, and picnicking. There are numerous hiking trails, including a 200 mile section of the Appalachian Trail; top-ranked mountain biking trails; rivers such the Nantahala, French Broad, Cheoah, and Chattooga, with world-class whitewater rafting, kayaking, and canoeing.

### 9.0.1 Nantahala and Pisgah NFs Visitation

The National Visitor Use Monitoring Survey (NVUM) is a Forest Service program which provides science-based estimates of the volume and characteristics of recreation visitation to the National Forest System, as well as the benefits recreation brings to the American public (USDA Forest Service 2010). Information about the quantity and quality of recreation visits is a requirement for national forest plans (Executive Order 12862 – Setting Customer Service Standards) and the NVUM data is useful for forest planning and decision making. The NVUM is completed on a 5-year cycle with the latest completed survey (round two) for the Nantahala and Pisgah NFs being conducted during FY2008 (October 1, 2007 through September 30, 2008) with updates made in 2010. During round two of the NVUM annual visitation to the Nantahala and Pisgah NFs were estimated to be 4.6 million (compared to 173.5 million for the entire National Forest System) with 153,000 estimated visits to designated wilderness areas (compared to 6.7 million nationally). In addition, the Nantahala and Pisgah NFs are viewed via scenic byways such as the Blue Ridge Parkway. Detailed information and results of the NVUM can be found at the following link: <http://www.fs.fed.us/recreation/programs/nvum>.

*Table 9.0.2 Overview of Visitation to the Nantahala and Pisgah NFs*

<b>Visit Type</b>	<b>Estimated National Forest Visits</b>
Annual Visitors	4,612,000
Day Use visits	1,639,000
Overnight visits	111,000
General forest visits	3,564,000
Designated Wilderness visits	153,000

Note: Designated Wilderness visits *are included* in the site visits estimates.  
Source: NVUM for FY2008.

#### *Definition of NVUM Terms:*

- National forest visit: entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A national forest visit can be composed of multiple site visits. The visit ends when the person leaves the national forest to spend the night somewhere else.
- Site visit: entry of one person onto a national forest site or area to participate in recreation activities for an unspecified period of time. The site visit ends when the person leaves the site or area for the last time on that day.
- Site types: Day Use Developed Sites (DUDS); Overnight Used Developed Sites (OUDS); Designated Wilderness areas (Wilderness); General Forest Areas (GFA); and View Corridors (VC). Only the first four categories are counted as national forest recreation visits and *are included* in the visit estimates. The last category (VC) is used to track the

volume of people who view national forest from nearby roads and since they do not get onto agency lands, they cannot be counted as visits.

Results of the 2008 NVUM for the Nantahala and Pisgah NFs showed over 71% of visitors interviewed cited recreation was the purpose of their visit and the forests serve a mostly local client base. Nearly 47% of the recreational visitors were from within 25 miles of the forest and 14% living between 25 and 50 miles away; however, nearly 20% of visitors traveled more than 200 to visit the Nantahala and Pisgah NFs. In addition, most visits to the two forests were day visits with the average visit lasting less than 10 hours and over half of the visits lasting less than four hours. Nearly 38% of the visitors were female; 98.7% of visitors were White; American Indian/Alaska Natives (2.3%) were the most common racial/ethnic group; visitors were evenly distributed across age groups with ages 16-19 and 70 or older somewhat lower than other groups. Visitors to the Nantahala and Pisgah NFs participated in a variety of recreation activities and used a variety of facilities and special designated areas (See Tables 9.0.3 through 9.0.8).

Table 9.0.3 Purpose of Visit to the Nantahala and Pisgah NFs by Percentage

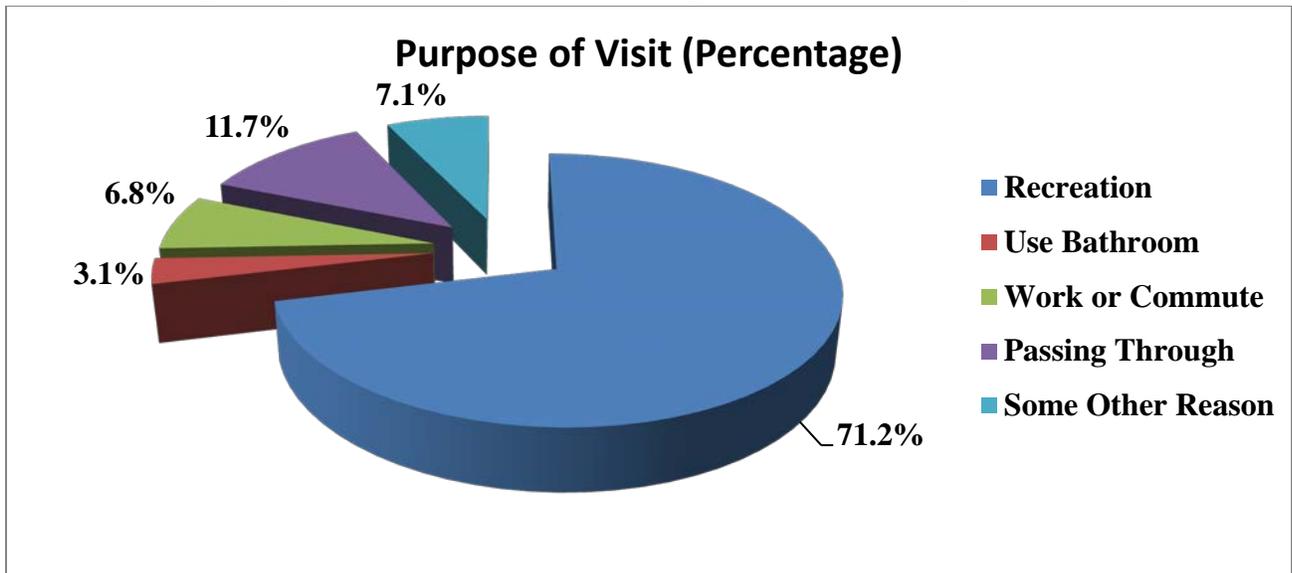


Table 9.0.4 Distance Traveled to Visit the Nantahala and Pisgah NFs by Percentage.

Miles Traveled	Percentage
0-25	47.0%
26-50	13.8%
51-75	5.1%
76-100	3.2%
101-200	10.9%
201-500	11.0%
Over 500	8.9%
Total	99.9%

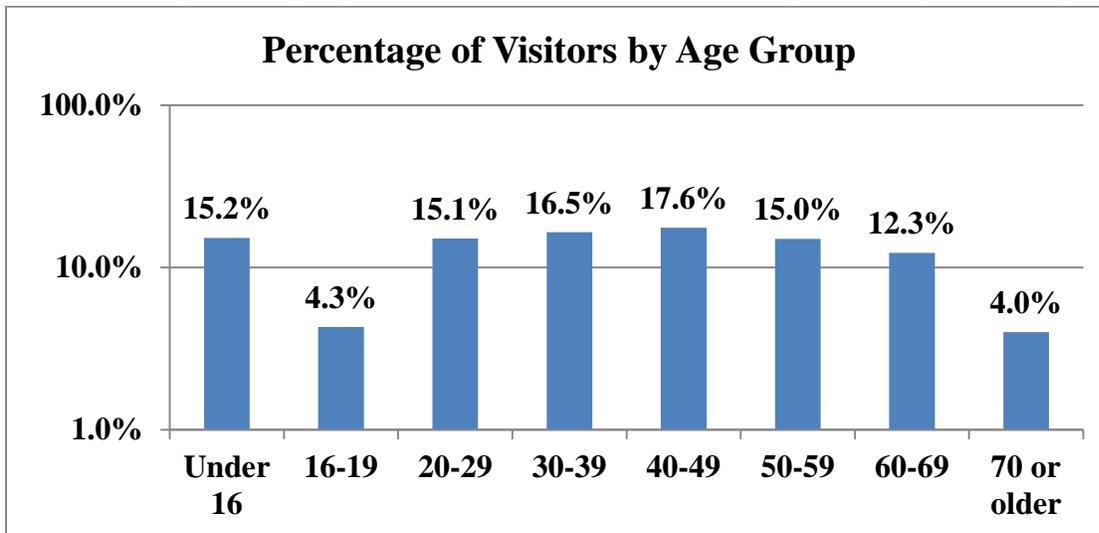
Table 9.0.5 Visit Duration to the Nantahala and Pisgah NFs by Percentage

Visit Type	Average Duration (hours)	Median Duration (hours)
Site Visit	4.8	2.0
Day Use Developed	1.6	1.0
Overnight Use Developed	51.7	42.3
Undeveloped Areas	4.6	2.0
Designated Wilderness	8.3	3.0
National Forest Visit	9.7	3.0

Table 9.0.6 Gender, Race, and Ethnic Makeup of Visitors to the Nantahala and Pisgah NFs by Percentage

Gender	Count	Percentage
Female	1,192	37.3%
Male	1,478	62.7%
Race/Ethnicity	Count	Percentage
American Indian/Alaska Native	22	2.3%
Asian	14	0.8%
Black/African American	11	0.4%
Hawaiian/Pacific Islander	1	0.0%
White	1075	98.7%
Hispanic/Latino	15	1.0%

Table 9.0.7 Ages Groups of Visitors to the Nantahala and Pisgah NFs by Percentage



*Table 9.0.8 Activity Participation of Visitors to the Nantahala and Pisgah NFs by Percentage; Percent Noting as Main Activity; and Average Time Spent Doing the Activity*

<b>Activity</b>	<b>Percent Participation</b>	<b>Percent Main Activity</b>	<b>Average Hours Doing Main Activity</b>
Hiking/Walking	60.4	38.5	2.4
Viewing Natural Features	55.0	15.0	4.0
Relaxing	37.9	4.0	10.8
Driving for Pleasure	32.0	6.9	2.2
Viewing Wildlife	30.9	0.9	2.9
Nature Center Activities	11.2	0.8	1.8
Bicycling	10.1	8.6	2.0
Picnicking	10.0	1.6	1.6
Fishing	8.4	5.8	3.7
Nature Study	7.0	0.5	2.4
Other Non-motorized	5.9	3.0	2.6
Visiting Historic Sites	4.8	0.5	1.7
Gathering Forest Products	3.7	0.0	0.0
Some Other Activity	3.6	3.5	4.1
Developed Camping	3.2	1.2	25.0
Non-motorized Water	2.8	2.1	3.8
Hunting	2.5	2.5	6.8
Motorized Trail Activity	2.3	0.1	3.0
Backpacking	2.2	1.1	28.8
OHV Use	2.1	2.0	3.6
Primitive Camping	1.1	0.5	62.5
Horseback Riding	1.0	1.1	4.0
Resort Use	0.4	0.0	56.7
Motorized Water Activities	0.3	0.0	3.8
Other Motorized Activity	0.2	0.1	1.8

### ***Customer Satisfaction Rating for the Nantahala and Pisgah NFs***

Customer satisfaction results showed that almost 83 percent of the people who visited the Nantahala and Pisgah NFs were very satisfied with the overall quality of their recreation experience and less than one percent expressed any level of dissatisfaction. Composite ratings are used to gauge customer satisfaction for recreation sites. A composite rating consists of proportion of satisfaction ratings scored by visitors as good (4) or very good (5) and are calculated as the percentage of all ratings for the elements within the sub grouping that are at or above the target level (FS national target for this measure is 85%), and indicates the percent of all visitors that are reasonably well satisfied. Composite Index scores for Developed Sites showed that all satisfaction elements were above the 85% national satisfaction target. There were a few areas that the public felt managers need to focus on, including General Forest Areas (restroom cleanliness, availability of recreation information, and road conditions) and Wilderness (restroom cleanliness and availability recreation information). See Tables 9.0.9 and 9.0.10.

*Table 9.0.9 Percent of National Forest Visits by Overall Satisfaction Rating for the Nantahala and Pisgah NFs*

<b>Satisfaction Rating</b>	<b>Percentage</b>
Very Satisfied	82.5%
Somewhat Satisfied	13.3%
Neither Satisfied nor Dissatisfied	3.9%
Somewhat Dissatisfied	0.4%
Very Dissatisfied	0.0%

*Table 9.0.10 Percent Satisfied Index Scores for Aggregate Categories for the Nantahala and Pisgah NFs*

Satisfaction Element	Satisfied Survey Respondents Percentage		
	Developed Sites*	Undeveloped Sites (General Forest Areas)	Designated Wilderness
Developed Facilities	86.7%	68.3%	77.1%
Access	94.5%	83.9%	89.4%
Services**	85.5%	73.4%	64.6%
Feeling of Safety	96.1%	97.0%	94.7%

\* This category includes both Day Use and Overnight Used Developed Sites.

\*\* This element includes items such as availability of information and trash removal.

## 9.0.2 Tourism in Western North Carolina

The Western North Carolina Vitality Index “reports on the 27 counties of Western NC through the perspectives of the region’s natural, social, built, and economic environments, and was designed to assist local governments, interest groups, and the public” (Mountain Resources Commission 2013). According to the index, from 1985 to 2009, the total number of recreation visits in the region’s national forests increased from 2.9 million to 6.8 million and from 1993–2002 the number of average annual visitors to the NC section of the Blue Ridge Parkway was 11.6 million. The number of visitors to the Great Smoky Mountains National Park in NC and Tennessee has varied slightly, but has remained around 9 million per year. In 2010, there were 14,517,118 recreation visits to the Blue Ridge Parkway, and 9,463,538 recreation visits to the Great Smoky Mountains National Park. The national forests in western NC, which offer a much broader range of recreational activities, are some of the most visited in the national forest system.

The Travel Economic Impact Model (TEIM) presents county-by-county travel economic impact statistics which are a part of a study entitled "The Economic Impact Of Travel On North Carolina Counties" and is prepared annually by the Research Department of the United States Travel Association for the North Carolina Department of Commerce's Division of Tourism, Film and Sports Development (North Carolina Department of Commerce 2013).

The TEIM is used to measure the impact of travel on the U.S. Economy and was created to “capture the highly complex nature of the U.S. travel industry at the national, regional, and local levels”. The model includes 16 travel categories, such as lodging, food, retail, public transportation, auto transportation, and amusement/recreation. The TEIM utilizes detailed data

from a variety of government and proprietary sources and uses a combination of data inputs derived from U.S federal government and state government, nationally-known private and non-profit travel organizations, and other travel statistics. The following table shows the economic statistics for the Nantahala and Pisgah NFs 18 county area.

*Table 9.0.11 Travel Economic Impact Statistics for Nantahala and Pisgah NFs 18 County Area*

County	Expenditures by Year (in millions of dollars)					
	2006	2007	2008	2009	2010	2011
Avery	89.31	90.72	89.76	85.05	89.82	98.38
Buncombe	645.71	709.38	711.04	655.02	729.02	783.01
Burke	71.14	73.22	74.02	68.05	71.89	78.50
Caldwell	43.64	46.55	49.21	41.80	42.45	44.83
Cherokee	34.63	35.60	35.31	30.73	31.64	33.92
Clay	11.90	12.43	12.03	10.77	11.23	11.65
Graham	24.03	24.54	23.42	21.38	22.82	23.73
Haywood	111.06	116.64	113.46	108.88	116.31	120.40
Henderson	189.23	199.85	198.62	195.76	203.09	209.39
Jackson	68.21	72.61	69.09	60.90	62.58	66.79
Macon	111.16	115.42	120.56	114.46	122.08	126.15
Madison	27.30	30.32	29.26	28.19	28.54	30.60
McDowell	37.00	38.60	41.09	40.82	44.09	47.52
Mitchell	18.62	19.87	19.86	18.35	19.10	20.48
Swain	240.86	251.03	233.26	237.29	256.35	280.50
Transylvania	75.64	80.14	77.07	70.56	71.75	77.32
Watauga	179.14	191.15	189.76	179.27	189.77	197.56
Wilkes	59.44	61.42	60.17	54.44	57.79	62.33
Yancey	26.51	27.20	26.33	27.59	29.92	31.04
<b>Totals</b>	<b>2,064.53</b>	<b>2,196.69</b>	<b>2,173.32</b>	<b>2,049.31</b>	<b>2,200.24</b>	<b>2,344.10</b>

### 9.0.3 Outdoor Recreation in the Southern Region of the United States

According to Cordell and Tarrant (2002) some general observations about outdoor recreation in the southern region include:

- Numerous outdoor recreation opportunities such as hiking, biking, and motorized vehicle use are available across the South. They are found in a wide variety of settings, ranging from large tracts of undeveloped land to highly developed theme parks in largely urban settings, both in public and private ownerships.
- Recreation access to private land is increasingly limited to the owners themselves, their families or friends, and lessees. The number of Southern private owners allowing the public to recreate on their land has been decreasing over time.
- Accommodating future public recreation demand increases will likely fall mostly to public providers, most of whom will likely continue to face significant budget and capacity constraints.

- While continuing to grow, adjust and adapt, Southern state land systems, especially state parks, have reached a point of seeming maturity as a recreation resource, except for expansion of high-end resort developments which provide better sources of revenue.
- Of public ownerships, federal tracts typically are large and mostly undeveloped. They fill a niche of providing backcountry recreation. State parks and forests are usually smaller and more developed and provide camping, picnicking, swimming, fishing, nature interpretation, and scenery.
- Twenty-six percent of residents of the South participate in gathering a wide variety of non-timber forest products (NTFPs). Most do so non-commercially. Sustaining availability of some NTFP resources will depend in large part on institutional capacities for education, monitoring, incentives, land management, and other conservation actions.
- Depending on the characteristics of recreation use, the forest site, and site management, recreation can have a variety of impacts on soils, water, vegetation and animal life. Almost all types of recreation activity have impacts, but this is especially true for motorized uses.
- Demands for off-road vehicle use, hunting, fishing, and other of the more consumptive recreational activities are likely to bring about more recreation participant/land owner conflicts over time.
- Lastly, as forest recreation demands grow, recreation activities are likely to conflict more with each other, especially on trails, in backcountry, at developed sites, on flat water (large rivers and lakes), in streams and whitewater, and on roads and their nearby environments. Typically a greater degree of conflict is perceived by one group of recreation users (usually traditional and non-motorized users) than is perceived by other groups (usually non-traditional and mechanized/motorized users).

#### **9.0.4 What is the Availability of Recreation Opportunities on Other Lands within in the Broader Landscape?**

In 2010, the Forest Service introduced a Framework for Sustainable Recreation (USDA Forest Service 2010). Among the areas of focus in this framework is an emphasis on working with communities and other outdoor recreation and tourism providers to:

- Develop and implement a place-based recreation planning model using collaborative processes
- Define potential roles to sustain the economic and quality of life benefits of recreation and tourism assets within these destinations
- Address connections of urban areas and rural communities to National Forests' scenic attractions, historic places, and recreation opportunities
- Evaluate community and state parks, other federal and tribal lands, and local open space lands for connections with National Forest System lands as well as for their own contributions for meeting the outdoor recreation and tourism demands for the area

North Carolina's current Outdoor Recreation Plan (NC SCORP 2008)

(<http://www.ncparks.gov/About/plans/scorp/main.php>) estimates there are 2,726,624 outdoor recreation acres across the state. Of these, 2,154,637 are in federal ownership (and are considered the most primitive settings). Some of these include:

- Ten areas under jurisdiction of the National Park Service, including Great Smoky Mountains National Park, the Blue Ridge Parkway, and the Carl Sandburg Home
- 416,000 acres of national wildlife reserves under jurisdiction of the United States Fish and Wildlife Service
- Cherokee Indian lands in western NC, totaling nearly 56,000 acres
- Four national forests, including the Nantahala and Pisgah NFs
- Several reservoirs and military installations under jurisdiction of the Department of Defense
- 12 designated Wildernesses, all managed by the Forest Service except one on the coast, and five designated Wild and Scenic Rivers, including three in the Nantahala and Pisgah NFs
- 484,368 acres in state ownership, including 197,347 acres of land and water in the NC State Parks system, organized into 34 park units that are staffed and open to the public

The 18-county area touched by the Nantahala and Pisgah NFs in NC offers recreational opportunities that draw tourists and residents alike to national parks, state forests, and state parks. The Nantahala and Pisgah NFs share boundaries and opportunities for outdoor recreation with two sister national forests in Georgia (Chattahoochee NF) and Tennessee (Cherokee NF). In addition, other recreational opportunities nearby include Jefferson National Forest and Mount Rogers National Recreation Area in southwest Virginia; Great Smoky Mountains National Park; Blue Ridge Parkway; and state parks.

Some specific facilities in national park units and state parks in NC, Georgia, South Carolina, and Tennessee include:

- **Blue Ridge Parkway:** (from milepost 294 south): Campgrounds capacity: 2,495; picnic area capacity 2,170.
- **Great Smoky Mountains National Park:** (NC and Tennessee): 10 developed campgrounds accommodating 4,630; 4 group camps accommodating 445, 3 horse camps accommodating 110; and several picnic facilities accommodating 3,785.
- **Carl Sandburg Home National Historic Site:** interpretive site and day use area.
- **Georgia State Parks:** (Black Mountain State Park): Campground capacity: 300, one group camp: 15; ten cottages: 100; picnic area capacity: 100; and one visitor center and gift shop.
- **North Carolina State Parks:** (South Mountain, Mt. Mitchell, Grandfather Mountain, Elk Knob, Lake James, Gorges): Campground capacity: 265, one group camp: 100; one horse camp: 75; total picnic area capacity: 1010.
- **North Carolina State Forests:** (DuPont State Recreation Forest, Holmes Educational State Forest, and Tuttle Educational State Forest): one group campground accommodating 50 people; picnic capacity: 550.
- **South Carolina State Parks:** (Caesars Head State Park, Jones Gap State Park, Mountain Bridge Wilderness Area): Campground capacity: 160; picnic area capacity: 20; one observation site; and one interpretive/visitors center.
- **Tennessee State Parks:** (Roan Mountain, Sycamore Shoals, Warriors Path, Fort Loudoun, Hiwassee/Ocoee): Campground capacity: 2375, one group camp accommodating 20, and several picnic areas accommodating 1215.

Types of facilities on these public land units can be summarized as providing:

- 24 campgrounds, most family type with defined sites and flush toilets, a few with showers, electrical hookups, and reserved sites, accommodating 10,210 people.
- 11 group camps that can be reserved, accommodating 630 people.
- 6 horse camps, most primitive, allowing several horses per site, accommodating 185 people.
- 23 sites with interpretive services and visitor information with various levels of development.
- 68 picnic sites, including pavilions and shelters, accommodating 8,850.

In addition, the Appalachian National Scenic Trail provides a unique long distance hiking opportunity across several national forests including Chattahoochee, Nantahala, Pisgah, Cherokee, George Washington/Jefferson National Forests, and the Great Smoky Mountain National Park. The Mountains-to-the-Sea National Recreation Trail travels through NC, with many miles running through public lands in the western section. Other national recreation trails within the 18-county area are listed below.

*Table 9.0.12 Non-Forest Service National Recreation Trails within the Nantahala and Pisgah NFs 18 County Area*

<b>Trail Name</b>	<b>Type</b>	<b>Mileage</b>	<b>Location</b>	<b>Agency</b>
American Tobacco Trail	Greenway	10.7	Transylvania County	Municipal
Big Glassy	Suburban	1.5	Transylvania County	National Park Service
Cherokee Arboretum	Pedestrian	0.50	Edgecombe County	Nonprofit
Grandfather Trail	Backcountry	3.5	Macon County	Private
Highlands Plateau Greenway	Greenway	5.5	Macon County	Nonprofit
House Creek Greenway	Greenway	3.2	Graham County	Private
Linville Falls Trail	Backcountry	1.2	Avery County	National Park Service
Mountains to Sea Trail	Backcountry	218.5	NC	Nonprofit/State
Overmountain Victory Trail	Backcountry	13.0	NC	U.S. Army Corps of Engineers
Princeville Heritage Trail	Greenway-Urban	1.25	Mitchell County	Municipal

Source: The National Recreation Trails Program (2013): American Trails - [www.AmericanTrails.org](http://www.AmericanTrails.org).

Large lakes that provide water-based recreation opportunities within the 18-county area as well as in the Nantahala and Pisgah NFs are managed by Tennessee Valley Authority (TVA), Brookfield (formerly Alcoa, Inc.), and Duke Energy. The lakes and rivers in western NC attract people to pursue a variety of recreational activities including fishing, canoeing, kayaking, and motorized boating.

Major providers of outdoor recreation on other lands within the broader landscape include federal, state, and local agencies and partners and include the following:

National Park Service (NPS 2013; NPS 2014):

The Blue Ridge Parkway (BRP) was constructed during the Great Depression as a scenic driving experience connecting two national parks, Great Smoky Mountains (TN and NC) and Shenandoah in Virginia. Self-described as “an important neighbor that links 29 counties through two states and shares boundaries with other national park system units, national forests, tribal lands, and state parks.” (NPS 2013, p. 4), its boundaries include 81,785 acres, with another 2,776 acres of scenic easements. It is a linear national park unit of 469 miles, the most visited unit in the country with 14.5 million visits annually (NPS 2013, p. 184).

The Great Smoky Mountains National Park (GSMNP), approximately seven hundred and four thousand acres, was established by Congress in 1934, and has become the most visited of all national parks in the U.S. Within a day's drive of over half of the population of the U.S., the park provides for public benefit and enjoyment by over nine million visitors each year (NPS 2014). The GSMNP is almost equally divided between eastern Tennessee and western North Carolina and is well-known for the diversity of its plant and animal resources, the beauty of its ancient mountains, the quality of its remnants of American early settlement culture, and the wilderness within its boundaries. The park also contains 160 historic buildings and structures and maintains over 800 miles of trails including a section of the Appalachian Trail with elevations ranging from 800 feet to 6,642 feet at Clingman's Dome.

Recreation issues affecting the GSMNP include:

- Heavy Visitation: Visitation has increased during the shoulder season (months before and after summer), during the evening hours, and in certain areas which were historically less visited. The heavy visitation level mandates that additional resources be devoted to road and backcountry patrol as well as intensive maintenance of public facilities.
- Budget Issues: The Park is dealing with the cumulative effect of years of absorbing fixed cost increases and across-the-board reductions.

The Appalachian National Scenic Trail (AT) is a 2,180-mile long-distance hiking trail between Maine and Georgia through the wild, scenic, wooded, pastoral, and culturally significant lands of the Appalachian Mountains. The AT is managed to support values which have been traditional as goals within the AT community, including being a simple footpath with primitive qualities. For further information see [http://www.nps.gov/appa/parkmgmt/upload/CompPlan\\_web.pdf](http://www.nps.gov/appa/parkmgmt/upload/CompPlan_web.pdf) .

State of North Carolina (NC SCORP 2008):

- North Carolina Division of Parks and Recreation (<http://www.ncparks.gov/Visit/main.php>)
  - *State Parks*: There are seven parks within or near the 18-county area including Grandfather Mountain, Mount Mitchell, Chimney Rock, Gorges, Lake James, Elk Knob, and Stone Mountain. Through the states' New Parks for a New Century initiative, the Division of Parks and Recreation has identified sites in the state - among some of the most treasured and threatened of natural resources - as potential additions to the state parks system.

- *State Trails*: There are four state trails, two of which are in the 18-county area and include the French Broad River Trail and Mountains-to-the-Sea Trail. The French Broad Paddle Trail is a recreational water craft trail from the headwaters of the French Broad River in Rosman, NC and winds 117 miles to the state line where it connects the Tennessee French Broad River Blueway. There are campsites approximately every 8-10 miles on the banks of the river along the trail, available for public use. The Mountains-to-the-Sea Trail (MST), first announced in 1977, has a goal of creating a statewide trail that when complete, will link Clingman's Dome along the western edge of the state in the Great Smoky Mountains National Park to Jockey's Ridge State Park on the outer banks – a distance of over 900 miles.
- *State Rivers*: There are four state rivers, two of which fall within the 18-county area. Horsepasture River (Transylvania County) and Linville River (Avery County).
- In addition, there are four state recreation areas, seven state lakes, and 20 state natural areas outside the 18-county area.

For more information state recreation areas see the “Directory of State Parks and Recreation Areas” located at [http://www.ncparks.gov/Visit/rules/docs/rules\\_subchapter\\_12a.pdf](http://www.ncparks.gov/Visit/rules/docs/rules_subchapter_12a.pdf).

- North Carolina Forest Service (<http://www.ncforestservice.gov>; NC SCORP 2008)
  - *State Forests*: There are two state forests that are managed as working forests to demonstrate and research sustainable forest management, promote public education, provide recreational opportunities, and conserve natural resources. DuPont State Forest (10,400 acres) is located in the southern mountains of Transylvania and Henderson Counties.
  - *Educational Forests*: There are six educational state forests, with two within the 18-county area. Holmes is in Henderson County and Tuttle is in Caldwell County. These education forests feature self-guided trails that include exhibits, tree identification signs, a forest education center, a talking tree trail, a picnic facilities. Rangers are also available to conduct classes for school and youth groups.

#### County and Municipal Resources (NC SCORP 2008):

There are 75 county governments which have official outdoor park and recreation programs. In the 18-county area, federal and state lands are most abundant in Swain County (245,152 acres) with four others containing over 100,000 acres. The counties with the most acres of county park lands are Buncombe (1,911 acres); Burke (834 acres); and Henderson (516); and counties with less than 30 acres of county park lands include Clay (22 acres); Graham (5 acres); Madison (26 acres); and Yancey (17 acres). In general, counties provide outdoor recreational areas that are not large enough to be managed feasibly at the state or federal level. Counties can provide resource-based areas including beaches, swimming sites, boat access sites, picnic areas, scenic areas, and some campgrounds. In addition, some facilities provided by county programs can include playgrounds, sports fields, and tennis courts.

One hundred and forty-six municipalities have recreational programs and facilities. These programs and facilities vary greatly, mainly depending on the population of the municipality. As

a result of population densities and lack of open-space, most outdoor recreational facilities include playgrounds, swimming pools, ball fields, tennis courts, and picnic areas.

### **9.1 Preferences and Demand for Specific Recreation Opportunities**

Documenting the outdoor recreation activities preferences and activity participation rates are an important step in the assessment phase of the Forest Plan. These preferences could contribute to the overall plan by providing information that can be used to identify the need for change and to develop components including desired conditions, objectives, standards, and guidelines.

#### *General Outdoor Recreation Participation*

According to Cordell et al., (2008) between 2003 and 2007 there was an overall increase of participation in outdoor recreation activities in the United States and some activities such as hiking, visiting nature centers and viewing/photographing scenery comprised nearly 75 percent of the “forest-based activity days that occurred on public lands” (p. 3); however, Cordell et al. also stated that during this same time frame, “forest-based recreation sites and capacities remained about constant or increased slightly” (p. 4). Additionally, research shows that participating in outdoor recreation on forests “tends to build support among participants for protecting and managing those forests” (Cordell et al. p. 3). These statistics demonstrate that public lands, including national forests, play a significant role in providing opportunities for outdoor recreation.

#### *Changing U.S. Population Demographics*

Changes in the United States Census data from 2000 to 2010 population demographics show ethnic and minority population subgroups increasing in number with African Americans and Hispanic/Latinos subpopulations are predicted to represent the majority of the U.S. population in the near future (U.S. Census 2012). In addition, the Pew Research Center recently reported that Asian Americans are the highest-educated, fastest-growing immigrant race group in the country (Taylor et al. 2012). Population demographic changes in the 18 county area of western NC somewhat follow these overall trends. Specifically, the changes in North Carolina population demographics from the 2000 census to the 2010 census show White and African American population percentages are decreasing, while Hispanic/Latino and Asian populations are increasing. These population demographic changes could result in outdoor recreation managers having to develop new ways to address challenges such as changing demand in recreation use, increased impacts on and demand for natural resources, and the need to develop alternative communication methods (Struglia and Winter 2002). In addition, it is likely that these population shifts will result necessitate “recreational site designs that will differ from the standard ways that public sites have been developed in the past” (Schelhas 2002, p. 753). For example, to accommodate large Hispanic/Latino families picnic sites will need to be larger and have more grilling facilities (Larson et al. 2012).

#### *Visitation Patterns in Southeastern National Forests*

One study conducted on a southeastern national forest which examined outdoor recreation preferences of four race/ethnic groups (African Americans, Asians, Hispanic/Latinos, and

Whites) showed the preference for frequency of visits to public lands, duration of stay while visiting, and people with whom they would recreate were similar across all age groups, genders, and race/ethnic groups (Parker and Green 2013). Specifically, the majority of visitors came with family or friends at least once a year and all population subgroups preferred to stay the day or several days and nights. The top two outdoor recreation activities participated in most often are similar among participants and included hiking/walking and family time. In addition, picnicking and relaxing were also popular activities for all groups. This study also noted that recreationists participating in this study preferred state parks and city/county parks as the places to conduct their favorite outdoor activities most often and national forests were ranked last as a place they would select to participate in these activities (Parker and Green 2013). However, despite the low ranking of the national forests as favorite places in this study, the National Visitor Use Monitoring (NVUM) survey showed that the Nantahala and Pisgah NFs had over four million site visits during FY 2008 (USDA Forest Service 2012). This information suggests the national forests are connecting with some audiences, but are not connecting with all race/ethnic groups equally. Lastly, respondents in this study noted the lack of information about recreation activities as the major reason for not visiting the national forest more often and suggested the need to increase advertising about available activities. Ethnic and minority groups also noted the need for more guided tours, hikes, and information on the history of the national forest as well as promotions, programs, and activities such as festivals, concerts, outdoor movies, and fireworks.

The recreation participation data source for the National, Regional, and NC information is from the 2000 – 2007 National Survey on Recreation and the Environment (NSRE) which is a general population household telephone survey of Americans age 16 and older (USDA Forest Service 2002). The core of the NSRE is a set of questions that ask about participation in the last 12 months in a variety of outdoor recreation activities. The simple yes/no response data were weighted using a post-stratification process that adjusts the respondent age, sex, race, education, and rural/urban residency profile so that it closely matches the U.S. population profile based on the U.S. Census of Population.

Regional data covers 13 southern states including Alabama, Georgia, Arkansas, Kentucky, Florida, Louisiana, Mississippi, **North Carolina**, South Carolina, Virginia, Tennessee, Texas and Oklahoma.

### **9.1.1 What Are the Recreation Preferences and Demands for North Carolina?**

In 2007, the Forest Service prepared an analysis of responses to the NSRE for residents from NC. The NSRE has yielded just fewer than 3,000 total surveys for NC during this period. The primary purpose of the NSRE and was to learn about approximately 85 specific outdoor recreation activities of people aged 16 and over in the United States. Questions from the NSRE broadly address areas such as outdoor recreation participation, demographics, household structure, lifestyles, environmental attitudes, natural resource values, constraints to participation, and attitudes toward management policies. The following information is from the USFS report “National Survey of Recreation and the Environment: North Carolina and the North Carolina Market Area”.

*Table 9.1.1 Percent of NC Residents of Age 16 or Older Participating in Selected Outdoor Recreation Activities*

<b>Activity</b>	<b>Percent</b>	<b>Activity</b>	<b>Percent</b>
Walk for pleasure	82.0	Hunting (any type)	9.9
Family gathering	74.6	Rafting	9.3
Driving for pleasure	58.2	Backpacking	8.4
View/photo natural scenery	57.0	Use personal watercraft	8.0
Visit nature centers, etc.	52.9	Horseback riding (any type)	7.8
Sightseeing	52.9	Horseback riding on trails	7.3
Picnicking	50.0	Big game hunting	7.2
Visit a beach	44.2	Canoeing	6.7
Visit historic sites	43.1	Small Game hunting	6.4
View/photo other wildlife	43.0	Waterskiing	6.3
View/photo wildflowers, trees	41.0	Downhill skiing	6.1
Swimming in lakes, streams, etc.	39.7	Mountain climbing	5.3
View/photograph birds	34.0	Caving	4.2
Bicycling	31.0	Snorkeling	4.1
Boating (any type)	31.0	Sailing	3.7
Freshwater fishing	30.9	Baseball	3.5
Visit a primitive area	29.8	Anadromous fishing	3.1
Day hiking	29.7	Kayaking	3.1
Visit a farm	28.2	Snowboarding	3.1
View/photograph fish	26.5	Orienteering	3.0
Gather mushrooms, berries, etc.	26.3	Rowing	2.5
Visit other waterside (not a beach)	24.4	Rock climbing	2.3
Motorboating	22.5	Ice skating outdoors	2.1
Drive off-road (any type)	20.7	Surfing	1.8
Developed camping	20.5	Migratory bird hunting	1.7
Visit archeological sites	18.0	Snowmobiling	1.5
Snow/ice activities (any type)	17.9	Scuba diving	1.0
Mountain biking	15.7	Cross country skiing	1.0
Primitive camping	14.6	Windsurfing	0.5
Golf	13.9	Snowshoeing	0.2
Coldwater fishing	11.5		

Source: 2007 National Survey on Recreation and the Environment (NSRE), USDA Forest Service, Athens, GA.

### **9.1.2 What Are the Recreation Preferences and Demands for the Southern Region and United States?**

Participation in most outdoor recreation activities has been growing steadily over the past few years. Of forest-based recreation activities, viewing and photographing fish, wildlife, birds, wildflowers, and native trees are among the fastest growing in the South. To Southerners outdoor recreation is an important part of their lifestyles. However, due to climate and type of forest setting, the abundance of forests in the South, in comparison with other less forested regions of

the country, does not result in higher per capita forest recreation participation (NSRE 2001, Arndt et al. 2002).

*Table 9.1.2 Percentages of the Population Participating in Recreational Activities in the South and United States in 2001*

Activity	Percentages		Activity	Percentages	
	South	United States		South	United States
Walk for pleasure	83.1	84.9	Mountain biking	16.2	23.4
Family gathering	71.9	73.9	Saltwater fishing	13.8	7.9
Visit nature centers	53.7	59.3	Primitive camping	13.0	16.2
Sightseeing	53.0	54.0	Hunting	12.8	10.5
Driving for pleasure	52.8	53.7	Horseback riding on trails	10.6	10.0
Picnicking	49.7	57.3	Coldwater fishing	10.4	14.4
View/photograph natural scenery	46.6	55.1	Jet skiing	10.0	8.9
Visit historic sites	43.8	47.7	Rafting	9.2	10.0
Swimming in lakes and streams	42.4	44.4	Horseback riding on trails	8.9	8.1
View/photograph wildlife	36.8	41.1	Waterskiing	8.7	7.9
View/photograph flowers, etc.	36.7	41.2	Backpacking	8.6	12.2
Visit the beach	36.5	40.0	Canoeing	7.5	10.2
Bicycling	35.0	41.6	Snorkeling	6.1	7.0
Gather mushrooms, berries, etc.	31.2	28.0	Downhill skiing	4.4	10.3
Visit a wilderness	31.1	35.5	Sailing	4.0	5.4
Warm water fishing	28.5	20.2	Rowing	3.3	5.0
View or photograph birds	27.5	30.1	Anadromous fishing	3.2	4.9
Day hiking	27.4	36.5	Migratory bird hunting	2.7	2.2
Visit a waterside besides the beach	27.1	27.1	Scuba diving	2.1	1.8
Motorboating	24.9	24.0	Snowboarding	2.0	5.8
View or photograph fish	21.4	21.7	Kayaking	1.8	3.5
Outdoor team sports	21.3	22.5	Surfing	1.5	1.5
Developed camping	20.7	26.8	Snowmobiling	1.4	7.1
Visit prehistoric sites	19.5	21.3	Cross-country skiing	1.2	5.0
Drive off-road	17.8	17.0	Windsurfing	0.8	0.8

Source: 2001 National Survey on Recreation and the Environment (NSRE), USDA Forest Service, Athens, GA.

## 9.2 Recreational Settings

### 9.2.1 What Are the Preferences of the Public and Demand for Specific Recreation Settings?

Characteristics of recreation visits such as types of sites, length of stay, and activities help managers understand visitors' preferences, patterns, and use. Research has shown that visitors' preference for an experience partly determine their setting preferences (Andereck and Knopf 2007). For example, some wilderness visitors backpack in remote areas because they seek solitude and the associated benefits. Solitude is a frequently cited motive for visiting parks, forests, and wilderness areas. People form bonds with specific places and sites and as a consequence, recreationists may feel a sense of ownership for favorite places and may want a say

in how these places are managed. Recreation management frameworks, such as the Forest Service's Recreation Opportunity Spectrum (ROS), suggest that a diverse set of recreation opportunities, including diverse recreation settings, are necessary to meet the needs and desires of a diverse population of recreationists (Graefe et al. 2009).

### **9.2.2 What Are the Available Ranges, Acreages, and Spatial Distributions of Recreation Settings in the Nantahala and Pisgah NFs?**

Forest Management Goals from the Land and Resource Management Plan, Amendment 5, Nantahala and Pisgah NFs include: 1) provide different environmental and social settings for outdoor recreation opportunities that range from primitive to developed; 2) provide for a variety of recreation activities appropriate to these settings and the forest environment; 3) provide all recreation visitors to the national forest the opportunity to participate in activities and programs and use facilities to the highest level of access practicable.

#### *Recreation Opportunity Spectrum Ranges*

Settings, activities and facilities are the three components of recreation supply, defined as the opportunity to participate in a desired recreation activity in a preferred setting to realize desired and expected experiences. Recreationists choose a setting and activity to create a desired experience. The key to providing most experience opportunities is the setting and how it is managed. The Recreation Opportunity Spectrum (ROS) offers a framework for understanding these relationships and interactions (USDA Forest Service 1982, 1986, and 1990). The Spectrum has been divided into six major classes for Forest Service use: Primitive (P), Semi-Primitive Non-Motorized (SPNM), Semi-Primitive Motorized (SPM), Roded Natural (RN), Rural (R), and Urban (U). Maintaining a broad spectrum of these classes provides people with choices. ROS is also flexible; it can be further subdivided into subclasses as the need arises. See the following links for further information:

[www.fs.fed.us/cdt/carrying\\_capacity/rosfieldguide/ros\\_primer\\_and\\_field\\_guide.htm](http://www.fs.fed.us/cdt/carrying_capacity/rosfieldguide/ros_primer_and_field_guide.htm);  
[www.fs.fed.us/cdt/carrying\\_capacity/rosguide\\_1982.pdf](http://www.fs.fed.us/cdt/carrying_capacity/rosguide_1982.pdf).

This information assists both managers and the public in understanding and identifying with the:

- type of settings (landscapes) provided;
- types of transportation permitted;
- social setting to expect;
- and level of management and infrastructure.

(Source: National ROS Inventory Mapping Protocol, 7/01/2003)

National direction for developed recreation instructs national forests to “provide a broad spectrum of outdoor recreation opportunities consistent with the applicable recreation opportunity spectrum (ROS) class that reflects a balance of environmental, economic, and social factors and the natural and cultural landscape.” In addition, national forests are directed to “restore recreation settings that have been impacted by declining ecosystem health and inappropriate use” (FSM 2330.2, 1 & .5). Four general ROS classes have been inventoried on the Nantahala and Pisgah NFs, including Primitive, Semi-Primitive Non-Motorized, Rural, and Roded Natural, which was broken into two sub-classifications, RN1 and RN2, the more remote of the two.

**Primitive (P)** is the most remote, undeveloped recreation setting, generally located three miles or greater from any open road and 5,000 acres or larger in size. In these two national forests, Primitive ROS class is limited to Congressionally designated Wildernesses even though they may not meet the requirements for size and distance from roads. Motorized vehicles are not allowed and facilities and evidence of management are minimal. Visitor group size is often limited to create a sense of isolation and solitude.

**Semi-Primitive Non-Motorized (SPNM)** areas are generally less remote and can be as small as 2,500 acres in size and only a half-mile or greater from any open road. Motorized vehicles are not allowed; and facilities are generally rustic; and management emphasis is for site protection. These settings accommodate dispersed, non-motorized recreation such as hiking, biking, hunting, and horseback riding. Some evidence of users may occur but interaction is generally low.

**Remote Roaded Natural (RN2)** is a sub classification of Roaded Natural and accounts for areas that either buffer SPNM areas or stand alone as tracts of land 1,500 acres or larger with a low road density of 1.5 miles of road/1,000 acres. Inventoried RN2 areas are managed to provide additional semi-primitive recreation settings either motorized or non-motorized. Facilities are generally rustic, using native materials with design refinements, and providing some comfort for the user as well as site protection. Evidence of users may be prevalent but interaction is generally low.

**Roaded Natural (RN1)** is a sub-classification of Roaded Natural. Settings are located within a half mile of an open road. These settings include the majority of developed recreation sites such as campgrounds, picnic areas, and river access points. Facilities are generally rustic, using native materials with design refinements, and providing some comfort for the user as well as site protection. RN1 also accounts for undeveloped, but highly roaded, settings popular for dispersed recreation activities such as hunting, fishing, camping, and horseback riding. Evidence of users is prevalent and interaction is moderate.

**Rural (R)** settings represent the most developed recreation sites and modified natural settings on the forest including the developed facilities at the Cradle of Forestry and highly developed campgrounds/recreation complexes like Davidson River and Lake Powhatan. Facilities are designed primarily for user comfort and convenience. Evidence of users is readily evident, and interaction is moderate to high.

### *Recreation Opportunity Spectrum Acreages and Distribution*

The following table illustrates the distribution of ROS within Nantahala and Pisgah NFs' 21 Management Areas. Twelve of these Management Areas are managed for a single class, while the remainder is managed for a wide to limited range of classes, depending on MA.

*Table 9.2.1 Recreation Opportunity Spectrum by Management Area, based on Nantahala and Pisgah Land and Resource Management Plan, Amendment 5, 1994.*

		Rural (R)	Roaded Natural 1 (RN 1)	Roaded Natural 2 (RN2)	Semi- Primitive Non- Motorized (SPNM)	Primitive (P)	Plan Direction and Comments
Management Area	Acres						
1B	38,494						
2A	40,642						
2C	37,680						
3B	232,873						
4A	55,604						
4C	179,992						
4D	160,080						
5 - Backcountry	119,685						
6 - Wilderness Study Areas	8,419						
7 - Designated Wilderness	66,550						"Emphasize a primitive recreation experience in a natural forest setting." (p. 99) - but no definition of "Primitive" is included in Appendix B/ROS
8 - Experimental Forests	12,520						
9 - Roan Mountain	7,900						Developed site, Roan Gardens, Rural; remaining lands, RN2
10 - Research Natural Areas	1,460						
11 - Cradle of Forestry in America	6,540						A spectrum of ROS based on the needs of the interpretive program; heavily-developed visitor center area currently considered "Rural" trending toward "Urban"
12 - Developed Recreation Areas	3,030						More highly developed: Rural; minimally developed: RN1
13 - Special Interest Areas	10,370						Manage to meet the recreation experience of adjoining management areas; the experience can vary across the spectrum RN1 to SPNM
14 - Appalachian National Scenic Trail and corridor	12,450						Generally managed as SPNM except RN2 at open road crossings
15 - W/S Rivers and corridors	2,050						Chattooga: SPNM; Horsepasture: Drift Falls to Rainbow Falls, RN2; Rainbow Falls to NF boundary, SPNM. (Does not include Wilson Creek added to the National Wild and Scenic River System in 2000)
16 - Administrative Facilities	1,260						



*Table 9.2.3 Spatial Distribution of ROS Classifications on the Nantahala and Pisgah NFs*

Spatial Distribution of ROS Classifications (Planned Settings) by District							
District	Primitive	Semi-Primitive Non-Motorized	Remote Rooded Natural (RN2)	Rooded Natural (RN1)	Rural	Mixed ROS	Unclassified
Tusquitee (NNF)	3.9%	9.5%	59.2%	23.1%	0.3%	0.8%	3.2%
Cheoah (NNF)	10.2%	14.7%	63.2%	9.1%		1.6%	1.3%
Nantahala (NNF)	3.5%	10.3%	66.2%	12.2%	0.01%	3.8%	4.0%
Pisgah (PNF)	15.5%	6.2%	61.4%	4.7%	0.2%	8.2%	3.9%
Grandfather (PNF)	6.1%	25.3%	55.4%	7.2%	>0.01%	0.04%	5.9%
Appalachian (PNF)		17.4%	59.1%	9.6%		12.4%	1.6%

Note: Unclassified acres range from new acquisitions since the 1995 Amendment to information missing in the GIS database.

Each of the six districts offers greater than 55% of its land base in the Remote Rooded Natural classification (not including any RN2 in the Mixed ROS classifications). Approximately 31% of the Grandfather District is classified in non-motorized settings, followed by almost 25% of the Cheoah District and 22% of the Pisgah District. The Tusquitee District offers the highest percentage of Rooded Natural (over 23%). Tusquitee and Pisgah districts offer the highest percentages of Rural settings (0.3% and 0.2% respectively).

### **9.2.3 What Are the Conditions Affecting the Quality of Recreation Settings?**

Some conditions affecting the quality of recreation settings on the Nantahala and Pisgah NFs include:

- Unanticipated changes in activities from recent recreation-related multi-agency agreements have required changes to settings to accommodate visitation. Examples of this include Federal Energy Regulatory Commission (FERC) agreements with Brookfield Renewable Energy Partners (formally Alcoa) and Duke Energy Corporation that provided new whitewater releases on Cheoah and upper Nantahala Rivers. These river releases have resulted in new outfitting services and increased numbers of boaters. Recent changes in water release schedules and water volumes have required additional designed access and facilities for concentrated recreation use.  
[www.americanwhitewater.org/content/Calendar/view-event/event/2733/](http://www.americanwhitewater.org/content/Calendar/view-event/event/2733/);  
[www.boatingbeta.com/releases/cheoah](http://www.boatingbeta.com/releases/cheoah);  
[www.duke-energy.com/pdfs/Nantahala\\_River\\_Paddling.pdf](http://www.duke-energy.com/pdfs/Nantahala_River_Paddling.pdf);  
[www.americanwhitewater.org/content/Calendar/view-event/](http://www.americanwhitewater.org/content/Calendar/view-event/);
- Recreation-related equipment (kayaks, mountain bikes, motorcycles, etc.) have brought on changes to settings; for example, heavy use and sounds of motorcycles on the Cherohala Skyway frequently alters the sense of remoteness.
- Aging facilities in Rooded Natural and Rural settings are changing the quality of recreation experience.
- The need for active management, including focused information, to channel visitation from over-utilized to under-utilized locations. Many of Nantahala and Pisgah NFs' "crown jewels" – unique and exceptionally beautiful places – are overused, while others can accommodate additional use.

- The increased popularity of some portions of designated Wilderness affects the intended Primitive setting, especially at Linville Gorge, Shining Rock, and Joyce Kilmer-Slickrock Wildernesses: [www.wilderness.net/NWPS/threatsOveruse](http://www.wilderness.net/NWPS/threatsOveruse); [www.wilderness.net/NWPS/wildView?WID=319&tab=regulations](http://www.wilderness.net/NWPS/wildView?WID=319&tab=regulations); [www.hikinginthesmokys.com/shining\\_rock\\_wilderness.htm](http://www.hikinginthesmokys.com/shining_rock_wilderness.htm); <http://hikingthecarolinas.com/shiningrockhikes.php>.
- As recreation popularity has increased, outfitter-guide services have grown with increasing numbers of groups and group members across the setting spectrums. Outfitters offer guided fishing, hunting, hiking, horseback riding, and other activities. Day treks by summer camps are also increasing the numbers of groups and group sizes across the setting spectrums.
- Settings (especially semi-primitive and remote settings) are also affected by the increased demand for festivals, races, challenge, orienteering, and other Special Use events in Nantahala and Pisgah NFs.
- Increased development and/or over-development in response to perceived needs of visitors and for resource protection often unintentionally changed ROS class. For example, adding amenities to dispersed camp sites such as picnic tables, lantern posts, and fire rings to replicate the appearance and amenities of highly developed fee sites. These dispersed sites occur along many of the Nantahala and Pisgah NFs river and creek corridors. Another example includes dispersed parking along many of the national forests' travelways.
- As the U. S. population ages, the number and development levels in Rural and Roded Natural settings may increase to accommodate their needs for more accessible and/or highly developed facilities as well as front-country opportunities.
- Land acquisitions in the past two decades have not been assigned ROS classifications.
- Changes in open/closed road designations could have an influence on ROS designations.

### 9.3 Recreational Opportunities

Many visitors to the Nantahala and Pisgah NFs are local; however, many also visit from neighboring states including Alabama, Georgia, Tennessee, Virginia, and West Virginia (Cordell and Tarrant 2002). Past research has demonstrated that most national forest visits originate from within a 75-mile (1½ hour driving time) radius (Overdeest and Cordell 2001). The largest cities within this driving radius include Atlanta, Knoxville, Chattanooga, Charlotte, and Winston-Salem. In addition, Asheville, NC, the Blue Ridge Parkway, and Great Smoky Mountains National Park draw national and international audiences. A wide range of developed and dispersed recreation opportunities are offered in the Nantahala and Pisgah NFs.

#### 9.3.1 What Are the Available Recreational Types by Range, Capacities, and Distribution? What Are the Nature, Extent, and Condition of Trails and Other Transportation to Provide Recreational Access?

More than 280 developed sites in in these two forests serve as destinations or hubs from which to access forest lands. A “developed site” is defined as a concentration of facilities and services used to provide recreation opportunities to the public. Recreation sites are developed within different outdoor setting to facilitate desired recreation use such as camping and picnicking; each site represents significant investment in facilities and management under the direction of a Forest

Service administrative unit. Based on the assigned ROS setting, developed sites provide different levels of user comfort and convenience. Development Levels range from 1 to 5, with Level 1 representing the most primitive, natural settings with minimal or no site amenities. Level 2 improvements are designed primarily for protection of the site rather than the comfort of users. User comfort increases in Levels 3 – 5. Level 3s typically include vault toilets and designated campsites; Level 4 sites often include bathhouses and options of electrical hookups. Level 5 sites are the most highly developed on national forest lands. Types of sites, their capacities (measured in persons-at-one-time, or PAOT), and distribution cross districts are shown below (note: minimally developed DS 1-0 sites are not included in this table).

*Table 9.3.1 Developed Recreation Sites by Type and District for the Nantahala and Pisgah NFs*

Site Type	Nantahala NF			Pisgah NF			Totals
	Cheoah District	Tusquitee District	Nantahala District	Appalachian District	Grandfather District	Pisgah District	
Boating Site	8	4	5	2	0	0	<b>19</b>
PAOT	936	639	1422	240	0	0	<b>3267</b>
Campground	4	2***	3	3	3*	4	<b>19</b>
PAOT	570	786	573	565	290	1600	<b>4384</b>
Roadside/Hunt Camp	5	1	1	0	1	7	<b>15</b>
PAOT	455	70	70	0	50	215	<b>860</b>
Group Camp	1	0	2	2*****	1**	3	<b>9</b>
PAOT	100	0	225	200	100	230	<b>855</b>
Horse Camp	0	1	2	1	0	2	<b>6</b>
PAOT	0	30	100	80	0	105	<b>285</b>
Cabin/Lookout/Lodge	3	0	1	0	0	0	<b>4</b>
PAOT	26	0	16	0	0	0	<b>42</b>
Fishing Site	1	1	0	2	1	0	<b>5</b>
PAOT	21	35	0	36	25	0	<b>117</b>
Information Site	0	0	1	0	0	3	<b>4</b>
PAOT	0	0	45	0	0	74	<b>119</b>
Interpretive Site	0	0	2	0	0	0	<b>2</b>
PAOT	0	0	32	0	0	0	<b>32</b>
Observation Site	2	0	9	1	2	1	<b>15</b>
PAOT	253	0	277	30	280	140	<b>980</b>
Picnic Site	2*****	3	8****	6	3	9	<b>31</b>
PAOT	74	230	723	1132	310	1247	<b>3716</b>
Swim Site	1	1	1	0	0	2	<b>5</b>
PAOT	200	280	96	0	0	1100	<b>1676</b>
Target Range	1	1	2	0	0	0	<b>4</b>
PAOT	15	45	71	0	0	0	<b>131</b>
Non-motorized Trail head	13	7	20	23	20	59	<b>142</b>
PAOT	552	310	461	655	1135	1586	<b>4699</b>
OHV Trail head	0	0	1	0	1	0	<b>2</b>
PAOT	0	0	60	0	375	0	<b>435</b>
Visitor Center	0	0	0	0	1	1	<b>2</b>
PAOT	0	0	0	0	105	715	<b>820</b>

Notes: PAOT = Maximum number of people at one time. \*Boone Fork CG (75 PAOT) not currently open; \*\*Boone Fork Group Camp not currently open; \*\*\*Two loops of Hanging Dog Campground (approximately 187 of 281 PAOT) not currently open; \*\*\*\*Arrowwood Glade Picnic Area (100 PAOT) not currently open; \*\*\*\*\*Not including picnic sites along Cherohala Skyway; \*\*\*\*\*Silvermine Group Camp currently closed due to flash flood damage during the Summer of 2013.

Several areas of outdoor activities help define the recreation opportunities and access for the Nantahala and Pisgah NFs.

- *Sightseeing/Driving for Pleasure/Nature Study*
  - Three scenic byways are open year round to accommodate driving for pleasure. Two of these are nationally-designated: Cherohala National Scenic Byway and a 17-mile portion of Forest Heritage National Scenic Byway. The remainder of Forest Heritage Scenic Byway and Mountain Waters Scenic Byway were designated as National Forest Scenic Byways.
  - There are 12 NC Department Of Transportation Scenic Byways (2013) including:
    - Nantahala Byway (part of this will be overlain by Mountain Waters Scenic Byway)
    - Cherohala (All overlain by the National Scenic Byway)
    - Indian Lakes
    - Waterfall (part of this will be overlain by Mountain Waters Scenic Byway)
    - Whitewater
    - Forest Heritage (all overlain by other designations)
    - I-26 Scenic Byway (the northernmost piece near the Tennessee line is travels over portions of the Pisgah NF)
    - Appalachian Medley
    - Pisgah Loop
    - Little Parkway
    - Mission Crossing
    - Mount Mitchell Scenic Byway: SR 19 from I-40, Exit 9, 19E through Micaville to NC 80/Blue Ridge parkway to NC 128
  - Fourteen observation sites, including Looking Glass Falls, Wiseman’s View, Brown Mountain, Patton’s Run, Dry Falls, Wayah Bald, and Roan Mountain. Some of these offer interpretation about the site; some, like Cherohala National Scenic Byway corridor, include multiple developed overlooks; and some provide facilities for picnicking or for short hikes.
  - Developed picnicking options range from a few tables to accommodations for group gathering. Currently, 31 picnic areas provide capacity to accommodate more than 3,700 people.
  - The mountains of western NC offer unique habitats for plants and animals and offer popular locales for viewing birds and other wildlife, nature study and wildcrafting (i.e., collecting plant materials in their natural habitat for food, medicine, and crafts). In its statewide program, NC features a Mountain region Birding Trail in “site groups” which include Nantahala and Pisgah NFs locations. See [www.ncbirdingtrail.org](http://www.ncbirdingtrail.org) for further information. In addition, four NC wildlife viewing areas are currently listed for Nantahala and Pisgah NFs and more information can be found at [www.wildlifeviewingareas.com](http://www.wildlifeviewingareas.com):
    - Big Bald Banding Station
    - Mt. Mitchell and Black Mountains
    - Roan Mountain
    - Standing Indian Mountain – Nantahala River wetlands

In addition, several other Forest sites are featured in Charles E Roe’s *North Carolina Wildlife Viewing Guide* (1992), designated in partnership through a program with Defenders of Wildlife. Studying the diverse natural world is another favorite pastime for visitors to the

Nantahala and Pisgah NFs. Wildflower pilgrimages, fall color tours, and many other activities are based on the natural environment and wildcrafters visit woods and fields to collect a wide range of plants, from edible mushrooms to ramps to the leaves, stems, bark, and roots of medicinal herbs. Summer months bring berry pickers to famed natural blueberry/huckleberry fields, to patches of blackberries and raspberries, persimmons, and other tree fruits are abundant during the fall. The Asheville Citizen-Times lists a number of sites in Nantahala and Pisgah NFs in their annual “It’s Wild Blueberry Season!” feature dated August 22, 2013.

- *Conservation Education*

- The Cradle of Forestry in America offers self-guided trail experiences and programming for groups and individuals between April and November. For more information on the Cradle of Forestry, see section 9.3.4 of this report.
- The Linville Gorge Cabin provides visitor information and wilderness education three days a week during peak recreation season.
- A few self-guided interpretive trails and scattered interpretive signs provide educational messages. For example, the Bob Padgett Poplar and the Wasilik Poplar are among the oldest living Tulip Poplar trees in the state, and can be accessed by short trails (<http://www.stayandplayinthesmokies.com/vendor/bob-padgett-poplar>).
- A short hiking loop through Joyce Kilmer Memorial Forest offers glimpses to an old growth cove forest ecosystem.
- Heritage interpretation is the emphasis at former Civilian Conservation Corps (CCC) sites (e.g., Massey Branch, Curtis Creek, and Mortimer); Wilson Lick, a former ranger station; White Oak bottoms, a former community; Wayah Bald fire tower; the Vanderbilt purchase memorial at Stony Fork; the first Weeks Act purchase at Curtis Creek; Cherokee Indian history at Tsali Trailhead; and along the route of the Overmountain Men (e.g., signs at Yellow Gab and Dobson Knob), as well as other locations. See Table 9.3.14 (Existing Interpretive Facilities). Hiking to NC’s historic lookout towers to take in vast spans of scenery from their sites is another popular heritage-based tourism activity.

- *Water-based Recreation*

Water-based Recreation in the Nantahala and Pisgah NFs can be broadly categorized into four sub-categories:

- *Whitewater paddling:*

Whitewater paddling is popular in the western NC area. Avid paddlers take advantage of heavy rain events to run a myriad of creeks and rivers.

(<http://www.americanwhitewater.org/content/River/state-summary/state/NC>). Forest Service facilities are located on the Cheoah, French Broad, Nantahala, and Nolichucky rivers, with trailhead access to the upper Chattooga. Additional access facilities are being designed for Cheoah River and on the Nantahala River between River Mile 16.5 and 19.

Free-flowing rivers that offer outfitter-guide services in the Nantahala and Pisgah NFs are the French Broad and Nolichucky. No guide services are currently available on the NC section of Chattooga and the floatable season (December 1 – April 30) is restricted to flows above 350 cubic feet per second. See the following web link for further information: <http://www.americanwhitewater.org>.

The Nantahala River routinely draws a varied audience due to frequent water releases, Class II and III rapids along the eight-mile section between the Duke Energy power plant and Wesser, NC. Also, there are sixteen commercial outfitters available to the public. In spite of infrequent water releases on the portion of the Nantahala River upstream from the power plant and below the dam (eight releases annually), and on Cheoah River between Santeetlah Dam and Caulderwood Lake (18 releases annually); these river sections are highly valued for their intense challenges and high flows (American Whitewater 2013; Duke Energy 2001). Outfitter-guides operate on Cheoah River and provide limited transportation services on the high-challenge portion of the Nantahala during some scheduled releases. These rivers compliment the network of other nearby rivers, including the Pigeon, Hiwassee, and Ocoee Rivers.

Table 9.3.2 Whitewater Put-ins and Take-outs on the Nantahala and Pisgah NFs

Forest	District	River	Site name
Nantahala	Cheoah	Cheoah River	Cheoah River Launch
		Cheoah River	Cheoah River Take-out
Nantahala	Nantahala	Nantahala River	Nantahala River Launch
		Nantahala River	Nantahala River Commercial/Public Take-out
		Nantahala River	Nantahala River Ferebee Memorial Launch & Take-out
		Nantahala River	Nantahala River Beaching Area/Observation Deck
		Nantahala River	Nantahala River Silver Mine Take-out
		Nantahala River	Nantahala River Silver Mine Take-out
Pisgah	Appalachian	French Broad River	Stackhouse Boat Launch
		Nolichucky River	Poplar Boat Launch

o *River and creek-oriented recreation*

Dispersed fishing, wading, tubing, and other activities as well as a few facilities characterize a large percentage of these forests’ river and creek-oriented recreation. Developed facilities for activities including picnicking, camping, and fishing are offered at some locations. Popular sites include Davidson, South Toe, Upper and Lower Nantahala, Cullasaja, North Mills, and Fires Creek. Sliding Rock, a developed site in the Pisgah NF, offers an unusual sliding and viewing experience for thousands of visitors annually.

o *Wild and Scenic Rivers*

There are three designated Wild and Scenic Rivers within the boundaries of Nantahala and Pisgah NFs. **Wilson Creek Wild and Scenic River** is a total of 23 miles in length. With nine miles on the Pisgah NF, the river offers fantastic vistas, ridges more than 4000 feet high, and whitewater rapids and trails that travel to spectacular waterfalls. In addition, Wilson Creek offers developed recreation facilities and access (restrooms and constructed stairs) and is popular for wading, fishing, and other low-water activities. Parking is limited along narrow State Route 1328.

**Horsepasture Wild and Scenic River** on the Nantahala NF is the shortest of the three with a total length of four miles. One and three quarters of a mile travel through the forest. It is an exceptional example of an escarpment river with five major waterfalls

within two miles – Drift Falls, Second Falls (or Turtleback Falls for its turtle shell like rock formation), Rainbow Falls, Stairstep Falls, and Windy Falls with numerous cascades, rapids, boulders, and rock outcroppings. Access is available via Rainbow Falls trail out of Gorges State Park.

**Chattooga Wild and Scenic River** originates in the mountains of western NC and runs a total of 59 miles from NC into Georgia and South Carolina, with 9.8 miles on the Nantahala NF. A section of the river runs through the Ellicott Rock Wilderness. The Chattooga is used by paddlers during high water flows. Limited trailhead access is available on the Nantahala NF's segment of the Chattooga River but includes the Chattooga River trail and off State Route 1100/Bull Pen Road.

○ *Waterfalls*

There is a falling cascade of water on almost every stream in the Nantahala and Pisgah NFs. A single "cascade" may be only a few feet in height, but it might be combined in a series of drops that travel a distance of several hundred feet. A "waterfall," by comparison, flows freely in a vertical drop along a cliff face. The quantity of water in the "fall" or "cascade" depends on the amount of rainfall, which varies from season to season and from year to year. More than 44 named waterfalls attract visitors to admire their beauty and power as well as providing the opportunity to wade or swim in cold pools. Many of the waterfalls listed below are adjacent to system trails. Some such as Bridal Veil Falls can be viewed from state highways and others like Dry, Looking Glass, and Whitewater Falls offer wide hardened trails, handrails, uniform stairs, and resting benches. Several are accessed by short easy hiking trails, while others are embedded several miles in designated Wilderness and backcountry. Sliding Rock, in the Pisgah NF, is an unusual developed recreation "swimming" site, complete with lifeguards and restrooms. In addition, nearly 1,000 visitors a day during the summer months pay a fee to slide on the waterfall or view others who engage in that activity.

Many local counties feature waterfalls as part of their outdoor recreation offerings. Transylvania County is known as "The Land of Waterfalls," and offers names of outfitters for guided waterfall tours. (<http://www.visitwaterfalls.com/the-great-outdoors/waterfalls>). Mountain Waters Scenic Byway that stretches between Highlands and Wesser, NC, travels past several named falls. The Franklin, NC chamber provides a list and map of waterfalls in the area (<http://www.franklin-chamber.com/whattodo/waterfalls.php>). An internet search of waterfalls in any of the counties in the Nantahala and Pisgah NFs area will yield directions and specific waterfall information. For example, see <http://www.ncwaterfalls.com/index2.htm>.

*Table 9.3.3 Waterfalls on the Nantahala and Pisgah NFs by Ranger District*

<b>Nantahala National Forest</b>	<b>District</b>	<b>Pisgah National Forest</b>	<b>District</b>
Big Snowbird Creek (Big Falls, Middle, Upper)	Cheoah	Elk River (aka Big)	Appalachian
Sassafras	Cheoah	Roaring Falls	Appalachian
Slickrock Creek (aka Lower Falls)	Cheoah	Douglas	Appalachian
Wildcat	Cheoah	Walker	Appalachian
Big Laurel	Nantahala	Catawba	Grandfather
Bridal Veil	Nantahala	Harper Creek	Grandfather
Cullasaja	Nantahala	Huntfish	Grandfather
Dry	Nantahala	Steele Creek	Grandfather
Glen	Nantahala	Upper Creek	Grandfather
Mooney	Nantahala	Toms Creek	Grandfather
Paradise (aka Wolf Creek)	Nantahala	Courthouse	Pisgah
Quarry (aka Upper Cullasaja)	Nantahala	Daniel Ridge	Pisgah
Ranger (Skitty Creek)	Nantahala	Graveyard Fields	Pisgah
Rufus Morgan	Nantahala	Looking Glass	Pisgah
Silver Run	Nantahala	Moore Cove	Pisgah
Wesser Falls (Nantahala River)	Nantahala	Rainbow	Pisgah
Whitewater	Nantahala	Skinny Dip	Pisgah
Beech Creek	Tusquitee	Slickrock Creek	Pisgah
Leatherwood	Tusquitee	Sliding Rock	Pisgah
North Shoal Creek	Tusquitee	Stairway	Pisgah
		Turtleback	Pisgah

o *Motorized and non-motorized recreation on large lakes*

Large lakes adjacent to national forest lands on the Nantahala NF include Chatuge, Hiwassee, Fontana, and Santeetlah. The lakes themselves are owned and managed by the Tennessee Valley Authority (TVA) or corporations such as Brookfield (formerly Alcoa) and Duke Power. Forest Service facilities include boat launches (some operated in cooperation with the North Carolina Wildlife Resources Commission (NCWRC)); swimming beaches; picnic areas; fishing piers; and campgrounds. The Forest Service is currently obligated through FERC agreements to provide dispersed camping on islands on Nantahala Lake and on the shores of Santeetlah and Calderwood lakes. Some privately owned marinas are operated through Special Use agreements with the Forest Service.

Table 9.3.4 Motorized Boat Launches and Boat Ramps on the Nantahala and Pisgah NFs

Forest	District	Lake/River	Site name
Nantahala	Cheoah	Fontana Lake	Lemmons Branch Boat Launch
		Fontana Lake	Cable Cove Boat Launch
		Fontana Lake	Tsali Boat Launch
		Santeetlah Lake	Cheoah Point Boat Launch
		Santeetlah Lake	Massey Branch Boat Launch
		Santeetlah Lake	Avery Branch Boat Launch
	Nantahala	Fontana Lake	Finger Lakes Kayak Boat Launch
	Tusquitee	Lake Chatuge	JackRabbit Mountain Boat Launch
		Lake Hiwassee	Hanging Dog Boat Launch
		Lake Hiwassee	Grape Greek Boat Launch
		Lake Hiwassee	Ramsey Bend Boat Launch

o *Recreation (generally non-motorized) on small mountain lakes*

The small mountain lakes, Balsam, Cherokee, Cliffside, and Appalachia on the Nantahala NF and Powhatan on the Pisgah NF, provide intimate, and generally non-motorized water-based recreation experiences. As with the large lakes, Forest Service facilities include swimming beaches; picnic areas; fishing piers; and campgrounds. Balsam Lake Lodge, with accommodations for groups of up to 16 people, provides direct access to Balsam Lake. Group picnicking in covered pavilions is available at both Cherokee and Cliffside Lakes.

o *National Forests in North Carolina’s Accessible Fishing Collaborative*

For more than twenty years, Fisheries, Engineering, and Recreation in National Forests in North Carolina have partnered to create a comprehensive network of accessible fishing opportunities. Through careful planning, design and construction, often in partnership with NC’s Wildlife Resources Commission, accessible fishing facilities provide opportunities that include warm water fishing in reservoirs and small ponds and cold water angling in streams and rivers, including some premiere trout fishing destinations. Cantilevered fishing pier designs have been refined over the years and have been adopted for use by the Wildlife Resources Commission throughout the state. Site-specific design has provided accessible parking and routes to these water-based sites; most of the fishing piers include areas for both seated and standing fishing. Recent piers have incorporated a metal mesh water-viewing component into a portion of the pier’s flooring.

Local communities utilize these facilities on a day-to-day basis. In many communities, these have become centers for frequent outdoor recreation. Boone Fork Pond pier, near the communities of Lenoir and Hudson, is commonly used as an outdoor destination for the mentally and physically challenged. Partners who have provided funding or assistance in constructing these facilities include Trout Unlimited, the Muskie Club, Bass Anglers Sportsmen Society and chapters of Wounded Warriors. Many of these accessible fishing facilities are used during National Fishing Week activities, including sites for Special Needs Fishing Days.

Throughout National Forests in North Carolina, the comprehensive network of accessible fishing facilities is well-designed and is well received by anglers and other forest visitors. These sites also provide places for viewing the majestic scenery along forested waterways. Accomplishments over the past twenty years include:

- Piers on small lakes and ponds: Cherokee Lake, Balsam Lake (network of several piers); Max Patch Pond; Boone Fork Pond; Cradle of Forestry impoundment; Cheoah Pond
- Piers on rivers and streams: North Mills River; Davidson River at Sycamore Flats and Coontree; South Toe River near Black Mountain Campground; Curtis Creek network of piers; French Broad River at Murray Branch; Fires Creek; Snowbird Creek
- Piers on large lakes: Jackrabbit Mountain (Lake Chatuge); Massey Branch (Santeetlah Lake)

- *Trails, Trailheads, and Shelters*

More than 140 developed trailheads provide access to Off High-way Vehicle (OHV) Trail Complexes; bike and equestrian trail complexes; hiking trail complexes; and a number of backcountry areas and Wildernesses. In FY2013, approximately 36% of trail miles are maintained to National Quality Standards.

- *Motorized Trail Complexes*

Two OHV complexes, Brown Mountain in the Pisgah NF and Wayehutta in the Nantahala NF, provide motorized trail access. Both accommodate wheeled vehicles less than 50” wide. In addition, two trails in the Brown Mountain complex accommodate full-sized vehicles. A segment of motorized trail on the Pisgah Ranger District, Ivestor Gap Trail, is open to street-legal vehicles on a seasonal basis for access to berry picking areas.

*Table 9.3.5 Motorized mileage for the Nantahala and Pisgah NFs*

<b>Motorized Trail Miles by Use-Type</b>	
<b>Brown Mountain</b>	<b>Mileage</b>
Trail Bike	6.0
Trail Bike, ATV	20.1
Trail Bike, ATV, 4WD	6.1
<b>Sub Total</b>	<b>32.2</b>
<b>Wayehutta</b>	<b>Mileage</b>
Trail Bike, ATV/UTV	22.7
<b>Ivestor Gap</b>	<b>Mileage</b>
Highway Legal Vehicles	2.3
<b>Grand Total</b>	<b>57.20</b>

- *Non-Motorized Trail Complexes*

For many visitors exploring a trail is the best way to enjoy the Nantahala and Pisgah NFs. National Forest System trails allow people to experience the forests beyond picnic areas, campgrounds, and forest highways. Trails invite people to view waterfalls and scenic overlooks and entice them to explore deeper into the forests. In addition, they allow a personal interaction with the forest landscape in a minimally constructed and planned environment. More than 1,560 miles of trails for hiking, mountain biking, and pack and saddle provide access into these two national forests. Among these are eight national recreation trails, one national scenic trail, and one national historic trail.

From 2011-13 the Forest Service coordinated an assessment of non-motorized trail condition, use, and user preferences through a series of collaborative meetings with trail volunteers and user groups. The resulting document, *Nantahala and Pisgah National Forest Trail Strategy, 2013*, is available for download from the following website: <http://www.fs.usda.gov/detail/nfsnc/home/?cid=STELPRDB5341557> (USDA Forest Service 2013). In this document a series of trail complexes are identified for each ranger district. Some of the complexes emphasize a specific use type and others are made up of mixed use trails.

Non-motorized trail complexes provide a range of recreation opportunities across all ROS settings from primitive to roaded natural. There are short loops, interpretive trails, challenging mountain bike trails, equestrian trails with overnight camping sites, and hiking trails for half-day or multi-day trips. The Appalachian National Scenic Trail, Bartram National Recreation Trail, Mountains-to-the Sea National Scenic Trail, Art Loeb National Recreation Trail, and Benton MacKaye Trail offer long-distance back-packing opportunities of three or more days. The following tables show the mileage, location, and use-type for all non-motorized trails on the Nantahala and Pisgah NFs.

*Table 9.3.6 Non-motorized mileage by Ranger District by use type for the Nantahala and Pisgah NFs*

<b>Non-Motorized Trail Miles by Use-Type</b>					
<b>Use Type</b>	<b>Total Mileage</b>	<b>Hike Only</b>	<b>Horse/Hike</b>	<b>Bike/Hike</b>	<b>Horse/Bike/Hike</b>
<b>Nantahala National Forest</b>	<b>649</b>	<b>504</b>	<b>72</b>	<b>21</b>	<b>52</b>
Cheoah RD	252	198	15	0	39
Nantahala RD	276	223	39	1	13
Tusquitee RD	121	83	18	20	0
<b>Pisgah National Forest</b>	<b>911</b>	<b>609</b>	<b>50</b>	<b>157</b>	<b>95</b>
Appalachian RD	264	203	39	15	7
Grandfather RD	267	206	3	43	15
Pisgah RD	380	200	8	99	73
<b>Total</b>	<b>1560</b>	<b>1113</b>	<b>122</b>	<b>178</b>	<b>147</b>

There are three categories of nationally designated trails on the Nantahala and Pisgah NFs: National Scenic Trails, National Historic Trails, and National Recreation Trails. Each of these are recognized for their unique attributes and managed to maintain those qualities. Nationally designated trails on the Nantahala and Pisgah NFs are shown in the following table.

*Table 9.3.7 Nationally Designated Trails within the Nantahala and Pisgah NFs*

<b>Trail Name</b>	<b>Designation</b>	<b>Mileage</b>	<b>Location</b>
Andy Cove Nature Trail	National Recreation Trail	0.6	Transylvania County
Appalachian Trail	National Scenic Trail	180	Clay, Macon, Swain, Graham, Haywood, Madison, Yancey, Mitchell & Avery Counties
Art Loeb Trail	National Recreation Trail	30.1	Transylvania & Haywood Counties
Bartram Trail	National Recreation Trail	59.2	Macon, Swain & Graham Counties
Biltmore Campus Trail	National Recreation Trail	1.0	Transylvania County
Joyce Kilmer Memorial Loop	National Recreation Trail	2.0	Graham County
Overmountain Victory Trail	National Historic Trail	4.9	Avery & Burke Counties
Roan Mountain Gardens Trail	National Recreation Trail	0.6	Mitchell County
Shut-In Trail	National Recreation Trail	18.8	Buncombe County
Whiteside Mountain Trail	National Recreation Trail	1.9	Jackson Country

○ *Trailheads*

A broad spectrum of trailhead facilities abounds in both the Nantahala and Pisgah NFs. These trailheads, and associated trails and roads, provide hike, bike, horse, and motorized access to areas of all ROS settings in both national forests. Some trailheads are highly developed with paved parking and picnic and restroom facilities, while the least developed include undefined parking and little else. Most developed trailheads are identified on Nantahala and Pisgah NFs trail maps.

○ *Trail shelters*

Twenty-two shelters offer trail-side overnight accommodations along the Appalachian National Scenic Trail and other trails. These shelters are typical primitive three-sided structures, though some are more complex. Many have nearby pit or moldering toilets. The following table identifies the shelter and associated trail.

Table 9.3.8 Trail Shelters on the Nantahala and Pisgah NFs

Trail Shelter Name	District	Trail
Groundhog Creek Shelter	Appalachian	Appalachian NST
Roaring Fork Shelter	Appalachian	Appalachian NST
Deer Park Mtn. Shelter	Appalachian	Appalachian NST
Little Laurel Shelter	Appalachian	Appalachian NST
Jerry Cabin Shelter	Appalachian	Appalachian NST
Flint Mtn. Shelter	Appalachian	Appalachian NST
Hogback Ridge Shelter	Appalachian	Appalachian NST
Overmountain Shelter	Appalachian	Appalachian NST
Stan Murray Shelter	Appalachian	Appalachian NST
Sassafras Gap Shelter	Cheoah	Appalachian NST
Brown Fork Gap Shelter	Cheoah	Appalachian NST
Cable Gap Shelter	Cheoah	Appalachian NST
Standing Indian Shelter	Nantahala	Appalachian NST
Carter Gap Shelter	Nantahala	Appalachian NST
Long Branch Shelter	Nantahala	Appalachian NST
Rock Gap Shelter	Nantahala	Appalachian NST
Siler Bald Shelter	Nantahala	Appalachian NST
Wayah Bald Shelter	Nantahala	Appalachian NST
Cold Spring Shelter	Nantahala	Appalachian NST
Wesser Bald Shelter	Nantahala	Appalachian NST
Rufus Morgan Shelter	Nantahala	Appalachian NST
Panthertown Shelter	Nantahala	TR449-TR489
Deep Gap Shelter	Pisgah	Art Loeb
Butter Gap Shelter	Pisgah	Art Loeb
Buckhorn Gap Shelter	Pisgah	Black Mountain
Muskrat Creek Shelter	Tusquitee	Appalachian NST

- *Other Dispersed Recreation, including Wilderness and Backcountry*

- *Congressionally Designated Wilderness*

In 1964, the United States Congress enacted landmark legislation that permanently protected some of the most natural and undisturbed places in America. The Wilderness Act established the National Wilderness Preservation System "... to secure for the American people of present and future generations the benefits of an enduring resource of wilderness. Firmly attached to the American past, the legacy that is wilderness will remain indispensable to the American future. See Assessment Section 15 Designated Areas for more information.

The six Wildernesses on Nantahala and Pisgah NFs offer many types of primitive recreation experiences, from the cliffs and rock ledges of Linville Gorge Wilderness, to the massive old-growth forests of Joyce Kilmer-Slickrock Wilderness. These areas attract users from across the country and around the world. Some areas of Shining Rock, Linville Gorge, and Joyce Kilmer-Slickrock Wildernesses are heavily used; while others such as Ellicott Rock, Middle Prong, and Southern Nantahala Wildernesses offer

opportunities for escape from the sights and sounds of humans. In an attempt to reduce user impacts and maintain wilderness character, all Wildernesses have a group size limit of 10 people; some have campfire bans and camping set-backs from streams; and Linville Gorge Wilderness requires an overnight permit during peak use season. All six Wildernesses allow commercial outfitter and guide operations under special use permit. No motorized equipment or mechanized means of conveyance, such as bicycles, are allowed in congressionally designated Wilderness. Wildernesses in the Nantahala and Pisgah NFs include:

**Ellicott Rock Wilderness** is located at the intersection of NC, South Carolina, and Georgia state lines, with approximately 3,400 acres of 8,300 acres in NC. The Chattooga National Wild and Scenic River passes through the Wilderness in this remote section of the Nantahala NF.

**Joyce Kilmer-Slickrock Wilderness** is comprised of 17,394 acres with 13,562 acres in NC and 3,832 acres in Tennessee. The Wilderness is on the Nantahala NF and has approximately 56 miles of rugged hiking trails. This Wilderness is home to the Joyce Kilmer Memorial Forest, a grove of old-growth Yellow Poplar trees dedicated to the author of the same name. Forest Plan Amendment 9 changed the management level for Joyce Kilmer National Recreation Trail within the Joyce Kilmer Memorial Forest to allow handrails, steps, footbridges, etc. In addition, Amendment 9 created an exception to the 10-person group size limit in Wildernesses.

**Linville Gorge Wilderness** is on the Pisgah NF and is one of the most beautiful and rugged river gorges in western NC. The gorge is formed by the Jonas Ridge on the east and Linville Mountain on the west and is bisected by the Linville River which drops 2,000 feet into the valleys below. The terrain is steep with numerous rock formations, and is covered by dense hardwood and pine forests. Recreation opportunities include hiking backpacking, rock climbing, fishing and hunting.

**Middle Prong Wilderness** is 7,900 acres of steep, rugged high-elevation ridges ranging from 3,200 to over 6,400 feet. The area gets its name from the Middle Prong of the Pigeon River whose headwaters are located in this area of the Pisgah NF.

**Shining Rock Wilderness** on the Pisgah NF encompasses over 18,000 acres, and was one of the first Wildernesses designated in NC. The area has elevations varying from 3300 to over 6,000 feet, and lies on the north slope of the Pisgah Ledge, a northeasterly extension of the Blue Ridge Mountains. Its name comes from the white quartz outcropping near the crest of the Shining Rock Mountain.

**Southern Nantahala Wilderness** was designated in 1984 and consists of 23,473 acres. Approximately 11,703 acres are located in NC on the Nantahala NF and 11,770 acres are located in Georgia's Chattahoochee NF. The highest elevation in the Southern Nantahala Wilderness is the 5,499-foot peak of Standing Indian Mountain and the lowest elevation is approximately 2,400 feet. The Appalachian Trail passes through the Wilderness in both states.

Table 9.3.9 Overview of Wildernesses in the Nantahala and Pisgah NFs

Site Name	Ranger District	Acreage	Mileage Hiking	Mileage Horse
<b>Nantahala National Forest</b>				
Joyce Kilmer-Slickrock Wilderness	Cheoah	13,562	56	0
Ellicott Rock Wilderness	Nantahala	3,394	7	0
Southern Nantahala Wilderness	Nantahala	11,703	13	3
<b>Pisgah National Forest</b>				
Linville Gorge Wilderness	Grandfather	11,786	39	0
Middle Prong Wilderness	Pisgah	7,460	12	0
Shining Rock Wilderness	Pisgah	18,483	36	7

○ *Wilderness Study Areas*

Wilderness Study Areas (WSA) are lands designated by Congress for further study for potential designation as Wilderness or their release from further consideration for designation. Until designated or released, these lands are managed to preserve their wilderness characteristics. As in designated Wilderness, this includes a prohibition of bicycles and other mechanical conveyance.

Table 9.3.10 Overview of Wilderness Study Areas in the Nantahala and Pisgah NFs

Site Name	Ranger District	Acreage	Recommend for Designation	Mileage Horse
<b>Nantahala National Forest</b>				
Snowbird	Cheoah	8,490	No	31
Overflow	Nantahala	3,200	No	6
<b>Pisgah National Forest</b>				
Craggy Mountain	Appalachian	2,380	Yes	6
Harper Creek	Grandfather	7,140	Yes	22
Lost Cove	Grandfather	5,710	Yes	12

○ *Managed Backcountry*

Additional semi-primitive backcountry opportunities are available in the 119,000 plus acres of the Nantahala and Pisgah NFs, these are identified in the LMP as Management Area 5. In these areas, the “emphasis is on providing large blocks of backcountry where there is little evidence of other humans or human activities other than recreation use” (Amendment Five, III-89).

○ *Rock Climbing*

Rock climbing, ice climbing, rappelling, and mountaineering are technical and unique ways to experience national forests. The rugged but accessible terrain makes climbing in the Nantahala and Pisgah NFs appealing and climbing in a forested, yet remote environment are characteristics of climbing in the area unique. Climbing in the Nantahala and Pisgah NFs provides a wide range of options, levels of commitment, and rock types. Whiteside, Big Green, Cedar Rock, Lost Cove, Looking Glass, and Linville Gorge are premier climbing locations which provide opportunities ranging from bouldering to single-pitch and multi-pitch climbs. In addition, current climbing management allows recreational access while protecting natural and cultural resource values. For example,

seasonal peregrine closures at Whiteside, Wall, and other cliffs successfully balance peregrine falcon protection with recreational access. Seasonal restrictions may vary from site to site.

o *Recreational Rockhounding*

Western NC is a destination for many amateur rockhounds and mineral collecting organizations. Rockhounding is primarily done as a dispersed recreation activity at old commercial mines and mineralized outcrops on the national forest. Popular rockhounding areas include the Ray Mine near Burnsville, Yancey County, the Buck Creek olivine deposit in Clay County, Walker Creek Kyanite Prospect in Buncombe County, and Grimshawe Sapphire Mine in Transylvania County. Organizations such as the Mountain Area Gem and Mineral Association (M.A.G.M.A.) bring hundreds of visitors to the forest every year for rockhounding and contribute to the local economy. Some of the common minerals collected include: kyanite, feldspar, mica, corundum, and quartz.

While collecting minerals that are loose and free on the surface is a permitted activity, some popular collection areas are experiencing more significant damage to natural resources as a result of digging and subsequent erosion. There is high interest from the rockhounding community in working with the forest to maintain areas that are open for rock collecting. More information regarding the current rockhounding guidelines on the Nantahala and Pisgah NF is posted on the forest's website at:

<http://www.fs.usda.gov/detail/nfsnc/recreation/?cid=stelprdb5420144>.

• *Hunting, Fishing, and Trapping*

Outside of developed recreation areas, fishing and hunting are permitted throughout the National Forest System lands in NC. According to the North Carolina Wildlife Resources Commission (NCWRC 2013), any lands open to the public hunting are called "game lands." On national forest lands, motorized hunter access is available on open forest roads and motorized trails. The USFS manages the habitat and protects water quality in the national forests and the NCWRC regulates fishing. Anglers should have a fishing license and hunters must have the proper licenses or permits needed to hunt. For information on licenses refer to the NCWRC at [www.ncwildlife.org](http://www.ncwildlife.org).

In addition to big game species including black bear, deer, and wild turkey (see Tables below for big game harvest data), many people hunt small game species in NC such as rabbits and squirrels as well as quail, grouse, and pheasants. Each year approximately 150,000 sportsmen/ sportswomen take more than 1.0 million trips afield in pursuit of resident small game species. According to a survey of hunters during a recent hunting season, it was estimated that hunters harvested approximately 8,750 grouse, 230,000 quail, 382,500 rabbits, and 482,000 squirrels in NC (NCWRC 2013).

*Table 9.3.11 Hunting and Fishing Licenses for Western North Carolina in 2011-2012*

<b>County</b>	<b>Hunting only</b>	<b>Inland Fishing only</b>	<b>Hunting &amp; Inland Fishing</b>
Avery	49	679	854
Buncombe	424	9633	3991
Burke	286	4832	2756
Caldwell	334	4768	2868
Cherokee	127	1752	1451
Clay	69	597	561
Graham	46	657	820
Haywood	214	3672	2256
Henderson	222	3722	2111
Jackson	106	2047	1409
Macon	123	1739	1408
Madison	89	1071	1282
McDowell	227	2565	1857
Mitchell	96	862	832
Swain	48	1076	731
Transylvania	120	1301	1195
Watauga	218	1584	1138
Yancey	94	859	1185
<b>Totals</b>	<b>2892</b>	<b>43,416</b>	<b>28,705</b>

Source: North Carolina Wildlife Resources Commission, [www.ncwildlife.org](http://www.ncwildlife.org).

Table 9.3.12 Big Game Harvest in Western North Carolina Counties 2011-12

County	Bear	Deer	Turkey
Avery	5	56	26
Buncombe	7	81	24
Burke	27	135	58
Caldwell	12	56	34
Cherokee	75	87	70
Clay	16	33	17
Graham	112	46	59
Haywood	31	28	21
Henderson	1	43	14
Jackson	28	48	49
Macon	55	143	65
Madison	29	84	29
McDowell	66	70	53
Mitchell	8	31	15
Swain	35	48	23
Transylvania	26	83	34
Watauga	0	8	6
Yancey	30	40	17
<b>Totals</b>	<b>563</b>	<b>1,120</b>	<b>614</b>

Source: North Carolina Wildlife Resources Commission, [www.ncwildlife.org](http://www.ncwildlife.org).

North Carolina has many opportunities for the 1.2 million anglers who fish in the state. Inland fishing consists of both game (See list of inland game fish below) and non-game fish. Any fish not classified as a game fish is considered a non-game fish when found in inland fishing waters and includes shellfish and crustaceans. Additionally, the harvest of several game fishes is regulated by length limits. Further information on specific regulations can be found at [www.ncwildlife.org](http://www.ncwildlife.org). In addition, the NCWRC provides information and two interactive maps on more than 500 publicly accessible places to fish in NC. Information on the location of publicly accessible fishing piers, boat ramps, and canoe launches, as well as places that provide bank and wade fishing opportunities including locations on the Nantahala and Pisgah NFs can be found at [www.ncwildlife.org/Fishing/Wheretofish.aspx](http://www.ncwildlife.org/Fishing/Wheretofish.aspx).

North Carolina offers a wide variety of trapping opportunities. Regulated trapping is an integral component of wildlife conservation programs, as it controls abundant wildlife, removes nuisance animals, aids in restoring native species, and protects habitat, property, and threatened and endangered species. Trapping on game lands is managed by the NCWRC. Additional information on trapping season dates, regulations, best management practices, furbearer management, and furbearer species can be located on the NCWRC website [www.ncwildlife.org](http://www.ncwildlife.org).

Target shooting ranges with developed facilities provide opportunities for sighting guns and for increasingly popular recreational shooting. There are four USFS operated ranges

in the Nantahala NF including Panther Top near Murphy, NC; Moss Knob and Dirty John near Franklin, NC; and Atoah near Robbinsville, NC.

- *Camping in the full range of development scales*

Nantahala and Pisgah NFs offer a variety of different camping options, from large developed campgrounds with showers and electrical hook-ups to rustic roadside and backcountry hunt camps. These overnight accommodations provide destination and hub opportunities for recreating in the adjacent forests and in local communities.

- There are 19 developed family-type campgrounds that can accommodate more than 4,300 people
- Six horse camps can accommodate more than 315 people
- Nine group camps can accommodate 855 people
- There are more than 100 individual dispersed sites identified in 15 roadside/hunt camp areas. Many of the hardened dispersed sites have evolved over time in response to riparian resource degradation and sanitation concerns. These sites are often developed in areas of concentrated use and along popular water corridors.
- One 16-person lodge (Balsam Lake), one rustic cabin (Swan Cabin) and two “camping cabins” in Cheoah Point Campground provide a different level of overnight facilities.
- Concession-operated camping/day use facilities include five large campgrounds (Standing Indian, Lake Powhatan, Davidson River, Carolina Hemlocks, and Black Mountain), four group camps and several associated small campgrounds and day use areas.
- To limit impacts, dispersed camping is only allowed at designated sites in many areas of the forest including:
  - Pisgah NF: (1) throughout the Pisgah Ranger District; (2) in corridors along Neals Creek, South Toe River, Big Ivy Road, Cold Springs Creek, and River Road/French Broad River in the Appalachian Ranger District; and (3) along the Curtis Creek corridor in the Grandfather Ranger District.
  - Nantahala NF: In the corridors in the Cheoah, Santeetlah, and Tellico rivers in both the Cheoah and Tusquitee Ranger District.
- Areas closed for an dispersed camping include Bent Creek Experimental Forest; the Cradle of Forestry’s developed areas; Wilson Creek corridor; land around Balsam Lake; the Coweeta Experimental Forest; U.S. 64 Cullasaja Gorge corridor; the Fontana Lake Finger Lake area; the 1,000 foot corridor along the Nantahala River between Silvermine Creek and Junaluska Road, including any islands; within the boundaries of developed day-use sites and campgrounds; in many wildlife openings; and areas with no-camping signs.
- Camping stay limits: Camping in developed or dispersed areas is limited to 14 days within a 30 day time period. A camper who wishes to relocate after the 14 day limit is required to move more than 10 miles from the previously occupied camping site.

### 9.3.2 What Are the Conditions Affecting the Quality of Recreation Opportunities?

Some conditions affecting the quality of recreation opportunities on the Nantahala and Pisgah NFs include:

- *Resource Issues*
  - Heavy use in dispersed recreation areas is resulting in resource damage, including trampling of vegetation; user conflicts in some areas (e.g., hunters and trail users; trail users of different types); increased traffic and parking demands; increased demand for restrooms; increased trash; and need for clean-up/trash collection facilities vs. Pack In/Pack Out philosophy (Source: Recreation manager observations).
  - The high volume of use of trails is adversely affecting trail condition and maintenance backlog. The Nantahala and Pisgah NFs have an estimated 4.6 million visits annually with nearly half (48%) stating non-motorized trail recreation as their primary reason for visiting. In addition, approximately 73% of visitors participate in hiking, bicycling, or horseback riding while visiting the forests; (USDA Forest Service 2010).
  - Some current trail designs do not meet user needs, are creating major erosion issues, and are causing environmental damage and management struggles with trying to mitigate effects of non-system trails and damage from unmanaged recreation. Additionally, requests for new and expanded trail systems continue.
  - Budgets shortfalls are resulting in a backlog of deferred trail maintenance.
  - Some highly scenic locations do not have facilities or planned access sufficient for the amount of use they receive. Therefore, issues such as unsafe conditions, user created trails, damage to vegetation and trash/trash collection may occur.
  - Increased bear encounters (GSMNP #1 in US in bear encounters, Backpacker magazine, 9/13; bear-camper conflicts in North Mills River and Shining Rock Wilderness, 2013, and Black Mountain/Briar Bottom, 2012).
  - Increased accidents and fatalities in the general forest area, including swift water rescues at waterfalls and rivers.
  - Potential increase in demand for festivals, special events, and other special uses could affect other users' ability to recreate in those areas (e.g., Tsali and Jackrabbit Mountain festivals and events; group trail running events on Shut-In Trail).
  - Changes in recreation access as a result of opening and closing roads and trails.
- *Wilderness Issues*
  - Uncontrolled recreation use in Wilderness and the presence of more recreation users at trail heads is resulting in challenges for managing Wilderness attributes such as solitude, untrammelled environment, and natural processes (non-native invasive species).
  - Mountain Bike trespassing (using hiking trails) at Harper Creek and Lost Cove WSAs. Additional demand for more mountain biking opportunities in these areas results in conflict between management of Wilderness and recreation opportunities.
  - Heavy recreation use in Shining Rock, Linville Gorge, and the Memorial Forest area of Joyce Kilmer Wildernesses has resulted in challenges for managing for wilderness characteristics (solitude, untrammelled, etc.). Challenges include resource damage such as damaging and trampling of vegetation; increased trash; creation of non-system trail; expansion of existing campsites; and creation of new campsites.
  - Overuse of highly visited Wilderness areas may lead to expansion of the current permit system in these areas.

- *Demographics*
  - Aging population desire more motorized access.
  - Dispersed camping by homeless people, especially nearer larger towns and cities, is a social issue for recreation management (Asheville Citizen Times 2012).
- *Infrastructure*
  - Recreation user fees are used to help maintain, improve, and provide specialized services at developed recreation sites. In the Nantahala and Pisgah NFs user fees are charged at highly-developed campgrounds; some swim sites; the Cradle of Forestry; and some highly developed day use sites. In addition, special recreation permits are required at OHV trail complexes; many shooting ranges; and for developed whitewater rafting access on several rivers.
  - Increased demand for more accessible and/or highly developed facilities and front-country opportunities.
  - The Nantahala and Pisgah NFs recreation infrastructure is aging; some existing facilities are 40+ years old and are in poor condition.
  - Reductions in appropriated funding are resulting in fewer improvements in popular, heavily used sites.
  - In recent years, there has been pressure from communities and groups to (1) add new recreation areas (example: Clay County Shooting Range) and/or to continue operating unprofitable, seldom used areas (example: Hanging Dog Campground).
  - Decreasing appropriations for deferred maintenance make new facility construction unlikely; therefore, resulting in a focus of maintenance on existing facilities.
- *Climate*
  - Climatic effects from rains, freeze-thaw, snow, ice, heat, and winds often result in mudslides, flooding, logjams, etc., and can cause adverse changes to developed recreation facilities and dispersed areas, including trails, roads and other access routes.
  - Studies of flash-flood prone developed sites have caused some changes to facility location and could likely result in other changes in the future.

### 9.3.3 What are the Opportunities to Connecting People with Nature?

National forests provide the greatest diversity of outdoor recreation opportunities in the world, connecting people with nature in a variety of settings and activities. In addition to providing a venue for various forest-based recreation activities such as hiking, biking camping, horseback riding, and viewing wildlife and scenery, the Nantahala and Pisgah NFs provides many other opportunities to connect people with nature.

- **Hosted programs:**

Hosted programs are partnerships between the Forest Service and other parties, either within or outside of the Federal government, where the primary purpose is for the Forest Service to provide a host site for the partners' job training program. The Forest Service hosts a variety of programs under this heading which provide a multitude of benefits to both parties. Benefits to outside partners include opportunities for their clients to gain and develop important job skills, while the Forest Service benefits from the accomplishment of many important tasks related to its mission of caring for the land. Examples of partnerships that fall under the hosted program title include:

- A crew of teen-age youth enrolled in a summer job training program sponsored by a private-nonprofit youth serving organization which maintain trails, improve wildlife habitat, and build fences for 10 weeks during the summer.
- Since, 2008 the Cheoah and Tusquitee Ranger Districts within the Nantahala and Pisgah NFs have hosted the Youth Conservation Corps. In addition, the Cheoah Ranger District has hosted Wilderness Rangers (college students) since 2011.
- A low income senior citizen enrolled in a Federal job training program who gains work skills while working at the front desk of the local Ranger Station, and who goes on to become gainfully employed at a local business.
- **Archeology/Archeologists:**

To connect people with nature Forest Service archeologists and cultural resource managers direct opportunities for public enjoyment, public education, and public involvement. In addition to many public presentations, professional presentations, and publication of scientific research; FS archeologists identify structures and sites for preservation and public visitation along with interpretation. The latter most often includes the history of the landscape, former inhabitants and past land use. The public is invited to share their interests and participate in Windows to the Past and Passport In Time (PIT) projects. These are hands-on projects working alongside professional archeologists with artifacts, repairing historic structures, locating, and excavating archeological sites. Often the public has the opportunity to work with FS hosted university archeological field schools, professors and students, as well as American Indian Tribal members. The public most often shares their knowledge and assistance while learning and connecting with the past people, environment and changes in the Forest over time.
- **Cradle of Forestry in America:** <http://www.cradleofforestry.com/site>.

The Cradle of Forestry in America is a 6,500 acre historic site within the Pisgah NF and the Pisgah Ranger District and is categorized as a Special Management Area in the current Forest Plan. Congress set this site aside to commemorate the beginning of forest conservation in the United States. The Cradle of Forestry tells the story of the first forestry school and the beginnings of scientific forestry in America. The center also has an interactive exhibit hall, the Giving Tree Gift Shop, and the Forest Bounty Cafe. Two interpretive trails, seven historic buildings, a 1915 Climax logging locomotive, an old sawmill, and several crafters—a toy maker, weaver, wood carver, and basket maker—bring the past to life. The Forest Service and the Cradle of Forestry Interpretive Association (CFIA) jointly manage the Cradle of Forestry in cooperation with other partners. The Cradle of Forestry attracts more than 40,000 visitors annually with nearly 10,000 visitors participating in a variety of special events—from the colorful music of Appalachian heritage to the exploration of bogs, air quality, wood products, and land stewardship. Each year more than 6,000 school children engage in educational, hands-on, curriculum-based programs interacting with the Cradle’s rich history and outdoor setting. Additionally, nearly 1,000 educators, classroom teachers, and interested individuals participate in professional development workshops, such as the Woodland Owners Short Course, a six-part series on understanding your land. Below is an example list of the programs available at the Cradle:

  - Old Time Plowing and Folkways
  - International Migratory Bird Day Celebration

- Woodsy Owl's Curiosity Club
  - National Get Outdoors Day
  - Twilight Firefly Tour
  - Bug Day!
  - Songcatchers Music Series
  - Winged Creatures of the Night Twilight Tour
  - Train History Day
  - Smokey Bear's Birthday Party
  - Afternoon Tea with the Llamas
  - Bring Back the Monarchs
  - National Public Lands Day
  - Forest Festival Day and John G. Palmer Intercollegiate Woodsmen's Meet
  - Camping in the Old Style
  - *The Legend of Tommy Hodges* – an outdoor drama
- **The North Carolina Arboretum:** <http://www.ncarboretum.org>.  
The North Carolina Arboretum is located on land within the Pisgah NF, and is operated under a special use permit issued by the National Forests in North Carolina. The NC Arboretum provides outreach and engagement through plant-centered adult and youth education and demonstration that promotes leadership in environmental sustainability awareness, related economic development and science literacy for NC communities, and campuses. The facilities, exhibits, education programs, and economic strategies serve as a model for excellence in institutional outreach, resulting in positive educational and economic outcomes. Annual visitation during 2012 was approximately 494,000 visitors.
    - *Adult Education:* Adult education at The North Carolina Arboretum covers three basic areas 1) horticulture and the environment; 2) natural history; and 3) fine arts and crafts and accounts for nearly 2000 classroom seats filled each year. Courses range from one to 20 hours and included topics such as “Spruce-fir Forests of the Southern Appalachians” to “Map and Compass Skills”.
    - *Youth Education:* Youth education programs serve students in Pre-K through high school. Over the past three years Arboretum educators have provided active, engaging experiences for an average of nearly 390 campers each summer, which translates into over 13,000 hours of outdoor fun and learning each summer. Since 2009 the year round youth education participation rates have been increasing with annual numbers growing from 7,929 in the 2009-2010 program years, to 11,380 in the 2010-2011 program years, to 15,633 in the 2011-2012 program years. Programs provide students the opportunity to hike through the woods, splash in creeks, learn survival skills, experiment with outdoor cooking, investigate animal habitats, create crafts from natural materials, build forts, go rafting, discover geocaching, camp out overnight, and share these experiences with friends old and new. The mission of youth education at the NC Arboretum is to provide every student with:
 

***Adventure:*** Enjoyable, physically active, healthy experiences that get students moving, outdoors, and immersed in the unique natural heritage of our biologically diverse region;

***Exploration:*** Hands-on investigations that challenge students to make observations, examine data, and draw conclusions about the natural world of which they are a part; and

**Awareness:** Learning experiences that foster an environmental consciousness in students that will aid in shaping their personal and professional life.

- **Pisgah Center for Wildlife Education:**

The Pisgah Center for Wildlife Education explores NC's mountain wildlife and habitats. The center is located in Pisgah NF off Highway 276 in the Pisgah NF. The Pisgah Center for Wildlife Education offers many programs that give participants a chance to learn a particular skill, such as tracking, orienteering or biological water sampling. Programs are offered at the Center and offsite. Below are some of the specific programs available.

- The Nature Nuts programs, for children ages 4 to 7, offers activities and topics that focus on specific wildlife species or related topics by incorporating an informational presentation with a children's book, craft project and a hands-on activity.
- Eco-Explorers programs engage youth ages 8 to 13 with the natural world through different hands-on investigations. In addition, both youth and adults may register for special events (see below) that provide a variety of learning experiences.
- The Center's Outreach Educator leads Project WILD, Aquatic WILD, and CATCH workshops for educators and youth leaders. These workshops provide materials and methods for incorporating wildlife in school curricula, scouting, and 4-H programs as well as environmental education.
- Group programs are available for groups of 10 or more. All group programs are hands-on and most are conducted outdoors. These programs are scheduled at each group's convenience and generally last two to three hours depending on the topic.

*Special Events:*

Hunter Education

Outdoor Photography

Outdoor Cooking Skills

Bird House Basics

Birding

Kid's Introduction to Archery

Salamanders

Gone Fishin'

Be Bear Aware

Stream Investigation

A Week in the Woods

National Hunting and Fishing Day Festival

- **Outward Bound:**

Outward Bound is the oldest outdoor educator in the world and the NC Outward Bound located in Asheville, NC is the oldest independent Outward Bound School in the country. Since 1967, North Carolina Outward Bound School (NCOBS) has delivered challenging wilderness adventures that teach more than just outdoor skills. The mission of the Outward Bound is to change lives through challenge and discovery. Upholding the same ideals and goals as the first Outward Bound School established in the 1940s in Britain, every NCOBS course is built around a progression that delivers powerful life lessons by encouraging participants to safely and confidently, step outside their comfort zones and travel in spectacular wilderness areas. NCOBS conducts courses on both the Nantahala and Pisgah

NFs under special use permits. Courses are offered for age ranges of 14-16, 16-18, 18+, 18-30, 20+, and 30+ and are scheduled from April to October each year with an of approximately 1700 each year. Courses include a variety of outdoor activities such as backpacking, mountain biking, rock climbing, and whitewater canoeing. Participants sleep outside under the stars each night in different spots in the national forest, cook meals outside on a camp stove, and learn how to use a map and compass as well as other camping and technical skills.

- **Outdoor Recreation Camps:**

Western NC is a popular location for outdoor and forest-based recreation activities. Its close proximity to large metro cities such as Atlanta, GA and Charlotte, NC and a large airport in Asheville, NC, has helped it become a popular location for summer camps. Each year the Nantahala and Pisgah NFs fills special permit request for a variety of camps which emphasize outdoor activities such as hiking, kayaking, canoeing, sailing, mountain biking, rock climbing, and horseback riding. Camps range from one day to several weeks and are attended by youth ages 6 to 17 years old and adults as well. Summer time attendance at any one of the over one hundred camps (see Appendix C), can range from 28 to 1200 individuals.

- **Interpretive Facilities**

In 1991, interpretive planners developed a Comprehensive Interpretive Plan for National Forests in North Carolina. The mission and the goals developed to direct the direction for the next 15 years include:

*Mission:*

“The interpretive services of the National Forests in North Carolina will provide high quality interpretive opportunities and experiences that increase the public’s awareness and understanding of their natural and cultural environment and how the Forest Service manages resources on the national forests to support and improve these environments.”

*Goals:*

- All Ranger Districts will provide orientation services
- Interpretation programs will address critical/sensitive issues
- The Forest will have an Interpretive Service specialist who will ensure quality and message unity through - District Interpretive Service coordinators
- NFsNC will be the center of excellence for interpretive services in Region 8
- The Cradle of Forestry in America Interpretive Association will be the center of excellence in interpretation in the Forest Service
- Interpretive services will provide enjoyable recreation experiences

Orientation is provided at all District Ranger Stations through exhibits, artifacts, and visitor information including maps. Interpretive sales items are also offered in partnership with the Cradle of Forestry In America Interpretive Association (CFAIA) at most of the ranger stations. The most elaborate series of orientation exhibits is at the Pisgah Ranger Station Visitor Center; many of these exhibits featuring *Leave No Trace* themes. The Grandfather Ranger Station also features a series of interactive and stationary exhibits focused on forest management. The Appalachian Ranger Station, located off I-26 near Mars Hill, features

recreation orientation by “zone” or distinctive geographic vicinity (e.g., Roan Mountain or Hot Springs/Harmon Den).

Small seasonally operated visitor centers are located at Linville Gorge, with exhibits and sales materials based on wilderness education, and Roan Mountain, with exhibits about rare species, cultural history, rhododendrons, high elevation mountain balds and other site-specific subjects.

In addition, dozens of wayside signs at historic sites and trailheads and along road corridors, as well as several trails interpret the area’s natural and cultural resources (Table 9.3.13).

*Table 9.3.13 Existing Interpretive Facilities Connecting People with Nature and Heritage*

Existing Interpretive Facilities		Connecting People with Nature and Heritage			
Forest	District	Wayside/Trailhead Interpretive Signs and Exhibits	Interpretive Trails	Interpretive Sites	
Nantahala	Cheoah	Tsali Bike Trailhead exhibits (Cherokee history, etc.)	Cable Cove Interpretive Trail	CCC Camp at Massey Branch (interpretive signage)	
		Joyce Kilmer Memorial Forest Trailhead exhibits	Llewellyn Cove Interpretive Trail		
		Cherohala Skyway National Scenic Byway corridor interpretive wayside signage			
		Tusquitee			
		Nantahala	Whiteside Mountain Trailhead	Walton Interpretive Trail	Bob Padgett Poplar
			Nantahala River Gorge wayside signs, including Ferebee Memorial		Wasilik Poplar
			Mountain Waters Scenic Byway route exhibit (2 locations)		Wilson Lick (including history exhibit)
		Roy Taylor Forest Dedication sign		Wayah Fire Tower (including history exhibit)	
		White Oak Bottoms wayside signs			
Pisgah	Appalachian	Overmountain Victory National Historic Trail interpretive sign at Yellow Gap			
		Max Patch/A.T. Trailhead			
		Carvers Gap/A.T. Trailhead			
		Roan Mountain signage at Cloudlands, Roan Gardens, High Bluff and exhibits at seasonal visitor center			
	Grandfather	Pinnacle Rock interpretive sign ("Wings over the Gorge")	Table Rock Interpretive Trail	First Weeks Act Purchase, commemorative/history sign @ Curtis Creek	

		Wiseman's View interpretive sign		CCC Camp at Mortimer (signage)
		Brown Mountain Overlook wayside signage		CCC Camp at Curtis Creek (signage)
		Wilderness Education signage at seasonal Linville Gorge Cabin		
		Overmountain Victory National Historic Trail interpretive sign at Dobson Knob		
		Catawba Falls Trailhead		
	Pisgah	Forest Heritage National Scenic Byway interpretive wayside signage	Andy Cove Trail (Kids in Parks - TRACK Trail)	The Cradle of Forestry National Historic Site, including visitor center; two interpretive trails; numerous facilities and installations
		North Mills River Stream Enhancement Project	Centennial Interpretive Trail (maintained by Bent Creek Experimental Forest)	Vanderbilt Purchase Memorial at Stony Fork
		Bent Creek vegetation management interpretive panels (maintained by Bent Creek Experimental Forest)	Graveyard Fields Interpretive Trail	
		Headwaters and Yellow Gap vegetation management interpretive panels		

- **Amphitheaters**

Amphitheaters and the associated campfire programs were once frequent design components in national forest campgrounds. In the Nantahala and Pisgah NFs, six amphitheaters remain: some with regular programming; some with Sunday services in the summer season; and some with little use other than campers’ impromptu gatherings. The most heavily used amphitheater in the two forests is the new amphitheater at the Cradle of Forestry which a popular location for a variety of public programs. At Davidson River and Black Mountain campgrounds naturalist programs are offered regularly in the amphitheater areas. Other amphitheater facilities are located at Jackrabbit Mountain and Standing Indian campgrounds in the Nantahala NF, and at Rocky Bluff Campground in the Pisgah NF.

- **Maps:**

There are several Forest Service maps of the Nantahala and Pisgah NFs available for purchase by the public including the following:

- Nantahala National Forest – Nantahala Ranger District
- Pisgah National Forest – Cheoah and Tusquitee Ranger Districts
- Pisgah National Forest – Pisgah Ranger District
- Pisgah National Forest – Grandfather and Appalachian Ranger Districts (Grandfather, Toecane, and French Broad)
- Chattooga national Wild and Scenic River

- Joyce Kilmer-Slickrock Wilderness
- Wayhutta Off-Highway Vehicle System
- Bent Creek Experimental Forest
- Brown Mountain Off-Highway Vehicle Area
- Linville Gorge Wilderness
- Shining Rock & Middle Prong Wilderness
- South Toe River, Mount Mitchell & Big Ivy Trail Maps
- Wilson Creek National Wild and Scenic River Trail Guide

In addition there are National Geographic Maps available including the following:

- Brasstown Bald/Chattooga River (#778)
- Linville Gorge/Mount Mitchell – Pisgah National (#779)
- Pisgah Ranger District – Pisgah National Forest (#780)
- Tellico and Ocoee Rivers – Cherokee National Forest (#781)
- French Broad & Nolichucky Rivers – Cherokee & Nantahala National Forests (#782)
- South Holston and Watauga Lakes – Cherokee & Pisgah National Forests (#783)
- Fontana & Hiwassee Lakes – Nantahala National Forest (#784)
- Nantahala & Cullasaja Gorge – Nantahala National Forest (#785)

- **Interpretive and Outreach Programs:**

Each year the Rangers from the six districts on the Nantahala and Pisgah NFs conduct interpretive programs and provided outreach to visitors and local communities. Some of these programs include:

- Smokey Bear
- Woodsy Owl
- Fishing days: Several kids fishing days take place on the Nantahala and Pisgah NFs during the spring of each year. Below is an example of the locations for the spring of 2013:
  - Rattler Ford, Cheoah Ranger District
  - Cherokee Lake, Tusquitee Ranger District
  - Cliffside Lake, Nantahala Ranger District
  - Boone Fork Pond, Grandfather Ranger District (event for the handicapped)
  - Boone Fork Pond, Grandfather Ranger District
  - Lake Powhatan, Pisgah Ranger District (special needs children day)
  - Lake Powhatan, Pisgah Ranger District
  - Carolina Hemlocks, Appalachian Ranger District
  - Max Patch, Appalachian Ranger District
- Leave No Trace and Seasonal Wilderness Ranger Programs
- Conservation Field Day – 7<sup>th</sup> graders from area schools on yearly basis
- Rangers participate in forestry summer camps at local schools
- Host middle/high school field trips about Hemlock woolly adelgid and other issues
- Present natural resource opportunities at career days yearly
- Present outdoor activities in nature for family fitness fair at elementary schools
- Present NEPA and other natural resource issues to college classes yearly
- Host groups of students who participate in alternative spring break
- Present to adult hiking groups (sponsored by Sierra Club)

- Participate in Partners of Joyce Kilmer Wilderness
- Host volunteers for trail maintenance yearly
- Lake clean-up yearly

In addition, campground programming is provided by the Cradle of Forestry in America Interpretive Association (CFAIA). Programs and events include mix of hikes, wildlife information (bears, local birds, plants, etc.) touch tables with natural objects, movies relating to the outdoors, and nature games. In addition, the CFAIA provides S'mores roast, ice cream social and hot dog roast, and "summer games" which include three-legged races, watermelon seed spitting, oh deer, and predator/prey games.

## **9.4 Recreational Scenic Character**

### **9.4.1. How Is Scenery Currently Managed and What are the Visual Quality Objectives (VQO) Across the Nantahala and Pisgah NFs?**

At the time of the 1994 Land Management Plan (LMP) Amendment 5, Forest Service Manual 2380 cited authority for managing National Forest System visual resources in the National Environmental Policy Act of 1969 (42 U.S.C. 4321), and the National Forest Management Act of 1976 (16 U.S.C. 1600). It further states that the objective of visual management is to manage all National Forest System lands to attain the highest possible visual quality commensurate with other appropriate public uses, costs, and benefits. Under section 2380.3 of the manual, Forest Service policy is to:

1. Inventory, evaluate, and manage the visual resources as a fully integrated part of the National Forest System land management process.
2. Employ a systematic, interdisciplinary approach in this effort to ensure the integrated use of the natural and social sciences and the environmental design arts.
3. Ensure the visual resource is treated equally with other resources.
4. Apply landscape management principals routinely in all National Forest System activities.

Under section 2380.42, each Forest Supervisor is directed to:

1. Determine and map visual quality objectives (per Agriculture Handbook 462) for definitive land areas that consider the physical characteristics and scenic quality of the land and the desires and preferences of the public.
2. Ensure that Forest and District personnel including wildlife biologists, silviculturists, timber sale administrators, engineers, land management planners, and range specialists understand and apply the basic landscape management concepts and principals.
3. Establish and implement a method for monitoring, recording, and documenting changes in the condition of the visual resource.
4. Implement a method of organizing, filing, and documenting recommended and final visual quality objectives.

Section 2380.6 direction is to use the *National Forest Landscape Management: Volume 2, Chapter 1: The visual management system* (Agriculture Handbook 462) to manage visual resources on National Forest System lands. This handbook identifies a process for inventorying

and classifying scenic landscapes, identifying management objectives, and incorporating those objectives into a Land Management Plan (LMP). This process was used in the current Nantahala and Pisgah NFs LMP and is described below (USDA Forest Service 1974, 1995, and 2008).

In the inventory phase, landscape Character Types were identified and classified into Variety Classes. Character Types are land areas having common distinguishing visual characteristics of landform, rock formations, water forms, and vegetative patterns, and are used as a frame of reference in classifying scenic quality based on physical features of the landscape. The second tier of classification is Variety Class, which subdivides the landscape into areas of scenic importance. This is based on the premise that landscapes with more variety or diversity have a greater potential for high scenic value, although all landscapes have some scenic value.

There are three Variety Classes identified in the Visual Management System (VMS):

- Variety Class A – Distinctive: Areas of unusual or outstanding scenic value, not common in the landscape character type.
- Variety Class B – Common: Areas where combinations of form, line, color, and texture are repeated throughout the character type, not unusual from standpoint of scenic value.
- Variety Class C – Minimal: Areas of little change in form, line, color, or texture, and contain no characteristics of Classes A or B.

In the initial scenery inventory created for the current LMP all landscapes within the Character Type were determined to have some degree of variety and scenic value, therefore no lands were classified as Variety Class C. Variety Class A landscapes were ultimately identified as special interest areas to be managed for their respective unique characteristics. All remaining lands were classified as Variety Class B – Common.

After determination of Variety Class, two other considerations affecting management of scenery were considered as directed in the VMS: Sensitivity Level and Distance Zone. Sensitivity Level is a measure of viewer concern for scenic quality and Distance Zone is the distance from viewer to landscape or feature being viewed. Both of these elements were identified in the initial scenery inventory for the current LMP, though this was a generalized or broad-scale inventory for land management planning purposes (a more detailed assessment of these elements is typically conducted for project-level scenery analysis).

The initial scenery inventory identified the following Sensitivity Levels and Distance Zones:

- Sensitivity Level 1 (SL1) – Highest Sensitivity: All seen areas from primary travel routes, use areas, and water bodies where at least  $\frac{1}{4}$  of visitors have a major concern for scenic quality; and secondary travel routes, use areas, and water bodies where at least  $\frac{3}{4}$  of visitors have a major concern.
- Sensitivity Level 2 (SL2) – Average Sensitivity: All seen areas from primary travel routes, use areas, and water bodies where less than  $\frac{1}{4}$  of visitors have a major concern for scenic quality; and secondary travel routes, use areas, and water bodies where at least  $\frac{1}{4}$ , but not more than  $\frac{3}{4}$ , of visitors have a major concern.
- Sensitivity Level 3 (SL3) – Lowest Sensitivity: All seen areas from secondary travel routes, use areas, and water bodies where less than  $\frac{1}{4}$  of visitors have a major concern for scenic quality.

Primary routes, use-areas, or water bodies are areas of national or regional importance, high use volume, and/or long use duration. Secondary routes, use-areas, or water bodies only have local importance, low use volume, and/or short use duration.

- Foreground Distance Zone (FG): The detailed landscape between the viewer and  $\frac{1}{4}$  to  $\frac{1}{2}$  mile in the distance.
- Middleground Distance Zone (MG): The landscape between the foreground and background located between  $\frac{1}{4}$  and  $\frac{1}{2}$  mile and 3 to 5 miles from the viewer.
- Background Distance Zone (BG): The distant part of the landscape located greater than 3 to 5 miles from the viewer.

After these three elements were classified and mapped for the Nantahala and Pisgah NFs, guidance in the VMS was used to synthesize Variety Classes, Sensitivity Levels, and Distance Zones into the following Visual Quality Objectives (VQOs). The resulting inventory was then used in management area (MA) allocation during the planning process.

- Preservation VQO – Ecological changes only.
- Retention VQO – Provides for management activities which are not visually evident.
- Partial Retention VQO – Management activities remain visually subordinate to the characteristic landscape.
- Modification VQO – Management activities may visually dominate the original characteristic landscape, but must borrow from natural form, line, color, and texture so completely that activities appear as natural occurrences.
- Maximum Modification VQO – Management activities may visually dominate the characteristic landscape; however when viewed as background the visual characteristics must be of natural occurrences.

The current LMP has VQOs assigned in the standards for each MA. In some cases there is one VQO per MA, such as the Preservation VQO for congressionally designated wilderness and research natural areas. Conversely, MA 1B and 3B lands are assigned Modification VQO; except where visible from the Blue Ridge Parkway (BRP) or Appalachian National Scenic Trail (AT) which must meet Partial Retention VQO. From these viewpoints, the Partial Retention portion of MA 1B and 3B is determined with site specific analysis. Other management areas are also assigned a range of VQOs, where again the applicable objective is determined by site specific analysis. Therefore acreage of each VQO type, for some management areas, cannot be determined at the LMP level. The following tables identify the VQO or range of VQOs assigned to each MA, associated acres, and percentage of total acres on the Nantahala and Pisgah NFs.

### 9.4.2 How Many Acres of Each VQO exist on the Nantahala and Pisgah NFs?

Table 9.4.1 Range of VQOs assigned to Management Areas on the Nantahala and Pisgah NFs

MA	Assigned VQO	Acres
1B	Modification (Partial Retention where seen from BRP or AT)	38,498
2A	Retention or Partial Retention	40,642
2C	Retention or Partial Retention	37,680
3B	Modification (Partial Retention where seen from BRP or AT)	232,873
4A	Retention or Partial Retention	55,604
4C	Retention or Partial Retention	179,992
4D	Partial Retention or Modification	160,080
5	Retention	119,685
6	Retention	8,419
7	Preservation	66,550
8	No VQO Assigned	12,250
9	Retention	7,900
10	Preservation	1,460
11	Retention, Partial Retention, or Modification	6,540
12	Retention, Partial Retention, or Modification	3,030
13	Retention	10,370
14	Retention	12,450
15	Retention or Partial Retention	5,616
16	Retention, Partial Retention, Modification, or Maximum	1,260
17	Retention or Modification	3,880
18	Retention, Partial Retention, or Modification	Embedded

Table 9.4.2 Assigned VQOs Incorporated into the Current Land Management Plan for the Nantahala and Pisgah NFs

Assigned VQOs Incorporated into Current LMP (Forest-Wide)	Acres	% of Total
Preservation	68,010	6.8%
Retention	158,824	15.8%
Retention or Partial Retention	319,534	31.8%
Retention, Partial Retention, or Modification	9,570	1.0%
Retention or Modification	3,880	0.4%
Retention, Partial Retention, Modification, or Maximum Modification	1,260	0.1%
Partial Retention or Modification	160,080	15.9%
Modification (Partial Retention where seen from BRP or AT)	271,371	27.0%
No VQO Assigned	12,250	1.2%

Distribution and percentage of land base for assigned VQOs across each ranger district is displayed in the following tables and maps are available in Appendix D.

Table 9.4.3 Assigned VQOs by Ranger District for the Nantahala and Pisgah NFs

<b>Assigned VQOs on Appalachian Ranger District</b>	<b>% of District</b>
Preservation	0.9%
Retention	28.8%
Retention or Partial Retention	27.9%
Retention, Partial Retention, or Modification	0.1%
Retention or Modification	0.0%
Retention, Partial Retention, Modification, or Maximum Modification	0.0%
Partial Retention or Modification	12.0%
Modification (Partial Retention where seen from BRP or AT)	30.2%
No VQO Assigned	0.00%
<b>Assigned VQOs on Grandfather Ranger District</b>	<b>% of District</b>
Preservation	6.5%
Retention	26.9%
Retention or Partial Retention	33.8%
Retention, Partial Retention, or Modification	0.0%
Retention or Modification	0.0%
Retention, Partial Retention, Modification, or Maximum Modification	0.01%
Partial Retention or Modification	6.7%
Modification (Partial Retention where seen from BRP or AT)	26.2%
No VQO Assigned	0.03%
<b>Assigned VQOs on Pisgah Ranger District</b>	<b>% of District</b>
Preservation	16.6%
Retention	9.0%
Retention or Partial Retention	20.0%
Retention, Partial Retention, or Modification	4.0%
Retention or Modification	2.2%
Retention, Partial Retention, Modification, or Maximum Modification	0.3%
Partial Retention or Modification	18.1%
Modification (Partial Retention where seen from BRP or AT)	25.8%
No VQO Assigned	4.1%
<b>Assigned VQOs on Cheoah Ranger District</b>	<b>% of District</b>
Preservation	10.4%
Retention	15.4%
Retention or Partial Retention	24.9%
Retention, Partial Retention, or Modification	0.0%
Retention or Modification	0.0%
Retention, Partial Retention, Modification, or Maximum Modification	0.0%
Partial Retention or Modification	21.6%
Modification (Partial Retention where seen from BRP or AT)	27.8%
No VQO Assigned	0.02%
<b>Assigned VQOs on Nantahala Ranger District</b>	<b>% of District</b>
Preservation	3.5%
Retention	13.8%
Retention or Partial Retention	41.1%

Retention, Partial Retention, or Modification	0.1%
Retention or Modification	0.0%
Retention, Partial Retention, Modification, or Maximum Modification	0.01%
Partial Retention or Modification	20.2%
Modification (Partial Retention where seen from BRP or AT)	18.2%
No VQO Assigned	3.0%
<b>Assigned VQOs on Tusquitee Ranger District</b>	<b>% of District</b>
Preservation	4.0%
Retention	10.5%
Retention or Partial Retention	30.9%
Retention, Partial Retention, or Modification	0.3%
Retention or Modification	0.0%
Retention, Partial Retention, Modification, or Maximum Modification	0.3%
Partial Retention or Modification	14.2%
Modification (Partial Retention where seen from BRP or AT)	39.8%
No VQO Assigned	0.1%

At the project level, visual resource management (scenery management) is used to determine potential scenery impacts by analyzing contrast of proposed actions and their degree of change within the surrounding landscape. The potential contrast is compared with elements of form, line, color, texture, and scale within the existing landscape. The proposed action is assessed to determine if it is a visually evident, subordinate, or dominate feature within the characteristic landscape (per VQO definitions above). If the assigned VQO cannot be achieved, design modifications or mitigation may be utilized to reduce potential scenery impacts. In addition to assigned VQOs, management area general direction and standards identify techniques which can be used to meet objectives. Assigned VQOs are the minimum requirement to meet LMP standards, and can be exceeded if determined necessary by the deciding official; though this is rare. Additional scenery mitigation techniques may also be incorporated into project design based on site specific analysis.

Scenery management considers impacts from any activity that could potentially modify the landscape, including road or highway construction, utility or communication site installations, recreation or administrative developments, vegetation management projects, etc. Typical mitigation used in vegetation management include, use of group selection or two-age harvest methods, retaining screening vegetation below roads, moving harvest boundaries below a ridge, reshaping harvest units to eliminate geometric shapes, and many other techniques. Mitigation for highway construction may include reforestation of cut/fill slopes, naturalizing rock cuts, or use of colored concrete in retaining walls. Communication towers or buildings may be painted to blend with the surrounding landscape, or radio antennas and satellite dishes may be collocated at existing sites to minimize visual clutter. The range of potential mitigation or design features is virtually endless.

### 9.4.3 What Are the Identified Distinctive Landscapes and How Are They Managed?

The current LMP identifies distinctive (Variety Class A) landscapes as “Special Interest Areas” and allocates them to MA 13. This management area combines areas of geological, botanical,

and zoological interest; as well as those with unique scenic attributes. MA 13 includes five administratively designated Scenic Areas:

- Looking Glass Rock
- Glen Falls
- John Rock
- Whitewater Falls
- Craggy Mountain

These scenic areas are managed to protect and emphasize their special characteristics, and all proposed management activities must meet Retention VQO. The areas are not managed for timber production, but activities such as wildlife improvements, prescribed fire, trail construction, and road construction are allowed if they enhance the area's unique qualities, foster public enjoyment of the area, and are compatible with other management objectives.

#### **9.4.4 What Are the Conditions Affecting the Quality of Scenery?**

Conditions affecting scenery on the Nantahala and Pisgah NFs vary greatly, from outdated management methodologies, to expanding private development, to climate change. The following list identifies the most prominent issues.

- *Outdated management methodology*  
The current scenery inventory was last updated in the early 1990's, and uses a methodology developed in the 1970's. The USDA handbook *National Forest Landscape Management, Volume 2: The Visual Management System* published in 1974 was superseded by *Landscape Aesthetics, A handbook for Scenery Management* in 1995. This new handbook describes an updated process for inventorying, classifying, and managing scenery with broadened consideration for constituent input, management of cultural landscapes, landscape restoration, and many other concepts which were absent or underrepresented in the "Visual Management System" used in the current LMP.
- *Increased development of adjacent private lands*  
As the population of western NC grows, the number of residences, vacation homes, businesses, and roads has increased. This residential and commercial expansion onto adjacent previously undeveloped lands creates new areas with potential views of the Nantahala and Pisgah NFs. Heightened viewer sensitivity can lead to conflicts in current management objectives and preferences of adjacent landowners. The issue is magnified by an outdated scenery inventory and management methodologies mentioned above.
- *Increased tourism and tourism-based commerce*  
The Nantahala and Pisgah NFs are among the most visited units in the national forest system and also serve as a scenic backdrop for national attractions such as the Blue Ridge Parkway and Appalachian National Scenic Trail. Economic benefits of a growing tourism industry in western NC are well documented, and along with that come a heightened sensitivity and desire for scenic quality. The Forest Service National Visitor Use Monitoring (NVUM) survey conducted in 2003 and 2008 concluded that 55% of national forest users have a concern for scenery. A similar survey of Blue Ridge Parkway visitors in 2000 indicated that 91% of its 11 million visitors that year were engaged in viewing scenery.

- *Recreation use and special use events*  
Higher numbers of recreation users causes greater impacts to trails and dispersed campsites, which become worn and eroded. The issues are exacerbated by a lack of adequate maintenance, but it is common to see deeply rutted or braided trails impacting scenic qualities of a natural appearing landscape. Dispersed camping has often resulted in large areas denuded of vegetation, with compacted soil, multiple fire rings, trash accumulation, and hacked-up trees. Special use recreation events can be especially damaging, when hundreds of users may run or ride the same trail routes over a one or two day period. If the event was preceded by heavy rains, combined erosive forces can cause extensive impacts.
- *Ongoing efforts to widen and straighten state and federal roads*  
The NCDOT and the FHA are mandated to improve the transportation system for commerce and safety. Highway and road improvement projects can create major changes in scenic qualities of national forest lands, yet there is little guidance in the current LMP on how to address these impacts.
- *Increased demand for timber resources and early successional habitat*  
Though the Nantahala and Pisgah NFs have a successful history of multiple resource management under the current LMP, there is public demand for more acres of early successional habitat and higher volume of timber supply.
- *Climate Change*  
Southern Appalachian climate change models predict an increase in rainfall in the coming years. With increased rainfall come a higher potential for damaging floods and landslides. These events can have a devastating and long-lasting effect on scenic qualities of national forest lands. Past flooding and landslides have marred the landscape in many watersheds and are still evident many years later.

## 9.5 Recreational Trends

### 9.5.1 What Are the General Trends for Recreation in the Nantahala and Pisgah NFs?

Outdoor recreation plays a large role in American lifestyles and is demonstrated when examining recent outdoor recreation activity trends. Recent trends have been reported as part of the current Resources Planning Act (RPA) Assessment of Forest and Rangelands (USDA 2012). An overview of these trends is presented below. For other reports the Forest Service, U.S. Department of Agriculture, has published for the national 2010 Resource Planning Act (RPA) Assessment, visit the following site link <http://www.fs.fed.us/research/rpa>.

#### *General Trend Statements:*

1. Outdoor recreation choices by people today are noticeably different from those made by and available to previous generations of Americans.
2. There is an overall increase in outdoor recreation activity participation, even though some traditional activities have been in decline.
3. Different segments of society choose different mixes of outdoor activities and there are various reasons why people seek different forms of outdoor recreation.
4. There is evidence that America's youth spend time outdoors, and, among some young people, this time is substantial.

5. Public lands remain highly important for the recreation opportunities they offer.
6. Trends in visitation vary by Federal land management agency and between Federal and State jurisdictions.

*Summary of Nature-Based Outdoor Recreation Demand and Trends:*

The following summarizes an analysis by the Forest Service of American's participation in nature-based outdoor recreation. The information documented here is from the *Demand for Nature-Based Outdoor Recreation Continues its Growth and Popularity* Recreation Research Report in the Internet Research Information Series (IRIS) (Cordell and Betz 2008).

1. Visitation to state parks, national parks, and other public lands is relatively stable after long-term growth in the 60s through the 80s:
  - Total visitation to state parks peaked around 2000 and then decreased somewhat through to 2006. In 2007, visitation was back up over the level reported in 2001 (a 0.7% increase).
  - There were minor decreases in national park visitation during the 2000s, but for the most part visitation has been stable since 2001. In 2007, visitation rose by almost 3 million above the 2006 level.
  - The National Survey of Fishing, Hunting, and Wildlife-Associated Recreation reported increases in numbers of wildlife watching visitors to public parks and areas near home. In 1996 the number was 11.0 million; by 2006 this had increased to 13.3 million, a 21 percent increase. Of the 23 million people in 2006 who traveled away from home to watch wildlife, more than 80 percent visited a public area to do so.
2. Many types of hunting and fishing are down in numbers participating, but bird and other wildlife watching, study and photography are up.
  - Between 1996 and 2006 there was a drop of 5.2 million anglers and of 1.5 million hunters. This national trend was reported by the Fish and Wildlife Service.
  - During this same period, however, the number of people who watch or photograph wildlife increased by 8.2 million, showing a net gain in participants in wildlife-associated recreation of 1.5 million.
3. The Forest Service's National Survey on Recreation and the Environment (NSRE) is the United States' official survey of outdoor recreation, on-going since 1960. The NSRE reports growth in nature-based outdoor recreation since 2000.
  - The NSRE reports that both the total number of Americans and the total number of days annually in which they participate in nature-based recreation are up since 2000.
  - Viewing, photographing, and studying nature, in all its forms, have grown strongly since 2000. These nature-interest activities include viewing flowers, trees, natural scenery, birds, other wildlife, fish, and visiting nature exhibits.
  - Still popular and growing are visiting beaches, gathering mushrooms and berries, visiting natural areas, driving off-road vehicles, kayaking, and snowboarding.
  - Total number of Americans participating in nature activities is up over three percent since 2000, number of activity days is up almost 32 percent since 2000.

*Recent Outdoor Recreation Changes and Trends:*

For the United States population during FY2010 – 2011, participation in walking for pleasure and family gatherings outdoors were the most popular activities and participation rates for these activities have changed very little in recent years. Participation in swimming, diving, and related activities and in sightseeing were both over 60% while viewing or photographing birds was over 40%; making these the three activities which have grown the fastest from 2005 – 2009 to 2010 – 2011. Other activities with increasing participation rates include viewing or photographing other wildlife besides birds, boating, fishing, and snow/ice activities. Participation rates for four recreation activities decreased between the time spans, and include picnicking, bicycling, developed camping, and primitive camping.

*Table 9.5.1 Percent of United States Residents of Age 16 or Older Participating in Selected Outdoor Recreation Activities.*

Activity	Percent Participating	
	2005-09	2010-11
Walking for pleasure	85.0	84.7
Family gatherings outdoors	74.0	74.4
Swimming, diving, etc.	61.3	66.1
Sightseeing	52.7	60.8
Viewing/photographing other wildlife	50.2	54.1
Picnicking	51.7	47.5
Viewing/photographing wild birds	35.7	41.4
Boating	35.5	38.2
Bicycling	37.5	35.6
Fishing	34.2	35.0
Snow/ice activities	24.9	26.6
Developed camping	23.8	21.7
Primitive camping	14.5	12.4

Source: National Survey on Recreation and the Environment (NSRE) 2005-2009 (n=30,398) and 2010-2011 (n=2,908) (USDA Forest Service 2002). Percentages represent annual participation rate estimates based on pooled NSRE data from the periods 2005 to 2009 and from 2010 to 2011.

In addition, according to Cordell and Betz (2008), many types of hunting and fishing are down in participation numbers for people in the U.S. for people ages 16 years and older, but bird and other wildlife watching, study, and photography are up. For example, between 1996 and 2006 there was a drop of 5.2 million anglers and of 1.5 million hunters. During this same period, however, the number of people who watch or photograph wildlife increased by 8.2 million, showing a net gain in participants in wildlife-associated recreation of 1.5 million (Cordell and Betz 2008).

Despite the decrease in national statistics, hunting, fishing, and trapping continue to be an important outdoor recreation activity in NC. The 2006-07 fiscal year or license sales season did show a decrease in hunting and fishing participants overall for NC, however, in recent years participant numbers are once again increasing. For example, hunting license sales trends show an

overall decrease from 2006-09; however, license sales have been increasing since 2010-11 fiscal years (See Table 9.5.2).

*Table 9.5.2 North Carolina Hunting Licenses Sales from 2006 through 2012*

<b>Fiscal Year</b>	<b>Total Licenses Sold</b>
2006-2007	270,091
2007-2008	261,973
2008-2009	257,708
2009-2010	252,365
2010-2011	253,712
2011-2012	254,536

Source: North Carolina Wildlife Resources Commission, [www.ncwildlife.org](http://www.ncwildlife.org).

### **9.5.2 What Are the Emerging New or Unique Recreational Trends That May Affect Future Demand on the Nantahala and Pisgah NFs?**

Special use permits requests increased in FY 2011-2012 and also showed a slight increase in FY 2012-2013 with mountain biking events contributing the most to the increase. In addition to the continued demand for mountain biking, there are two emerging recreational interests that are of interest to users of the Nantahala and Pisgah NFs including:

- **Biking: Enduro racing** is a form of multistage mountain biking racing that requires fitness, technical ability, and downhill skills. Timing is only conducted on the downhill sections.
- **Climbing:** Italian for “iron way,” a **via ferrata** is a climbing route that features a permanent safety system—steel rungs, ladders, and bridges—embedded in the rock. While clipped into a cable system that follows the route, novice climbers can get a taste for exposed heights without the technical know-how of rope work. The Southeast’s only via ferratas are located in Kentucky’s Red River Gorge and West Virginia’s Nelson Rocks Preserve.

## **9.6 Sustainable Recreation**

### **9.6.1 How Are Recreational Opportunities, Settings, and Infrastructure Financially Sustained?**

Sustainable Recreation has been defined as the set of recreation settings and opportunities on the National Forest System that is ecologically, economically, and socially sustainable for present and future generations. As described in previous sections, recreation opportunities on National Forests provide many economic benefits to local communities and a variety of social benefits to the public. The Forest Service strives to manage these opportunities in a manner that protects the ecological sustainability of the area.

The socio-economic benefits derived from recreation are largely dependent on sustaining the infrastructure and services that support those recreational activities. However, there are several indicators that the NFs are not trending towards a sustainable recreation program. Some of these indicators include:

- Declining budgets will erode the agency's ability to maintain developed facilities. Less than half of the existing developed site infrastructure is currently predicted to be sustainable over the long-term.
- There is a substantial backlog of trail maintenance needs, as well as public demand for more trails. As budgets decline, the agency is increasingly challenged to provide the staffing needed to work with partners and volunteers to properly plan and maintain the trail system, even with non-appropriated funding sources.
- Trails not maintained to standard, proliferation of non-system trails, and unmanaged streamside camping may create environmental and cultural resource damage.
- There is increased crowding and user conflicts in many locations. Favorite locations and trails are exceeding their capacity at times, and conflicts can increase as visitation increases.
- Road access may decline as road maintenance funds decrease. This could affect various recreation uses.

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## Appendices

### Appendix A – Nantahala and Pisgah NFs Crown Jewels – Uniquely Special Places

The Nantahala and Pisgah NFs boast a collection of recreation “Crown Jewels,” special places that help create the Forests’ unique sense of place. Among these are the following locations:

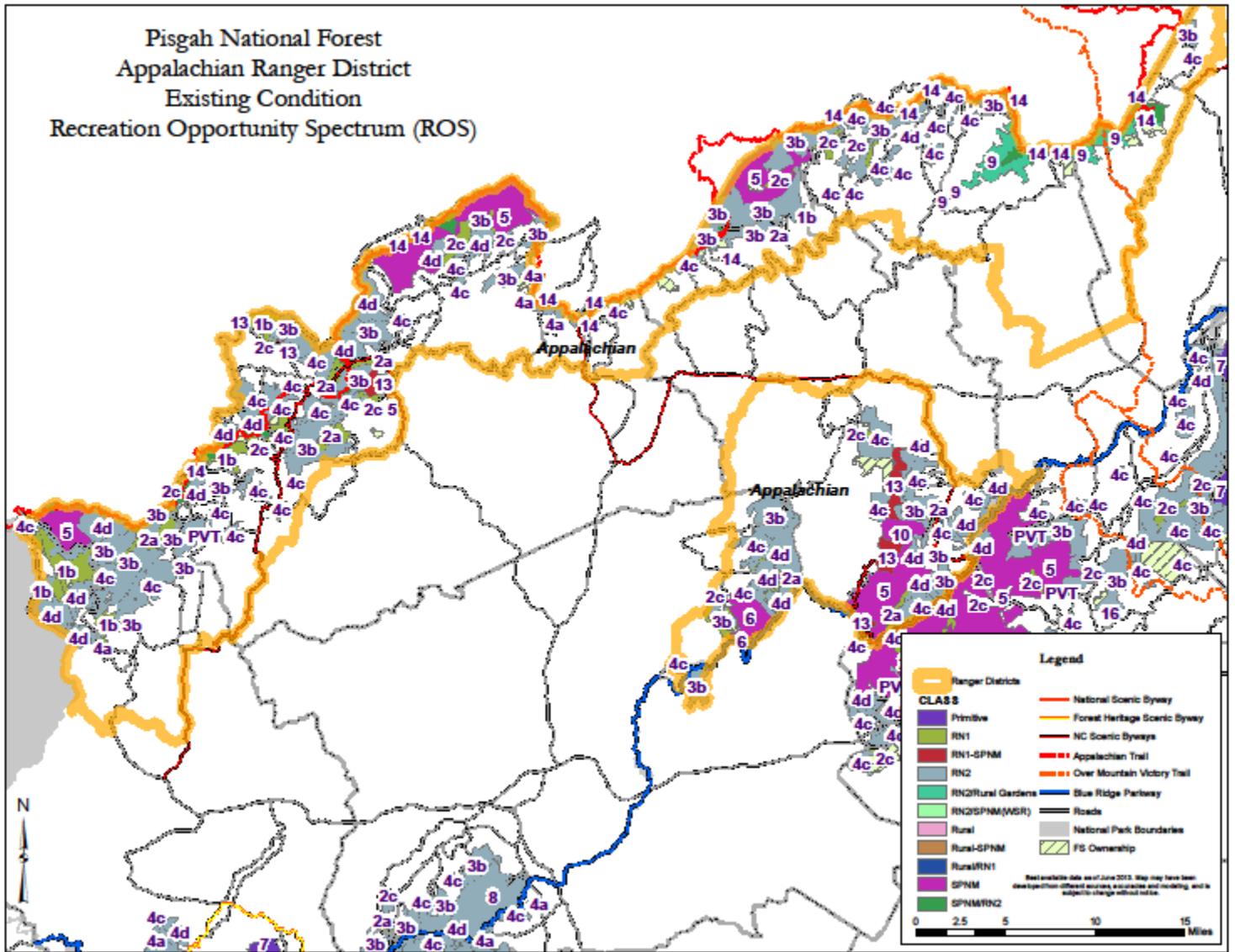
#### *Nantahala National Forest*

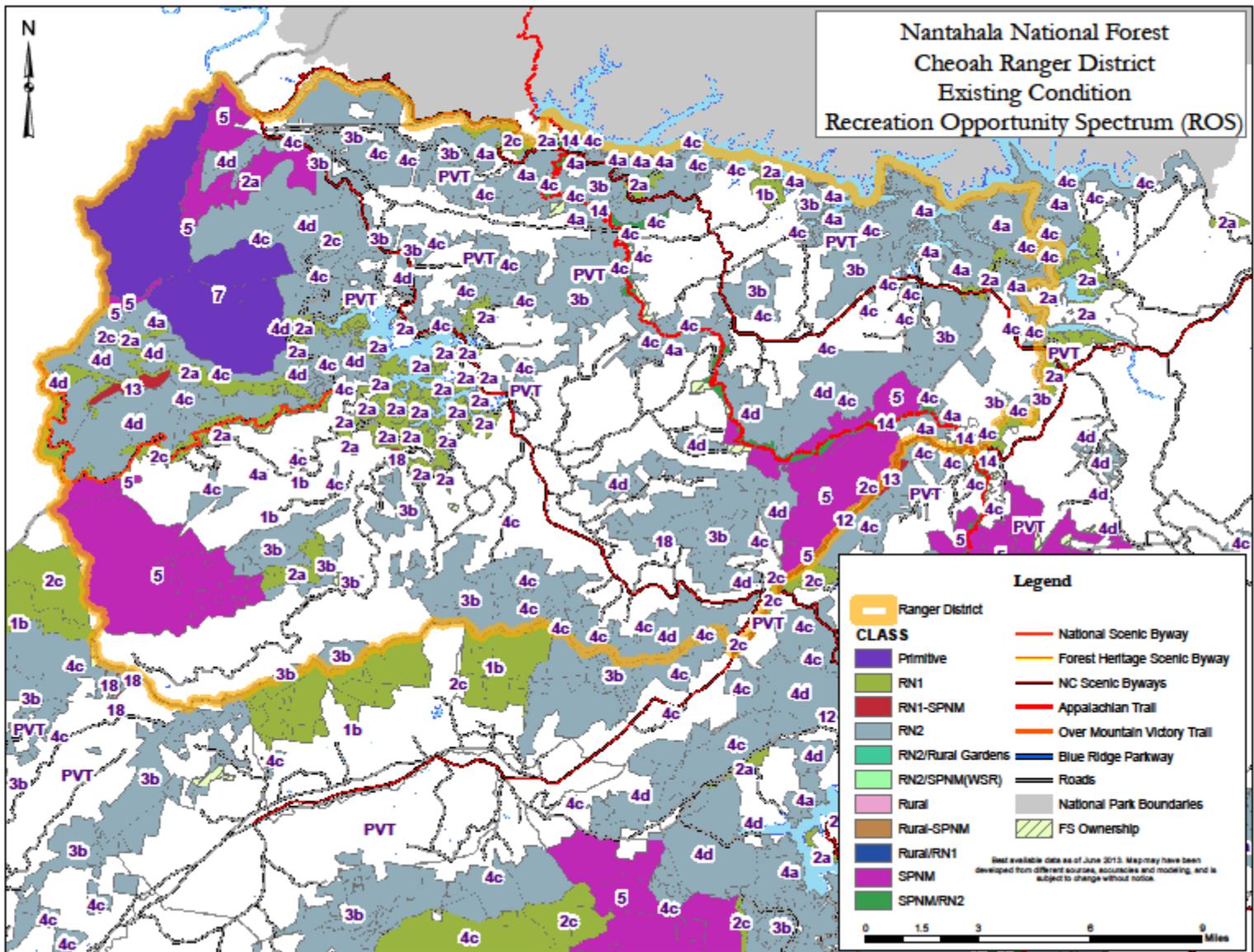
- Nantahala River
- Appalachian National Scenic Trail
- Mountain Lakes, including
  - Balsam
  - Cliffside
  - Santeetlah
  - Chatuge
  - Appalachia
  - Fontana
  - Hiwassee
  - Cherokee
- Cherohala Skyway
- Whitewater Falls
- Standing Indian
- Joyce Kilmer Wilderness
- Dry Falls/Cullasaja Gorge
- Wayah Bald Fire Tower and Observation Area
- Fires Creek
- Tsali Mountain Bike Trail Complex
- Jackrabbitt Mountain Bike Area
- Trail Complex

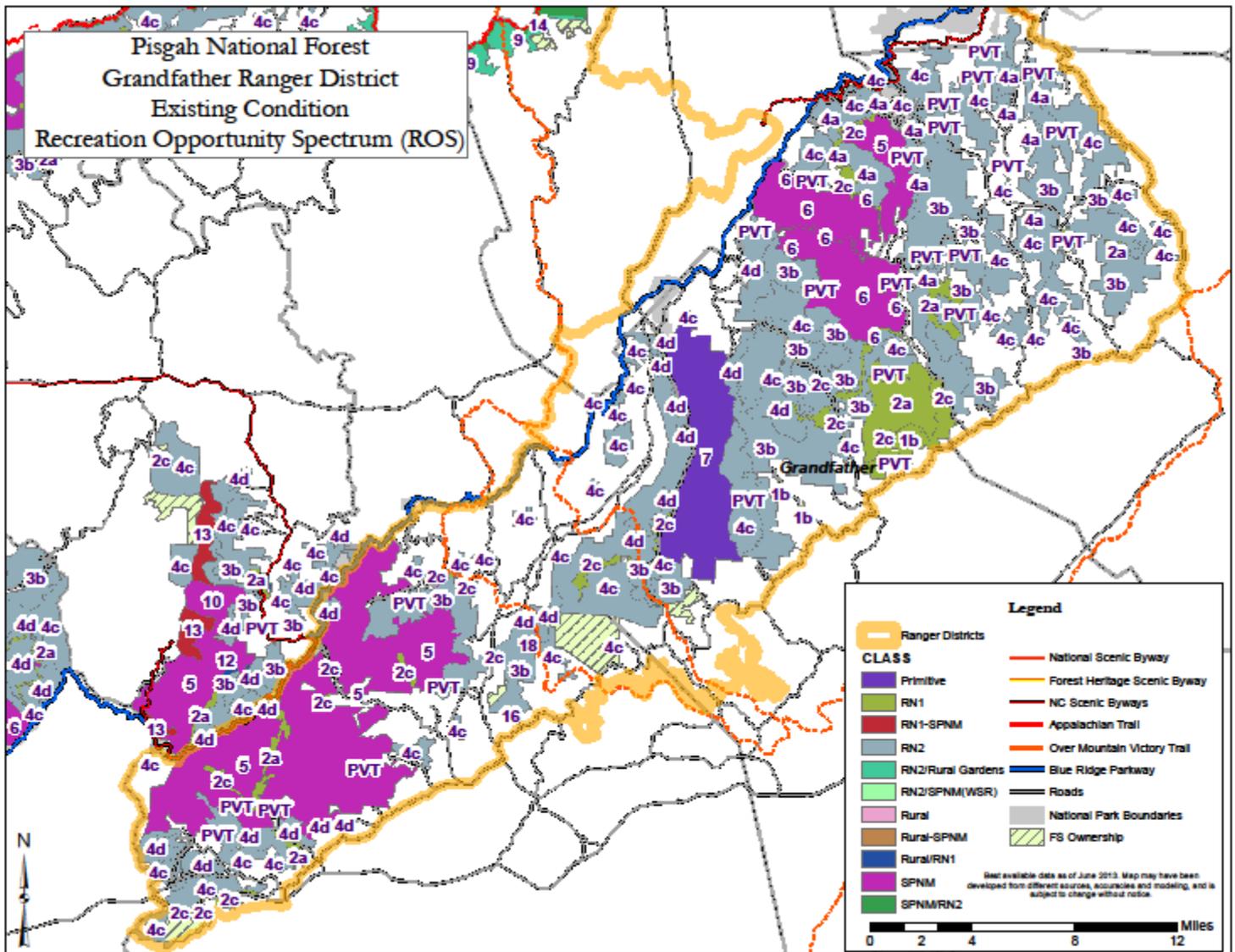
#### *Pisgah National Forest*

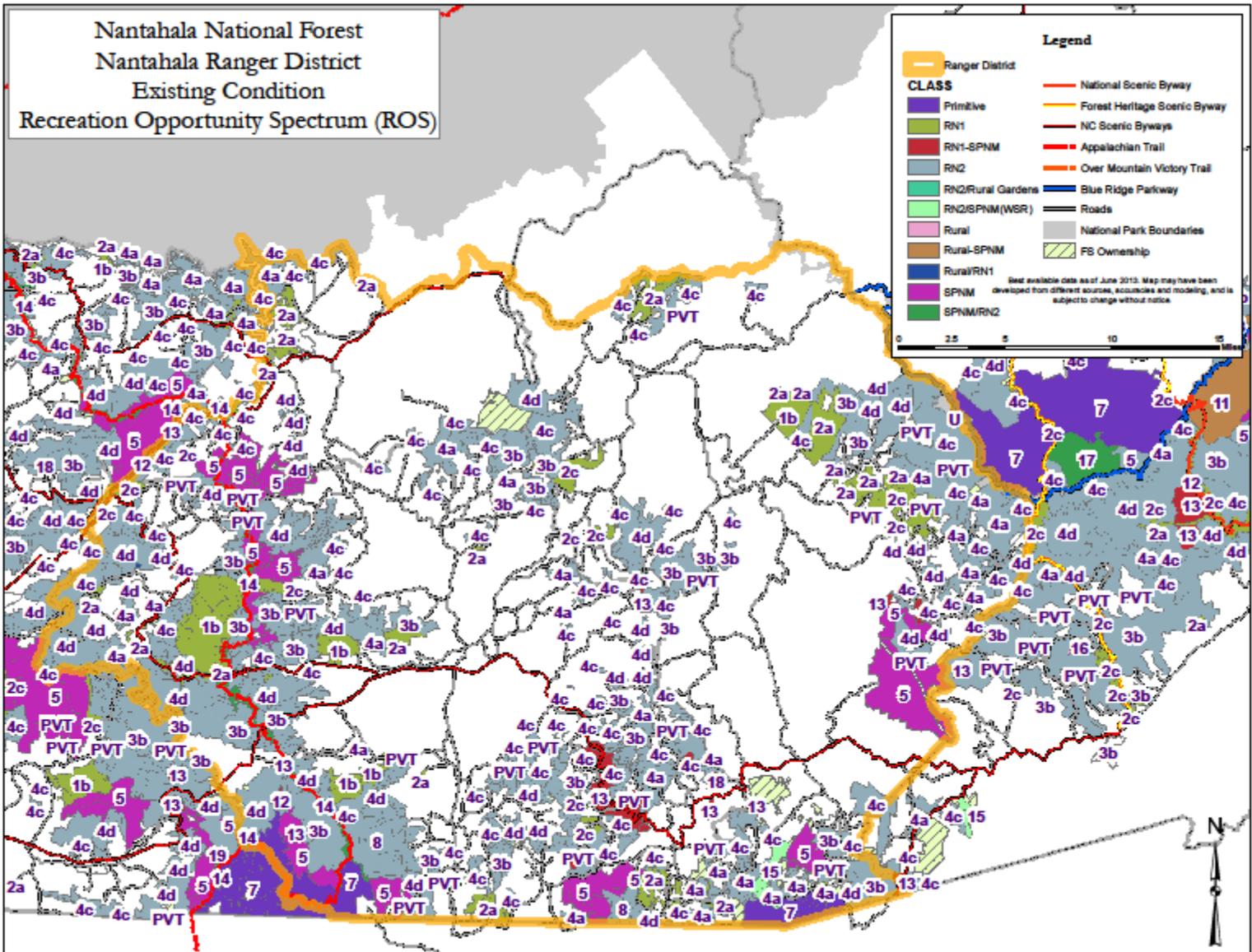
- Roan Mountain
- Appalachian National Scenic Trail
- Wilson Creek
- Mountain Lakes, including Lake Powhatan
- Linville Gorge
- Wisemans’ View
- Table Rock
- Looking Glass Falls
- Cradle of Forestry
- South Toe River
- Max Patch
- Graveyard Fields
- Black Balsam
- Catawba Falls
- Shining Rock Wilderness
- Davidson River
- Bent Creek Mountain Bike Trail Complex

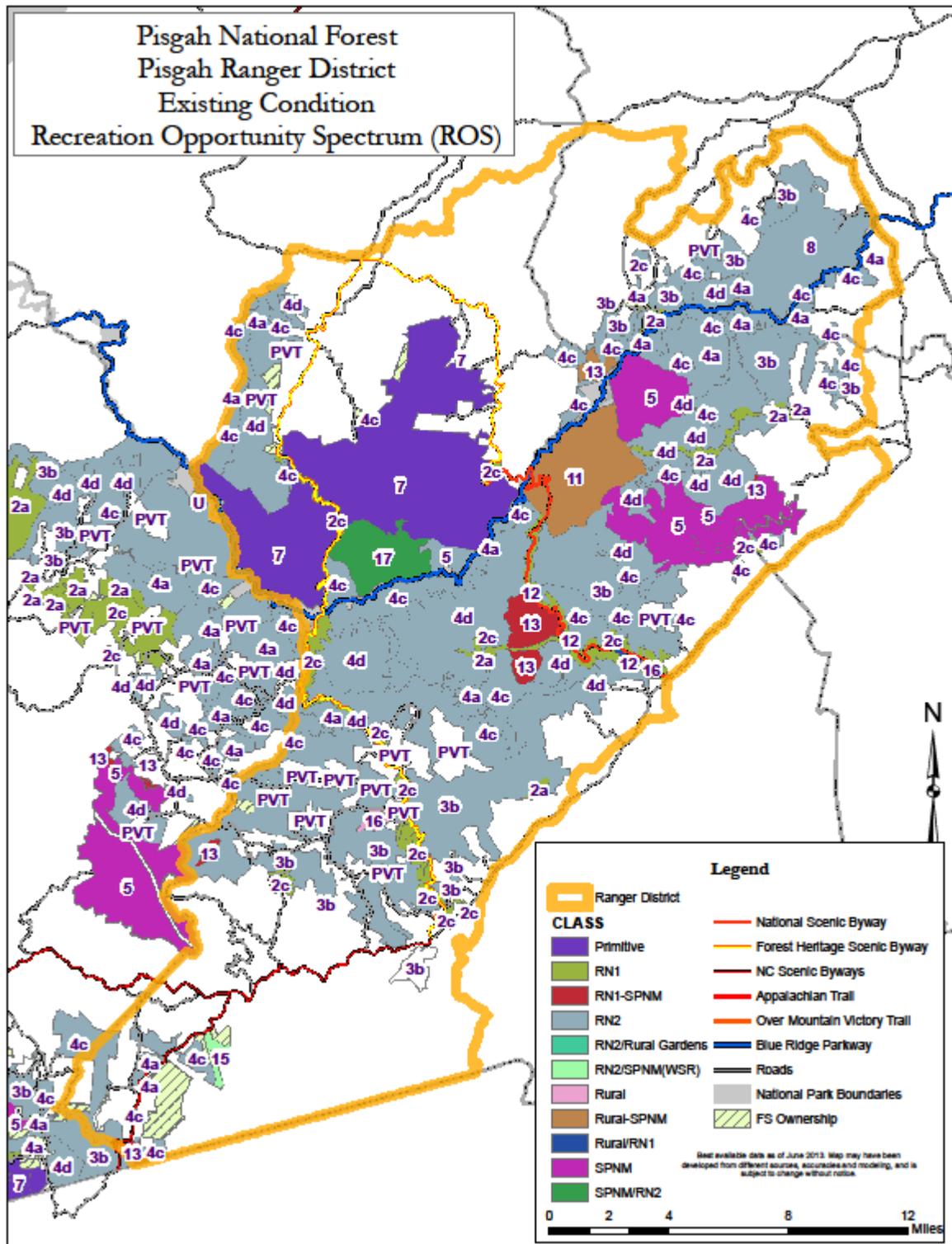
Appendix B – ROS maps for each Ranger District

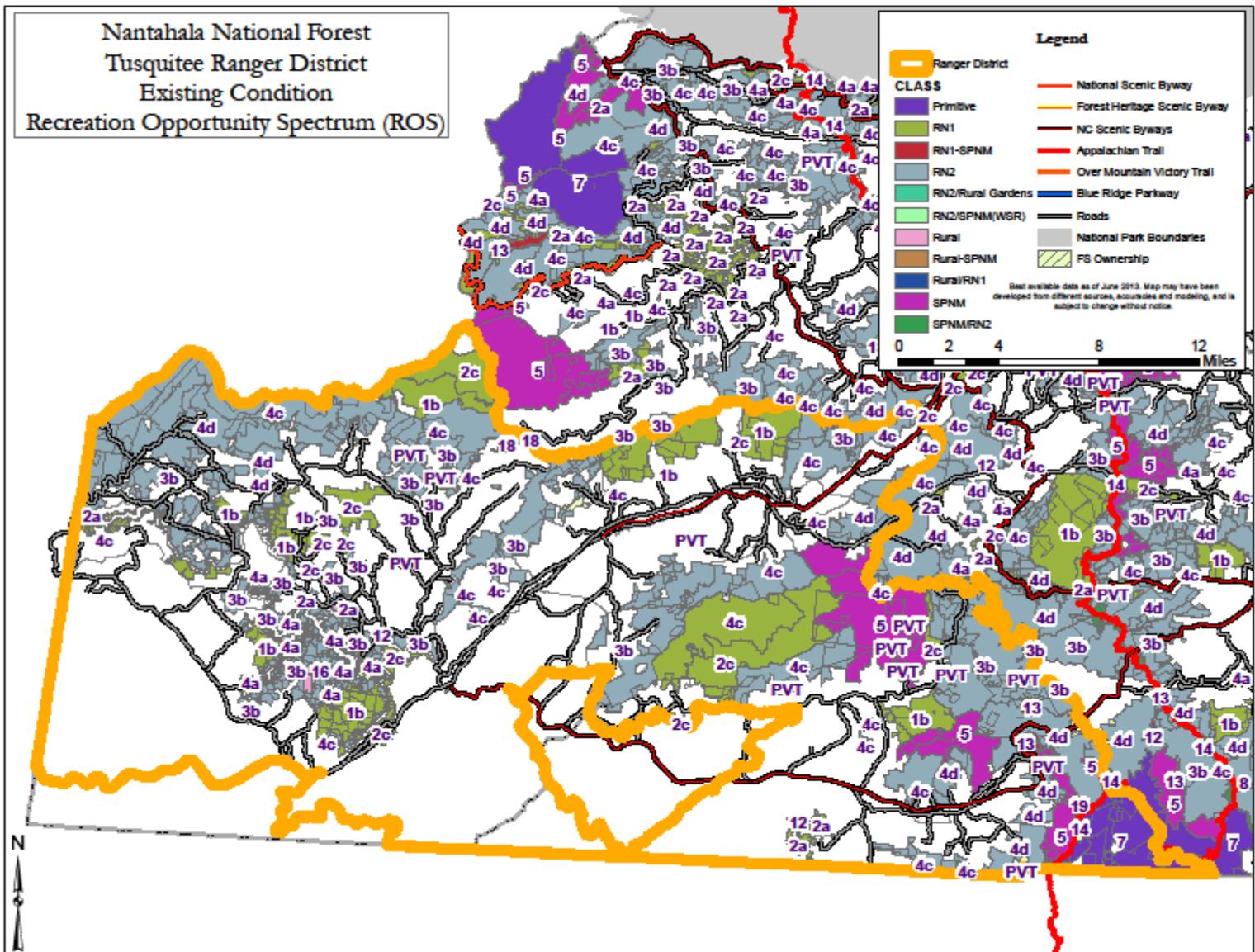












**Appendix C – List of Camps with Special Use Permits on the Nantahala and Pisgah NFs**

<b>Camp Name</b>
Adventure Links
Adventure Treks
All American Cross Country Camp
Appalachian State University
Appalachian Whitewater
Asbury Hills Camp
Asheville Drifters
Asheville Parks and Recreation
Asheville School
Baylor University
Benchmark Ministries
Blue Star Camp
Brevard College
Brevard Distance Runners Camp, Inc.
Brookside Guides
Buffalo Cove Outdoor Education
Camp Arrowhead
Camp Carolina
Camp Celo
Camp Chosatonga
Camp Daniel Boone
Camp Falling Creek
Camp Glen Arden
Camp Grier
Camp Gwynn Valley
Camp High Rocks, Inc.
Camp Highlander
Camp Hollymont
Camp Illahee
Camp Kahdalea
Camp Merri Mac & Timberlake
Camp MerriWoode
Camp Pinewood
Camp Pinnacle
Camp Rockmont
Camp Tekoa
Camp Ton-A-Wanda

Camps Mondamin & Grove Cove
Carmichael Training Systems
Challenge Adventure
Charleston County Park & Recreation Comm.
Cheerio Adventures
Cherokee Adventures
Christ School
City of Morganton
Clear Creek Dude Ranch
ClimbMax, Inc
Cranbrook Schools
Davidson River Outfitters
Deep Woods Camp
Dirt Divas
Eagles Nest
Echo Expeditions, Inc.
Four Circles Recovery Center
Geneva College
Granite Arches Climbing Services
Great Outdoor Adventure Trips
Green River Preserve
Greensboro Day School
Headwaters Outfitters, Inc.
High Mountain Expeditions
Hunter Banks
Inner Peaks
Inside Out
Jackson County Parks & Recreation
Johns River Valley Camp
Kanuga Conferences
Keystone Camp
Lees-McRae College
Lovett School
Luteridge Lutherrock Ministries
Magic Light Photogarphy
Mars Hill College
Moondance Adventures
Mountain Alliance, Inc.
Mtn. Adventure Guides

Muddy Sneakers
Nantahala Outdoor Center
North Greenville College
Outward Bound
Overland Travel
Pisgah Forest Riding Stables
Project Soar
Ridgecrest Summer Camps
Rock Dimensions
Rockbrook Camp
Smoky Mountain Llama Treks
Smoky Mountain Running Camp
Snowbird Wilderness Outfitters
Southwestern Community College
Stone Mountain School
SUWS of the Carolinas
Talisman Schools
The Mountain Retreat and Learning Center
UNC Outdoor Education
UNC Venture Program
VisionQuest National Ltd.
Wahoo Adventures
Warren Wilson College
Western Carolina University
Western Spirit Mountain Bike Adventures
Wheaton College Honey Rock
Wilderness Adventures
Woodward Academy
YMCA Camp Greenville
YMCA Chattanooga
YMCA Western North Carolina
Young Harris College



