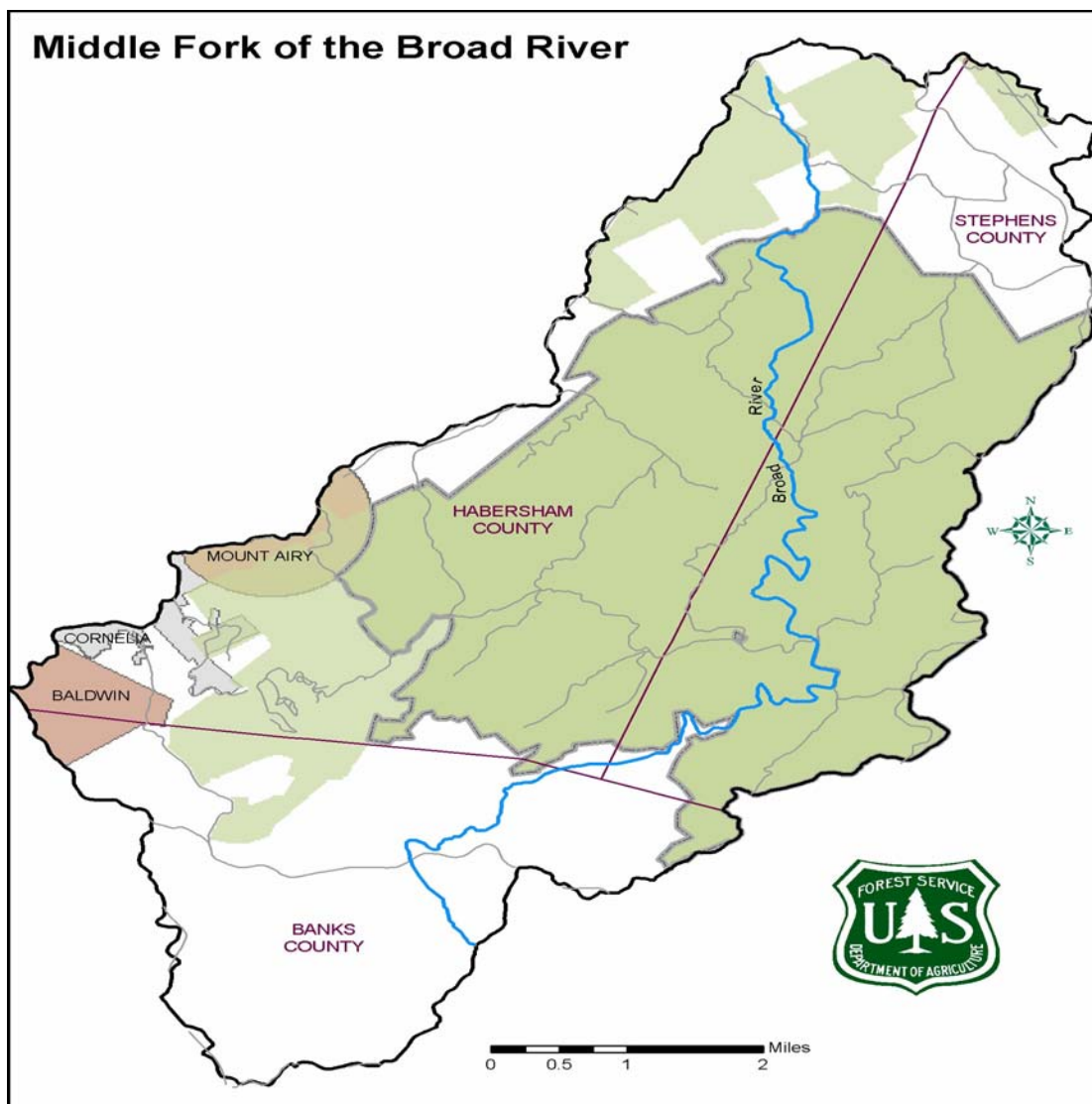


# Middle Fork of the Broad River Watershed Assessment



USDA Forest Service – Chattahoochee-Oconee National Forest – Chattooga Ranger District – Habersham County, GA

## Middle Fork of the Broad River Watershed Assessment

The Middle Fork of the Broad River is a sixth order watershed. This sixth order watershed resides within the larger fifth order watershed that has been named ***Broad River- North and Middle Forks*** (HUC#0306010401). Adjacent fifth order watersheds on the Chattooga Ranger District include the Soque River and Tugaloo River-Panther Creek (refer to map below).

The fifth order Broad River- Middle and North Forks watershed includes both private lands and National Forest System (NFS) lands on the Chattooga Ranger District in Georgia. The total watershed acreage is 195,200 acres, of which approximately 12% are NFS lands. Within the fifth order Broad River watershed, there are four (4) sixth order watersheds that contain NFS lands, including the following (see table):

Sixth Order HU Name	Sixth Order HU Code	NFS acres	Non-NFS acres	Total Acres
Middle Fork Broad River	030601040101	15,140	9,733	24,873
Lower Middle Fork	030601040102			
Big Leatherwood Creek	030601040103			
North Fork Broad River	030601040105			
<b>Total NFS &amp; Non-NFS Acres in Broad River Watershed</b>		23,582	171,618	195,200

The Broad River watershed is briefly described in the Land and Resource Management Plan for the Chattahoochee – Oconee National Forests (Forest Plan), page 4-28. This watershed is a Piedmont hills watershed, and the Broad River is a tributary of the Savannah River. The watershed includes portions of the cities of Baldwin, Cornelia and Mt. Airy, with headwaters on the Brevard Fault (Gainesville Ridges Landtype Association).

The watershed contains 114 miles of perennial streams on NFS lands, including the Middle Fork of the Broad River, North Fork of the Broad River, Kimbell Creek, Nancytown Creek, and Big Leatherwood Creek. None of the streams within the watershed are used as a public water supply.

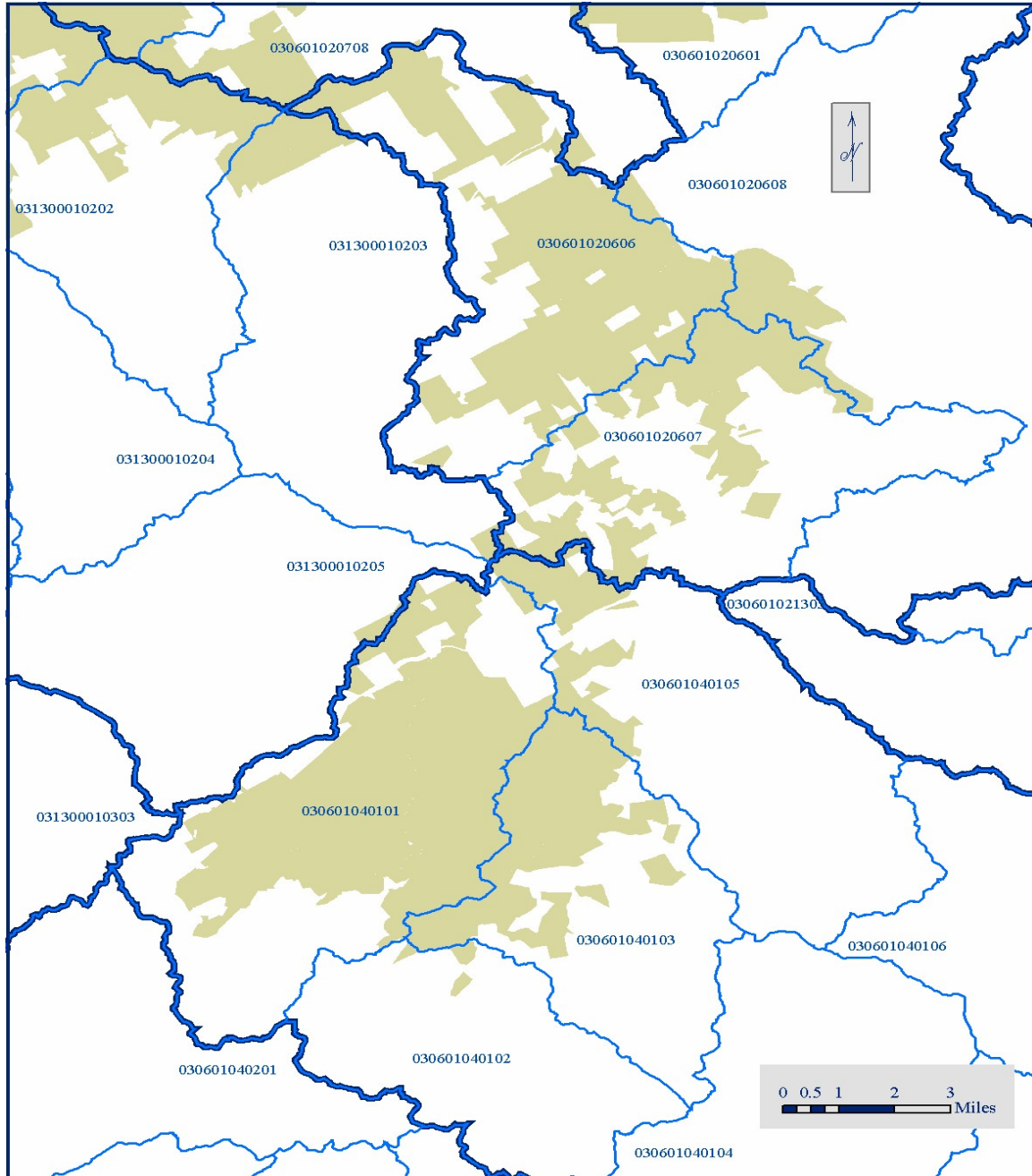
Notable features of the watershed include the Lake Russell Wildlife Management Area, the Lake Russell-Nancytown Lake Developed Recreation complex, Currahee Mountain, Chenocetah Mountain, GA Highway 365/US 441 on the north and west boundaries of the watershed, and the Gainesville Ridges landform feature along GA 365.

The Middle Fork of the Broad River watershed is located in the northwesternmost part of the Broad River watershed (refer to Fifth Level HUC map). This watershed contains a higher percentage of NFS lands (61%) than the rest of the Broad River watershed, and most of the watershed is contained within the Lake Russell Wildlife Management Area.

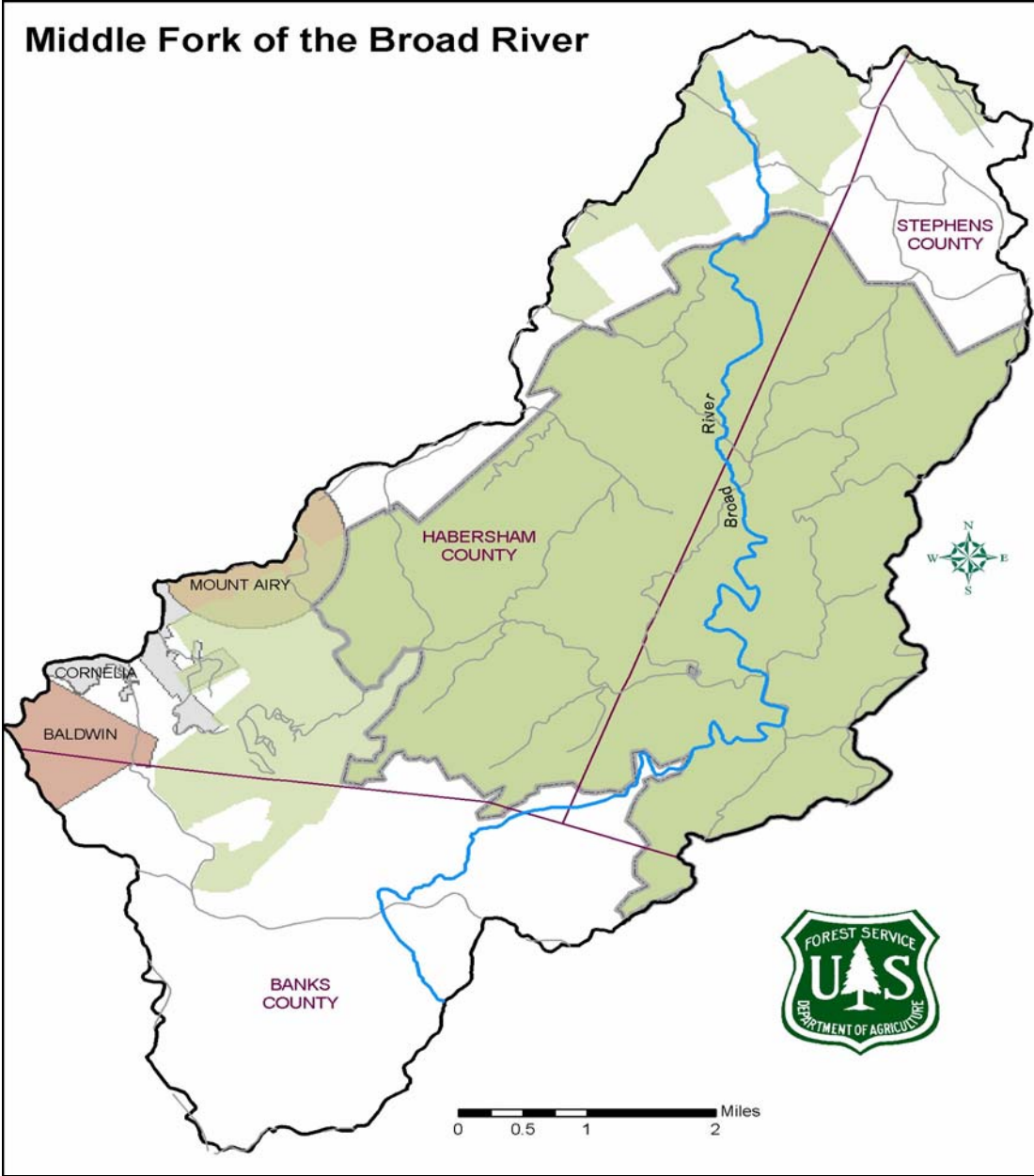
Approximately two-thirds of the NFS acres in the Middle Fork watershed (9,661 acres) is within the 9.H Management Prescription, which is described as *Management, Maintenance, & Restoration of Plant Associations*. The other primary management prescriptions within this watershed include *Scenic Areas* (4.F), *Outstandingly Remarkable Streams* (4.H), and *Watershed Restoration Areas* (9.A.3) (see table below).

<b>Prescription</b>	<b>Description</b>	<b>Acres</b>
4.E.1	Cultural and Heritage Areas	5
4.F	Scenic Areas	3,065
4.H	Outstandingly Remarkable Streams	2,260
9.A.3	Watershed Restoration Areas	138
9.F	Rare Communities	11
9.H	Management, Maintenance, and Restoration of Plant Associations	9,661
<i>Total</i>		15,140

## Map of Associated Fifth Level HUCs



The Broad River 5<sup>th</sup> level HU is located in the lower portion of this map.



(Acreage Table on following page)

Acreages of NFS and Non-NFS Lands in the Middle Fork of the Broad River Sixth Order  
HU

County	Rx	Rx Description	Acres
Banks		Private Land	5,398
Banks	4.F	Scenic Areas	435
Banks	9.H	Management, Maintenance, and Restoration of Plant Associations	133
Banks County Total			5,966
Habersham		Private Land	2,668
Habersham	4.E.1	Cultural and Heritage Areas	5
Habersham	4.F	Scenic Areas	2,628
Habersham	4.H	Outstandingly Remarkable Streams	699
Habersham	9.A.3	Watershed Restoration Areas	4
Habersham	9.H	Management, Maintenance, and Restoration of Plant Associations	5,470
Habersham County Total			11,475
Stephens		Private Land	1,667
Stephens	4.F	Scenic Areas	2
Stephens	4.H	Outstandingly Remarkable Streams	1,560
Stephens	9.A.3	Watershed Restoration Areas	134
Stephens	9.F	Rare Communities	11
Stephens	9.H	Management, Maintenance, and Restoration of Plant Associations	4,058
Stephens County Total			7,431
Total Watershed Acres			24,873

Ownership	Acres
National Forest	15,140
Private	9,733
Total	24,873

Land Ownership Within the City

CITY	Acreage
BALDWIN	457
CORNELIA	290
MOUNT AIRY	492

## Condition and Priority of the HU

The Middle Fork of the Broad River watershed was selected for this assessment for several different reasons, however there were a few reasons that were overriding factors in the decision. One of the primary reasons was the existence of several thousand acres affected by past Southern Pine Beetle epidemics (most recently in 2002-2003), and several thousand additional acres in pine cover types that are susceptible to future epidemics. Other factors in the decision to do this assessment in this watershed include vegetative needs due to the past SPB epidemics, vegetative needs due to recreation activities, deficiencies in data (including stand data), and potential hardwood-glade restoration activities.

The existence of several thousand acres of young pine trees presents the largest problem within the watershed. This is due to the overstocked and stressed condition most of this acreage is currently in. Future SPB outbreaks will probably devastate these stands and compound the previous losses to SPB if management actions in the form of thinnings are not taken.

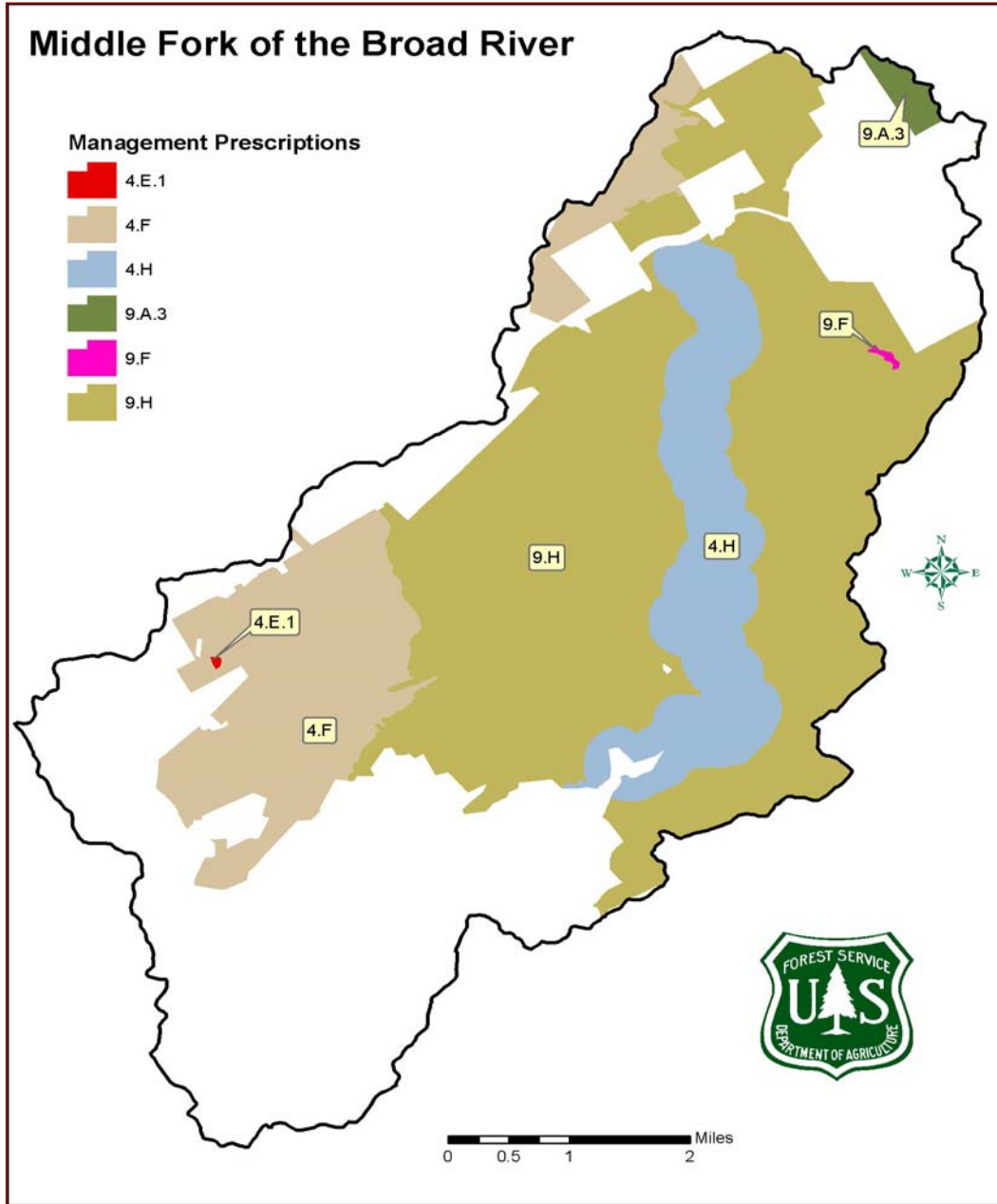
Previous SPB epidemics affected a significant amount of acreage previously dominated by pine forest cover types. A small portion of this acreage has received regeneration treatments in the form of site preparation, with some of this acreage planted with shortleaf pine. There is still a large amount of the SPB-affected acreage that could receive treatment. Treatment could range from site preparation and artificial regeneration, to site preparation and natural regeneration, to timber stand improvements that focus on managing the natural regeneration now occupying these stands.

Other vegetative concerns are due in part to the amount of use this area receives on a daily basis. It has been determined in several sites within the watershed that popular activities, such as camping and hiking, are causing increasingly detrimental impacts to the watershed. These impacts are in the form of sedimentation to the Middle Fork of the Broad River and its tributaries, and to Lake Russell and Nancytown Lake. Unmanaged recreational camping and unregulated trail use are quickly becoming issues due to the effects to the natural resources within the watershed.

There are recognized gaps in the data for the NFS lands within the watershed. A recent effort was made to narrow this gap by using newly-acquired aerial photos and field checking to re-map the compartments that are included within this watershed. This effort primarily addressed the need to update maps to reflect effects from the past two SPB epidemics, but did not collect any updated prescription-type stand data. The inclusion of this data into the system would also allow for more accurate and timely reports from the Heritage resources staff without adding to their workloads.

Lastly, due to a combination of past timber management and SPB affects, several opportunities exist for ecosystem restoration to historic forest cover types. These areas include the older pine plantations killed in recent SPB epidemics (discussed above), and other areas within the watershed that show traditional compositions of mixed forest types.

# Management Prescription Map



Prescription	Description	Acres
4.E.1	Cultural and Heritage Areas	5
4.F	Scenic Areas	3,065
4.H	Outstandingly Remarkable Streams	2,260
9.A.3	Watershed Restoration Areas	138
9.F	Rare Communities	11
9.H	Management, Maintenance, and Restoration of Plant Associations	9,659
<i>Total</i>		15,138



## Management Direction Information

The Middle Fork of the Broad River watershed forms an ecosystem that is truly a multiple use resource area. This watershed has long been a popular recreation area for a wide variety of uses, including hunting, fishing, camping, hiking, horse riding, and bicycle riding. The location of this area within the Lake Russell Wildlife Management Area and the presence of the Lake Russell/Nancytown Lake developed recreation complex are primary reasons for this popularity. The watershed has also received the most attention for forest management of any other area on the Chattooga Ranger District, with the area historically hosting the bulk of the timber activities and silvicultural treatments each year. The watershed is noteworthy for being located at the transition area between the southern Blue Ridge and northern Piedmont physiographic regions, and therefore contains a diverse mix of tree species and vegetative species. Included in these is the only area of occurrence on the Chattahoochee NF of the smooth coneflower, a federally-listed species.

### Findings/Opportunities:

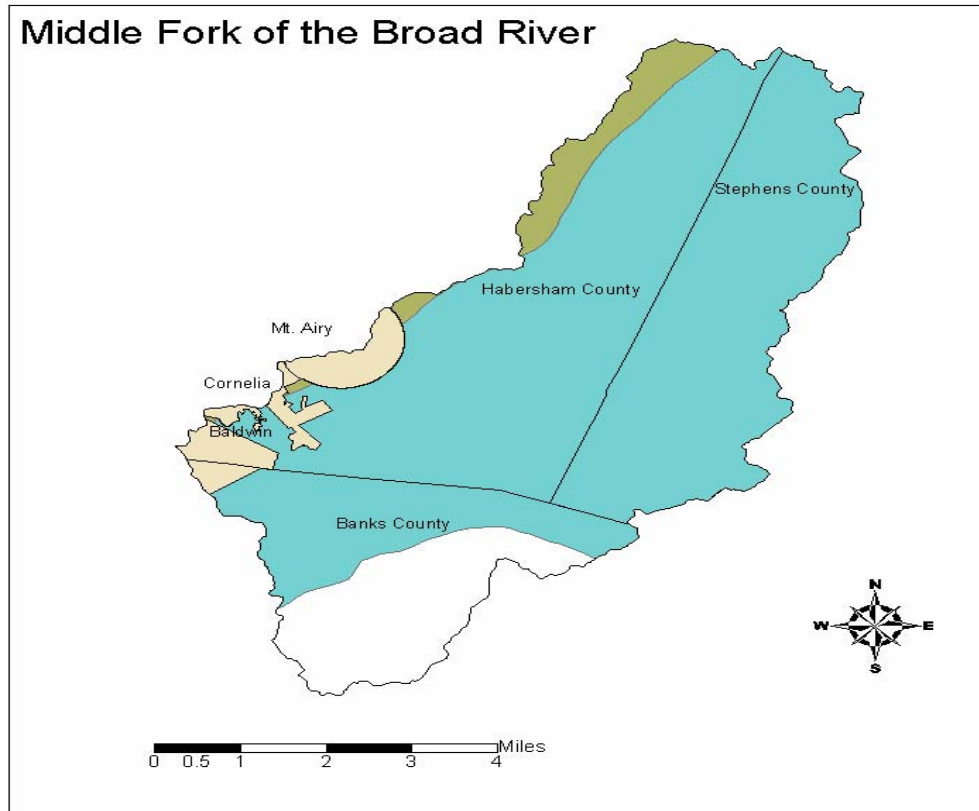
RESOURCE	FINDINGS / ISSUES	OPPORTUNITIES
Recreation	A wide variety of recreation uses occurs in the watershed, and the overall cumulative use is increasing. Along with the increased use are increasingly detrimental impacts to the natural resources within the watershed, primarily due to overuse of specific sites resulting in sedimentation and erosion. Unmanaged dispersed camping and unregulated trail use are the two primary uses contributing to this issue.	Identify dispersed campsites along the Middle Fork of the Broad River and tributaries that may be contributing excessive sedimentation into the watershed. Close and rehab as needed. Maintain and monitor designated trails to meet trail standards for public safety and mitigate use impacts. Identify un-designated trails and close to prevent use, or assess for inclusion in the designated trail system. Perform bank and shoreline stabilization, and install steps and fencing as needed at Lake Russell. Address use impacts at Farmers Bottom by hardening access and maintenance of previous access and bank stabilization.
Forest Health	The watershed has been severely impacted over the past decade by two SPB epidemics. Several thousand acres of pine forest types were lost during these epidemics, with older pine plantations (most of which were	Several treatment alternatives have been implemented within the stands affected over the past few years, but opportunities are still plentiful. Conventional site preparation and planting may continue on limited acreage, but

	loblolly pine 15 to 30 years old) being the most severely impacted. A minimal amount of salvage was done during these epidemics, leaving standing dead pine trees on the majority of these acres.	opportunities to manage the natural regeneration within these stands through timber stand improvements should be emphasized. This focus would also lend itself more to restoration efforts to more historic forest types.
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Forest Health	There is still a significant amount of acreage in the watershed occupied by pine stands that are susceptible to future SPB impacts. The majority of these stands are overstocked.	Pine stands within the watershed need to be identified and assessed for thinning needs. These stands should then be prioritized for thinning based primarily on susceptibility (stand density) and existing access.
Stand Data	Although existing historical stand data (CISC) for this watershed is considered to be in relatively good shape, the watershed has experienced a significant amount of change (primarily due to SPB impacts) over the past 15 years and there is a need for updated stand data.	The stands affected by SPB in this watershed were re-mapped in 2004 using new aerial photos and some spot ground checking. Stand data was also updated on hard copy forms only (CISC has been inaccessible). Once the transition to a new database is completed this new information can be input. Stand examination data is still needed across the watershed to assess each stand and refine the database.
Wildlife Habitat	The watershed is in relatively good condition for wildlife habitat. This resource has actually benefited from the disturbance caused by SPB impacts to help create more early-successional and diverse habitat. Demand species (deer, turkey, small game) populations are in general increasing based on Georgia DNR information.	Opportunities to improve the wildlife habitat in the watershed have been identified, and basically will continue historical wildlife management treatments. The continued involvement of the zone wildlife biologist and zone w/l technician in project planning will insure the retention of hardwoods to Forest Plan standards during forest mgmt. treatments. Wildlife openings will be maintained to provide high quality habitat. The prescribed burning program within the watershed will continue to improve wildlife habitat conditions. WSI projects that will

		improve hard mast production will continue. A project has been proposed for the Georgia Mountain Orchard that will help restore the site to permanent early-successional conditions.
Invasive Species	Although invasive species are not considered a major problem, the watershed does contain specific sites where this is an issue. A kudzu treatment program has not been in place for over 10 years within the watershed.	Growing season prescribed burning in the Georgia Mountain Orchard to remove/reduce Russian and Autumn olive encroaching into the fields and wildlife openings. Aquatic weeds will continue to be treated using grass carp. Kudzu sites have been identified and are proposed for treatment as part of an east zone treatment project.
T & E Species	A management program has been in place for several years to identify, protect, and manage known T & E plant sites within the watershed, including for smooth coneflower and Georgia aster.	The management program for T & E species will continue, with emphasis on enhancing and increasing suitable habitat in the vicinity of known coneflower site. Projects have been identified for Guard Camp Road and Allen Mountain that will utilize prescribed burning treatments.
Roads	Although the road system in the watershed is considered to be adequate, the overall condition of these roads has worsened due to a combination of factors, including budget constraints and fewer forest management projects that formerly contributed funds to help with road maintenance.	Continue to perform basic road maintenance, including blading, application of gravel, and maintenance of culverts, on a rotational basis within budget constraints. Identify specific locations or segments that may be contributing sedimentation to the watershed and mitigate as needed.

## Map of Ecological Units (LTA)



### Legend

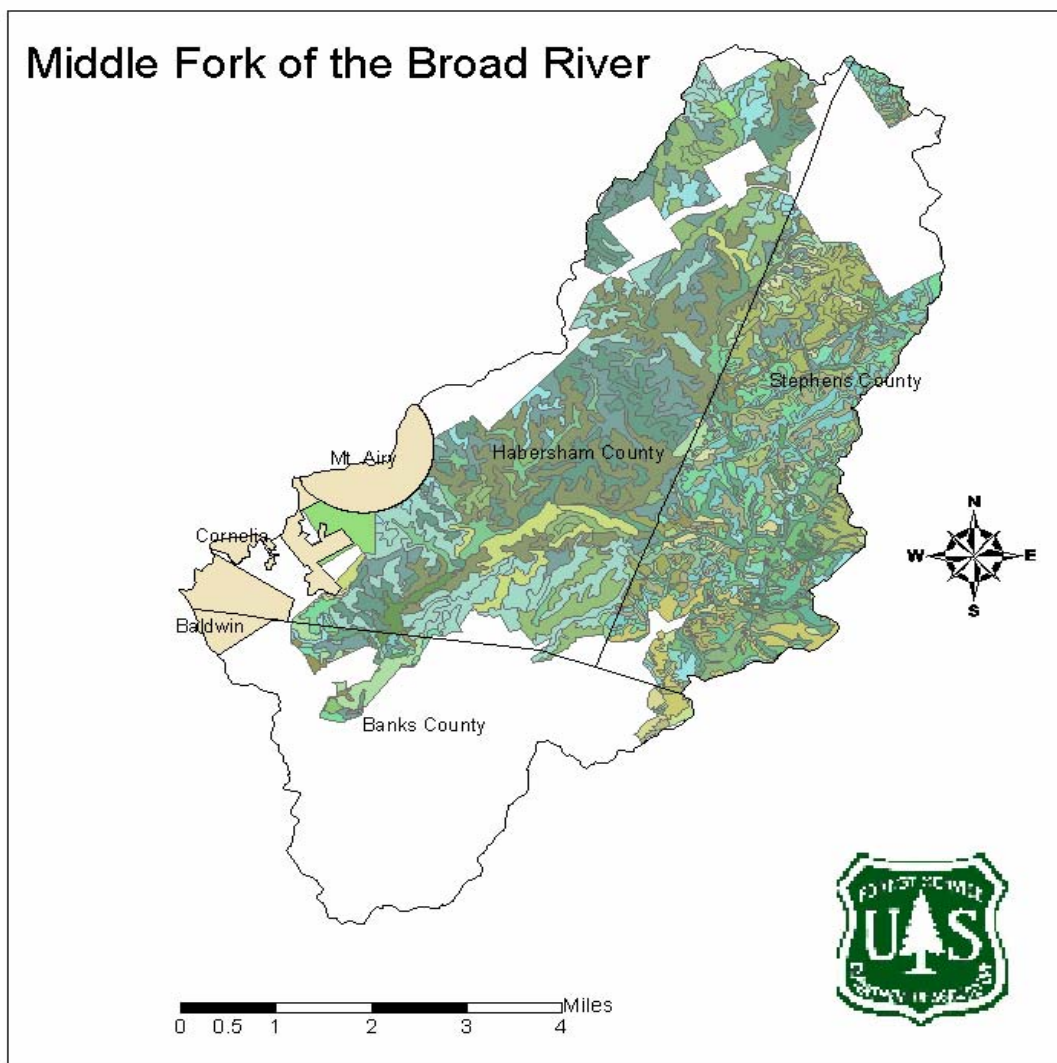
MAP_UNIT_I	Color	Code
		231Ab034
		231Ad335



### Acres by Land Type Association

Land Type	Section	Subsection	Acres
231Ab034 (Gainesville Ridge)	231Ad	231A	1470
231Ad335 (Broad River LTA)			20497
	231Ab	231A	

# Map of Ecological Units (Soils)



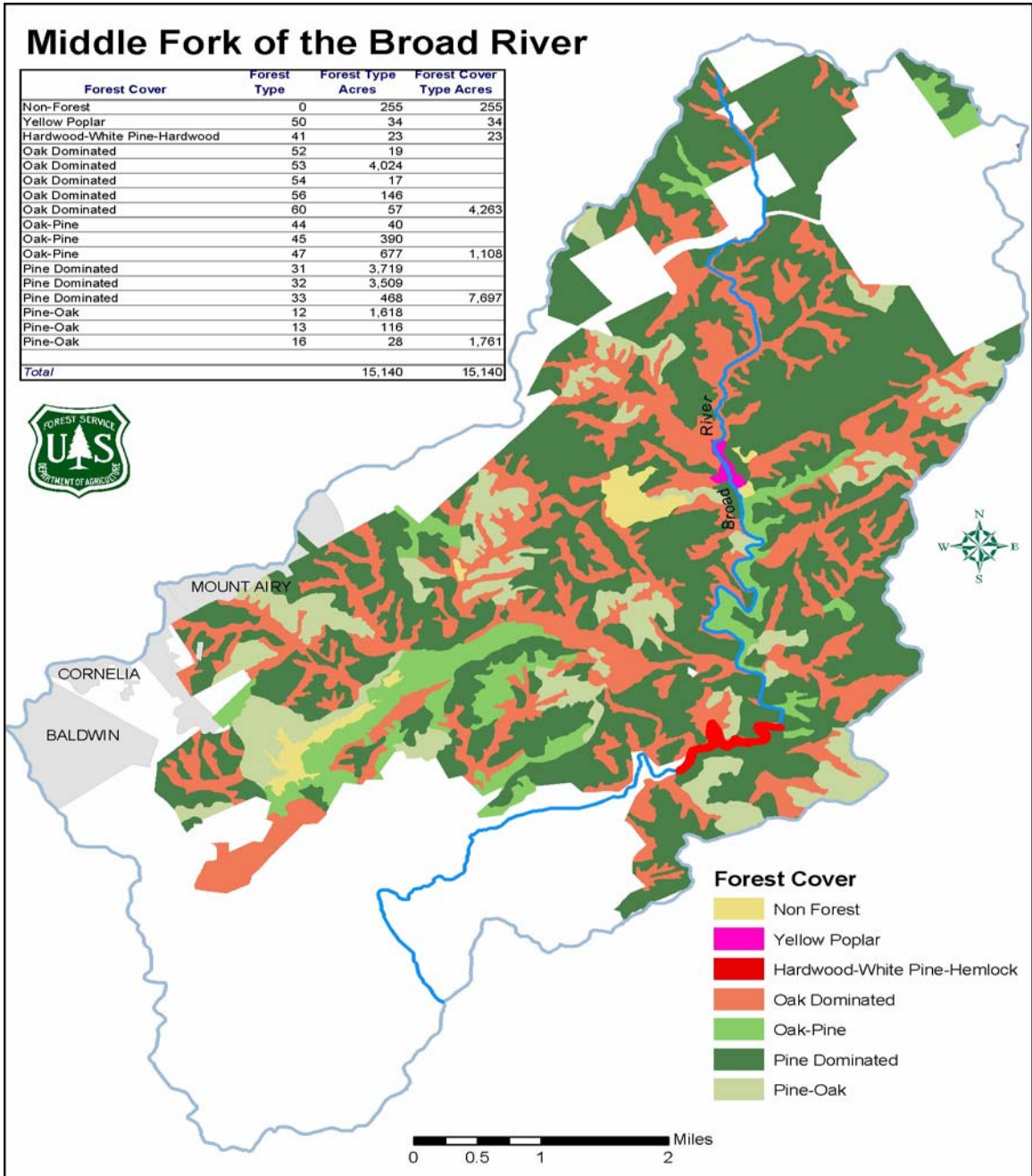
**Legend**

Water	Cedri sandy loam	Louisa-Talapoosa complex	Madison-Louisa-Talapoosa complex	Private land
NAME	Cedri sandy loam, eroded	Louisburg loamy sand	Maceda (variant)	Tale fine sandy loam
????	Chandler and Rock land	Louisburg sandy loam	Maceda fine sandy loam	Toccoa soils
Abundant sandy loam	Chandler complex	Louisburg-Rock land complex	Medford fine sandy loam	Water??
Appling sandy clay loam, eroded	Crocker fine sandy loam	Madison fine sandy loam	Muskeget and Oatme II stony soils	Wadlowe fine sandy loam
Appling sandy loam, eroded	Crocker fine sandy loam, eroded	Madison fine sandy loam, eroded	People (variant) loam	Wadlowe fine sandy loam, eroded
Carle clay soils	Owens II sandy loam	Madison gravelly sandy loam	People (sandy clay loam, severely eroded)	Wadlowe sandy clay loam, severely eroded
Cedri sandy clay loam, severely eroded	Wessee day loam, eroded	Madison sandy clay loam, eroded	People (sandy loam)	Wadlowe sandy loam
	Wessee loam	Madison sandy clay loam, severely eroded	People-Louisburg complex	Wickham fine sandy loam
				Wilkes complex
				Wilkes stony complex

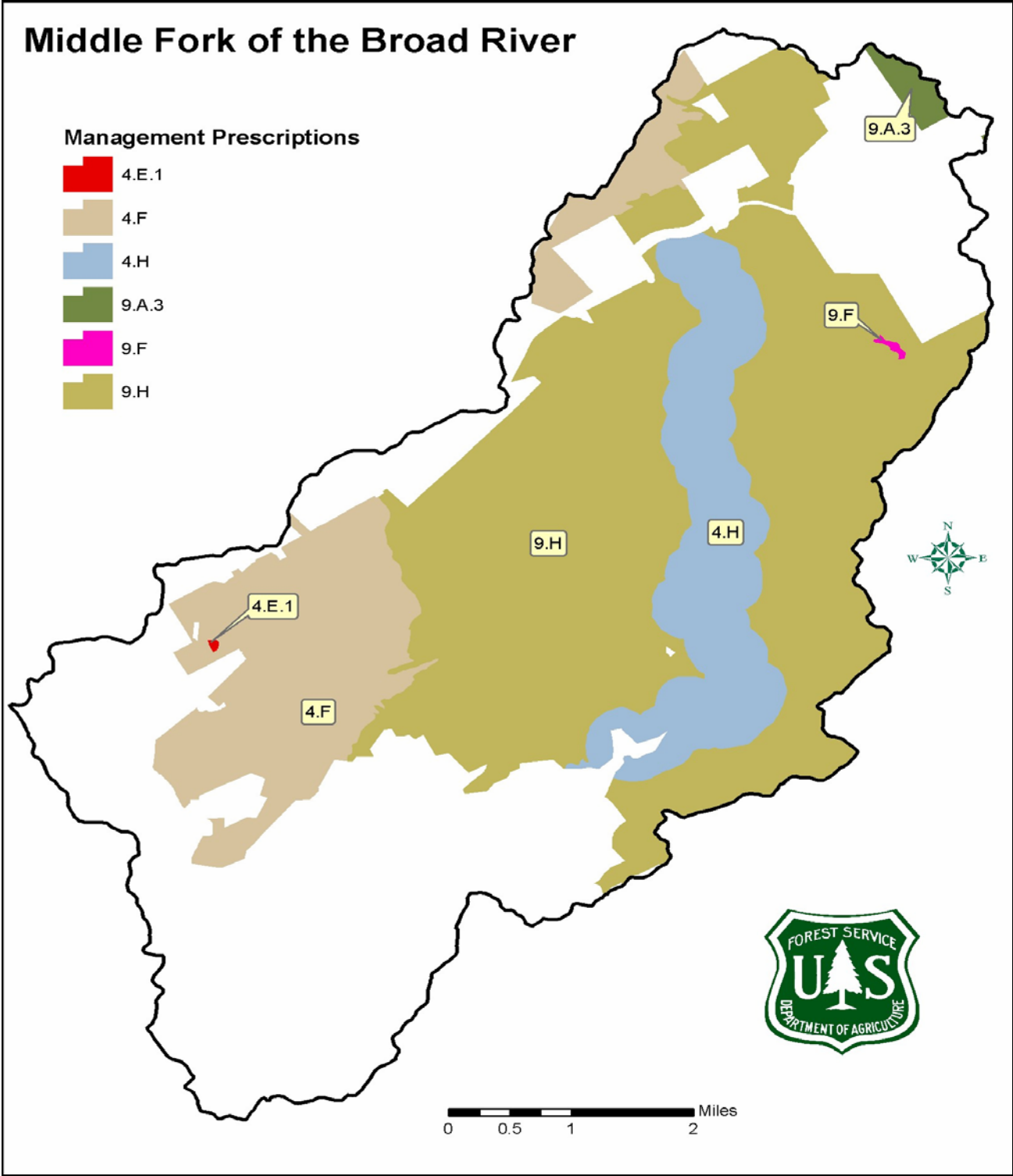
### Information about Ecological Units

Desired Condition (from Forest Plan)	The Ecological Classification System is integral to the management philosophy of ecosystem management. The delineation of ecological units, or Landtype Associations, within this system help us to develop and maintain a thorough understanding of local factors affecting the ecology and result in better resource management decisions (Plan, p. 2-58, 59).
Related Objectives to move toward Goal	Conduct monitoring and evaluation, assessments, project mapping, GIS, and other data collection/entry of all resource areas within the context of the Forest Service ecological classification system (Plan, p. 2-58).
Existing Condition from inventory	The Middle Fork of the Broad River watershed is located within the Southern Appalachian Piedmont (231A) section. The majority of the watershed is further classified within the Broad River (231Ad235) Landtype Association (LTA), with a smaller area within the Gainesville Ridges LTA (231Ab034). The Broad River LTA is characterized by a complex group of ridges and narrow valleys generally aligned north-northwest by south-southeast, and probably shares more similarities with LTAs on the Oconee NF than with any other LTA on the Chattahoochee NF. The existing vegetation consists primarily of pine-oak species (primarily loblolly and shortleaf pine with mixed southern hardwoods species including white, scarlet, southern red, and chestnut oaks. The Gainesville Ridges LTA is characterized by a series of low, linear and parallel ridges oriented on a northeast-southwest alignment. The major forest types are similar to those found in the Broad River LTA (oak-pine), but the Gainesville Ridges LTA is known as a “biological crossroads” and therefore has a richer diversity of species.
Opportunities and Possible Management Practices	Both LTAs were historically characterized by oak-pine forest cover with shortleaf being the predominant species of pine in this watershed. Management practices that focus on retention of desired hardwood species and shortleaf pine will gradually move this watershed toward a shift from pine-hardwood to hardwood-pine.
Remarks	This watershed has been dramatically affected by several southern pine beetle epidemics over the past 20+ years, most recently in 2002-2003. The changes that have occurred within this watershed as a result, including the loss of several thousand acres of pine forest cover in the past two SPB epidemics, may actually help attain a slight shift in forest cover in a shorter period of time. A significant amount of natural regeneration in the form of mixed hardwood-pine species has resulted from these epidemics.

# Major Forest Communities Map



Rare Communities Map





Rare communities Information

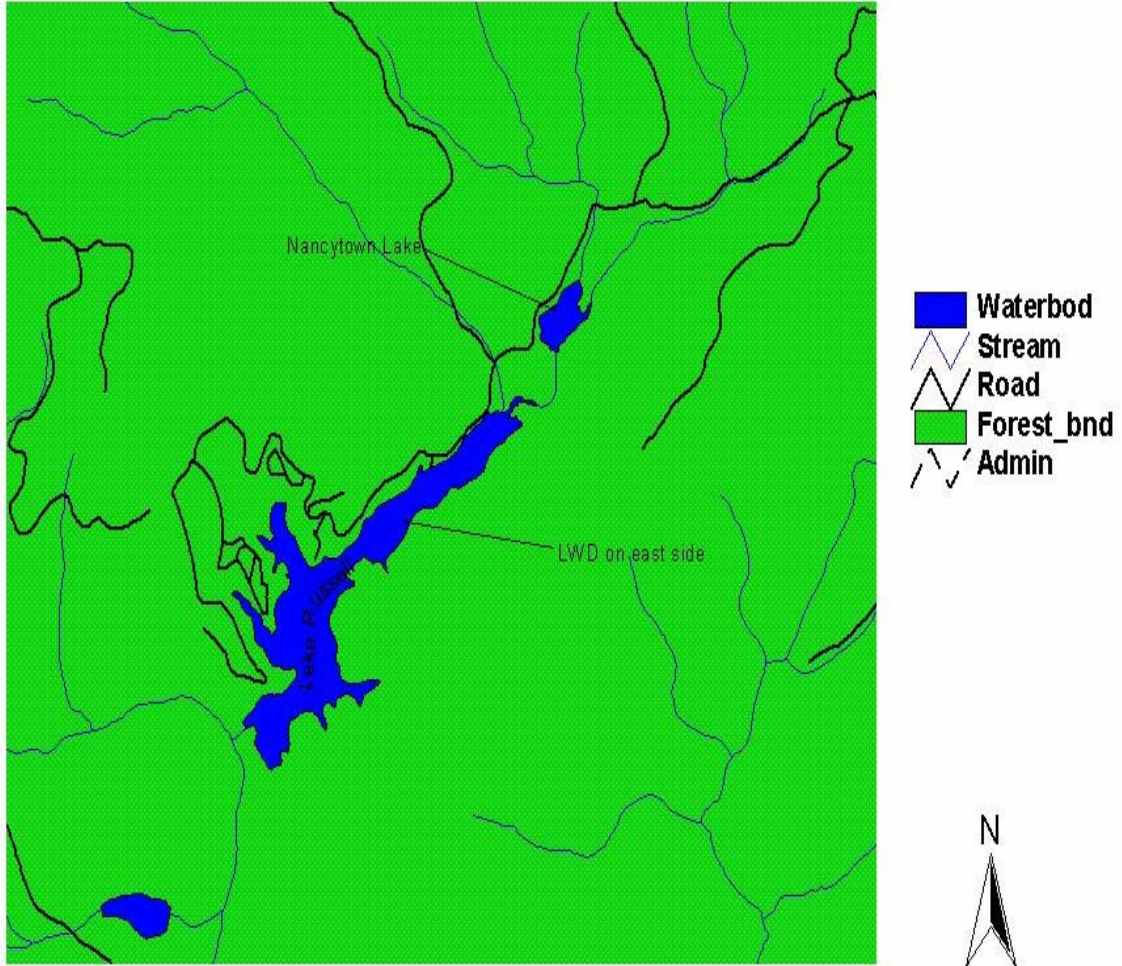
Desired Condition (from Forest Plan)	The communities are characterized by thin soils and exposed parent material that result in localized complexes of bare soil and rock, herbaceous and/or shrubby vegetation, and thin, often stunted woods
Related Objectives to move toward Goal	Generic rare community direction is sufficient for provide for these communities
Existing Condition from inventory	None exist in this watershed.
Opportunities and Possible Management Practices	
Remarks	This area represents a very small 11 acre patch of a Poplar dominated stand that occurs along the river corridor

Successional Stage Habitats Map  
(Couldn't create map)

Successional Stage Habitats Information

Desired Condition (from Forest Plan)	<p>The landscape of this area retains a natural, forested appearance. A mid- to late-successional forest greater than 40 years of age dominates the landscape with a continuous forested canopy greater than 50 percent of the prescription area. The area is interspersed with both forest communities greater than 100 years of age and herbaceous openings providing wildlife habitat diversity and visual diversity.</p> <p>The landscape character is natural-appearing. Natural processes are the primary agents of strong change in visual elements of form, line, color, and texture. Natural-appearing managed change occurs, but affects a limited area either individually or cumulatively at any one time. Management changes are designed to be low to moderate contrast and therefore compatible with the SIO. Active management usually does not occur to moderate visual contrasts of natural change. Evidence of human intervention in the appearance of the landscape is infrequent.</p>
Related Objectives to move toward Goal	There are no recognized needs for additional successional habitats within the watershed. This is due primarily to the impacts of past SPB infestations and the mosaic of openings and they created throughout the watershed.
Existing Condition from inventory	Due to the last episode of SPB, there is no need to create early successional habitats within the watershed. There are numerous multiple aged stands present within the watershed, however, species composition may be an issue in the eyes of some.
Opportunities and Possible Management Practices	<b><i>1. Pre-commercial thinning of young pine trees and release of oaks in pine dominated stands to create uneven-aged stands.</i></b>
Remarks	N/A

## Lake Russell and Nancytown Lakes Projects



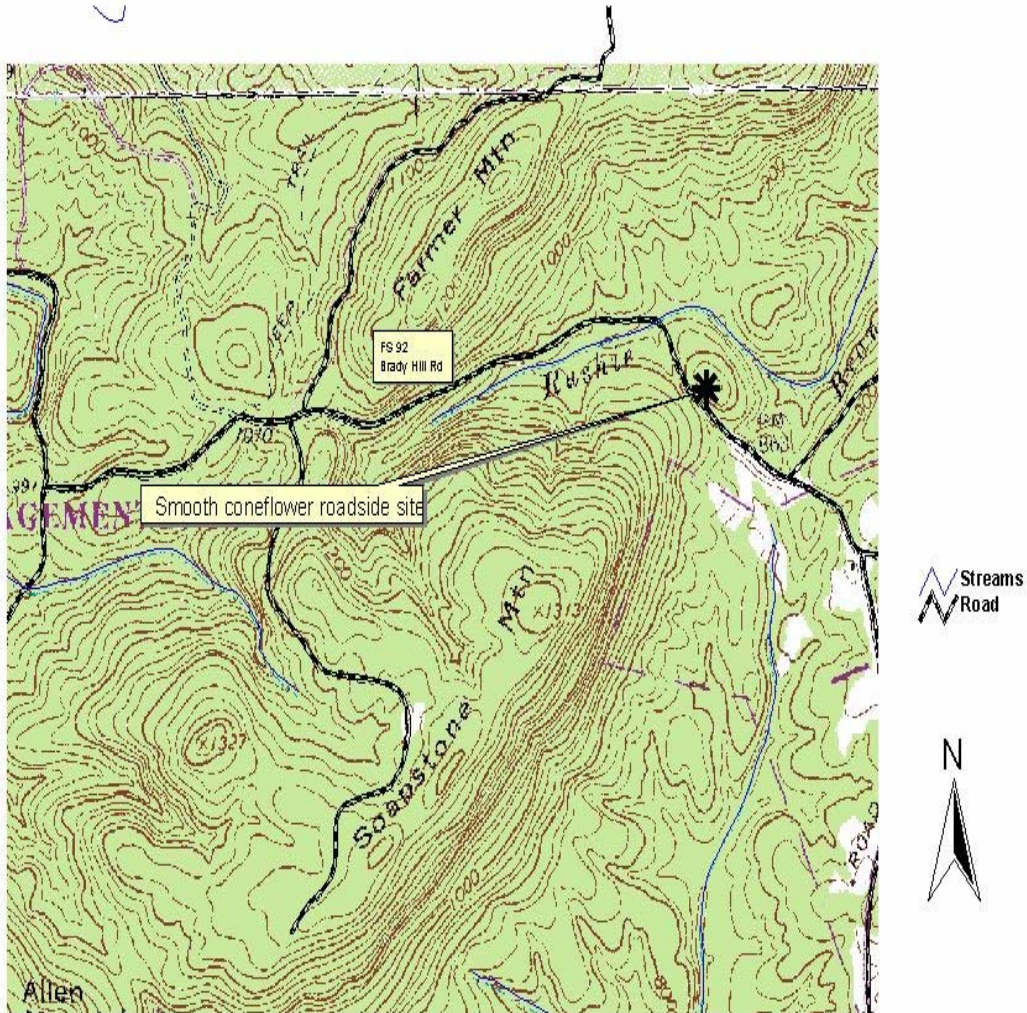
Noxious weed control-Lake Russell and Nancytown Lake  
Add LWD Lake Russell

Special Habitat Attributes information

<p>Desired Condition (from Forest Plan)</p>	<p>Nothing exists in the Plan that specifically addresses this information.</p>
<p>Related Objectives to move toward Goal</p>	<p><b>GOAL 26-</b> Restore and/or maintain aquatic ecosystems in amounts, arrangements, and conditions capable of supporting viable populations of all native and desired nonnative species of aquatic flora and fauna within the planning area.</p> <p><b>OBJECTIVE 26.5-</b> Assess the approximately 300 acres of Forest Service owned lakes and ponds for habitat improvement needs for fish and amphibians within ten years of Plan implementation.</p> <p><b>GOAL 31-</b> Provide a spectrum of high quality, nature-based recreation settings and opportunities, that reflect the unique or exceptional resources of the Forest and the interests of the recreating public on an environmentally sustainable, financially sound, and operationally effective basis.</p>
<p>Existing Condition from inventory</p>	<ul style="list-style-type: none"> <li>• Surveys of Lake Russell, Duckett Lake, and Nancytown Lake show an increase in exotic aquatic weeds. Lake Russell also has a lack of large woody debris.</li> <li>• Broad River is a put and take trout fishery. Water Temp is too high for reproduction or significant hold-over trout. No stream habitat improvements needed.</li> </ul> <p><b>Lake Russell Lake</b></p> <ul style="list-style-type: none"> <li>• 30 acres</li> <li>• Boat ramp, adjacent campground and day use area</li> <li>• Important warm water fishery (bass, bream, catfish)</li> </ul> <p><b>Nancytown Lake</b></p> <ul style="list-style-type: none"> <li>• 7 acres</li> <li>• Stocked with rainbow trout. A put and take fishery due to warm water temperature in the summer</li> <li>• Concern in the early 1980's about hazardous wastes discharged into the watershed from an upstream wood preserving company. Several studies were performed in the Nancytown Lake Watershed. Conclusions were that toxic levels decreased to the point that there are no fish consumption advisories in place for the last 20 years.</li> <li>• Consistent problem with aquatic weeds impacting recreational fishing</li> </ul> <p><b>Duckett Lake</b></p> <ul style="list-style-type: none"> <li>• 4 acres</li> <li>• Dispersed camping</li> </ul>

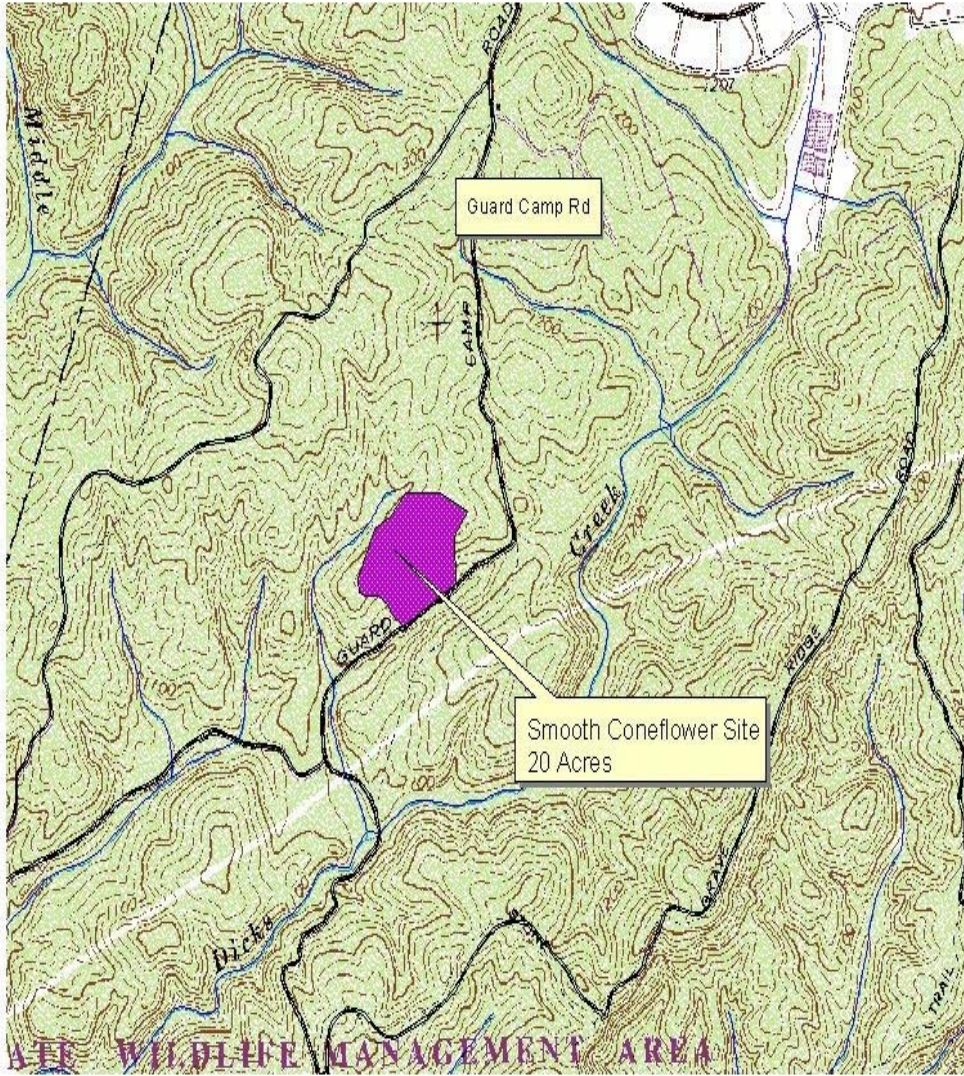
	Consistent problem with aquatic weeds impacting recreational fishing
Opportunities and Possible Management Practices?	<ol style="list-style-type: none"><li><i>1. To improve cover for fish, add large woody debris in the form of cut pines and hardwoods into Lake Russell</i></li><li><i>2. To improve spawning habitat, install gravel spawning beds into Lake Russell and Duckett Lake</i></li><li><i>3. To reduce aquatic weeds, continue on-going stocking of hybrid grass carp</i></li><li><i>4. To increase recreational fishing opportunities, cooperate with GA DNR to stock channel catfish at Lake Russell</i></li><li><i>5. Improve fishing access into Duckett Lake road and parking area</i></li></ol>
Remarks	N/A

## Brady Hill Rd Smooth Coneflower Site



Opportunities include expanding required habitat from roadside into adjacent woodland.

## Guard Camp Rd Coneflower Project



Opportunities include expanding required habitat from roadside into adjacent woodland.

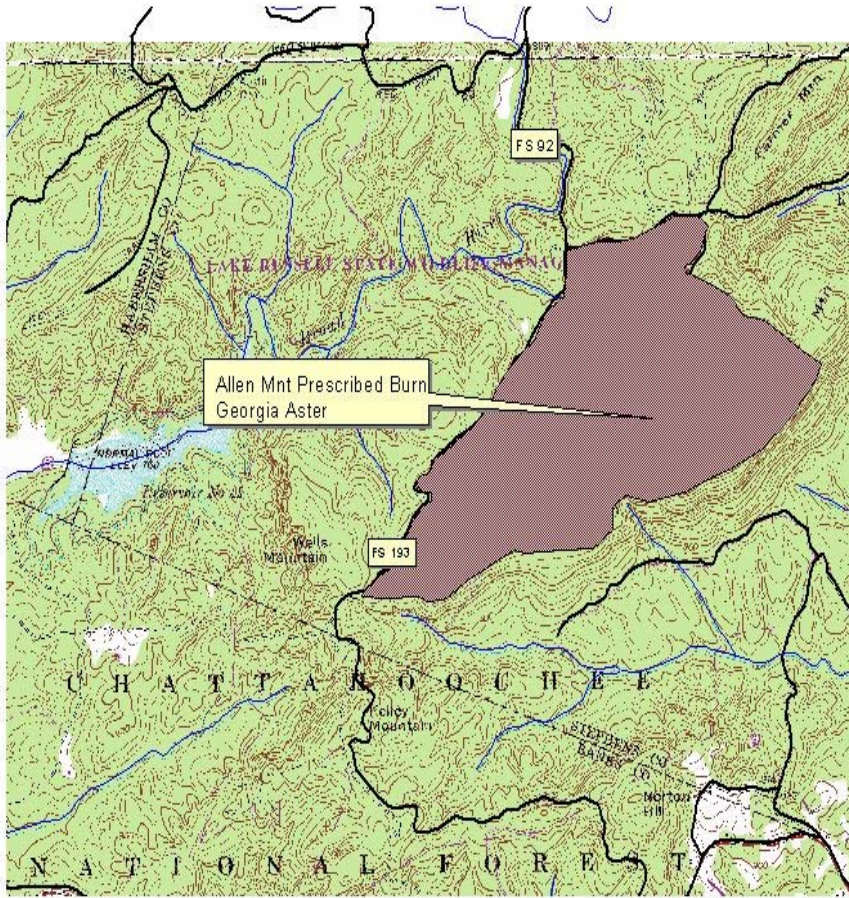
New T&E Species  
“Dogpanzee”  
*Homo canius pseudorectus*





Candidate List Species Map

# Allen Mountain Prescribed Burn 550 Acres



 Streams  
 Road



Habitat Improvement for existing population of Georgia Aster

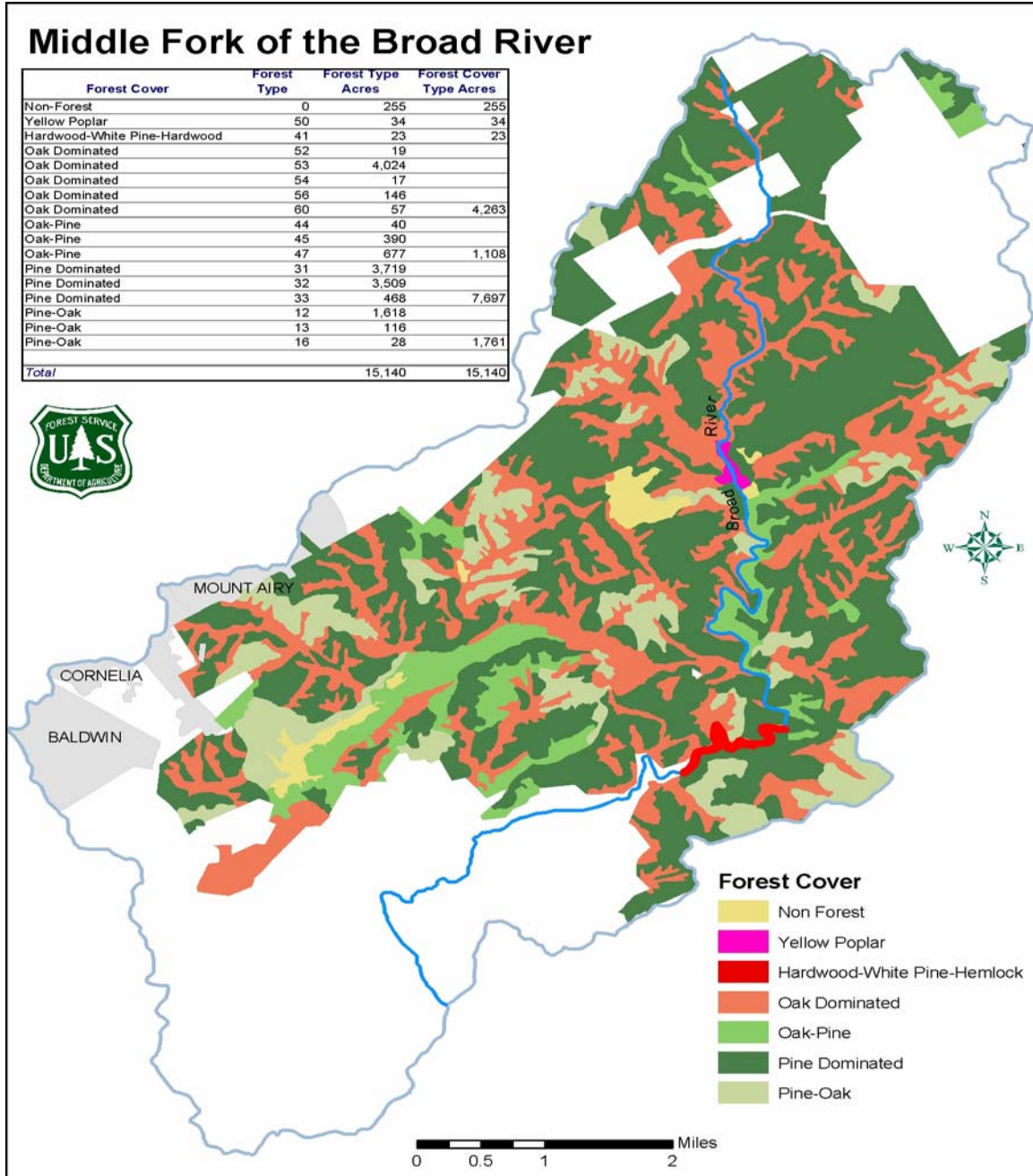
T&E Species Information

Desired Condition (from Forest Plan)	The Chattahoochee National Forest is charged with creating and maintaining habitat conditions suitable to maintain viable populations of all species native to the planning area. A mix of management prescription allocations provide for a variety of habitat conditions. The Forests will conserve and assist in the recovery of threatened, endangered and sensitive species through maintenance or enhancement of their associated habitats. Emphasis is also placed on minimizing undesired human-wildlife interactions during critical life stages. The integrity of native communities is protected through the management of invasive species. The following goals, objectives and standards are designed to protect, restore, maintain and enhance wildlife and plant populations and communities while maintaining flexibility to manage other resources.
Related Objectives to move toward Goal	GOAL 15 Contribute to conservation and recovery of federally-listed threatened and endangered species through habitat maintenance and/or enhancement and, where possible, for their reintroduction into suitable habitats, and contribute to avoiding the necessity for federal listing of other species under the Endangered Species Act. (Refer to Table 2-3)
Existing Condition from inventory	<b>Current Conditions-</b> Existing coneflower populations are on roadsides and are vulnerable to road management and exploitation impacts.
Opportunities and Possible Management Practices	<p><b><i>1. Enhance and increase suitable habitat at both smooth coneflower sites by prescribe burning into adjacent woodlands (Total of 25 acres) and mechanical treatments of adjacent woody competition. NEPA complete for prescribed burning and mechanical treatments for Guard Camp Road project area.</i></b></p> <p><b><i>2. Remove encroaching/competing woody vegetation by mechanical removal</i></b></p> <p><b><i>Enhance existing Georgia Aster population by prescribe burning. NEPA complete for the project area (Allen Mountain project)</i></b></p>
Remarks	N/A

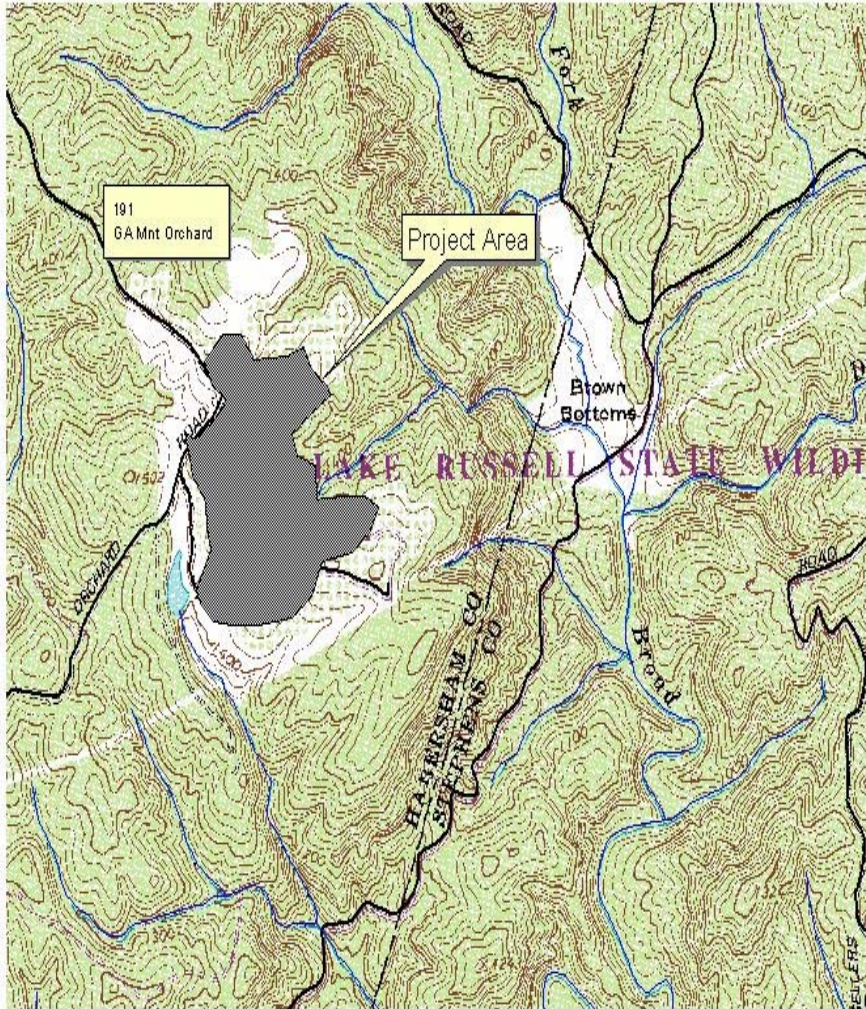
Table 2- 3.

Common Name	Known Populations or Occurrences/Conditions	Management Objectives
<b>Smooth Coneflower</b>	2 roadside populations	Increase number of populations/occurrences by improving and/or increasing available habitat and relying on natural recruitment rather than reintroduction and propagation.
<b>Georgia Aster</b>	1 woodland population	Increase number of populations/occurrences by improving and/or increasing available habitat and relying on natural recruitment rather than reintroduction and propagation.

## Demand Species and Forest Community Association Map



## Demand Species Habitat Improvement Georgia Mnt Orchard



## Demand Species Information

Desired Condition (from Forest Plan)	Nothing exists in the Plan that specifically addresses this topic.
Related Objectives to move toward Goal	<p><b>GOAL 1-</b> Contribute to the viability of native and other desirable wildlife species.</p> <p><b>GOAL 2-</b> A diversity of habitat will be provided for the full range of native and other desired species. Sufficient amounts of interior or late-successional habitat as well as early-successional habitat will be provided to meet needs of all successional communities. Early successional habitat will be well distributed in all forest types, elevations, aspects, and slopes including riparian corridors.</p> <p><b>GOAL 3-</b> Enhance, restore, manage and create habitats as required for wildlife including disturbance-dependent forest types.</p> <p><b>GOAL 10-</b> Manage for a diversity of oak species to minimize yearly fluctuations in acorn supplies</p>
Existing Condition from inventory	<ul style="list-style-type: none"> <li>• Approximatley 12,000 acres of the 17,000 acre Lake Russell WMA are in the watershed.</li> <li>• In the top 10 WMA's for number of deer harvested.</li> <li>• Spring turkey harvest averages 50 birds per year.</li> </ul> <p><b>White-tailed Deer-</b> Population has remained stable since 1991. The area is located in the Lake Russell WMA. Habitat quality is good due to the diversity of habitat. High quality wildlife openings, sufficient succulent browse, sufficient hard mast stands, and numerous openings caused by SPB have contributed to a healthy deer population.</p> <p><b>Black Bear-</b> Occasional sightings only. Habitat conditions are poor due to disturbance and proximity to populated areas. First and only bear was harvested in 2004. (GA DNR harvest data 1998-2003).</p> <p><b>Eastern Wild Turkey-</b> Requires hardwood forests (hard mast) and early successional habitat (nesting cover) and openings (insects for young). Habitat quality is good due to the diversity of habitat. High quality wildlife openings, sufficient succulent browse, hard mast stands, and numerous SPB areas have contributed to a healthy deer population. According to Georgia DNR biologist's, the population is stable. Continued reduction in required habitat is expected unless management activities are implemented.</p>
Opportunities and Possible Management	<ol style="list-style-type: none"> <li><b>1. Enhance hard mast production through WSI projects in white/red oak stands</b></li> <li><b>2. Prescribed burning to increase wildlife habitat</b></li> </ol>

Practices	<b><i>3. Ensure high quality wildlife openings are maintained and/or constructed where allowed.</i></b>  <b><i>Improve conditions in Georgia Mountain Orchard by: Reducing encroaching pines and invasive plants (Autumn/Russian Olive) in existing fields.</i></b>
Remarks	N/A

### Migratory Bird Information

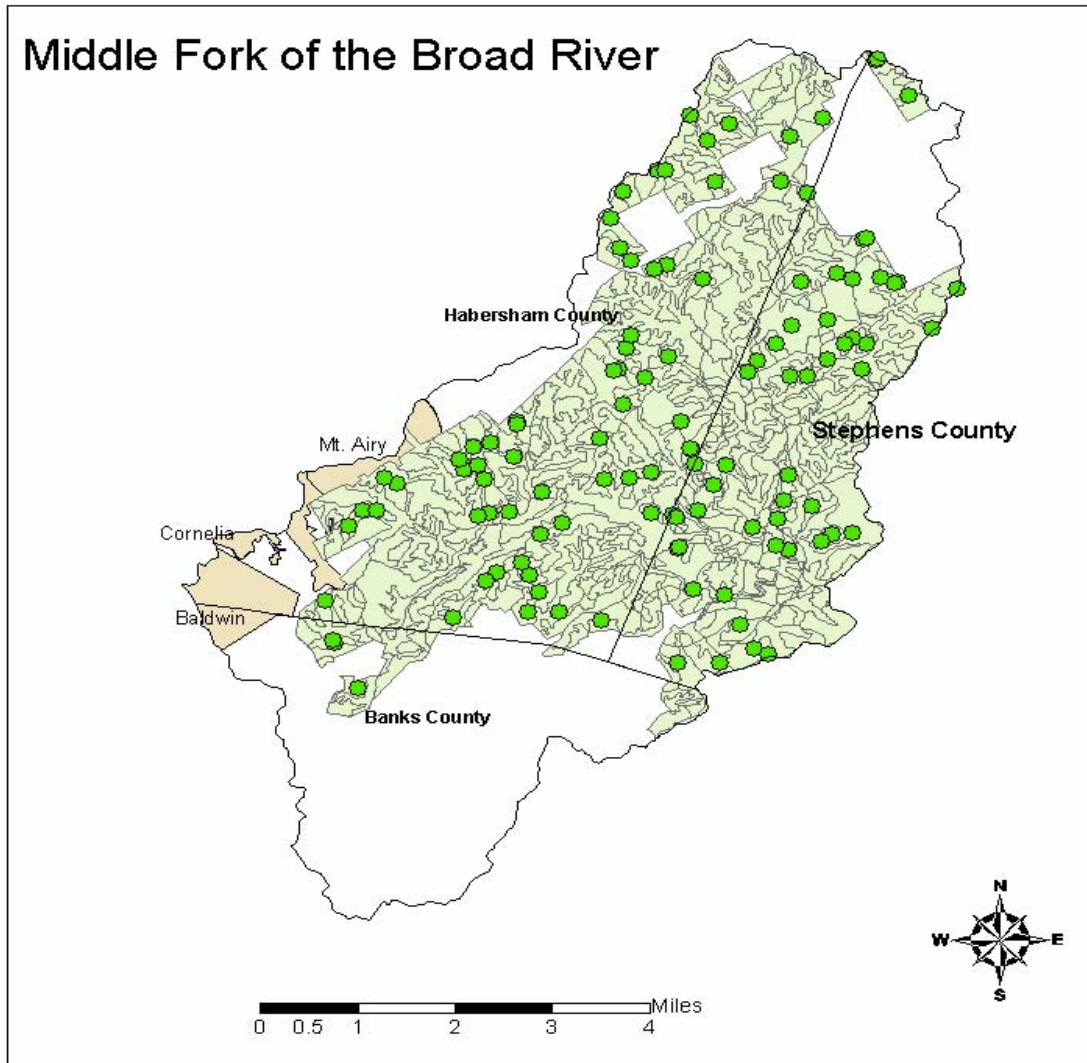
Desired Condition (from Forest Plan)	Diversity of species and habitats will be provided for the full range of native and other desired species. Sufficient amounts of interior or late successional habitat as well as early successional habitat will be provided to meet needs of all associated migratory bird species and successional communities. Early succession will be well distributed in all forest types, elevations, aspects, and slopes including riparian corridors.
Related Objectives to move toward Goal	<b>GOAL 2-</b> A diversity of habitat will be provided for the full range of native and other desired species. Sufficient amounts of interior or late-successional habitat as well as early-successional habitat will be provided to meet needs of all successional communities. Early successional habitat will be well distributed in all forest types, elevations, aspects, and slopes including riparian corridors.  <b>GOAL 13-</b> Provide breeding, wintering, and migration staging and stopover habitat for migratory birds in ways that contributes to their long-term conservation.
Existing Condition from inventory	See Table below
Opportunities and Possible Management Practices	“
Remarks	N/A

Species/ *(Status)	Habitat Requirement	Opportunities
Field Sparrow	Early successional	Sufficient habitat currently exists. Implement Georgia Mnt Orchard Project
Prairie Warbler (Population declining)	Early successional	Sufficient habitat currently exists. Implement Georgia Mnt Orchard Project
<b>* Draft MIS Report USFS 2005</b>		



New Migratory Bird Found



# Forest Health Map



## Legend

-  stands
-  SPB Infected Spots

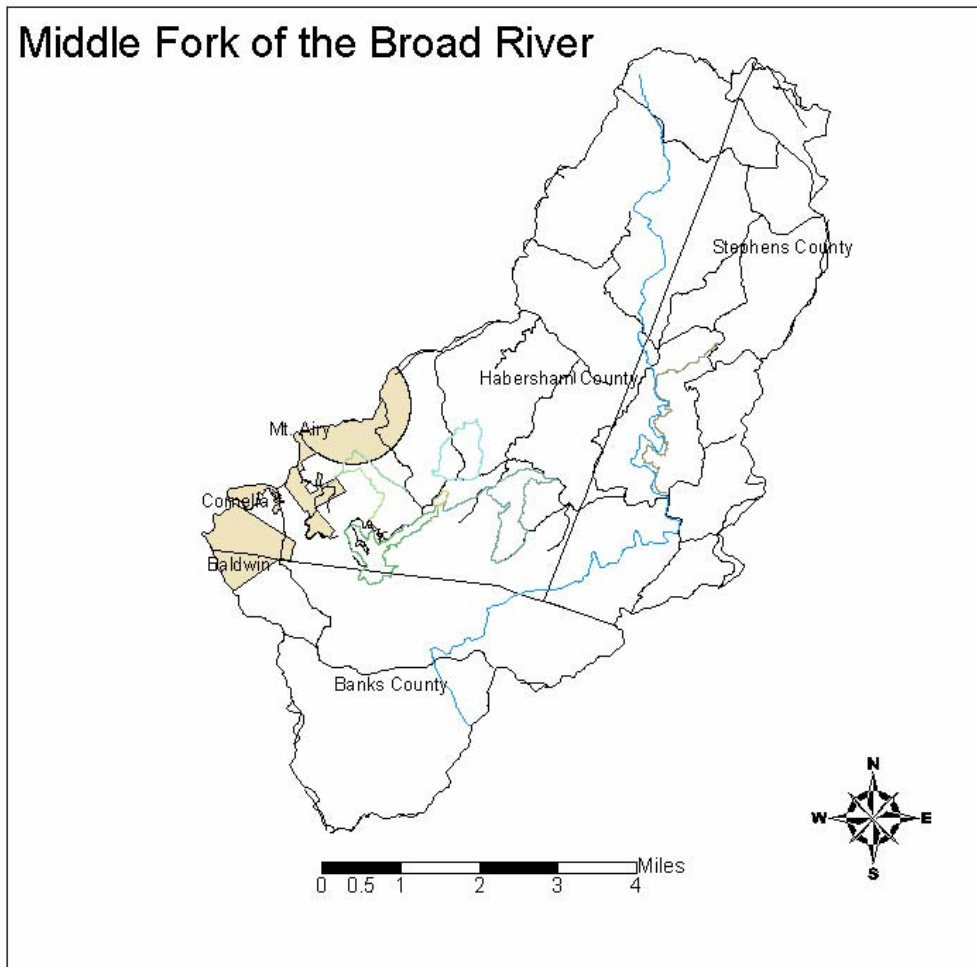




## Forest Health Information

<p>Desired Condition (from Forest Plan)</p>	<p>Forests change through time; that is, they are dynamic systems. The present forest has been greatly shaped by fire suppression, the end of woods grazing, and widespread logging at the turn of the twentieth century. Some of the more recent changes have been caused by forest pests of various types individually or in combination. Management actions can change the area affected and the severity of effects of some pests. But the level of management needed to protect special areas or values, such as wilderness or certain habitats for threatened and endangered species, often creates concerns about forest pest management.</p>
<p>Related Objectives to move toward Goal</p>	<p>Goal 49 Contribute to maintenance or restoration of native tree species whose role in forest ecosystems is threatened by insects and disease.          Goal 50 Through appropriate management, reduce populations of native and nonnative invasive species.          Goal 51 Contribute to the development of hazard rating systems for forest pests lacking such a system.          Goal 52 Where hazard ratings for known or newly discovered (but previously known) pests are available, manage based on each rating to reduce hazard conditions to or below moderate hazard levels for each pest.          Goal 53 Include Identification Of Non-Native Invasive Species As A Vegetation Inventory Element And Develop Species-Site Relationships To Predict their probable locations.</p>
<p>Existing Condition from inventory</p>	<p>The watershed is full of opportunities to reduce SPB threats, restore historic plant diversities, and improve the vigor of existing stands.</p>
<p>Opportunities and Possible Management Practices</p>	<ol style="list-style-type: none"> <li><b><i>1. Pre-commercial thinning of young densely stocked pine stands on 150 acres.</i></b></li> <li><b><i>2. Shortleaf pine restoration on 125 acres of identified suitable habitats.</i></b></li> <li><b><i>3. Initiate NEPA on 150 acres of stands identified suitable for commercial thinnings for forest health.</i></b></li> <li><b><i>4. Saw\planting\burning to be used on over 100 acres of identified stands of SPB killed trees for ecosystem restoration.</i></b></li> <li><b><i>5. Reduce the number of stems in pine-oak and oak-pine stands to increase vigor in young stands on previously treated sites.</i></b></li> <li><b><i>6. Identify opportunities for upland hardwood-glade community restoration work.</i></b></li> <li><b><i>7. Identify 150 acres of WUI stands for fuels\rough reduction commercial thinnings.</i></b></li> </ol>

# Recreation Area Map (Trails and Roads)



## Legend

### NAME

- Broad River
- Ladyslipper
- Lake Russell Loop
- Nancytown Lake Loop
- Rhododendron Lake Access
- Rhododendron Trail
- Sourwood
- river



### System Trails and Primary Purposes

System Name	Trail Name	Trail Number	Multiple Routes	Primary Use
Broad River	Broad River	151	-	Hike
Ladyslipper	Ladyslipper	153	-	Horse
Lake Russell Loop	Lake Russell Loop	73	Nancytown Lake	Hike
Nancytown Lake	Nancytown Lake Loop	152	Lake Russell Loop	Hike
Rhododendron	Rhododendron Lake Access	185A	-	Hike
Rhododendron	Rhododendron Trail	185	-	Hike
Sourwood	Sourwood	155	-	Hike

### Miles Available per User Group

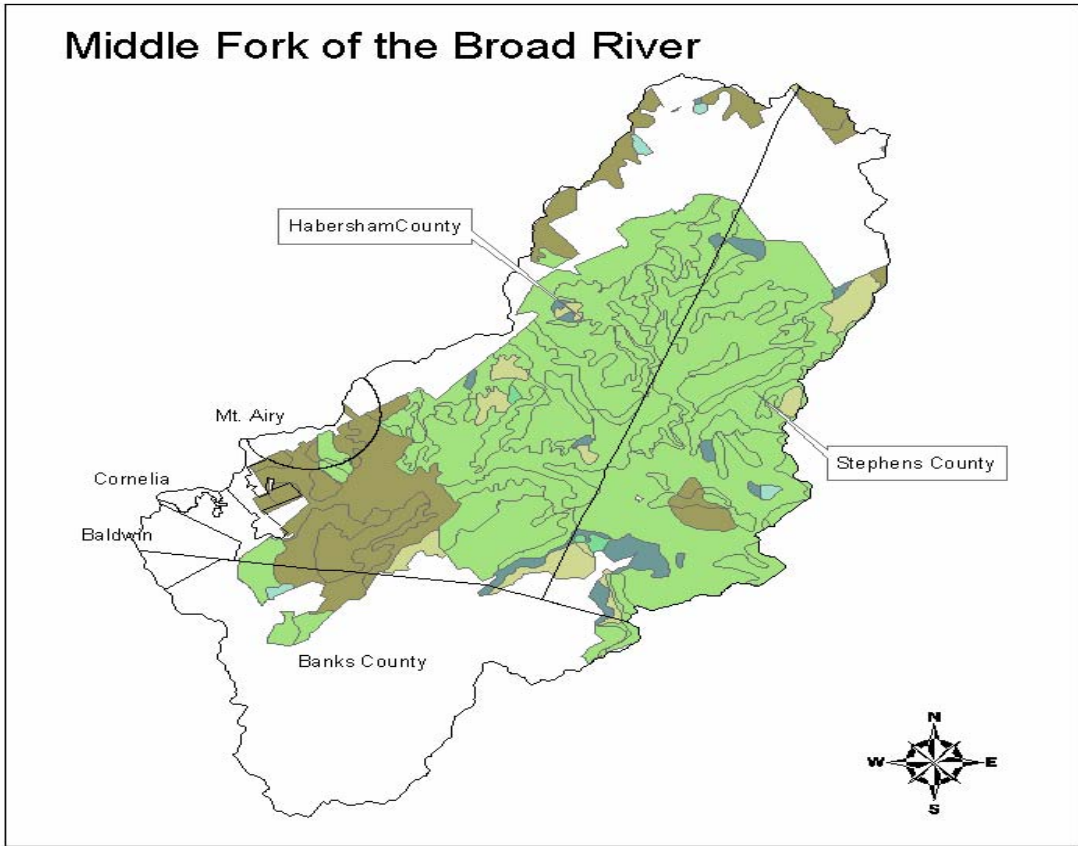
Primary Use	Total Miles Available per User Group
Hike	15
Horse	5

### Recreation Areas Information

Desired Condition (from Forest Plan)	The National Forest will provide a variety of dispersed and developed recreational opportunities. Provide people with trails for backpacking, mountain biking, horseback riding, and off-highway vehicles on national forest lands. Reduce conflicts due to congestion within certain areas and concentration of activities between the various user groups in high demand areas.
Related Objectives to move toward Goal	Goal 40 Provide a spectrum of high quality, nature-based recreation settings and opportunities, that reflect the unique or exceptional resources of the Forest and the interests of the recreating public on an environmentally sustainable, financially sound, and operationally effective basis. Adapt management of recreation facilities and opportunities as needed to shift limited resources to those opportunities. Goal 42 Maintain structures in a safe, serviceable, and attractive condition suitable for the intended use. Goal 43 For Regional Forester Scenic Areas, enhance, restore and create forest habitats as required for wildlife, rare plant communities and historic forest types.
Existing Condition from inventory	This watershed represents one of the first opportunities for people from the Atlanta metro, and is easily accessible by those in the surrounding counties. Therefore, it receives use on a daily basis for several of the provided recreational opportunities which creates several problems due to the extreme amounts of use.
Opportunities	<b><i>1. Bank and shoreline stabilization activities to reduce</i></b>

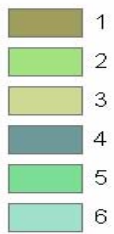
<p>and Possible Management Practices</p>	<p><i>sedimentation into Lake Russell by bare or unstable soils.</i></p> <ol style="list-style-type: none"> <li><i>2. Build fences and steps in designated areas to control access to Lake Russell to reduce impacts from people creating new access points in unsuitable, environmentally sensitive areas.</i></li> <li><i>3. Replace or upgrade Broad River trail bridges, re-route the trail in certain areas, and trees removed in certain areas.</i></li> <li><i>4. Improve Lady Slippers Trail surface and remove SPB-killed trees from within 100 ft. of the trail</i></li> <li><i>5. Harden the surface in the Farmer's Bottom area to reduce impacts to the resources due to the high volume of traffic that it receives.</i></li> <li><i>6. Refurbish the river access of Farmer's Bottom, replace the rails on the steps, and bank stabilization efforts need to be revisited to check for signs of degradation.</i></li> <li><i>7. Re-gravel the access to the Farmer's Bottom area to lessen the impacts to the river caused by sediments.</i></li> <li><i>8. Consider the potential for concession activities at Lake Russell, including: Paddleboat rentals, RV sites with hook-up facilities, and vending opportunities</i></li> </ol>
<p>Remarks</p>	<p>N/A</p>

# Scenery Class Map



## Legend

### Scenic Class



Scenic Class	Associated Acres
0	32
1	2,773
2	10,299
3	662
4	444
5	45
6	75

### Scenery Information

Desired Condition (from Forest Plan)	Public concern for the quality of scenery on National Forest lands is ever increasing. Many sightseers visit the National Forest as part of an interwoven experience with other tourist opportunities. The mountainous Chattahoochee National Forest provides many opportunities for high quality, nature-related and rural culture sightseeing and scenic viewing.
Related Objectives to move toward Goal	Goal 29 Protect and enhance the scenic/aesthetic values and the Landscape Character of the National Forest lands in the Southern Appalachians, the Ridge and Valley and the Piedmont by meeting all adopted Scenic Integrity Objectives on Forest Service lands within individual management prescriptions. Goal 30 Provide a variety of Landscape Character Themes with the predominant themes being Natural Appearing, Natural Evolving, and variations of these themes.
Existing Condition from inventory	There are no real scenery concerns evident from the inventory. All areas are in the appropriate conditions for the designated condition levels.
Opportunity and Possible Management Practices	N/A
Remarks	N/A

## Heritage Resources Information

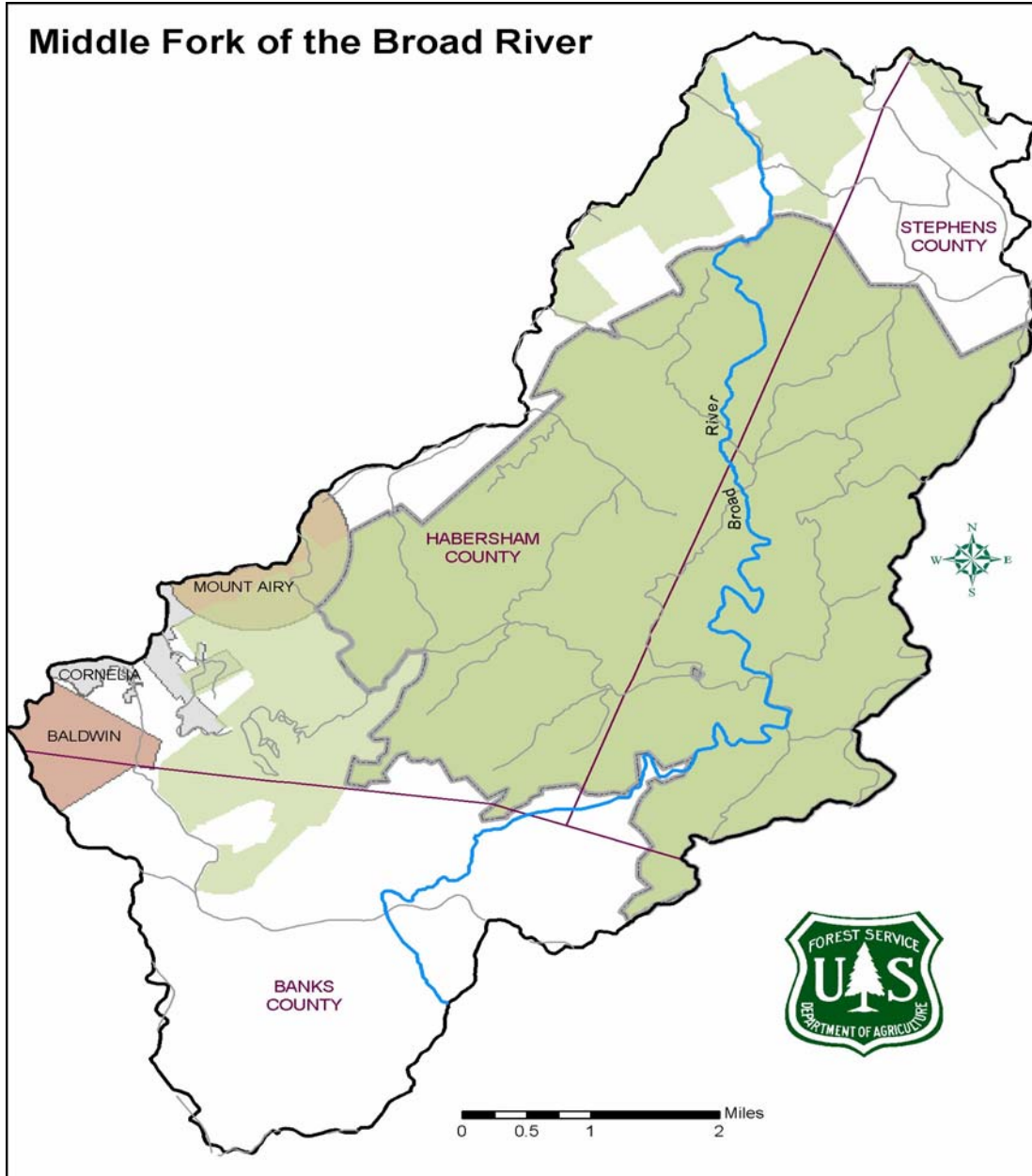
<p style="text-align: center;">Desired Condition (from Forest Plan)</p>	<p>Heritage resources is a broad term that refers to sites that contain remnants of past human behavior, providing clues to how humans used and adapted to the environment over time. The Heritage Resource Program provides a critical role in preserving our nation’s history by identifying, evaluating, protecting, and enhancing heritage sites for future scientific research and public enjoyment.</p> <p>The Heritage Resource Program represents heritage resource values in forestwide management planning, while providing a systematic program of resource inventory, evaluation, and preservation aimed at the identification, enhancement and protection of significant heritage resource values.</p>
<p style="text-align: center;">Related Objectives to move toward Goal</p>	<p>Goal 84 Implement the National Heritage Strategy by identifying, evaluating and preserving significant heritage resources, sharing their values with the public, and contributing relevant information and perspectives to natural resource management and the scientific community. Integration of heritage resource management concerns is emphasized, as is coordination with the public, scientific community, and appropriate federal tribal governments and other ethnic groups.</p>
<p style="text-align: center;">Existing Condition from inventory</p>	<p>After reviewing the current and existing heritage information on file accumulated over the last 29 years, there is a wealth of information on the cultural resources within this watershed. Approximately 7,000 acres within these 19 compartments have been previously surveyed or reviewed in 23 different reports. The previous surveys have been for past timber sales, roads, land exchanges, SPB salvage, prescribed burning, recreation area improvements, trails, and the Passport in Time program. Approximately 200 prehistoric, historic, and WWII period sites are known to exist in the Middle Broad River Watershed on the National Forest. The sites range from in age from 50 years old to 10,000 years old.</p> <p>Between 1989 and 1993, a historical research project was developed to identify and record as many sites in the Lake Russell area using local history buffs and family members who used to live within the bounds of this area. This area is proposed as a National Register District within the Lake Russell WMA boundaries that incorporates the Middle Broad River Watershed. The Middle Broad River archeological district is a historically rich area that prior to the government acquisition in the 1930s was once six communities that contained their own churches/schools, post offices, homes/farms, and mills. These communities were purchased in the late 1930s to establish a wildlife refuge to restock the forests and streams with animals and fish on severely farmed over land. Hundreds of families lived in the area, and some of them and their descendents helped us</p>

	<p>identify many of the old home places. From October 1991 to April 1992, these six now extinct communities were intensively surveyed to record houses, mills, schools, churches and many other unusual features. The project was undertaken through the Passport in Time program. The project is still continuing today with the volunteer group Faded Footprints of Friends and Families (FFFF) continuing to locate and record more home places and features from the late 19<sup>th</sup> to early 20<sup>th</sup> century. The area is also rich in prehistoric sites as well. One of the prehistoric sites in the district, a rock shelter site was also the site of another Passport in Time project in 1994. There is also the WW II mid century history component in the area as well. Several sites were used for munitions dumps, artillery ranges, and trash dumps in the district as well. This Middle Broad River Watershed is rich in prehistory and history. Many of the historic sites have been interpreted with small signs acknowledging the people and events that occurred at the different locations.</p>
<p>Opportunities and Possible Management Practices</p>	<p><i>Of the 200 sites found in the watershed, many of these will need protection. These sites will be identified and addressed when projects are proposed in those locations. Some sites may need to be reassessed. There are approximately 20 known cemeteries within the watershed and all of these will need to be protected. Several of these are small, some with 1-3 graves, and not well marked while others are large, and well maintained and have fencing surrounding the cemetery. All sites needing protection will be marked on the ground prior to any ground disturbing activities. Forty-three historic sites have had interpretive signs installed by the FFFF Volunteer group. Seventeen signs are found at cemeteries, 20 at old home sites, and there are a few other signs for mills, waterfalls, and one prehistoric site.</i></p> <p><i>The GIS survey data needs to be updated to the current year this project is funded. The Atlas maps were updated during this assessment and all current data was added to those maps. All new site locations also need to be updated into GIS. Many previously recorded sites may need to be updated into GIS as well. The unfinished site data report from 1993 needs to be completed and any new site information from the last 12 years needs to be incorporated into it.</i></p> <ol style="list-style-type: none"> <li><i>1. Reassess the eligibility of known sites, many have an unknown National Register eligibility status, and this will be on a project specific and ongoing basis when projects are proposed</i></li> <li><i>2. GPS all sites in the archeological district, with help from the FFFF group</i></li> </ol>



	<p><i>3. Compile and incorporate new site information into the unfinished report from the last 12 + years of survey data and complete the report Historic Communities of the Lake Russell Wildlife Management Area (background data for the National Register Nomination)</i></p> <p><i>4. All new site locations need to be updated and incorporated into GIS</i></p> <p><i>Complete the National Register District Nomination for the Archeological District</i></p>
Remarks	N/A

# Land Ownership Map



Ownership	Acres
National Forest	15,140
Private	9,733
Total	24,873

Lands Information

Desired Condition (from Forest Plan)	The primary goal of lands management within the Middle Fork of the Broad River watershed, as with the rest of the Chattahoochee NF, is to consolidate national forest system lands where possible to improve management (Plan, p. 2-68).
Related Objectives to move toward Goal	Maintain a proactive program of land acquisition through exchanges and purchases. Land will be acquired primarily to meet resource management needs while following the Land Ownership Adjustment Plan (LOAP) with an overall goal of consolidation (Goal 81, p. 2-68). Divest those properties through land exchange that are isolated, impacted by urban influence, and generally not conducive to NFS lands management (Goal 82, p. 2-69).
Existing Condition from inventory	The Middle Fork of the Broad River watershed is characterized by a fairly large block of NFS land with almost no private inholdings. A significant portion of the watershed is within the Lake Russell Wildlife Management Area. The private inholdings consist of two small tracts of private land in the northernmost part of the watershed primarily occupied by private residences, and a larger block of private land in the same general area that contains the Habersham County Landfill. Mountain Grove Cemetary is located within the south-central portion of the watershed and is also privately owned. Private land borders the NFS land on the northern and western boundaries of the watershed, and NFS land is adjacent to much of the southern and eastern watershed boundaries. The majority of the private lands around the watershed are used for residential purposes, with a smaller amount of land devoted to agricultural uses. The northwestern edge of the watershed is adjacent to the communities of Cornelia and Mt. Airy and therefore has an urban influence.
Opportunities and Possible Management Practices	<b><i>Opportunities for consolidation of NFS lands within this watershed are very limited, but this is not a concern due to the existing ownership pattern. The LOAP, most recently updated in 2002, identified nine (9) tracts of private land within the watershed that would be desirable for acquisition, and the LOAP only identified one (1) tract of NFS land in the watershed for possible divestment. Acquisition of the private tracts identified would generally expand on the existing contiguous block of NFS land, and divestment of the one NFS tract identified would eliminate a small tract of NFS land located in an urban setting. Encroachments on NFS land within the watershed are present and need to be dealt with as they are discovered (usually during landline maintenance).</i></b>
Remarks	A land exchange has recently been proposed in the Chenocetah Mountain area southwest of Cornelia involving a small tract of private land and a small tract of NFS land (both tracts are in LOAP).

### Special Uses Information

Desired Condition (from Forest Plan)	The primary goals applicable to the Middle Fork of the Broad River watershed are to manage special uses consistent with protection of natural resource values, public health and safety, and cost effectiveness (Goal 55, p. 2-49), and to minimize the NFS land area affected by special use permits and their conflicts with other National Forest values (Goal 56, p. 2-49).
Related Objectives to move toward Goal	The primary objectives involve administration of existing special use permits and following the established special use process for processing new special use applications.
Existing Condition from inventory	There are a relatively small number of existing special uses in the watershed. The Georgia Department of Natural Resources holds a permit for the facilities at the checking station on Guard Camp Road. There are three (3) special use permits within the watershed issued to individuals for road access (2) and fencing (1). There are also two (2) permits issued for research within the Lake Russell WMA. The Lake Russell WMA is also host to several recreation events throughout the year, including horse rides, running events, and adventure races. This area is popular for these events primarily due to the presence of the large, contiguous block of NFS land, and the presence of the Lake Russell/Nancytown Lake developed recreation complex. Currahee Mountain and the Frady Branch Trail System also receive use by recreation event permit in conjunction with the Lake Russell complex but are located in adjacent 6 <sup>th</sup> order watersheds (North Fork of the Broad River and Big Leatherwood).
Opportunities and Possible Management Practices	The opportunities for additional special use permits in this watershed in the future are limited due to the land ownership patterns and access already in place. Existing permits will be administered as needed, including regular inspections and monitoring of use. Permits for recreation events and noncommercial group use will be processed as received.
Remarks	N/A

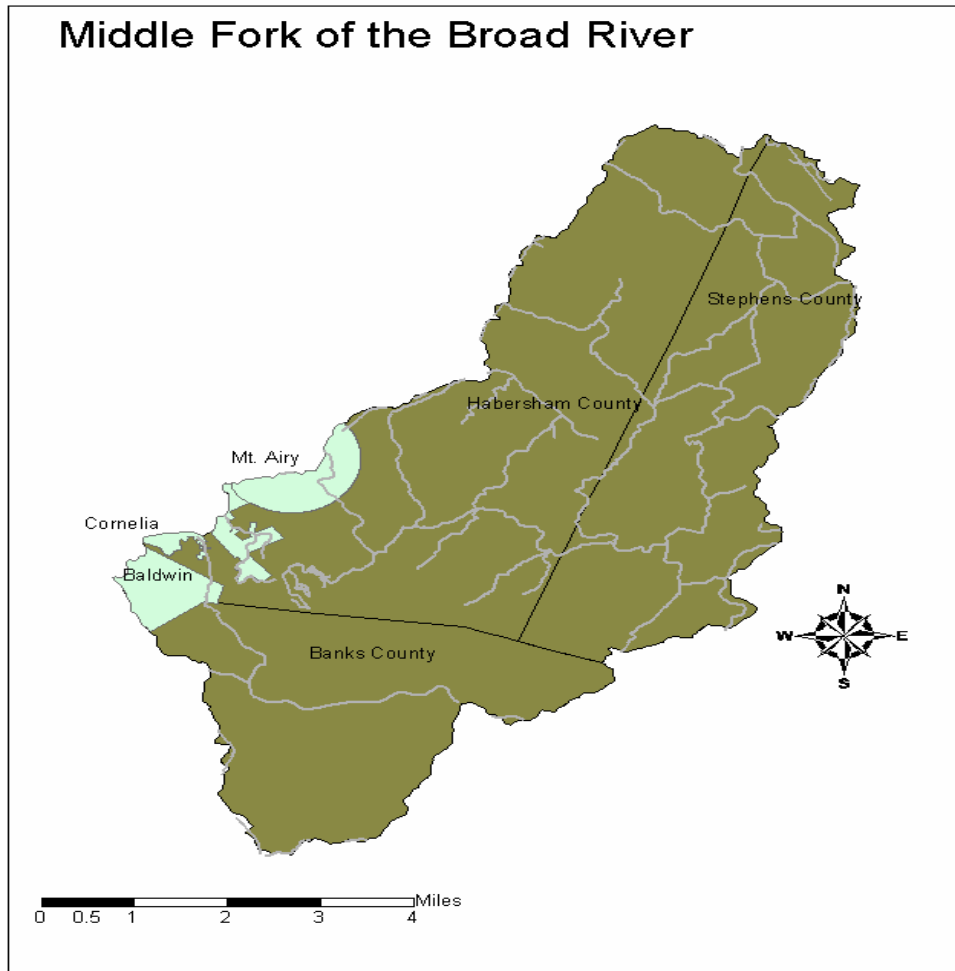
## Fire Management Map



## Fire Management Information

<p>Desired Condition (from Forest Plan)</p>	<p>Fire Management as a program involves both fire suppression and proactively using fire to achieve set goals. In comments received from the public, fire was not an issue. But since planning began, much research and a greater understanding of fire both as a threat and as a tool have occurred. Fire effectively and efficiently reduces the level of hazardous fuels thus reducing risks and costs. Natural ignition, i.e. lightning strikes, of fire is not uncommon and is a valuable ecosystem dynamic within the planning area. Research results are varied but historic human fire use is being increasingly seen as a crucial influence on our present forests. Fire was used historically to modify vegetation, and its use continued long enough to have an effect on species composition and arrangement. Conversely, vigorous fire suppression efforts beginning about 1920 have greatly affected the present forest.</p>
<p>Related Objectives to move toward Goal</p>	<p>Goal 67 Reduce the risks and consequences of wildfire through fuel treatments that restore and maintain fire regime condition class 1 to the extent practicable.</p> <p>Goal 68 Support local efforts to create solutions to hazardous fuel conditions, including development of tools or markets traditionally not cost effective.</p> <p>Goal 69 Provide for human health and safety, determine values at risk, and minimize damage to resources</p> <p>Goal 70 Expand the role of fire to recover and sustain short interval fire-adapted systems including allowing lightning-caused fire to function, as much as possible, as a natural process.</p> <p>Goal 71 Participate in research and cooperative opportunities to increase the understanding of burning and smoke management constraints.</p> <p>Goal 73 Develop a Fire Use Program and a Forest fire Management Action Plan. Include all burnable lands in all management prescriptions where the use of fire may achieve the desired conditions and goals outlined in the Forest Plan.</p>
<p>Existing Condition from inventory</p>	<p>Areas are in relatively good condition, except for the accumulation of fuels caused by normal growth processes within the area.</p>
<p>Opportunities and Possible Management Practices</p>	<ol style="list-style-type: none"> <li><b><i>1. Rough reduction burns in Compartments 204, 214, and 215 to enhance upland hardwood-glade communities.</i></b></li> <li><b><i>2. Compartment 217 WUI\Forest Health\Fuels reduction commercial thinnings identified.</i></b></li> </ol>
<p>Remarks</p>	<p style="text-align: center;">N/A</p>

# Roads Map



### Road Jurisdictions within the Watershed

Road Jurisdiction	Total miles within the Watershed
County	14
DNR	2
FS	41
US	6

## Roads Information

Desired Condition (from Forest Plan)	Forest Service roads are the primary means of national forest access, however, they are the source of many concerns. They are the center of negative
Related Objectives to move toward Goal	<p>Goal 58 Improve conditions of needed roads and trails that are adversely affecting soil and water resources</p> <p>Goal 59 Match road management to concerns for public safety, use levels, environmental effects, recreational opportunities, seasonal habitat needs, and cost.</p> <p>Goal 60 Provide a transportation system that supplies the public with safe, high quality access to roaded portions of the national forest</p> <p>Goal 61 Accelerate the pace of closing and restoring unneeded roads and motorized trails.</p> <p>Goal 62 Improve conditions of needed roads that are adversely affecting soil and water resources.</p>
Existing Condition from inventory	The roads show general wear and tear associated with the types of the roads that receive moderate of heavy traffic for the better part of the year. The roads also reflect damage in some areas caused by the excessive amounts of rain that was received as a result of the hurricanes of the 2004-2005 fall season.
Opportunities and Possible Management Practices	<ol style="list-style-type: none"> <li><b><i>1. Post Oak Corner (FS 193) needs heavy maintenance/reconstruction with dozer work and stone</i></b></li> <li><b><i>2. Norton Hill (FS 190), Allen Mtn. (FS 194), Pear Orchard Loop (FS 62A), Stone Grave Ridge (FS 87A), Lathem Rd. (FS 87C), Pumping Station Rd. (FS 89), Kelly Mtn. (FS 92D), and Farmer Mtn. (FS 92F) are in need of heavy maintenance, extensive blading and large gravel applications.</i></b></li> <li><b><i>3. Frady Branch (FS 389 and 389A) is in need of extensive blading.</i></b></li> <li><b><i>4. Currahee Rd. (FS 62) is in need of extensive blading, complete stone re-application and 2 culverts replaced.</i></b></li> <li><b><i>5. Guard Camp Rd. (FS 87), Red Root Rd. (FS 92), and Brown's Bottom Rd. (FS 92B) are in need of heavy blading, large areas of stone replaced, and culvert cleaning.</i></b></li> </ol>
Remarks	N/A



## Process Summary

*What was the make up of your ID team and the means you used to assure interaction between resources?*

Answer- Blaine Boydston, Janice Miller, Andy Gaston, Lynn Smith, Wayne Herron, Tony Roberson, and Mitchell Hardy

*How much time did the ID team put into the assessment?*

Answer- Everyone had different roles and spent various amounts of time on their part.

*Given the time to complete your first assessment, do you feel subsequent watersheds of similar complexity will take as much time?*

Answer- Once there is a given format and an understood complexity, subsequent ones shouldn't take as much time to complete.

*What skills were most lacking? If skills were lacking, will recent position management decisions help with this? Is employee training needed? If so, what kind of training is needed?*

Answer- GIS skills were most lacking on our district.

*While these assessments are supposed to be conducted with information that is currently available, did you find a need to do some field work? If so, what kind of field work was needed? Did you find the existing information you used adequate and of sufficient reliability; such as, CISC, INFRA, NRIS etc?*

Answer- Yes, lots of on the ground field work was needed, due to the lack of stand information. The type of field work consisted of stand composition checks. The aerial photos only show pine vs. other stands, but doesn't separate hickories from oaks from maples. GIS and aerial photos were the main tools used in this project.

*Are there any major changes in the process you would recommend?*

Answer- Knowing what was wanted and the amounts of information needed for this would have been very beneficial. Having a set format reduces the stress and anxiety caused by trying to figure exactly what is the key piece to the puzzle that everyone will be wanting to see.