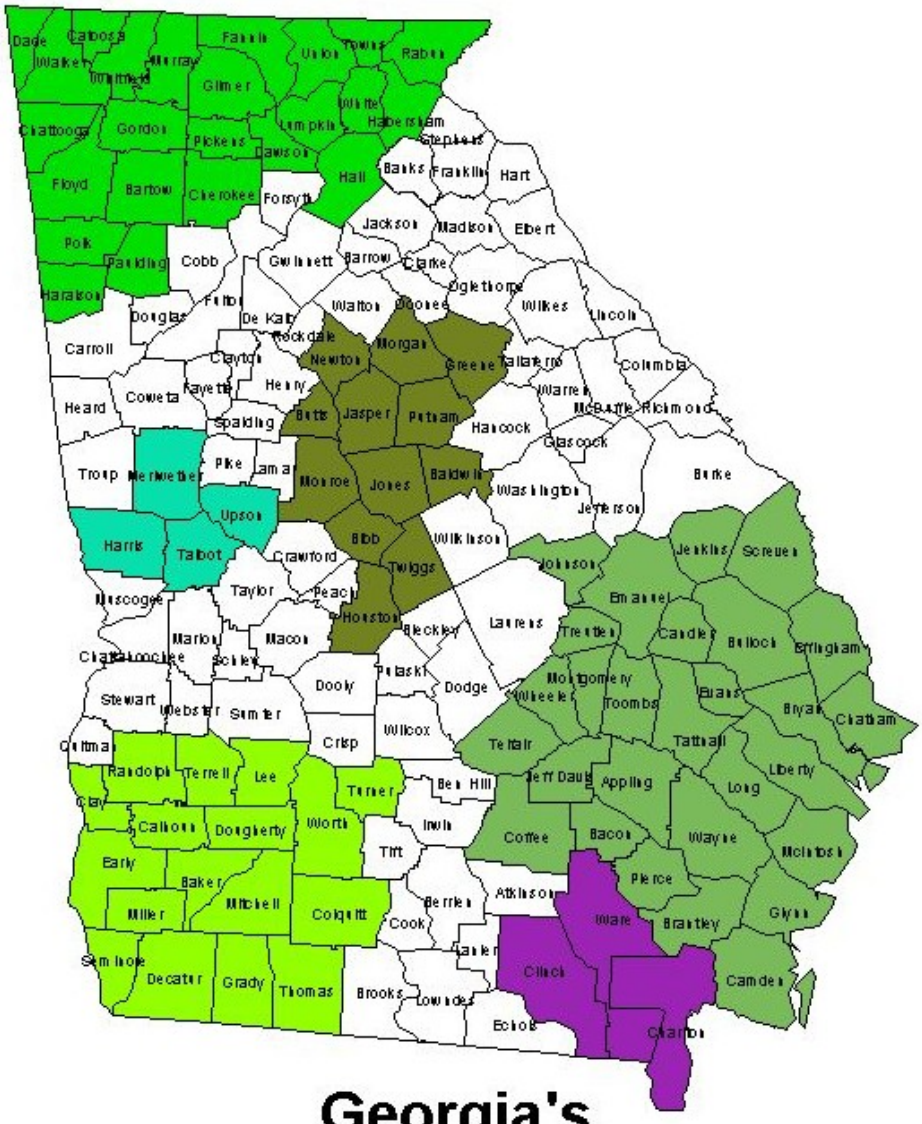
FOREST LEGACY PROGRAM
ASSESSMENT OF NEEDS
FOR
THE STATE OF GEORGIA



Georgia's
Forest Legacy Areas

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INTRODUCTION

Enabling Legislation

The Cooperative Forestry Assistance Act of 1978, as amended, (16 U.S.C. 2103c et.seq.) provides authority for the U.S. Secretary of Agriculture to provide financial, technical, educational, and related assistance to States, communities, and private forest landowners. Section 1217 of Title XII of the Food, Agriculture, Conservation and Trade Act of 1990 (P.L. 101-624:104 stat.3359), also referred to as the 1990 Farm Bill, amended the Cooperative Forestry Assistance Act and allows the Secretary to establish the Forest Legacy Program to protect environmentally important forest areas that are threatened by conversion to non-forest uses. This authority continues indefinitely. Through the 1996 Farm Bill (Federal Agricultural Improvement and Reform Act of 1996; Public Law 104-127); Title III - Conservation; Subtitle G - Forestry; Section 374, Optional State Grants for Forest Legacy Program), the Secretary is authorized, at the request of a participating State, to make a grant to the State to carry out the Forest Legacy Program in the State, including the acquisition by the State of lands and interests in lands. Georgia has requested the State Grant Option.

The Georgia Forestry Commission is the lead agency for the Forest Legacy Program in Georgia (Appendix A). The Cooperative Forestry Assistance Act directs the Secretary to establish eligibility criteria for the designation of Forest Legacy Areas, in consultation with the Forest Legacy Committee (Appendix B) of the State Forest Stewardship Coordinating Committees (Appendix C). These criteria are developed based upon the State lead agency's Assessment of Need for establishing a State Forest Legacy Program. The Georgia Forestry Commission Director, J. Frederick Allen, designated Rick Hatten, Staff Forester, to be the Forest Legacy Program Coordinator for Georgia.

Purpose of the Forest Legacy Program

The majority of Georgia's productive forest lands are in private ownership; these private landowners are facing increased pressure to convert their forest lands to other uses; greater population density and user demands are placing increased pressures on private lands to provide a wide variety of products and services including fish and wildlife habitat, aesthetic qualities, timber and recreational opportunities; and good stewardship of privately held forest lands requires a long-term commitment that can be fostered through a partnership of Federal, State, and local government efforts.

In 1990, the Forest Legacy Program was one of several programs established to promote the long-term integrity of forestlands. The Secretary was directed to establish a Forest Legacy Program in cooperation with State, regional, and other units of government. In carrying out this mandate, the Secretary has been authorized to acquire lands and interests in lands through Fee Purchases or Conservation Easements in perpetuity for inclusion in the Forest Legacy Program. **Landowner participation in the Forest Legacy Program, including the sale of lands and interests in lands, is entirely voluntary**.

Assessment of Need (AON)

The purposes of the AON are:

1. To document the need for a Forest Legacy Program in Georgia;
2. To identify and delineate the boundaries of forest areas meeting the eligibility requirements for designation as Forest Legacy Areas; and
3. To recommend areas to the FS/Secretary for inclusion in the Forest Legacy Program.

EXECUTIVE SUMMARY

The State of Georgia is blessed with a vast forest resource covering nearly 24.4 million acres. The timberland acreage (the acreage available for harvest) is the most of any state in the country. Seventy percent of this land is held by private landowners.

Forestry is the number one industry in Georgia with an economic impact of nearly $20 billion annually. The industry accounts for more than 177,000 jobs. But Georgia is also ranked 3rd in the annual rate of development and has the 10th highest population in the country.

Growth and development are forcing the conversion of forests to non-forest uses. Forested acreage is predicted to be 21.8 million acres by the year 2030, a loss of nearly ten percent of the forest land in Georgia.

This loss of forest land was recognized by the US Forest Service and the Forest Legacy Program was developed in 1990 as a component of the Cooperative Forestry Assistance Act of the Farm Bill. The purpose was to give forest landowners an option other than conversion. The Legacy Program allows the outright purchase of threatened forest land or the purchase of the development rights through conservation easements. The Act was amended in the 1996 Farm Bill to allow state agencies to hold the title or easement on properties in the Program. Prior to that amendment only a federal agency could hold the title or easement.

Governor Roy Barnes in August 2000 petitioned the Forest Service to allow Georgia to participate in the Forest Legacy Program with the Georgia Forestry Commission as the Lead Agency. The Forest Service approved the request pending the development of an Assessment of Needs document and its approval.

A Forest Legacy Committee was selected from the State Forest Stewardship Coordinating Committee to develop the Assessment of Needs document. Additional committee members were recruited from natural resource agencies and organizations with conservation easement experience. Committee members and contact information are included in the Appendix of the Assessment of Needs.

Six Forest Legacy Areas were designated by the committee. Current demographic trends were analyzed along with other selection criteria as required by the national guidelines for the program. The selection criteria included: Aesthetic and scenic values; Fish and wildlife habitat, including threatened and endangered species; Minerals resource potential; Public recreation opportunities; Soil productivity; Timber

management opportunities; Watershed values; Native plant communities; and Connectivity to other significant areas. Also considered were historic uses and projected future uses, cultural resources, outstanding geological features, and other ecological values. While forestlands participating in the program must be working forests, values beyond timber and wood fiber production must be considered. A working forest is defined as forest lands from which specific objectives are derived following the stewardship principles that address timber management, wildlife management, soil & water conservation, recreation, and aesthetics.

The Flint Forest Legacy Area is located in Southwest Georgia. This FLA was nominated because of it's unique biodiversity, longleaf pine restoration, groundwater recharge for Floridian Aquifer. The threats to the forest resource in the Flint FLA are fragmentation/development due to the growth of Albany and Tallahassee, Florida. While forest acres have increased, these values and ongoing work with partners indicated a need to focus in this area. There also is very little publicly owned land in the region.

Specific Goals in the Flint FLA include consolidation, connectivity, and conservation of the longleaf pine/wiregrass system and related natural communities. Protection and improvement of the water supply through groundwater recharge is also a goal.

The Heartland Forest Legacy Area is located in Central Georgia. The threats to the forest resource in the Flint FLA are fragmentation/development, and degradation of water quality.

Specific Goals in the Heartland FLA include consolidation, connectivity, and buffering of public lands. Several state and federal land holdings of significance provide rare opportunity for conservation of forest interior habitat for birds and piedmont wildlife. There is a need to conserve surface water drinking supplies, highly erodible soils need to be protected, air pollution concerns require forests to mitigate.

The Mountain Forest Legacy Area is located across North Georgia. The threats to the forest resource in the Mountain FLA are fragmentation/development, degradation of water quality, and declining water supply.

Specific Goals in the Mountain FLA include protection and improvement of water supply and quality, consolidating and buffering public lands, reducing or limiting residential development.

The Okefenokee Forest Legacy Area is located around the Okefenokee Swamp in Southeast Georgia. The threats to the forest resource in the Okefenokee FLA are mining of underground resources and the subsequent alteration of hydrology, impacts on the recreational and scenic aspects of the swamp, fragmentation/development, and degradation of water quality. There are significant federal and state ownerships in and around the swamp.

Specific Goals in the Okefenokee FLA include protection of the Okefenokee Swamp Ecosystem from mining and buffering public forestlands and swamps with upland forests.

The Pine Mountain Forest Legacy Area is located in West Central Georgia. Threats to the forest resource in the Pine Mountain FLA include fragmentation/development,

degradation of water quality, and declining ecosystems. This area displays a tremendous biodiversity mix of Piedmont, Appalachian and coastal plain species as noted by Harper and others. There is also a unique, geographical East-West ridge orientation. The proximity to the Flint and Chattahoochee River basins provides corridors for species migration.

Specific Goals in the Pine Mountain FLA include consolidation, connectivity, and conservation of the longleaf pine ecosystem, protection and improvement of water supply and quality, and consolidating and buffering public lands and conserved lands.

The SOAR Forest Legacy Area is located in Southeast Georgia and is named for the Savannah, Ogeechee, and Altamaha Rivers. These corridors provide valuable habitat for many declining wildlife species, such as the Swallow-tailed Kite and the Bald Eagle. Bottomland hardwoods and the longleaf pine wiregrass community once were the dominate forest types in this area. Carolina Bays and maritime forests are unique to this part of the state. The threats to the forest resource in the SOAR FLA are fragmentation/development, degradation of water quality, declining water supply, and declining ecosystems.

Specific Goals in the SOAR FLA include protection of the Savannah, Satilla, Ogeechee, Ocmulgee, and Altamaha River Corridors from development. Consolidation, connectivity, and conservation of bottomland hardwoods and the longleaf pine/wiregrass system and related natural communities are important goals along with protection and improvement of the water supply.

THE NEED FOR FOREST LEGACY IN GEORGIA

Currently Georgia has the most timberland of any state in the country, however it is ranked 3rd in the annual rate of development (USDA 1999, Natural Resource Inventory). Georgia now has the 10th highest population in the country with nearly 6 ½ million people (US Census, 2000). The number of private forest landowners is increasing faster than population growth. Private forest landowners own nearly 70% of the 24 million acres of forestland in Georgia and trends indicate that by the year 2010 95% of all private forest ownerships could be in parcels smaller than 100 acres (Hull, 2000). Forestland ownerships are increasing 1.6 times faster than the general population (DeCoster, 1988). Most of these smaller ownerships come from subdividing 100 to 500 acre tracts as estate settlements create smaller parcels for heirs. Minority and poor forest landowners have less land and are having a harder time holding on to their land (Schelhas, 2000). Forest landowners over the age of 50 may sell their land to support retirement and/or pay estate taxes.

Along with estate settlements, another factor driving forest fragmentation in Georgia is urban out-migration. Increases in real incomes caused increase demand for larger homes and more people chose to move to rural areas, where land is cheaper. Former urban residents are purchasing more rural lands for second home development and retirement homes. The trend towards bigger houses uses more forestland to shelter fewer people. Also the amount of land devoted to retail space has increased tremendously.

Figure 1: The Mall of Georgia opened in August 1999 and covers 500 acres.

Georgia had the most tree planting done through the federally funded Conservation Reserve Program, however this was not enough to match the rate of urbanization. The nation's largest tree planning effort could not offset the 3 million acres of forests converted between 1982 and 1997 (Alig et al, 2000).

Industrial forestland is being threatened by conversion to non forest use. Also, some environmentally important natural forestland is being altered by inappropriate management practices for that site. Most of the 40 million acres owned by industry in the South is concentrated in the Coastal Plains where soils are productive and growing seasons are long. Approximately 45% of these industrial forests are mixed hardwood – pine or hardwood forest types (Lancia, 2000). At the regional scale, these industrial forestlands provide important connectivity and habitat. The trend of this major forestland holder is to sell as sites become more valuable for development. If these lands are located near active real estate markets there is a tendency for industry to sell in order to maximize company profits (Luloff, 2000). Timber Investment Management Organizations (TIMOs) are buying and managing timberland for pension and investments funds with a high rate of turnover, as their interests are financially based (Sampson, 2000).

The environmentally important natural forestland is the most threatened habitat type, because of decades of loss. One such forestland is the longleaf pine forests of coastal Georgia that still have native groundcover and the associated wetlands and hardwood bottoms found in a natural system. Frost (1993) estimated the pre-settlement range of longleaf pine at 92.5 million acres. Today, less than 3% of the original longleaf pine forests remain (McGee, 1998). By 1955, only 12.2 million acres of longleaf pine forests remained in the Southeast, and in 1985, only 3.8 million acres remained (Kelly and Bechtold, 1989). A recent estimate (Frost, 1993) calculated the remaining acreage of naturally regenerated longleaf pine forests at approximately 2.6 million acres. Using 1989 forest survey data, Outcault and Sheffield (1996) estimated the acreage of longleaf pine in Georgia at about 500,000 acres. According to McGee, approximately 113,000 acres of this is on private lands, the remainder is found on public lands such as Fort Stewart.

Georgia's longleaf pine forests provide habitat for more than 170 species of rare plants and animals. Some longleaf pine savannas have the highest values of diversity for plant species in the world. Georgia occupies the geographic center of this once vast ecosystem, and has approximately a third of the 60 types of longleaf pine forests recognized (McGee).

GEORGIA'S FOREST LEGACY PROGRAM - GOALS

The goals of Georgia's Forest Legacy Program are to protect environmentally important forest areas that are threatened by conversion to nonforest uses and to promote working forests and other conservation opportunities. A working forest is defined as forest lands from which specific objectives are derived following the stewardship principles that address timber management, wildlife management, soil & water conservation, recreation, and aesthetics.

Environmentally important forest areas shall contain multiple combinations of the following important public values and shall be ranked through a system based on these values: (This list does not indicate or imply an order of importance.)

1. Scenic resources;
2. Public recreation opportunities;
3. Public education opportunities;
4. Riparian areas;
5. Significant groundwater recharge areas;
6. Wetlands;
7. Fish and wildlife habitat;
8. Native plant communities;
9. Connectivity to other significant areas and other protected lands;

10. Known threatened and endangered species;
11. Known cultural resources;
12. Other ecological values; and

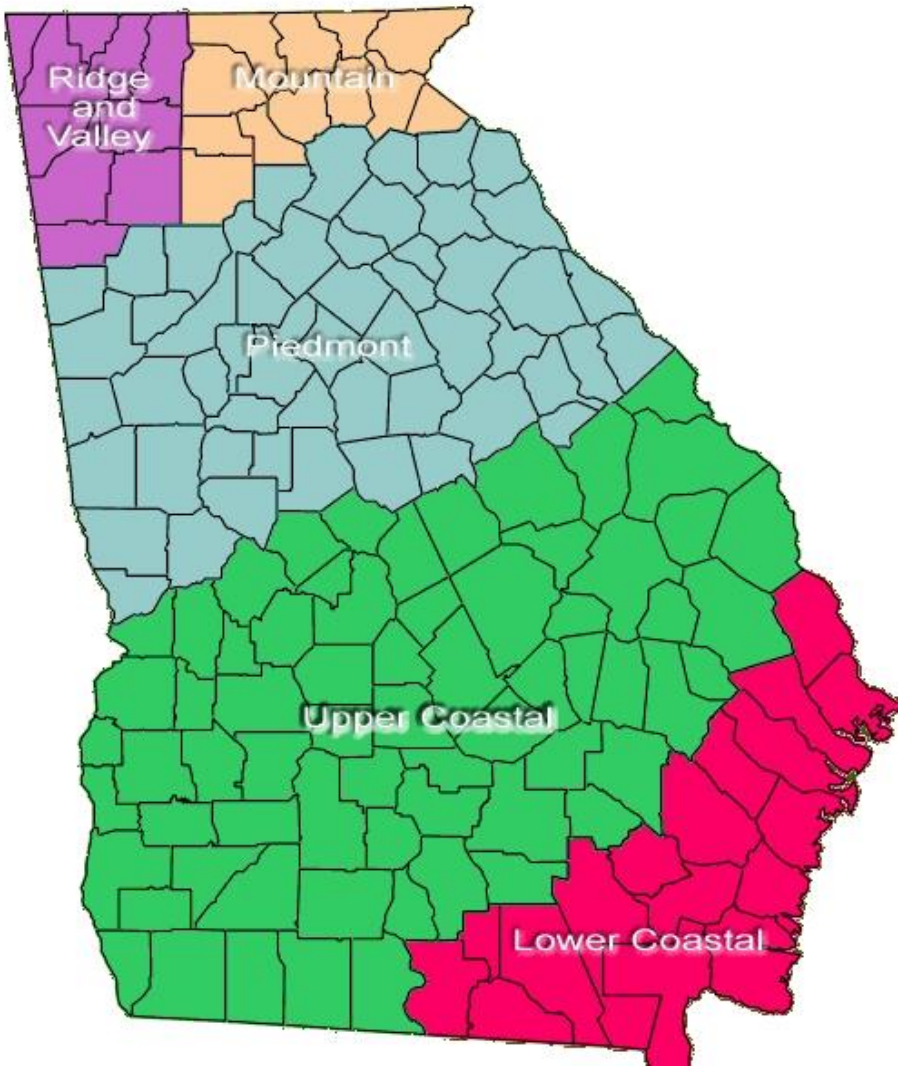
These forests should provide opportunities for the continuation of traditional forest uses, such as ecology based forest management, sustainable timber harvesting, and outdoor recreation, as defined in the AON.

Since many tracts may qualify for the FLP, eligibility criteria has been established in order to prioritize acquisition proposals. The eligibility criteria should meet the same criteria used for selecting the Forest Legacy Areas (page 31) and further prioritization can be accomplished by using Georgia's Forest Legacy Program Evaluation Form (Appendix H).

Lands and interests in lands identified within a FLA may be acquired under FLP authority by the State, only on a willing seller/willing buyer basis.

GEORGIA'S FOREST RESOURCE – TRENDS AND THREATS

Timber Resource - Georgia is blessed with a great diversity in her forests. There are forests specific to each of the major physiographic regions (see map) of the state with a wide variety that are shared across the regions.



The Cumberland Plateau and Ridge & Valley Regions lie in northwest Georgia. They are characterized by long ridges, often with sheer rock faces, separated by broad, flat valleys. Common forests are pines and cedars, mixed pine-oak stands and a variety of red oaks, white oaks, and other hardwoods.

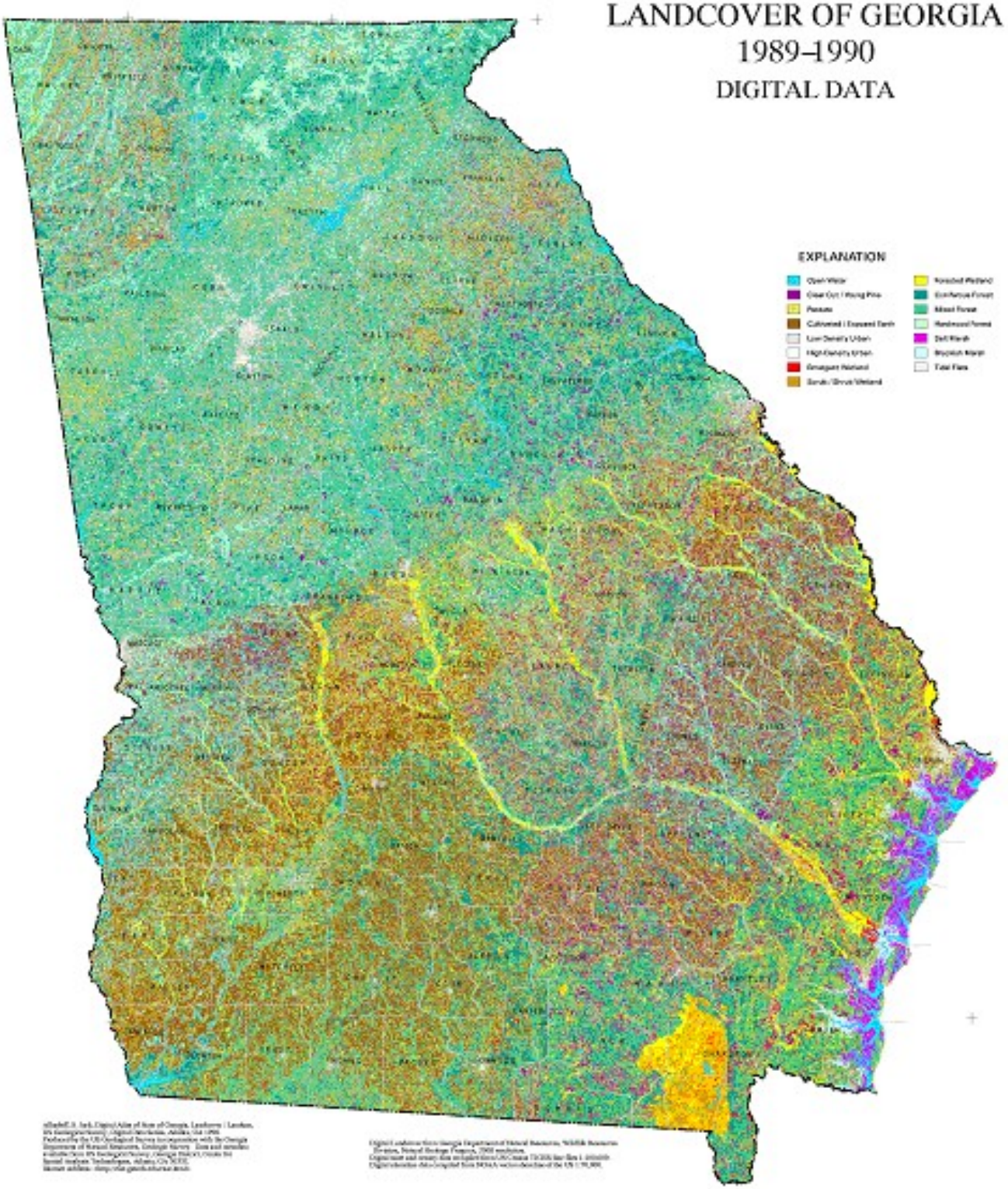
The Mountain Region is in northern and northeastern Georgia, an area also known as the Southern Appalachians or Blue Ridge. This area is considered to have been a mountain mass for hundreds of millions of years and has one of the oldest collections of plants in North America. Hardwoods are the dominant group of forest trees with oaks and hickories common over the entire region. Yellow poplars, maples, basswood, and beeches are also common especially in the coves. Virginia pine and shortleaf pine

occur in natural stands along with stands of white pine and hemlock at higher elevations. Loblolly pines are common in plantations.

The most distinctive feature of the Piedmont is the terrain with a very obvious geologic break along the Fall Line. The Fall Line is a division between the relatively flat Coastal Plain and the hilly or rolling land of the Piedmont. This feature lies roughly along a line from Augusta through Macon then to Columbus. Loblolly pine and shortleaf pine naturally occur in this region and are the primary pine species here. Loblolly pine is the primary species used in plantations. This region is predominately hardwoods however. There is a great mixture of hardwoods with oaks, hickories, yellow poplars, and sweet gums as the more important species.

The Upper Coastal Plain is called the agricultural zone of Georgia. Over the years many of the farm fields have been converted to pine plantations, primarily slash pine at the lower boundary and loblolly pine northward to the Fall Line. Recently, longleaf pine plantations are being established on suitable sites. Hardwoods are present with red and white oaks in bottomland areas.

Slash pine is the timber species of choice in the Lower Coastal Plain. Vast plantations are managed for wood and fiber production. Longleaf pine plantations are also becoming popular in recent times. Loblolly pine is also of economic importance here. Water oak, laurel oak, and southern red oak along with magnolia, cypress, and black gum are important hardwood species in this region.


LANDCOVER OF GEORGIA
1989–1990
DIGITAL DATA
EXPLANATION

Wildlife Resource – Hunting is an important social and economic activity in Georgia. According to a US Fish and Wildlife Survey Report, in 1996, 403,000 hunting licenses were sold in Georgia and hunting has an overall economic impact of $1.78 billion. Georgia Department of Natural Resources Wildlife Resources Division (WRD) manages state-owned wildlife management areas (WMAs) across Georgia for the benefit of the wildlife resource and to provide recreational opportunities for the citizens of our state. State-owned WMAs are present in each of the suggested FLAs. WRD maintains hunter visitation to some WMAs for big game species only, especially white-tailed deer and wild turkey. These data are a small representation of the annual visitors to our WMAs and represent only a fraction of the people who use our state-owned lands for hunting, fishing, wildlife viewing, camping, hiking, horseback riding, and the other recreational opportunities available on public lands in Georgia. During the 1999-2000 hunting season, a total of 50,000 resident and non-resident WMA licenses were sold. These licenses are required for anyone who hunts and/or fishes on a WMA in Georgia. In addition, 30,058 resident Sportsman licenses were sold during the same period, bringing the total of individuals licensed to hunt and/or fish on Georgia's WMAs to 80,058. This total gives a closer minimum estimate of WMA use by hunters in Georgia than counting only big game hunters who utilize particular WMAs.

According to the responsive management survey conducted in 1991 for WRD by the Responsive Management National Office and entitled *The Public And Wildlife Management In Georgia: Survey I,* 84% of Georgians supported, or strongly supported, efforts to protect additional lands, including acquisition efforts. Also, unpublished data from WRD indicates a positive correlation between WMA license sales and total # of WMAs available for recreational opportunities, again pointing to the importance of land acquisitions to the public.

Fisheries Resources

Fishing is one of the most popular wildlife related activities in Georgia, enjoyed by over 1.15 million anglers representing every age group. The total number of fishing licenses sold to anglers in Georgia for 1999 was 805,052, including 141,256 trout stamps. The State's diverse freshwater fishery resources include over 4,000 miles of trout streams, 12,000 miles of warm water streams and half a million acres of impoundments. Anglers spend almost $500 million yearly on fishing in Georgia which generates an estimated 14,700 jobs and has a total economic impact of over $900 million.

Soil & Water Resources

The total surface area of Georgia is approximately 37.7 million acres, which includes 1.02 million acres of water. Nearly fourteen percent of the surface area is being used for crop production and 57.6 percent was forest land, the largest single land use in the state.

The most significant land use change in the period 1982 to 1992 was the increase of urban lands from 1.8 million acres to 2.5 million acres. There was a slight increase in forest acres during this time period and a majority of that increase was due to tree planting on highly erodible cropland across Georgia.

Soil erosion is not usually a significant problem on most forest lands. The most notable soil resource problems associated with forests include poor regeneration of tree stands and erosion from harvesting operations. Recent statistics indicate significant improvement however.

Wetlands are lands where flooding, ponding, and/or soil saturation are the dominant factors determining the nature of soil development and the types of plants and animals living there. Most of the 6.5 million acres of Georgia's land that are classified as wetlands are forested and are included in the acreage totals for forest land.

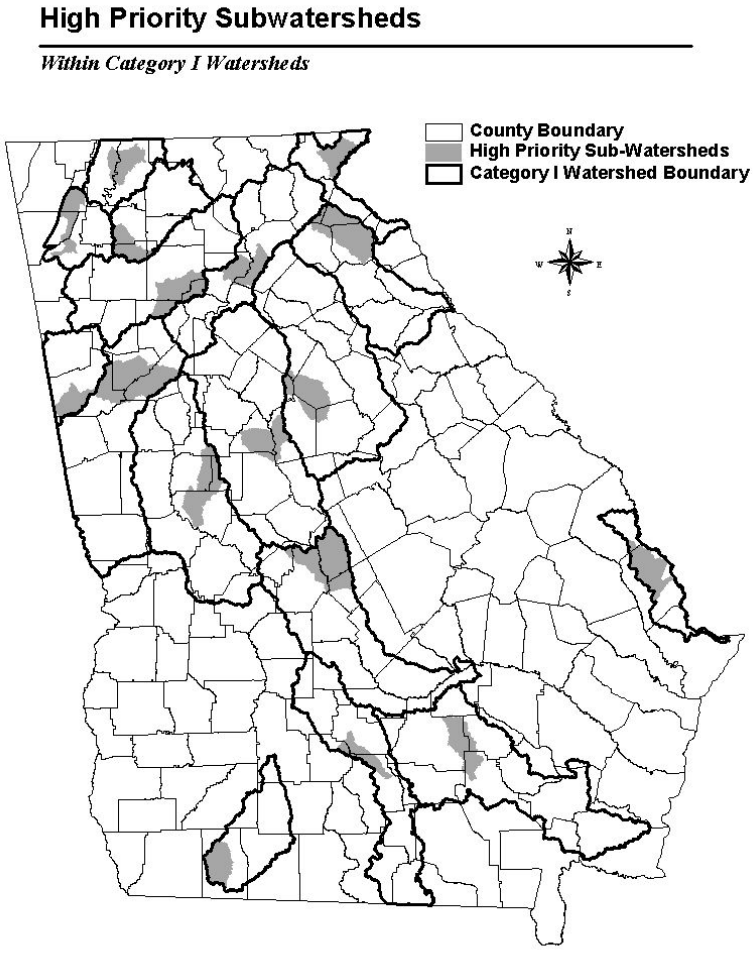
Almost 10 percent of Georgia's cropland is marginal or unsuited for cultivation due to steep slopes or wetness. Erosion on these lands could be reduced to negligible levels if they were converted to a more suitable land use such as pastureland or forestland. (*Georgia's Land: Its Use and Condition*)

Georgia soils are quite productive. One indicator of this productivity is the Site Index. The Site Index is a numeric measure based on the height a tree of a particular species can be expected to grow in a 25 or 50 year period. The rich, bottomland soils tend to have higher Site Indices than the sloped, eroded uplands.

The State Unified Watershed Assessment identifies watersheds that are impaired and most in need of restoration. Seventeen of these Category I watersheds are located in Georgia. These watersheds are the :

Tugaloo River
Broad River
Lower Savannah
Upper Oconee
Upper Ocmulgee
Lower Ocmulgee
Satilla River
Alapaha River
Upper Ochlocknee
Upper Chattahoochee
Middle Chattahoochee
Upper Flint
Conasauga River
Coosawatee River
Oostanaula River
Etowah River
Tallapoosa River

Of these, the Conasauga and the Chattooga Rivers (part of the Tugaloo watershed) have been identified as Large-Scale Watershed Restoration Projects by the US Forest Service.



The two Large-Scale Watershed Restoration Projects were selected to become national prototypes for more visionary management of ailing watersheds and ecosystems. Degradation of these watersheds is being caused by impaired water; declining fish stocks; damaged and destroyed wetlands; increasing risks from wildfire, insects, and disease infestation; impaired recreation and forest resources; increasing threats to water quality caused by road failure and intensive agriculture; eroded stream banks; diminished streamside vegetation; degraded fish and wildlife habitat; and, invasion by nonnative plants. *(US Forest Service Report)*

Water Quality - Clean water is fundamental to life, required by all plants and animals. Water is used by the people of Georgia to support many activities, including water supply for domestic and industrial purposes, maintaining fisheries, agricultural uses, and recreation. The Georgia Water Quality Control Act of 1964, as amended, authorized the Board of Natural Resources (the Board) by rule to establish water-use classifications and designations for all surface waters. The current water-use classifications are: wild river, scenic river, drinking water, recreation, fishing, and coastal fishing. The Board also designated some rivers as primary or secondary trout waters. It has added a special designation of Outstanding Natural Resource Water (ONRW), but has not yet designated these waters. Only the Savannah harbor is designated as coastal fishing.

The Rivercare 2000 River Assessment considered only those stream segments in the following water-use classifications:

- Wild and scenic rivers: no formal definition of these categories exists. They include rivers which the Board has designated as wild or scenic and in which there shall be no alteration of natural water quality from any source.
- Outstanding natural resource water: waters of National or State parks and wildlife refuges, and waters of exceptional recreational or ecological significance.
- Primary trout waters: waters which support self-sustaining populations of rainbow, brown, or brook trout.
- Secondary trout water: waters with no evidence of natural trout reproduction, but capable of supporting trout throughout the year.
- Drinking water: waters approved as a source of drinking water systems, either now or to be permitted by the Environmental Protection Division (EPD).
- Recreation: waters approved for general recreational activities, such as water skiing, boating, and swimming.

For each classification, the Board has developed water-quality standards of criteria which establish the framework which EPD uses in making regulatory decisions. The standards include criteria for dissolved oxygen, pH, temperature, and fecal coliform bacteria. In addition, there are general narrative criteria and specific standards, such as provisions for control of toxic substances, which apply to all waters.

Values were assigned to water-use classifications and designations as follows:

Value Class	Basis of Rating
Superior	Segments with water-use classifications of wild river, scenic river, or outstanding national resource waters
Outstanding	Segments designated as primary or secondary trout streams
Significant	Segments with water-use classifications of drinking water or recreation. (Segments classified as recreation are generally included in major impoundments.)

Currently, 88 miles of river segment have the Superior Value Class, 1,613 miles are rated as Outstanding, and 3,154 have the Significant rating. Segments classified as fishing or coastal fishing were not evaluated. It did not consider whether river segments fully support the water-quality standards for the classifications or designations.

The Board of Natural Resources establishes water-use classifications and designations for Georgia's rivers. However, some river segments are listed as not fully supporting their designated uses, because they do not fully meet water-quality standards. EPD collects and evaluates water-quality data, and lists waters which support, partially support, and do not support their designated uses. Historically, EPD has monitored about 14% of the state's perennial streams, concentrating its efforts in areas with water-quality problems.

The pollution impact on Georgia rivers has shifted radically over the last two decades. Most rivers are no longer dominated by untreated or partially treated sewage discharge which resulted in little or no oxygen and little or no aquatic life. The sewage is now treated, oxygen levels have returned and fish have followed. However, another source of pollution continues to affect Georgia rivers. That source is referred to as nonpoint-source pollution and consists of mud, litter, bacteria, pesticides, fertilizers, metals, oils, suds, and a variety of other pollutants being washed into rivers by stormwater. This form of pollution, although somewhat less dramatic than raw sewage, must be reduced and controlled to fully protect Georgia streams. (*Georgia Rivercare 2000 River Assessment*.)

Water Supply – Stream segments are important as water-supply sources if they can produce amounts of treatable raw water which are large enough to justify developing the sources. Communities have already developed and are using some of these segments.

However, Georgia's population is growing, especially in urban areas. Even with significant efforts to decrease growth in water demand, many communities will require new water supplies. Streams which can provide those future supplies are critical resources.

Moderate-to high-yield watersheds near areas with high projected demand will be particularly important as regional water sources. However, native plants and animals also depend on enough water remaining in stream flows, and water planners must consider their needs. The river segments that are most valuable for new water supplies are those which have enough water for regional use, above a minimum instream flow which protects ecosystem functions.

Currently, the northern portion of state relies primarily on surface water for water supply, whereas the southern portion of the state relies primarily on groundwater. Large supplies of groundwater are not generally available north of the Fall Line, which extends roughly from Augusta through Macon to Columbus. Surface water will be a critical resource for future supply north of this line. Though plentiful groundwater is expected to remain the primary source of water supply in the coastal plain, which lies south of the Fall Line, some increased demand is likely for surface-water-supply withdrawal in some parts of this region.

The amount and quality of water available at any point in a river depend on the stream segments which contribute flow to the point. However, the entire watersheds of those stream segments affect the quantities of water and pollutants which enter the river. This assessment of water-supply resources and the tools for their management therefore includes upstream segments. It is based on an integrated consideration of watershed characteristics and their impact on water-supply resources.

River segments in watersheds which can meet future water-supply needs in high-demand areas were considered Superior or Outstanding. These segments were scored using four criteria in order to decide their value class. Each criterion contributed between zero and three points to the segments total score. The first criterion is based on the relationship between estimated watershed discharge and the demand projected for demand clusters near the watershed. The remaining three criteria consider watershed characteristics. Two of these, land cover and the number of major wastewater discharges in each watershed, suggest potential adverse impacts on available water quality or quantity. Presence of public lands in a watershed, the final criterion, identifies opportunities for cooperative management to protect future water supplies.

Segments are considered significant if they have permitted withdrawals as of 1986, but do not have the capacity to meet future needs, or are too remote from projected demand centers. These segments have value for water supply because of their current use. However, their estimated discharge or their remoteness from projected demand centers makes them unlikely to help provide future water supply in high-demand areas.

Value Class	Basis for the Segment Rating
Superior	Segment earns 8-12 rating points (actual range of scores 8-10 points)
Outstanding	Segment earns 0-7 rating points (actual range of scores was 5-7 points)
Significant	Segment has surface-water withdrawals permitted by EPD as of 1986, but it does not have the capacity to meet future needs or is distant from a projected demand center

About 60 segments of river were identified as Significant water-supply resources. Many of them contain more than one surface-water withdrawal. As described above, they have value as water-supply resources because of their current use. However, they are not likely to help meet future water needs in projected demand areas.

Seventy watersheds can help meet future water-supply needs in high-demand areas north of the Fall Line. On the map of water-supply resources, rivers mapped in blue (Superior) and green (Outstanding) identify these segments. The map shows all segments in a watershed as Superior or Outstanding water-supply resources. However, only the lower reaches of the main river which drains the watershed have enough discharge to meet future needs. Since upstream segments contribute to that discharge and affect the quality of water available at that point, they are a crucial part of the water-supply resources. The entire watershed contributes to the value of water-supply resources.

Of the 70 watersheds, 39 rank as superior water-supply resources. These watersheds have a combination of desirable discharge and watershed characteristics. Thirty-one of these watersheds rank as outstanding water-supply resources. These waters have sufficient discharge and lie in proximity to projected demand centers, making them important resources for future water supply. However, activities in the watershed may reduce the quality of the river segment for water supply, unless watershed management is effective.

Value Class	Number (Percentage) of Segments
Superior	39 segments (30%)
Outstanding	31 segments (24%)
Significant	60 segments (46%)

Information on water withdrawals was readily available only for permits issued through 1986. Since then, some river segments not included in this assessment may have received withdrawal permits, and some amounts permitted may have changed. These facts may affect the assessment results in at least two ways:

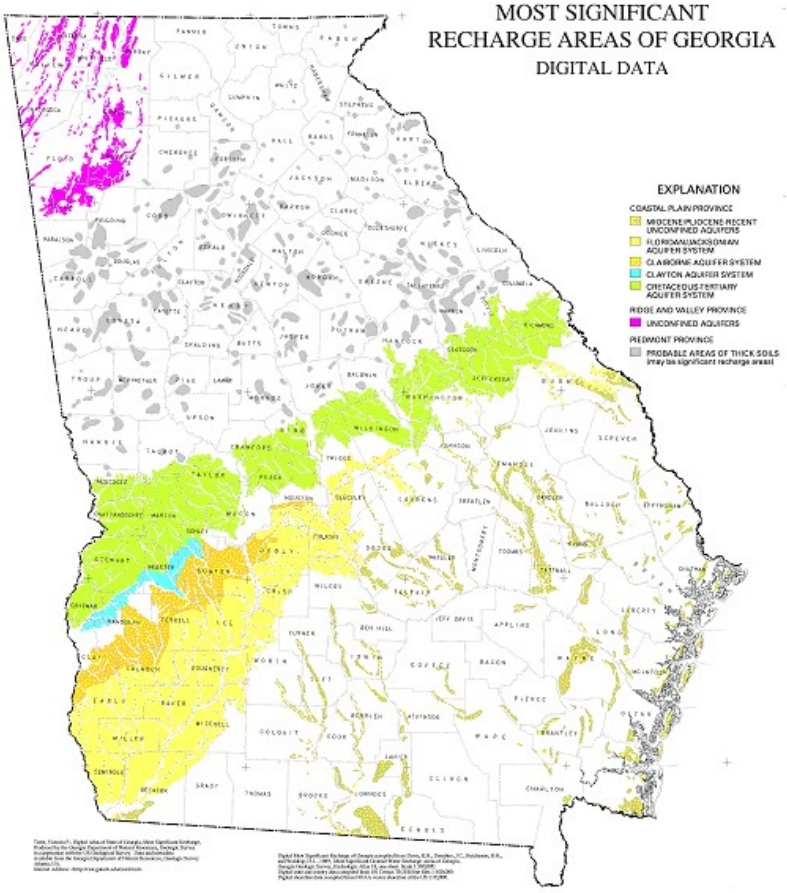
- River segments not included which do currently have permitted water withdrawals would qualify for a Significant rating.
- At least one river segment rated currently does not have a permitted water withdrawal and would not qualify for further consideration.

Most municipal and industrial water supplies south of the Fall Line are likely to continue using groundwater. However, at certain locations, there is strong evidence that groundwater is being withdrawn from major aquifers faster than infiltration replenishes it. In Savannah and Brunswick, massive groundwater withdrawals have caused pressure in the aquifers to fall; salt water is beginning to enter the aquifers. Withdrawals for municipal, industrial, and agricultural use have combined to lower pressure in the aquifer near Albany, as well. It may become necessary for these and other communities to begin using significant quantities of surface water. This assessment did not evaluate river segments south of the Fall Line for their potential to supply large quantities of water.

The water-supply resources identified are currently of high quality and value. The greatest threat to water-supply resources is the effect of human activities in the watershed. Clearing vegetation, disturbing earth without adequately controlling the movement of sediment, increasing impervious surface, and related activities in a watershed can alter water quality and patterns of stream discharge. These activities often reduce the value of streams for water supply.

Unless communities manage watershed impacts, less clean water will be available for existing and potential supplies, and the cost to prepare it for use will increase. Managing watersheds to protect water-supply resources can decrease treatment costs, maintain options for future water use, and contribute to healthier riverine systems, enhancing many other resource values described in this document. . (*Georgia Rivercare 2000 River Assessment*.)

Groundwater Recharge – The primary zones for replenishing the underground aquifers of Georgia are located in a band south of the Fall Line and in Southwest Georgia over the Lime Sink Region. The Floridan Aquifer is the major source of drinking water for the coastal zone. It also supplies an immense amount of water for agricultural irrigation. Heavy local use has created problems with lowered pressures and salt intrusions. Polluted agricultural drainage into limesinks constitutes a positive threat (Wharton's *Natural Environments of Georgia.*)



Recreation and Scenic Resource - Wildlife watching is Georgia's fastest growing recreational pastime. Nationwide, birding and wildlife watching are second only to gardening as the most popular outdoor recreational activity. Currently, 62.8 million people bird or wildlife-watch in the United States, spending approximately $3.45 billion per year. In Georgia alone (based on 1996 figures) there were 5.5 million wildlife watchers who spent $941 million on this activity.

There are numerous places to wildlife-watch in Georgia, including National Parks and Refuges, and State Wildlife Management Areas. Many of these significant wildlife-watching areas are located in potential Forest Legacy Area Counties.

Archeological and Historic Resource -

Based on projections from current surveys of historic buildings combined with other data from U. S. Census records, it is estimated that there are about 175,000 historic buildings in Georgia at the present time. This includes all buildings 50 years old or older that are historically significant and have retained their historic identity. More than 51,500 historic buildings have been recorded through computerized field surveys; another 50,000 or so are recorded in older paper files (although there is some duplication between the older paper files and the newer computerized records). Previously unsurveyed buildings are being added to the inventory at the rate of about 5,000 per year.

At the present time there is no way to determine how many historic landscapes exist in Georgia. Few historic landscape surveys have been done, and historic landscapes vary greatly in type and size and overlap in many instances (for example, a landscaped yard may be part of a farm which itself is part of a larger agricultural or rural landscape). However, it is clear that many of the state's 175,000 historic buildings are associated with or located within historic landscapes of one form or another (for example, houses in a neighborhood or commercial buildings around a courthouse square).

Nobody knows exactly how many archaeological sites exist in Georgia. Because they are mostly underground, or under water, they are difficult to locate without expert field investigation. At the present time, more than 34,000 archaeological sites have been identified and recorded in the University of Georgia's Archaeological Sites File, but only a very small percentage of the state's land area has been systematically surveyed for archaeological sites. Newly discovered archaeological sites are being reported at the rate of nearly 2000 per year.

Trends - Forestry in Georgia is the state's leading industry. Forestry has a nearly $20 billion impact on the economy and it provides employment for over 177,000 of Georgia's citizens.

The first statewide inventory of Georgia was conducted in 1936 and timberland totaled 21.3 million acres. An inventory in 1961 recorded an increase to 26.3 million acres. Later inventories indicated a decline in forested acres. Today, forests occupy more than 24.4 million acres or about 65% of Georgia's total acreage. (*Georgia's Fourth Forest*, 1988)

Year	Forested Acres
1936	21,300,000
1945	21,107,000
1953	23,969,000
1961	26,300,000
1972	24,839,000
1989	24,136,737
1997	24,412,600
2030	21,800,000

Timberland area – The area classified as timberland (that part of the forestland that is available for harvesting) has increased by less than 1 percent, or by 165,000 acres, since 1989 and now totals 23.8 million acres. Land use changes occurred on 2.0 million acres. Nine hundred and twenty-nine thousand acres of diversions were offset by 1.1 million acres of additions to the timberland base. Tree planting and natural seeding on agricultural land accounted for almost all of the additions. Fifty-six percent of the diversions were the result of forest land conversion to urban and related land uses. Forest clearing for agricultural purposes accounted for 28 percent of the diversions. Forests cover 66 percent of the land area in Georgia. Reserved forest land accounts for 595,000 acres.

Ownership – The area of timberland increased 6 percent on nonindustrial private forest (NIPF) land and totals 17.1 million acres. Timberland controlled by the NIPF sector accounts for 72 percent of the total timberland in Georgia. Timberland under forest industry control dropped 17 percent to 4.9 million acres. Public agencies control 1.8 million acres, or 7 percent of total timberland, an increase of 6 percent since 1989.

Forest type – Forest stands classified as a pine forest type occupy 10.6 million acres, or 45 percent of timberland in the State. Pine stands have declined 2 percent since 1989. The only major pine type to increase was loblolly pine, which increased 14 percent to 6.5 million acres. Slash pine dropped 15 percent to 3.0 million acres and longleaf pine declined 23 percent to 376,000. Recent longleaf pine plantings under the Conservation Reserve Program are not included in this survey period. Old growth longleaf pine forests have continued to decline. Georgia's longleaf pine forest provide habitat for more than 170 species of rare plants and animals. Planted pine stands increased from 5.0 to 6.1 million acres and now account for 57 percent of all pine stands in Georgia. Oak-pine stands increased 17 percent to 3.6 million acres. Hardwood stands were up 1 percent to 9.2 million acres. The predominant hardwood type of oak-hickory decreased 12 percent to 4.8 million acres. Oak-gum-cypress increased 13 percent to 3.6 million acres. Hardwood types currently account for 39 percent of timberland in the State.

Stand treatment – Harvesting and regeneration have been the predominant treatment and management activities in the timberland of Georgia since 1989. Final harvests occurred on 446,000 acres annually; 65 percent of the harvesting activity was in pine stands, 25 percent in hardwood stands and 10 percent in oak-pine stands. The area of new stands exceeded the area harvested by 25 percent. Reforestation and afforestation combined averaged 559,000 acres annually. Fifty-five percent (308,000 acres) involved planting activities. (*Forest Statistics for Georgia, 1997*)

Threats - The South (broadly defined from Maryland around to Texas) grew by an impressive 17% during the 1990's, adding some 15M people to reach a total population of 100M. This gain in population was greater than any other region of the country over the past decade. At the heart of this Southern growth, Georgia's population grew at the phenomenal rate of 26%. (Perry and Mackun's *Population Change and Distribution: 1990 to 2000*)

This population growth, coupled with our sprawling land use patterns, means that the Southeast is now experiencing a rapid conversion of undeveloped land to urban and suburban uses. In a recent study of land conversion nationwide, Georgia, North Carolina, Tennessee, and South Carolina all ranked in the top ten states with respect to the most land converted to developed uses in recent years. (*Summary Report: 1997 National Resources Inventory [Revised December 2000]*)

The average county population density in Georgia is 129 persons per square mile. The highest population per square mile is 2,035 (DeKalb County) and the lowest is 6 persons per square mile (Echols County). Population density in the Greater Atlanta Metropolitan Area (Cobb, Clayton, DeKalb, Fulton and Gwinnett Counties) exceeds 850 persons per square mile.

According to a 1999 study the opportunity for forest management decreases as population density increases. When the population density is more than 150 persons per square mile, then there is little to no chance of forest management occurring. As the population density decreases to 70 persons per square mile, the probability of forest management occurring increases to 25%. As the population density decreases to 45 persons per square mile, the probability of forest management increases to 50%. (*The Effects of Population Growth on Timber Management and Inventories in Virginia.)*

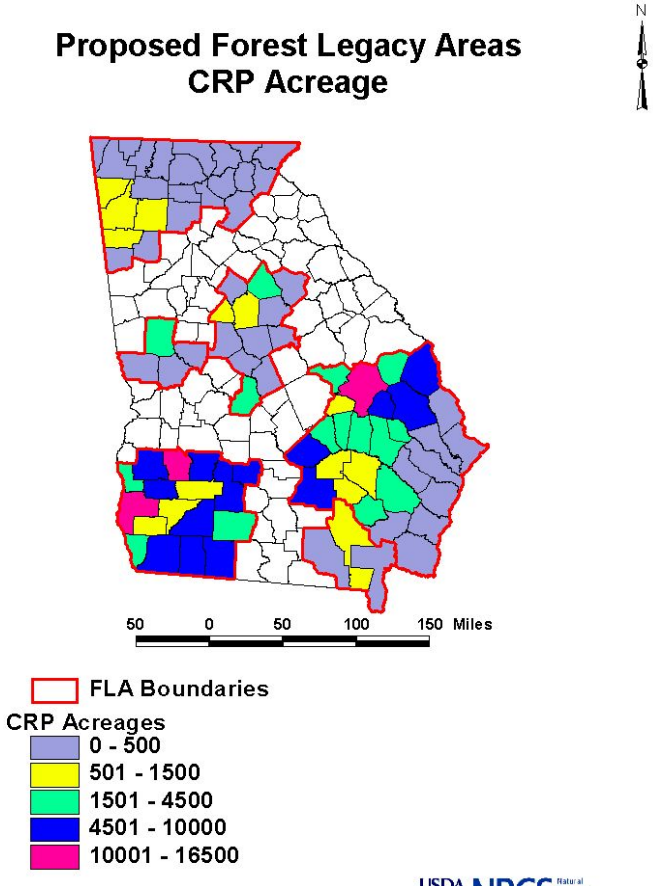
Changes in timber resources in Georgia will be determined in large measure by expansion in population and movement into traditional forest lands, changes in timberland area and ownership, income and economic activities, and the intensity of management and subsequent yield effected by that intensification. Population growth and movement into the forested acreage surrounding urban areas will tend to reduce the timber growing land base and an increased demand for industrial products and fuelwood will lead to greater harvests and reduced inventory unless other factors occur. (*Georgia's Fourth Forest*, 1988)

EXISTING FOREST RESOURCE CONSERVATION PROGRAMS

Federal Programs

Conservation Reserve Enhancement Program (CREP) – CREP provides a flexible and cost-effective means to address agricultural resource problems by targeting Federal and State resources to specific geographic regions of particular environmental sensitivity over a 10 to 15 year period for the Conservation Reserve Program (CRP).

The primary CREP objectives are: (1) to create an opportunity where the resources of a State government and the CRP can be targeted in a coordinated manner to address specific conservation and environmental objectives of that State and the Nation; and (2) to improve water quality, erosion control, and wildlife habitat in specific geographic areas which have been adversely impacted by agricultural activities, with emphasis on addressing non-point source water pollution and habitat restoration in a cost-effective manner.



Conservation Reserve Program (CRP) - This program pays annual payments to landowners who own property with a cropping history. Payments are based upon soil type, amount of acreage and cost to the landowner for establishing cover on previously-farmed land. The intent of

the program is to protect erodible soils by removing them from agricultural production, improve water quality adjacent to agricultural lands, and improve wildlife habitats on the property. Sign-up periods are announced by the Secretary of the U. S. Department of Agriculture. A continuous sign-up is available for high priority practices. These practices are also eligible for incentive payments in addition to soil rental rate and cost-share payments. The Farm Services Agency (FSA) accepts applications for CRP during sign-up periods and the Natural Resources Conservation Service (NRCS) has technical responsibility for the program.

Environmental Quality Incentives Program (EQIP) - EQIP replaced the Agricultural Reserve Program and the Water Quality Incentives Program. This program pays up to 75% of the cost of successfully implementing certain conservation practices. The intent of the program is to identify resource conservation priorities and to address concerns such as soil erosion, water quality, wildlife habitat, waste management, and others. Under EQIP, 50% of program funds are targeted to address live-stock related conservation practices and 65% of funds will be spent in Priority Areas identified through a locally-led conservation work group. The remainder of the funds will target state priority natural resource concerns. Sign-up for EQIP is continuous, but Priority Areas may change on an annual basis.

Forestry Incentives Program (FIP) - FIP is a federal program re-authorized by the 1996 Farm Bill. Payments made to landowners are based upon established cost-share rates for practices such as tree planting, stand improvement, and site preparation prior to natural regeneration. FIP is designed to establish trees or improve a timber stand in order to increase the nation's supply of timber products.

Forest Stewardship Program (FSP) - FSP is a federally funded program administered by the Georgia Forestry Commission and re-authorized by the 1996 Farm Bill. Landowners are furnished a written management plan prepared by professional natural resource managers and tailored to fit the landowner's personal stewardship objectives for the property. To be eligible for this program, landowners must own at least 25 acres with at least 10 acres of woodland. There is no upper limit on acreage. FSP is designed to enable private landowners to manage their land with multiple resource objectives in mind. These objectives include timber, wildlife, soil and water conservation, recreation, and aesthetics.

Partners For Fish & Wildlife (PFFW) - Partners for Fish & Wildlife is a federal program developed and administered by the U. S. Fish and Wildlife Service (FWS). FWS will pay landowners up to 100% of the costs connected with improving wildlife habitats, up to a maximum of $10,000. The primary objective of Partners for Fish & Wildlife is to restore and protect wetlands and other wildlife habitats on private lands. Landowners must maintain the restored area for a minimum of ten years.

Wetlands Reserve Program (WRP) - WRP is a federal program authorized by the 1996 Farm Bill. Landowners receive payments based upon the agricultural value of the land and the duration of the easement placed upon the property. Permanent easements pay the total value of the land and 100% of wetland restoration costs, 30-year easements pay 75% of the land's agricultural value and 75% of restoration costs, and restoration cost-share agreements must be at least 10 years long and will pay 75%

of the restoration costs. The landowner maintains control of all access decisions and retains ownership of the property. The program is designed to improve water quality and restore wildlife habitats by restoring wetlands that have been degraded due to agricultural practices. Sign-up for WRP is continuous and ongoing.

Wildlife Habitat Incentives Program (WHIP) - WHIP is a federal program authorized by the 1996 Farm Bill. Landowners receive up to 75% of the cost of establishing certain wildlife habitat practices on their property. Anyone who owns land or can show that they have control of land for the contract period may be eligible for WHIP. The primary focus of the program is to enhance, create, or restore habitats for upland and wetland species, threatened and endangered species, fish and other types of wildlife. Of particular concern are habitats for threatened and endangered species, bobwhite quail, neotropical songbirds, and amphibians. This includes plant communities such as early succession habitats, upland and bottomland hardwoods, longleaf pine community, and habitats associated with isolated wetlands.

Industry Programs

Tree Farm Program – The American Tree Farm System® is a nation-wide community of more than 70,000 individuals and families joined by their desire for excellence in forest stewardship. To qualify as a Tree Farmer, landowners generally manage at least 10 acres of forest land. They must prepare a written plan that details their management objectives and shows how they will provide for wildlife, recreation, water and soil conservation while producing timber. After their land is inspected, landowners are certified and earn the right to erect the Tree Farm sign. Every five years thereafter, Tree Farms are reinspected to assure that landowners continue to meet the System's forestry certification criteria.

Landowner Assistance Program (LAP) and Management Assistance Program (MAP) – Several companies within forest industry provide landowners with written forest management plans. These plans address timber management primarily with some advice regarding wildlife management. Both of these programs emphasize the importance of following the *Recommended Best Management Practices for Forestry in Georgia* in order to maintain and improve water quality.

Project W.I.N.G.S. - W.I.N.G.S. (**W**ildlife **I**ncentives for **N**on-game and **G**ame **S**pecies) is a private conservation grant program funded by the Georgia Power Company, Georgia Transmission Company, and Metropolitan Electric Authority of Georgia. It is administered by Two Rivers RC&D Council. Grants are based on a three-year management plan. W.I.N.G.S. is designed to enhance wildlife habitats on electric power line rights-of-way. Landowners, hunt clubs, wildlife organizations, or any other individuals interested in creating productive wildlife habitats on Georgia Power Company rights-of-way are eligible to receive grants under this program.

Non-profit Land Trusts and Conservancies

The Conservation Fund – The Conservation Fund is a national non-profit conservation organization that forges partnerships to protect America's legacy of land

and water resources. Through land acquisition, community initiatives and leadership training, The Conservation Fund and its partners demonstrate sustainable conservation solutions emphasizing the integration of economic and environmental goals. Since its founding in 1985, The Conservation Fund with its partners has protected over 2.8 million acres of land valued at over $1.4 billion at a cost of only $589 million. The Conservation Fund strives for absolute efficiency in all its endeavors resulting in ninety-seven cents of every dollar contributed to the Fund going directly toward saving our nation's land and water. Fundraising costs do not exceed 1%, unprecedented in the environmental community.

The Conservation Fund is governed by a Board of Directors consisting of sixteen individuals from various disciplines including business, academia, science, recreation and law. The Conservation Fund is headquartered in Arlington, Virginia with offices throughout America including the Atlanta area. The Atlanta office has had an active program in Georgia and the southeast resulting in protection of premier conservation lands such as the critical 230 acre Nicholson tract on the West Fork of the Chattooga River, the significant 6800 acre Gulf Tract in the Cherokee National Forest containing 6 miles of the Appalachian Trail and the 10,000 acre Bridgestone/Firestone Centennial Wilderness Area along the Caney Fork River in middle Tennessee. Currently, The Conservation Fund is negotiating to protect Connally Park in southwest Atlanta, and working with partners to purchase over 1,000 acres of significant openspace as an addition to Arabia Mountain located just east of Metro Atlanta among other projects.

Georgia Land Trusts and The Land Trust Alliance - Georgia Land Trusts are key stakeholders in Conservation Programs because of their experience, nationwide and locally, with conservation easements. The Land Trust Alliance, based in Washington DC, is the national organization for the 1200-plus land trusts. Established in 1982, LTA serves as an educator, advocate, advisor, and leader for land trusts. It promotes voluntary land conservation and strengthens the land trust movement by providing the leadership, information, skills, and resources land trusts need to conserve land for the benefit of communities and natural systems (*Land Conservation Training 2001*).

The Land Trust Alliance defines a land trust as a “nonprofit organization that, as all or part of its mission, works to conserve land by undertaking or assisting direct land transactions – primarily the purchase or acceptance of donations of land or easements.” There are currently 47 land trusts operating in Georgia. See Appendix D for a listing of each.

The Nature Conservancy – The Nature Conservancy’s mission is to preserve plants, animals, and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.

The Nature Conservancy, a nonprofit organization founded in 1951, is the world's largest private international conservation group. Working with communities, businesses and private landowners, The Nature Conservancy has protected millions of acres of valuable lands and waters worldwide.

The Nature Conservancy uses Conservation by Design as its framework for mission success. The Nature Conservancy’s conservation approach includes:

- Setting priorities through ecoregional planning;
- Developing strategies to conserve both single and multiple conservation areas;
- Taking direct conservation action; and
- Measuring conservation success.

Through sound science, tangible results and a non-confrontational approach, The Nature Conservancy expands the boundaries of conservation to save the Earth's Last Great Places for future generations. The Nature Conservancy has protected 12 million acres in the U.S. and 80 million acres internationally.

Georgia is the largest state east of the Mississippi River, and in terms of natural diversity, ranks fifth in the nation. Only one state has more vertebrate species than Georgia, and only six have more vascular plants. The Georgia Chapter of The Nature Conservancy currently owns and manages 17 preserves and has helped protect over 200,000 acres of habitat across the state.

State Programs

Bobwhite Quail Initiative (BQI) - The Bobwhite Quail Initiative is being implemented by the Georgia Department of Natural Resources, Wildlife Resources Division (WRD). BQI is primarily directed at providing nesting and brood rearing habitat, factors most commonly limiting quail populations across Georgia's landscape. However, these practices should also improve habitats for certain early successional songbird species that also are in serious decline. BQI program practices should reduce soil erosion and improve water quality. Other beneficial aspects may include economic enhancement to local communities from recreational opportunities associated with improved quail hunting and wildlife viewing.

Forestry for Wildlife Program (FWP) - FWP is a comprehensive, formal wildlife conservation partnership program between the Georgia Department of Natural Resources, Wildlife Resources Division (WRD) and corporate forest landowners in Georgia. WRD annually evaluates reports submitted by corporate participants and recognizes those participants for their contributions to wildlife conservation on company-owned lands. Companies participate in all components of FWP, including education & outreach, wildlife management practices, sensitive sites & special concerns, wildlife recreation, and partnerships. Recognition by WRD may include conferring partnership status and various media events each year.

Greenspace – Greenspace is a state program within which developed and rapidly developing counties, and their municipalities, can preserve community greenspace. It promotes the adoption, by such counties and cities, of policies and rules which will enable them to preserve at least 20 percent of their land areas as connected and open greenspace which can be used for informal recreation and natural resource protection. "Greenspace" means permanently protected land and water, including agricultural and forestry land, that is in its undeveloped, natural state or that has been developed only to the extent consistent with, or is restored to be consistent with, one or more listed goals for natural resource protection or informal recreation.

STATE AND FEDERAL LANDS

State agencies in Georgia own 755,943 acres. There are 45 State Parks, 3 State Historic Parks, and 15 State Historic Sites in Georgia. Thirty-eight of these sites occur in FLA counties and comprise a total of over 51,000 acres. These State Parks, Historic Parks and Historic Sites offer a range of recreational opportunities including hiking, camping, wildlife watching, swimming and more, attracting approximately 1.1 million visitors per year.

The Georgia Forestry Commission owns and/or manages six forests across Georgia. The Dixon Memorial Forest in Ware and Brantley Counties is 35,708 acres that is managed for timber production and wildlife habitat. The Dixon Forest is also a Wildlife Management Area operated by the Department of Natural Resources, Wildlife Resources Division. Bartram Forest in Baldwin and Wilkinson Counties covers over 2600 acres and is the former site of a Forest Tree Seed Orchard. It is now being managed as a Demonstration and Educational Forest. As is the 580 acre Spirit Creek Educational Forest in Richmond County. The 4,735 acre Hitchiti Experimental Forest is the core of the Brender Demonstration Forest in Jones County. This is a site of on-going forestry experimentation focused on the Southern Piedmont Plateau.

INSERT MAP

The Dawson Experimental Forest and the Paulding Forest are owned by the City of Atlanta Airport Authority and managed by the Georgia Forestry Commission. Each forest exceeds 10,000 acres and are managed for timber production, wildlife habitat enhancement, recreation, aesthetics, and soil and water conservation. Both forests are also Wildlife Management Areas operated by the Department of Natural Resources, Wildlife Resources Division.

Federal agencies currently own 2,033,996 acres of land in Georgia (less than 10% of Georgia's forested acres.) The US Forest Service has 868,755 acres in the Chattahoochee and Oconee National Forests. The US Department of Defense has 636,909 acres, primarily on military bases and lakes built by the Corps of Engineers. The US Fish & Wildlife Service has 487,159 acres, the majority of which are in the Piedmont Wildlife Refuge, Bond Swamp Refuge, and the Okefenokee Swamp. The USDA Natural Resources Conservation Service has 4564 acres.

FOREST LEGACY AREA SELECTION CRITERIA

The Forest Legacy Committee uses the following criteria when determining a potential Forest Legacy Area:

1. Forested areas threatened by conversion to non-forest use, in both the near and long term;
2. Forest resources including:
    a. Aesthetic and scenic values;
    b. Fish and wildlife habitat, including threatened and endangered species;
    c. Minerals resource potential;
    d. Public recreation opportunities;
    e. Soil productivity;
    f. Timber management opportunities;
    g. Watershed values;
    h. Native plant communities; and
    i. Connectivity to other significant areas.
3. Historic uses of forest areas, and trends and projected future uses of forest resources;
4. Current ownership patterns and size of tracts, and trends and projected future ownership patterns;
5. Cultural resources that can be effectively protected;
6. Outstanding geological features;
7. Demographic trends as they relate to conversion of forest areas; and
8. Other ecological values.

The AON must reflect the direction set forth in the Cooperative Forestry Assistance Act to give priority to lands which can be effectively protected and managed, and which have important scenic or recreational values, timber, riparian areas, fish and wildlife values including threatened and endangered species, or other ecological values.

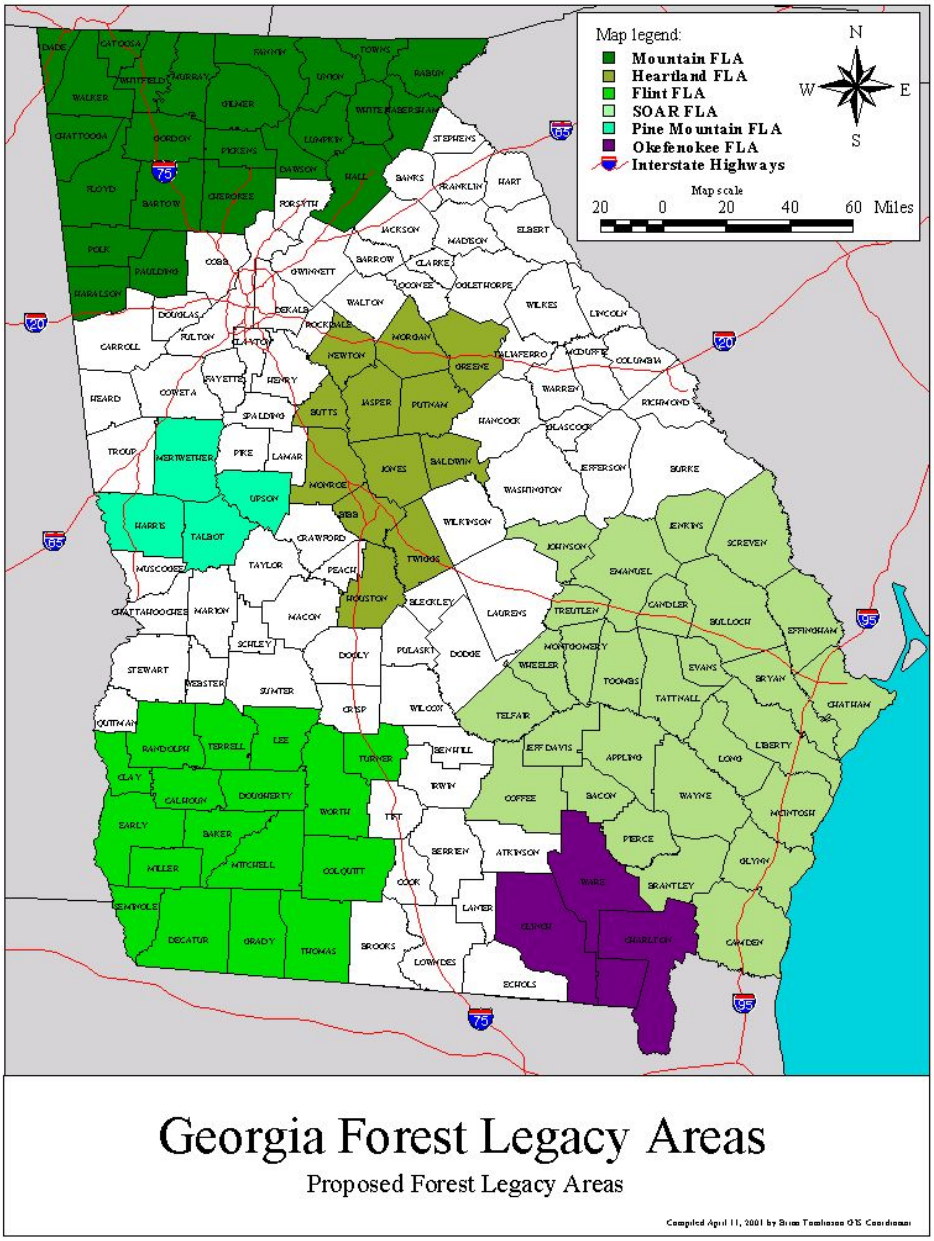
Forest Legacy Area (FLA) boundaries must encompass forestlands with significant environmental and other resource-based values. Areas may also include non-forested areas such as farms and villages if they are an integral part of the landscape and are within the logical boundaries. Since FLA boundaries may not always correspond to property boundaries, tracts located partially within the geographically defined FLA are eligible for the Forest Legacy Program, upon approval of a boundary adjustment.

FOREST LEGACY AREAS – PROPOSED

The Forest Legacy Committee submitted maps of their proposed FLA's along with their justifications for selecting those areas. The committee then met and each member presented their selections. The committee agreed to use county lines as boundaries for the FLA's. County lines are well established and easy to locate. Some areas within a county will meet additional criteria as established in this AON and the Policy & Procedure Manual and these criteria will allow more important properties or areas to be targeted as a participant.

Many of the areas identified in the proposals overlapped. A composite map was created and refined. The proposed FLA's then went from many small FLA's to six larger FLA's. Committee discussion and public input then led to the addition and/or deletion of some Counties.

The committee has reached agreement on these proposed FLA's: The Mountain Forest Legacy Area in North Georgia, the Heartland Forest Legacy Area in Central Georgia, the Flint Forest Legacy Area in Southwest Georgia, the Okefenokee Forest Legacy Area, the Pine Mountain Forest Legacy Area in west central Georgia, and the Savannah-Ogeechee-Altamaha Rivers Forest Legacy Area in Southeast Georgia.



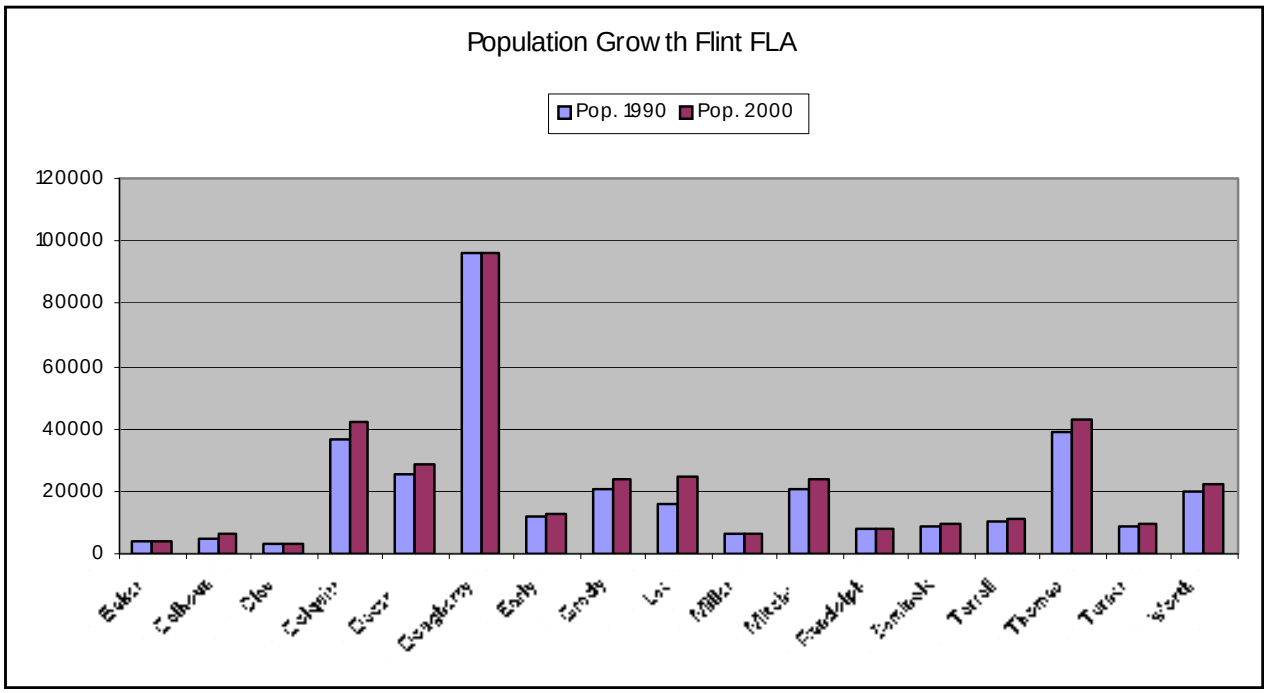
Flint Forest Legacy Area

The following Georgia Counties are wholly within the Flint FLA:

Baker	Dougherty	Mitchell	Turner
Calhoun	Early	Randolph	Worth
Clay	Grady	Seminole	
Colquitt	Lee	Terrell	
Decatur	Miller	Thomas	

Population – Every county within the Flint FLA except Miller County has had an increase in population from 1990 to 2000. Overall, the increase was 10% above 1990 levels from 340,517 to 373,350. The greatest changes occurred in Lee, Dougherty, and Thomas Counties.

Overall, the population density averages 50 persons per square mile. This density level is slightly above the threshold level of 45 that indicates there is a 50% probability that forest management opportunities will exist. Dougherty County is the high with 292 persons per square mile and Clay County is the low at 17.2 persons per square mile. The Dougherty County level is over 3.5 times higher than the next closest county level.



Land Area - The total land area within the Flint FLA is 4,157,700 acres. (From the US Bureau of the Census, 1990.)

Ownership Patterns - Land ownership in the Flint FLA is primarily private ownership, with scattered properties owned by the Georgia Department of Natural Resources: Doerun Pitcherplant Bog NA, Elmodel WMA, Mayhaw WMA, George Bagby SP, Kolomoki Mounds SP, Reed Bingham SP, and soon the Chickasawhatchee WMA.

Threats to the Forest Resource –

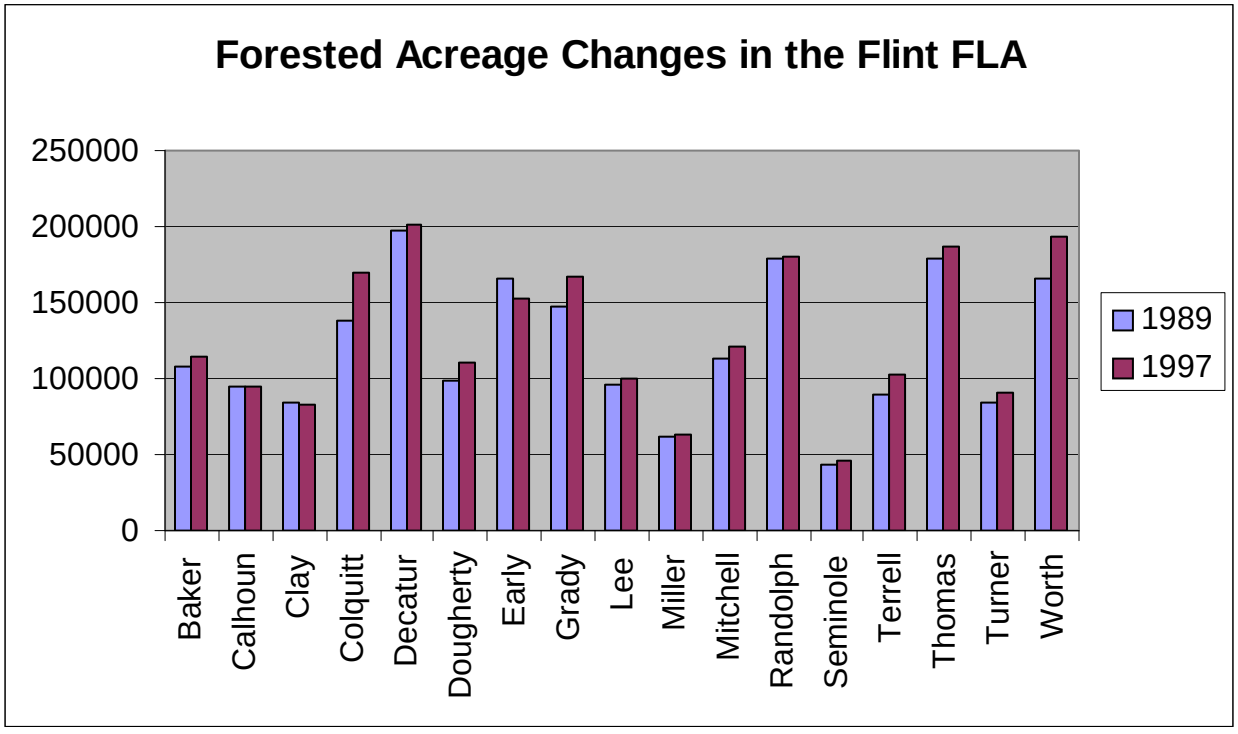
- ❖ Fragmentation/Development – Population growth within the FLA and from Tallahassee, FL are leading to the subdividing and developing of forest lands within this FLA.
- ❖ Water Quality – Important segments of the Chattahoochee and Flint River systems are located within this FLA. Poor land use practices, such as those associated with land clearing for development and road building, negatively effect water quality.
- ❖ Water Supply – These counties cover the majority of the ground water recharge area for the Floridan Aquifer, which supplies drinking water and irrigation for large areas of SW Georgia, SE Alabama, and North Florida.
- ❖ Declining Ecosystems – Some of the last remaining, unbroken tracts of Longleaf Pine and it's associated plant and animal communities are found in this FLA.

FLA Specific Goals – These goals will be the focus for this FLA. These goals fall within those established in Section III, page 9 of this Assessment of Needs. Properties meeting these goals will receive additional scoring in the evaluation process.

- ❖ Consolidate (i.e. connectivity) and conserve the longleaf pine/wiregrass system and related natural communities.
- ❖ Protect or improve water supply through groundwater recharge.

FOREST RESOURCES

Forested Acreage –



Timber Resource – The forest statistics for the Flint FLA indicate a slight increase, less than 6.6%, in forest acreage since 1989. Acreage now totals nearly 2.2 million acres. Approximately 169,400 acres were added to the timberland base, while only 33,500 were diverted from timberland to others uses. Tree planting and natural seeding on agricultural lands make up over 95 percent of the additions. The increase was spurred by widespread tree planting, primarily through the Conservation Reserve Program.

The increase in timberland area occurred in the nonindustrial private forest (NIPF) and public ownership sectors. NIPF owners control almost 1.9 million acres, or 87%, of the total timberland in this FLA, an increase of nearly 2 percent. Public agencies control over 25,200 acres, or about 1 percent, of total timberland, which is relatively unchanged since 1989. Timberland under forest industry control dropped 4 percent to less than 259,700 acres.

Forest stands classed as a pine or oak-pine forest type occupy over 1.3 million acres of timberland in the FLA. Collectively, pine and oak-pine have increased by 18.7 percent since 1988, and stands classified as hardwood forest types declined 17.7 percent to 793,100 acres. Pine plantations increased 10 percent to almost 1.8 million acres and account for 70 percent of all pine stands in the FLA. Longleaf-Slash pine and Loblolly-shortleaf are nearly equal in acreage at 462,500 and 469,100 acres respectively. Oak-gum-cypress remains the predominant hardwood forest type with 442,700 acres.

Harvesting and regeneration have been the predominant treatment and management activities in the timberland of the Flint FLA since 1988. Final harvests occurred on 39,660 acres annually; 62 percent of the harvesting activity was in pine stands, 10 percent in oak-pine stands, and 25 percent in hardwood stands. The area of new stands established exceeded the area harvested by nearly 13 percent. Reforestation and afforestation combined averaged over 55,060 acres annually. Twenty-nine percent (15,880 acres) of this total involved planting trees on nonforest land. (Adapted from Thompson and Sheffield's *Forest Statistics for Southwest Georgia, 1996* and Thompson's *Forest Statistics for Central Georgia, 1997,* and *Forest Statistics for Georgia, 1989.*)

High-quality stands of longleaf pine forest are found within this area, many of which are working forests which are managed for wildlife and sustainable timber harvest. This community type ranks with tropical rainforests in natural diversity, with more than 100 species recorded in a square meter area. Longleaf pine woodlands and associated ecological communities were once the dominant vegetation type in the Flint FLA, which falls within the East Gulf Coastal Plain of Georgia. Fire-maintained longleaf pine woodlands are found across a wide range of soil moisture regimes, and support a large number of plant and animal species (including many endemics, which are species with restricted geographic ranges). Due to a drastic decline of longleaf pine woodlands across the East Gulf Coastal Plain (less than 5 percent remains), many of these species are imperiled.

Intact bottomland hardwood forests are found along many rivers in this region. These forests contain a diversity of hardwood species and provide habitat for multiple wildlife species, such as the majestic swallow-tailed kite (*Elanoides forficatus*).

Forest Plant Diversity- The meager topographic and soil diversity of the East Gulf Coastal Plain would seemingly suggest an area of low biodiversity, yet the ecoregion is one of the richest in North America in species richness, endemism, and community diversity. Part of the reason for this is that the East Gulf Coastal Plain has never been glaciated, and has been continuously occupied by plants and animals since the Cretaceous, giving ample time for the evolution of narrow endemic species (species restricted to a relatively small geographic area). Federally listed plants found in the Flint FLA include American chaffseed (*Schwalbea americana*), Cooley's meadowrue (*Thalictrum cooleyi*), and Florida torreya *(Torreya taxifolia*).

Forest Wildlife – The region is well-known for the excellent quail habitat found in its longleaf pine forests and agricultural lands. It also has abundant deer and turkey populations. Less well-known are the many rare species found in the region, such as the gopher tortoise (*Gopherus polyphemus*), eastern indigo snake (*Drymarchon corais couperi*), and the red-cockaded woodpecker (*Picoides borealis*).

Breeding songbird diversity and abundance is extremely high in this region, especially diversity of neotropical migrants. The heavily forested southern blue ridge serves as a critical migration corridor for millions of songbirds which nest to the north and east. In addition this region represents the southern limit of many species' ranges. Because of this it is likely to harbor unique genetic diversity. Several species found in the southern blue ridge have been or are being considered as endemic species, subspecies or races to this region including the southern Appalachian yellow-bellied sapsucker, dark-eyed junco, golden-winged warbler, common raven, and red crossbill, and Appalachian cottontail.

The following table represents the available data on hunter visitation for WMAs within the Flint FLA during the 1998-1999 hunting season.

FLINT FLA	WMA	Size (ac.)	# Hunters
	Albany Nursery	300	26
	Chickasawhatchee	15000	1033
	Elmodel	1500	
	Mayhaw	4681	17
TOTALS		17481	1076

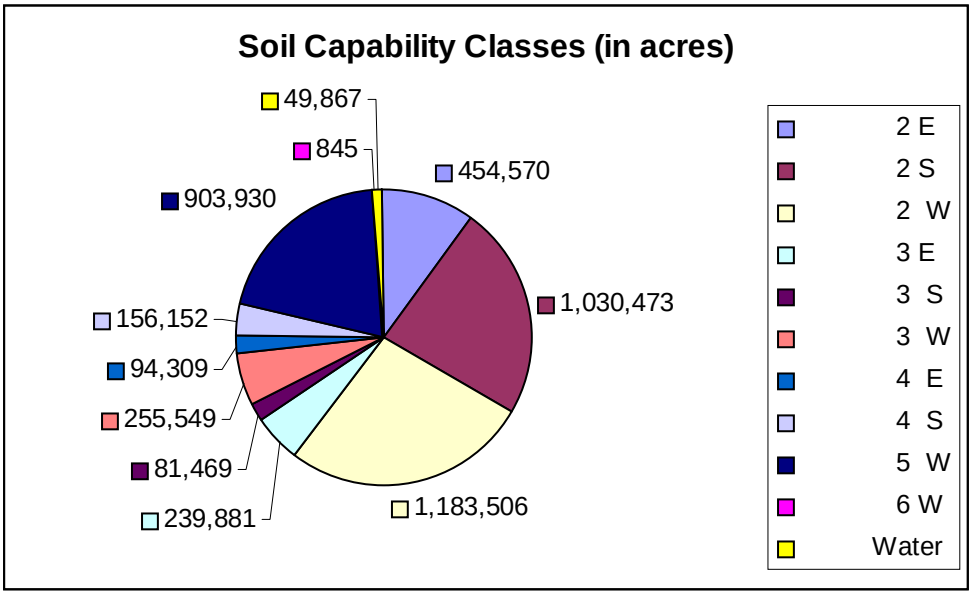
Fisheries - Some of the most significant warm water streams and impoundments are found in the Flint FLA. These areas include: The Chattahoochee, Flint, Ochlocknee, and Little Rivers, Spring Creek, Walter F. George Lake, Lake Seminole, Lake Blackshear and Lake Chehaw.

The freshwater aquatic systems of the East Gulf Coastal Plain Ecosystem are among the most significant and at-risk aquatic biodiversity resources in North America, particularly for fish and mussel species. River systems are primarily of three types: brownwater (with headwaters north of the Fall Line, silt-laden); blackwater (with headwaters in the coastal plain, stained by tannic acids); and spring-fed (with

headwaters in limestone karst). These river systems often contain unique biological resources; some endemics only occur in one river system. Other dominant features of this area includes a large number of freshwater wetlands, including one of Georgia's largest freshwater wetland systems (Chickasawhatchee Swamp), and limesink depression ponds. These wetlands are significant recharge areas for the Floridan aquifer.

Public Fishing Areas (PFAs) are areas managed intensively for fishing by the Wildlife Resources Division. Currently, there are no PFA's in the Flint FLA

Soil and Water – All of the soils in the Flint FLA have some degree of limitation associated with them. Water in or on the soil interferes with plant growth or cultivation on 53.7% of the acreage. Sixty percent of the soils are in a Class that has moderate limitations that restrict the choice of plants or that require special conservation practices, or both. (See Land Capability Classification in the Appendix.)



The Flint FLA is associated with the primary groundwater recharge area for the Floridan Aquifer. Current agricultural practices along with an extended drought are greatly affecting the aquifer.

The Upper Ochlocknee Watershed is located in the southeast area of the Flint FLA and is a Category I watershed. This ranking indicates the watershed is impaired and most in need of restoration.

Unique Natural Areas - The Nature Conservancy working with a multidisciplinary team of experts from many agencies, completed a study of the East Gulf Coastal Plain Ecosystem, which covers portions of North Florida, SW Georgia, S. Alabama, S. Mississippi, and E. Louisiana. One of the purposes of this study was to determine what are the most crucial areas to protect. There were 132 portfolio sites selected with 24 chosen as "action sites". The following factors were assessed to determine action sites: 1) Sites with very high biodiversity significance (relative to other portfolio sites), high

urgency of threat, and ecological systems intact; and 2) high leverage sites where is feasible to accomplish significant conservation results.

For the portion of the East Gulf Coastal Plain Ecosystem in Georgia also covered by the Flint FLA, the following sites were selected as "Action Sites": Upper Apalachicola (along the GA-FL border in Decatur Co., dominated by steephead ravines), Bainbridge Longleaf Pine (high-quality longleaf pine forests in Decatur, Seminole, Baker and Miller counties), Flint River, Red Hills (south of Thomasville in Thomas and Grady counties), and Worth/Colquitt Longleaf Pine (between Moultrie, Sylvester, and Albany in Colquitt, Worth and Mitchell counties).

Recreational and Scenic Resources – The Flint FLA has a diversity of ecological systems, ranging from sandhills and rolling longleaf pine-dominated uplands to pine flatwoods and savannas, pitcher plant seepage bogs, Altamaha Grit outcrops, isolated wetlands (including sinkhole depressions and ponds in karst areas), and bottomland hardwood forests. This diversity makes southwest Georgia both beautiful and infinitely interesting. It is a landscape of rolling longleaf pine hills interspersed with pitcher plant bogs, sparkling ponds, and rich bottomland hardwood forests.

Georgia's State Parks offer many recreational activities such as:

State Parks	Designation	County	Acres	Annual Visitors	Attractions
Seminole	Park	Seminole	343	155280	CT, RV, CA, PC, LK, BR, CN, NT
Lapham-Patterson House	Historic Site	Thomas	NA	4551	PC, HBR, ME
Kolomoki Mounds	Historic Park	Early	1293	163476	RV, CA, PC, LK, BR, FS, CN, NT, HK, ME
George T. Bagby	Park	Clay	300	138812	CT, PC, LK, BR, FS, CN, PL, NT
Reed Bingham	Park	Colquitt	1620	295984	RV, PC, LK, FS, NT
Georgia Veterans	Park	Crisp	1322	1600850	CT, RV, CA, PC, LK, BR, FS, PL, NT, ME

PC = Picnic, CT = Cottages, RV = RV/Trailer/Tent Sites, BR = Boat Ramp, FS = Fishing
LK = Lake, CN = Canoeing, HBR = Historic Building/Ruin, HK = Hiking, ME = Museum/Exhibit
PG = Playground, NT = Nature Trail, PL = Pool, CA = Camping

There are numerous places to wildlife-watch in Georgia, including National Parks and Refuges, and State Wildlife Management Areas. Many of these significant wildlife-watching areas are located in the Flint FLA: Lake Seminole WMA, Reed Bingham State Park, Chickasawhatchee WMA, Kolomoki Mounds State Historic Park, Mayhaw WMA, Georgia Veterans State Park, and Lake Walter F. George WMA.

CURRENT STATUS – FLINT FLA

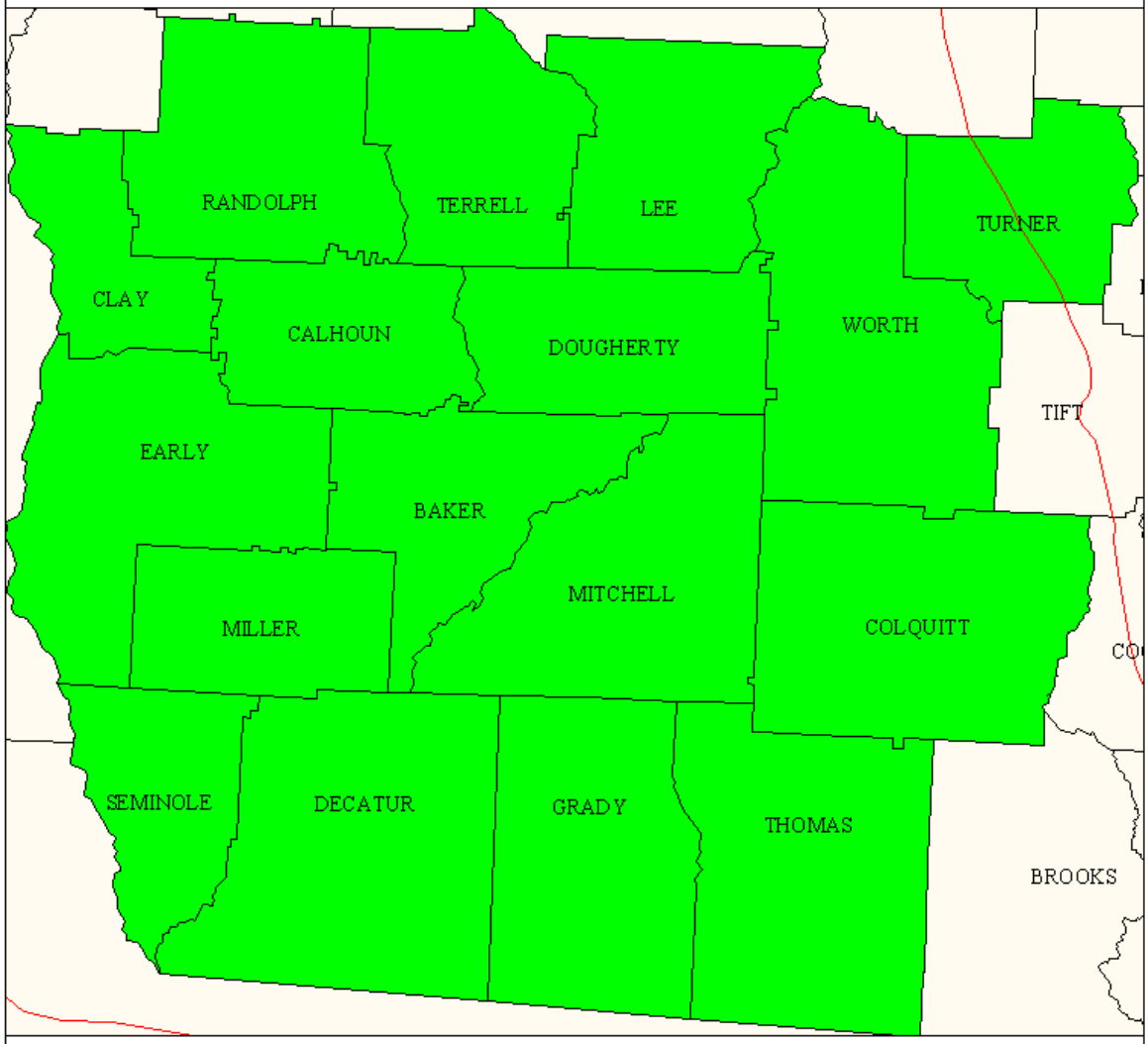
Forest Fragmentation - Key stresses to this area are intensive silvicultural practices, including conversion of natural forests to highly managed pine monocultures, conversion to agriculture, the clear-cutting of bottomland hardwood forests, habitat destruction, habitat fragmentation, alteration of natural fire regime, habitat disturbance, development, changes in hydrological processes due to intensive groundwater pumping for pivot irrigation, and point and non-point source pollutants.

Existing Forest Conservation Efforts - Though much has been lost, there are still great conservation opportunities. Many high-quality natural areas remain as large, functioning landscapes. Many of the rivers and streams remain relatively intact, but are under threat. This is a priority area for The Nature Conservancy; strong governmental and private partnerships have been formed, allowing the opportunity to work at large scales to preserve the high biological diversity of this rich region. Privately-owned Protected Lands in the Flint FLA include: Dry Creek Swamp Preserve and Shackleford-Williams Bluff Preserve (The Nature Conservancy), Joseph W. Jones Ecological Research Center, and Tall Timbers Research Station.

State Listed Unusual, Rare, Threatened, or Endangered Species in Flint FLA Counties: See Appendix E.

Flint Forest Legacy Area

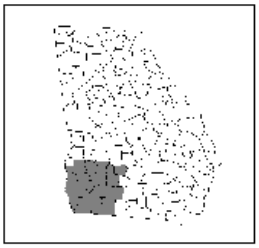
Proposed Legacy Area



Flint Forest Legacy Areas (FLA) Counties

Clay, Randolph, Terrell, Lee, Worth, Turner, Calhoun, Dougherty, Early, Miller, Baker, Mitchell, Colquitt Seminole, Decatur, Grady, and Thomas

The Flint Forest Legacy Area contains 17 counties in Southwest Georgia.



Compiled March 6, 2000 by Steve Tomlinson GFC GIS Coordinator

MAP LEGEND:

- Flint FLA
- Interstate Highways

N
W E
S

Map scale

5 0 5 10 15 20 Miles

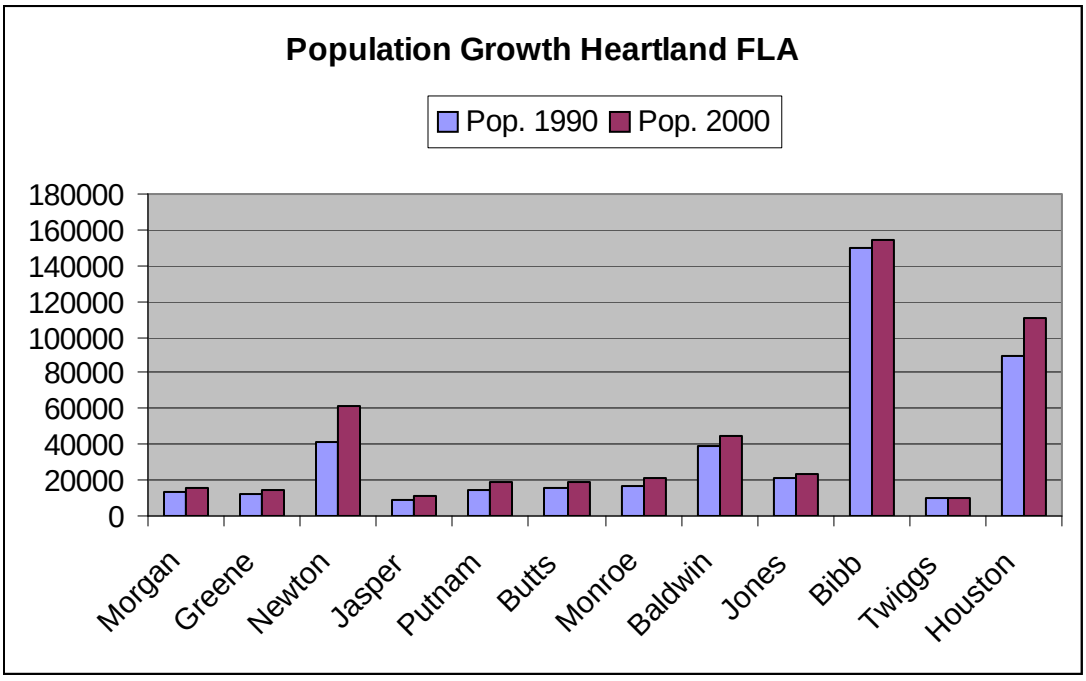
Heartland Forest Legacy Area

The following Georgia Counties are wholly within the Heartland FLA:

Baldwin	Greene	Jones	Newton
Bibb	Houston	Monroe	Putnam
Butts	Jasper	Morgan	Twiggs

Population – Every county within the Heartland FLA has had an increase in population from 1990 to 2000. Overall, the increase was 18% above 1990 levels from 430,763 to 506,962. The greatest changes occurred in Newton and Houston Counties.

Overall, the population density averages 123 persons per square mile. This density level is approaching the threshold level of 150 that indicates there is little to no chance that forest management opportunities will exist. Bibb County is the high with 600 persons per square mile (almost one person per acre). Houston and Newton Counties are also above the threshold level of 150. Jasper County has the lowest density at 22.8 persons per square mile. The Bibb County level is over 2.5 times higher than the next closest county level.



Land Area - The total land area within the Heartland FLA is 2,528,600 acres. (From the US Bureau of the Census, 1990.)

Ownership Patterns – Land ownership is largely private but includes several large federal holdings: Piedmont National Wildlife Refuge, Bond Swamp National Wildlife Refuge, Robins Air Force Base, Hitchiti Experimental Forest, and the Oconee National Forest. Together these total 161,000 acres.

In addition the state owns or leases another 63,000 acres in 13 parks and wildlife management areas. Forest industry owns a significant, but rapidly diminishing portion of the Georgia Piedmont.

Threats to the Forest Resource –

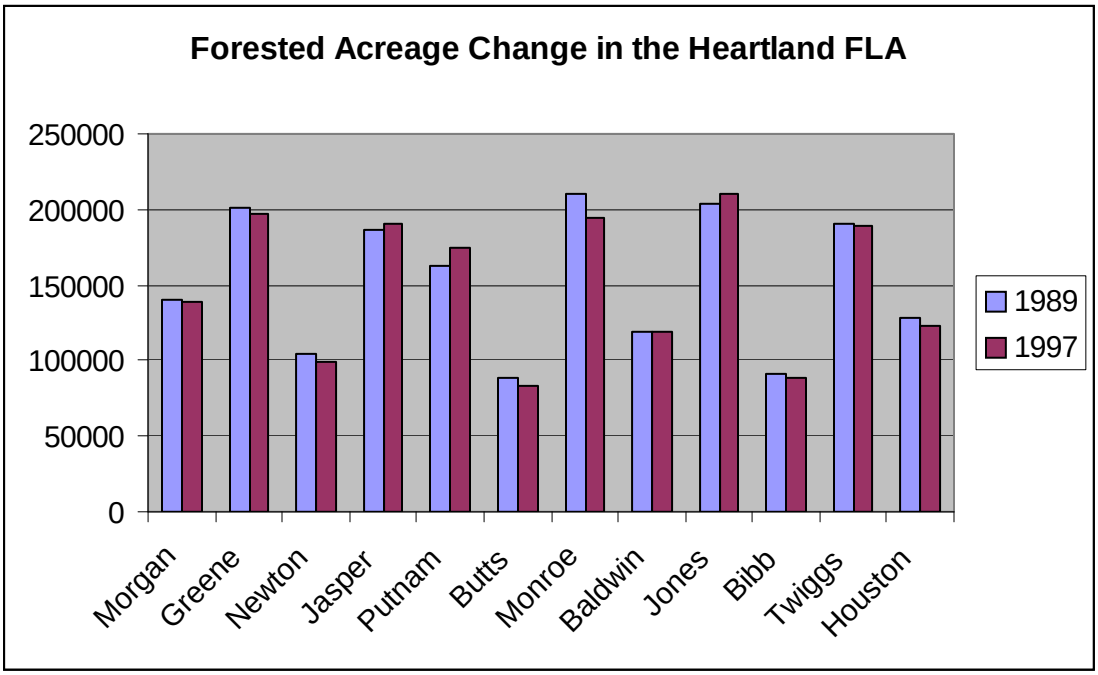
- ❖ Fragmentation/Development – Population growth within the FLA and from Metro Atlanta are leading to the subdividing and developing of forest lands within this FLA.
- ❖ Water Quality – Important segments of the Ocmulgee and Oconee River systems are located within this FLA. These rivers provide drinking water for several major cities such as Macon and Milledgeville. Poor land use practices, such as those associated with land clearing for development and road building, negatively affect water quality.

FLA Specific Goals – These goals will be the focus for this FLA. These goals fall within those established in Section III, page 9 of this Assessment of Needs. Properties meeting these goals will receive additional scoring in the evaluation process.

- ❖ Consolidate (i.e. connectivity) and buffer public forestlands.
- ❖ Protect and provide public recreation on public lands and the Ocmulgee River and it's associated swamplands .

FOREST RESOURCES – HEARTLAND FLA

Forested Acreage -



Timber Resources – The forest statistics for the Heartland FLA indicate a slight decrease, less than 1%, in forest acreage since 1989. Forest acreage now totals nearly 1.8 million acres with 7500 acres of that total in productive reserve. Timberland acreage is relatively unchanged at 1.8 million acres. Approximately 12,700 acres were added to the timberland base, while over 31,050 were diverted from timberland to others uses. Tree planting and natural seeding on agricultural lands accounted for nearly all of the additions. Almost 83 percent of the diversions were due to forest clearing for agriculture and urban and related uses. Forest covers 72 percent of the land area in the Heartland FLA.

The increase in timberland area occurred in the nonindustrial private forest (NIPF) and public ownership sectors. NIPF owners control almost 1.2 million acres, or 69%, of the total timberland in this FLA, an increase of nearly 7 percent. Public agencies control over 135,900 acres, or 8 percent, of total timberland, an increase of about 1.5 percent. Timberland under forest industry control (12 percent of the total) dropped 38 percent from 340,100 acres to less than 212,500 acres.

Forest stands classed as a pine or oak-pine forest type occupy over 886,000 acres of timberland in the FLA. Collectively, pine and oak-pine have decreased by 10 percent since 1988, and stands classified as hardwood forest types increased by 12 percent to almost 590,600 acres. Pine plantations increased 34 percent to almost 505,000 acres and account for 57 percent of all pine stands in the FLA. Loblolly pine remains the predominant pine forest with 743,700 acres and oak-hickory remains the predominant hardwood forest type with 441,500 acres.

Harvesting and regeneration have been the predominant treatment and management activities in the timberland of the Heartland FLA since 1988. Final harvests occurred on 36,700 acres annually; 58 percent of the harvesting activity was in pine stands, 12 percent in oak-pine stands, and 30 percent in hardwood stands. The area of new stands established exceeded the area harvested by nearly 23 percent. Reforestation and afforestation combined averaged over 47,700 acres annually. Forty-two percent (20,000 acres) of this total involved planting trees on forest land. Seventeen percent (8100 acres) of this total involved both the planting and natural reversion of nonforest land. (Adapted from Thompson and Sheffield's *Forest Statistics for Central Georgia, 1997,* Thompson's *Forest Statistics for North Central Georgia, 1998*, and *Forest Statistics for Georgia, 1989*)

The Piedmont of Georgia serves as the interface between the Coastal Plain and Southern Blue Ridge physiographic provinces as reflected by its diversity of forest types. The Piedmont was once dominated by hardwood forests, but soil erosion from poor farming practices and eventual abandonment of the land has left much of the Piedmont in pine or mixed pine hardwood forest types. Today Oak-Hickory, mixed pine-hardwoods, and loblolly/shortleaf pine dominate the uplands. The Piedmont also contains significant expanses of bottomland hardwood of very similar composition to the floodplains of the coastal plain. Much of the Piedmont bottomlands are in a degraded state from decades of high grading, extremely high sedimentation rates and changes to hydrology.

Besides these forest types several other rare forest types can be found in the Georgia Piedmont. The historic range of longleaf pine extended well into the range of the Georgia Piedmont, though it is rarely found there today.

Forest Plant Diversity – Georgia's Piedmont was once largely converted to cropland. Only since the 1930s has most of it reverted to forest cover. As a result of this land use history forest plant diversity is generally low. However certain habitat types that may not have been converted harbor significant diversity including depressional wetlands, steep ridges, granite outcrops and some upland hardwood sites that were never converted to agriculture.

Forest Wildlife – The Piedmont Region of Georgia supports the largest populations of many of our most important game species such as white-tailed deer and wild turkey. As a result this region of the state experiences some of the highest demands for forest recreation.

The region selected for the Heartland Forest Legacy Area is critical for a variety of wildlife. The Bond Swamp region is within a few miles of downtown Macon. Only a small portion of the actual swamp is in public ownership, the rest is owned primarily by industrial landowners, especially the mining industry. Cherrybark Oak and other high dollar species are common in the region, and the opportunity for mismanagement of this resource is great. In spite of these pressures Bond Swamp is home to one of three remaining black bear populations in Georgia, and one of the largest populations of Swainson's warblers, a bird species of very high conservation priority. It is a unique island of wilderness on the doorstep of a large and growing city.

A fragmented complex of public lands, including Hitchiti Experimental Forest, Piedmont National Wildlife Refuge, and Oconee National Forest, represent one of the best opportunities for conservation of forest interior habitat for birds and other wildlife in the Georgia Piedmont. Increasing taxes in this region is driving a shift in land use from forms that maintain forest cover, such as industrial forestry, to consumptive land use, especially development for homes. Development in the region is increasing rapidly and will have a negative impact on regional forest health, including wildlife. This region also contains one of five remaining populations of the endangered red-cockaded woodpecker. Bachman's sparrows are also common in this region and are of high conservation priority. Early succession habitat, high quality bottomland hardwood habitat, and unfragmented upland habitat are critical for bird conservation in the region. Wood thrush, summer tanager, Swainson's warbler, Acadian flycatcher and many more high conservation priority species would benefit from the efforts of a forest legacy program in this region.

The following table represents the available data on hunter visitation for state-owned WMAs within the Heartland FLA during the 1998-1999 hunting season.

HEARTLAND FLA	WMA	Size (ac.)	# Hunters
	Clybel	6400	836
	B.F. Grant	11870	1476
TOTALS		18270	2312

Fisheries - Streams and rivers of the Piedmont region are generally characterized by a moderate current and well characterized shoals, riffles, and other structure. Most originally contained a rocky or sandy bottom. More than any other habitat type, streams have been degraded by historic poor agricultural practices. High sediment loads in the Piedmont have caused most streams to be classified as impaired, meaning pollution levels are severe enough to significantly alter the natural functioning of the stream community. Piedmont streams have lost much of their natural diversity of aquatic life as a result of this sedimentation. While sediment loads are far less today than during the decline of agriculture earlier this century, they do still remain high in some areas from runoff from roads, poor agricultural or logging practices, and development. In spite of this recreational fishing remains high in the region. Numerous public lakes and ponds, including lakes Juliette and Jackson and the Ocmulgee River, provide outdoor recreation opportunities for thousands of boaters and anglers every year.

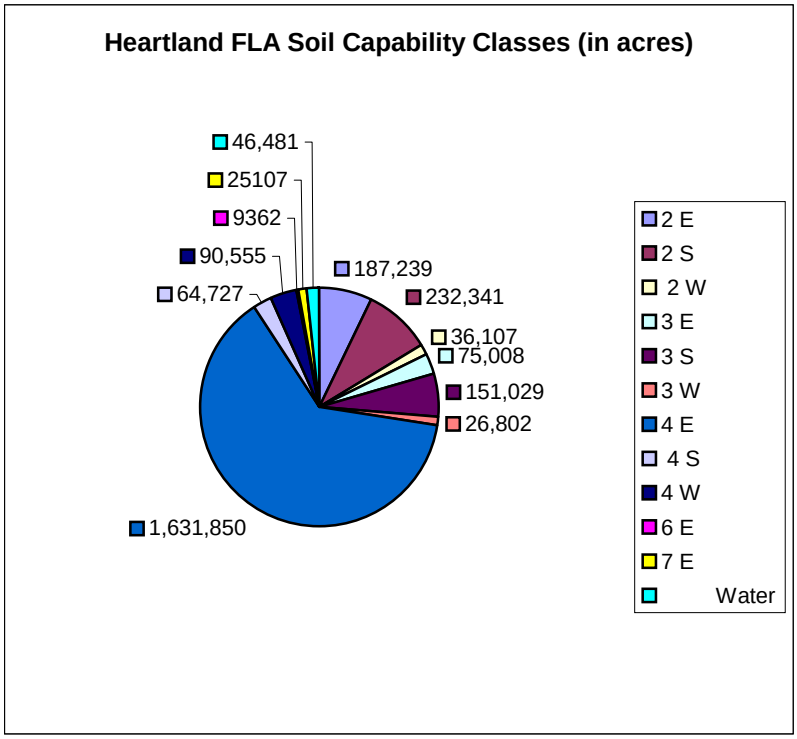
Some of the most significant warm water streams and impoundments are found in the Heartland FLA. These areas include: The Yellow, South, Ocmulgee, Oconee, and Apalachee Rivers, Lake Oconee, Lake Sinclair.

Public Fishing Areas (PFAs) are areas managed intensively for fishing by the Wildlife Resources Division. The Heartland FLA has the Charlie Elliot Wildlife Center & PFA in Jasper and Newton Counties. Most of the PFAs are made up of one or more intensively managed ponds or lakes. Fish available to the angler include: largemouth bass, bream (bluegill & redear sunfish), channel catfish and crappie.

Overall Public Fishing Areas attract over 400,000 visitors per year, of which 60% visit PFAs located within FLA counties.

Public Fishing Area	Counties	Total Ac.	# Impoundments	Visitors/Year
Charlie Elliot Wildlife Center	Jasper & Newton	295	2	150,000

Soil and Water – All of the soils in the Heartland FLA have some degree of limitation associated with them. The main limitation on these soils is risk of erosion. Sixty nine percent of the soils are in a Class that have severe limitations that restrict the choice of plants or that require very careful management, or both. The letter ***E*** in the graph shows that the main limitation is risk of erosion, ***W*** shows that water in or on the soil interferes with plant growth or cultivation, and ***S*** shows that the soil is limited mainly because it is shallow, droughty, or stony. (See Land Capability Classification in the Appendix.)



The Fall Line Counties in the Heartland FLA are associated with important groundwater recharge areas. These are the southernmost counties in the FLA

The majority of the Upper Oconee, Upper Ocmulgee, and the Lower Ocmulgee Watersheds are located in the FLA and are classified as Category I watersheds by the State Unified Watershed Assessment. This classification indicates the watersheds are impaired and most in need of restoration.

Unique Natural Areas

Granite outcrops constitute the most unique natural community in the Piedmont. Species on granite outcrops are well adapted to conditions that preclude other species, namely very shallow or no soil, and a boom or bust water regime. In addition these granite outcrop communities are often highly isolated from each other. Granite outcrops generally have no immediate overstory although they are usually surrounded on all sides by forest and so are heavily influenced by the management regimes of surrounding lands. Outcrops occur across the Georgia Piedmont. Although no vertebrate animal species are known to be specifically adapted to this community, there

are a number of rare invertebrate species which can be reliably found in this community type including a number of mites and collembolan insects. Most spectacular is the community of plants, many rare, which thrive in these conditions. Among these are bear grass, matted quilwort, Piedmont barrens strawberry, Missouri rockcress, pool sprite and many others. In some situations granite outcrops have been threatened by a landowner's attempts to grow pine plantations on or around granite outcrops. In this scenario herbicide drift may endanger the outcrop. Other threats to Piedmont granite outcrops are trampling of vegetation by people and mining.

Non-alluvial forested wetlands are a very rare but valuable community type found on the Georgia Piedmont. These wetlands contain numerous rare plants including several manna grasses, twayblade, and bog sneezeweed to name a few. These wetlands are also very important as breeding sites for many species of amphibian. Pine Savannahs, a forest type more commonly found in the Coastal Plain, were once found across much of the Piedmont. These Savannahs were very high in plant diversity and provided critical early succession habitat for many animal species.

Recreational & Scenic Resources –

Georgia's State Parks offer many recreational activities such as:

State Parks	Designation	County	Acres	Annual Visitors	Attractions
Jarrell Plantation	Historic Site	Jones	50	13970	PC, NT, HBR, ME
High Falls	Park	Monroe	995	962891	RV, CA, PC, LK, BR, FS, CN, PL, NT
Indian Springs	Park	Butts	523	367925	CT, RV, CA, PC, LK, BR, FS, NT, ME
Hard Labor Creek	Park	Morgan	5805	269429	CT, RV, CA, PC, LK, BR, FS, NT, HK, ME

PC = Picnic, CT = Cottages, RV = RV/Trailer/Tent Sites, BR = Boat Ramp, FS = Fishing, LK = Lake, CN = Canoeing, HBR = Historic Building/Ruin, HK = Hiking, ME = Museum/Exhibit, PG = Playground, NT = Nature Trail, PL = Pool, CA = Camping

There are numerous places to wildlife-watch in Georgia, including National Parks and Refuges, and State Wildlife Management Areas. Many of these significant wildlife-watching areas are located in Forest Legacy Counties: Oconee National Forest, Cedar Creek WMA, Baldwin State Forest WMA, Rum Creek WMA, High Falls State Park, Piedmont NWR, Ocmulgee WMA, Oaky Woods WMA, Oconee WMA, Hard Labor Creek State Park, and Clybel WMA.

CURRENT STATUS – HEARTLAND FLA

Forest Fragmentation – Loss of land to development and resulting forest fragmentation is the greatest threat to forests in this region. Changes in land use due to

urban sprawl and development pressure from Atlanta to the northwest and Macon to the south have resulted in increased taxes that are making traditional forest uses unaffordable. In addition increasing air pollution are resulting in restricted use of controlled burning and outright bans on burning in many areas. Continued burning programs are especially needed to maintain red-cockaded woodpecker colonies and associated species. Increased water use by Atlanta's burgeoning population seriously threaten aquatic resources in this region, and have already resulted in changed flooding regimes and hydrology that may change the dynamics of bottomland hardwood forests.

Increasing land prices may make it difficult to consolidate and buffer existing public lands before long. Despite its size the Oconee National Forest is highly fragmented and is dependant on the sound management of surrounding private lands to maintain its wildlife diversity.

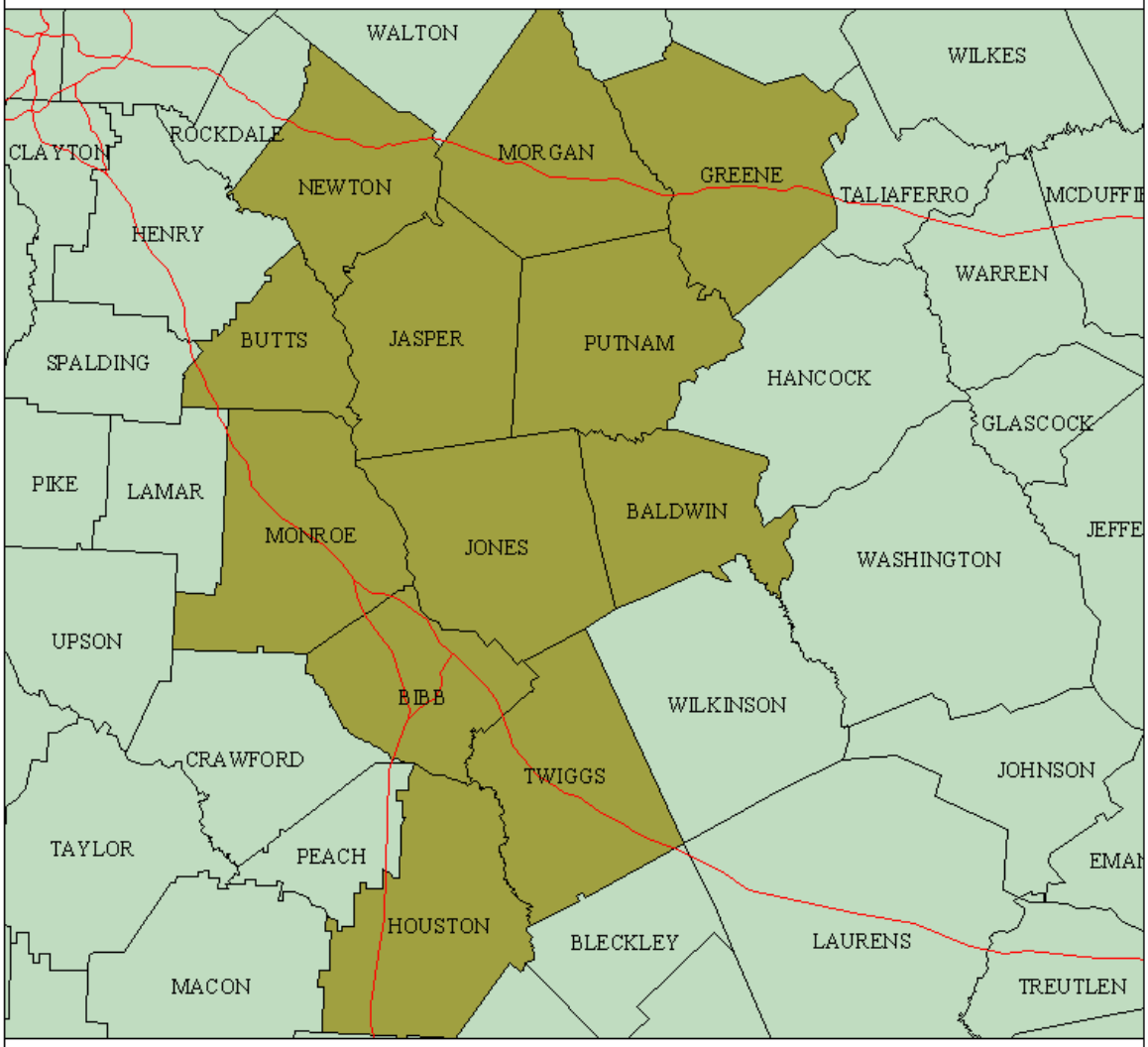
Upland hardwoods are an especially threatened forest type in this region. Most upland hardwoods have been converted to pine stands, either inadvertently from abusive farming practices earlier this century that resulted in loss of topsoil, or deliberately through conversion to pine plantations. In addition upland hardwoods sites are extremely valuable for development of home sites.

Existing Forest Conservation Efforts – The Georgia Piedmont Natural Resources Cooperative (GPNRC) is a group of public and private landowners who own or lease approximately 50% of the landbase in 6 Piedmont counties. They have formed this cooperative to plan and implement landscape level management for wildlife. Cooperators include the Georgia Department of Natural Resources, US Forest Service-Oconee National Forest, US Forest Service-Hitchiti Experimental Forest, US Fish & Wildlife Service-Piedmont Refuge, Weyerhaeuser, Georgia Power, The Timber Company, and John Hancock.

State Listed Unusual, Rare, Threatened, or Endangered Species in Heartland FLA Counties: See Appendix E.

Heartland Forest Legacy Area

Proposed Legacy Area



Mountain Forest Legacy Area

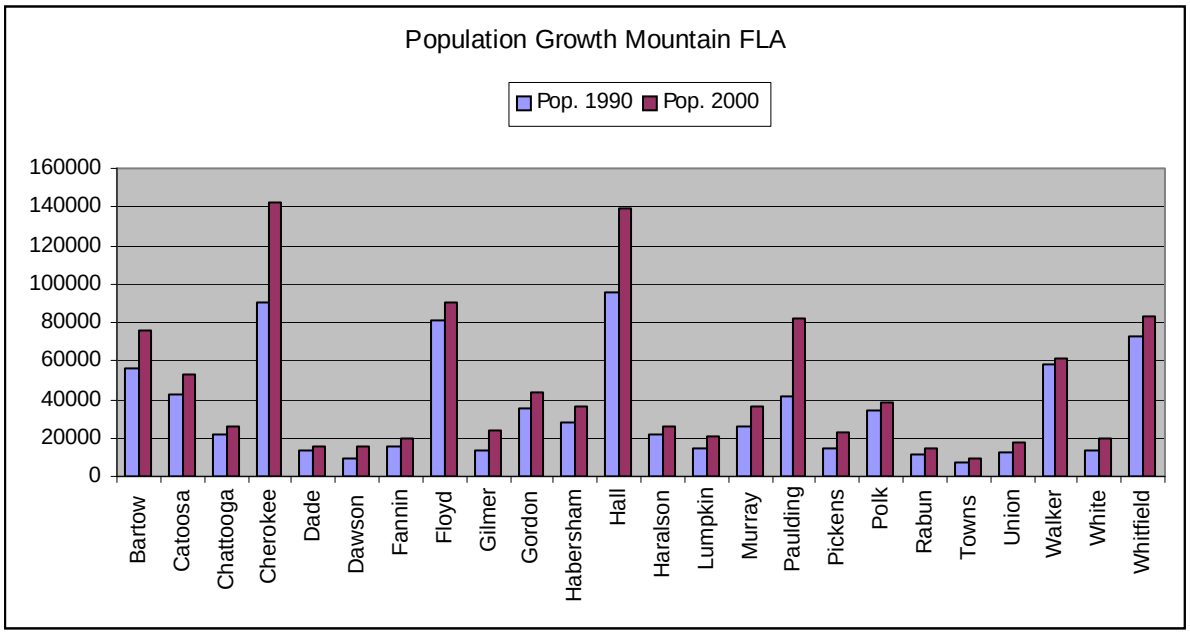
Location – This FLA covers all or parts of the Cumberland Plateau, Ridge & Valley, and Blue Ridge/Appalachian Regions of North Georgia.

The following Georgia Counties are wholly within the Mountain FLA:

Bartow	Fannin	Haralson	Rabun
Catoosa	Floyd	Lumpkin	Towns
Chattooga	Gilmer	Murray	Union
Cherokee	Gordon	Paulding	Walker
Dade	Habersham	Pickens	White
Dawson	Hall	Polk	Whitfield

Population – Every county within the Mountain FLA has had an increase in population from 1990 to 2000. Overall, the increase was 34% above 1990 levels. (From Bureau of the Census, 2000) The greatest changes occurred in the counties north and west of Atlanta, Georgia, and south of Chattanooga, Tennessee.

Overall, the population density averages 105 persons per square mile. This density level is almost midway between the threshold level of 70 that indicates there is a 25% probability that forest management opportunities will exist and the 150 level and the little or no chance. Catoosa County is the high with 262 persons per square mile and is followed closely by Whitfield, Hall, and Cherokee Counties. Gilmer County and Rabun County are the low at 31.3 and 31.4 persons per square mile. When the four highest density counties are eliminated from the equation, the average population density for this FLA is 78 persons per square mile.



Land Area - The total land area within the Mountain FLA is 4,930,100 acres. (From the US Bureau of the Census, 1990.)

Ownership Patterns – A large percentage of the acreage in this region is federally owned through the U.S. Forest Service. There are also public and private lands which are small to medium in size.

Threats to the Forest Resource –

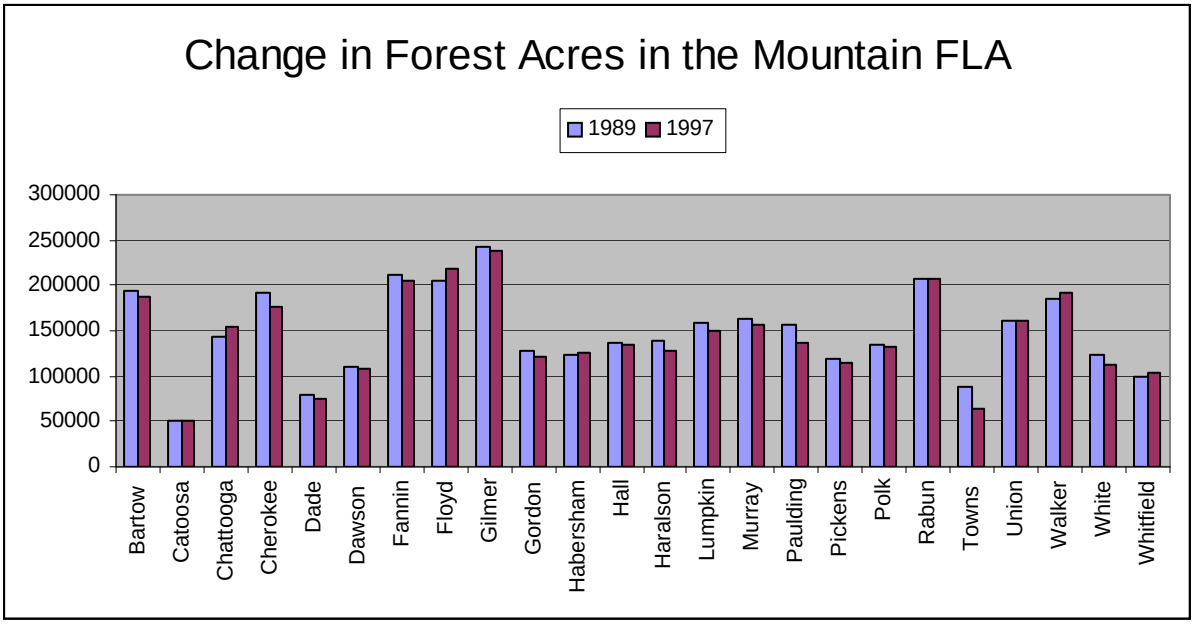
- ❖ Fragmentation/Development – Population growth within the FLA and from Atlanta, GA and Chattanooga TN, along with the building of second homes in the scenic mountains are leading to the subdividing and developing of forest lands within this FLA.
- ❖ Water Quality – The headwaters and/or important segments of the Chattahoochee, Conasauga, and Chattooga River systems are located within this FLA. These river systems, especially the Chattahoochee, are major suppliers of drinking water for Georgia and surrounding states. Poor land use practices, such as those associated with land clearing for development and road building, negatively effect water quality.

FLA Specific Goals – These goals will be the focus for this FLA. These goals fall within those established in Section III, page 9 of this Assessment of Needs. Properties meeting these goals will receive additional scoring in the evaluation process.

- ❖ Protect or improve water supply and quality through proper management of the adjacent forestlands.
- ❖ Consolidate (i.e. connectivity) and buffer public lands.
- ❖ Reduce residential development and the associated changes in land use.
- ❖ Protect aquatic resources through proper management of the adjacent forestlands.

FOREST RESOURCES

Forested Acreage –



Timber Resources – The forest statistics for the MOUNTAIN FLA indicate a slight decrease, less than 3%, in forest acreage since 1989. Acreage now totals nearly 3.46 million acres. Approximately 56,000 acres were added to the timberland base, while over 150,000 acres were diverted from timberland to others uses. Tree planting and natural seeding on agricultural lands accounted for nearly all of the additions. Fifty-nine thousand acres of timberland were reclassified to reserve timberland. Almost 62 percent of the remaining diversions were due to forest clearing for agriculture and urban and related uses.

The area in timberland area remained stable in the nonindustrial private forest (NIPF) and totals 2 million acres. NIPF owners control almost 68 of the total timberland in this FLA. Public agencies control over 680,000 acres, or 24 percent, of total timberland, a decrease of about 6 percent. Timberland under forest industry control dropped 18 percent to less than 222,000 acres.

Forest stands classed as a hardwood forest type occupy over 1.6 million acres of timberland in the FLA. Hardwood stands have increased by 6 percent since 1988, and stands classified as a pine or oak-pine forest type decreased 12 percent to about 1.3 million acres.

Harvesting and regeneration have been the predominant treatment and management activities in the timberland of the MOUNTAIN FLA since 1989. Final harvests occurred on 26,000 acres annually; 68 percent of the harvesting activity was in pine stands, 16 percent in oak-pine stands, and 16 percent in hardwood stands. The area of new stands established exceeded the area harvested by nearly 46 percent. Reforestation and afforestation combined averaged over 37,000 acres annually. Twenty-eight percent (11,000 acres) of this total involved planting trees on forest land. Eighteen percent of this total involved both the planting and natural reversion of nonforest land. (Adapted from Thompson's *Forest Statistics for North Georgia, 1998*)

The forests of this region over the past century have been adversely effected and continue to be threatened by several disturbances. For instance, most of the forests have been intensively logged and fire suppressed. Despite these impacts, the forests of this region are still biologically rich and provide critical habitat for wildlife.

Forest Plant Diversity - There is a diversity of plant habitats in this region from xeric mixed forests to rich mesic hardwood forests. The Southern Blue Ridge is considered to harbor one of the oldest aggregations of plants in North America. Moist, cool, north-facing mountains serve as refuges for rich vegetation. The dense tree canopy and diverse herbaceous layers of some of the landscapes of this region, draw large amounts of hikers and outdoor enthusiasts to this region.

Forest Wildlife – The forests of north Georgia are home to many of the popular game species including white-tailed deer, wild turkey, and gray squirrel. This region represents the southernmost limit for ruffed grouse. This is a critical region for migratory birds, aquatic conservation particularly in the Conasauga and Etowah Rivers and bog species in the wet meadows and bogs. Breeding songbird diversity and abundance is extremely high in this region, especially diversity of neotropical migrants. The heavily forested southern blue ridge serves as a critical migration corridor for millions of songbirds which nest to the north and east.

In addition this region represents the southern limit of many species' ranges. Because of this it is likely to harbor unique genetic diversity. Several species found in the southern blue ridge have been or are being considered as endemic species, subspecies or races to this region including the southern Appalachian yellow-bellied sapsucker, dark-eyed junco, golden-winged warbler, common raven, and red crossbill, and Appalachian cottontail.

This region hosts the largest remaining population of black bears in Georgia. It also is host to the endangered bog turtle, gray bat, and Indiana bat. Private land in the Southern Blue Ridge remains the only source of early succession habitat in the region. Sound management of this habitat is critical to the golden-winged warbler and numerous other early succession species.

The following table represents the available data on hunter visitation for state-owned WMAs within the Mountain FLA during the 1998-1999 hunting season.

MOUNTAIN FLA	WMA	Size (ac.)	# Hunters
	Crockford-Pigeon Mountain	14396	2419
	JL Lester	477	
	Sheffield	3303	158
	Otting Tract	700	27
	John's Mountain	25958	2608
	Dawson Forest	15000	366
	Wildcat Creek	Inc. in Dawson	
	Dukes Creek	4500	415
	Tallulah Gorge	3050	
	Chattahoochee River Park	1200	988
TOTALS		68584	6981

Fisheries – Some of the most significant recreational trout streams, warm water streams and impoundments are found in the Mountain FLA. These areas include:

Boston Creek Watershed, Tom Creek Watershed, Connesena Creek Watershed, Dykes Creek Watershed, Pine Log Creek Watershed, Dry Creek Watershed, Little Chickamauga Creek Watershed, Amicalola Creek, Chattahoochee River, Coleman River, Conasauga River, Hoods Creek, Jones Creek, Moccasin Creek, Mountaintown Creek, Noontootla Creek, Smith Creek, Stanley Creek, Walnut Fork Creek, Etowah River Watershed, Toccoa River Watershed, Rock Creek Lake, Tugaloo River, and Waters Creek

In addition, Trout (rainbow and brown) are stocked by the Department of Natural Resources into many of the river systems and streams in the Mountain FLA. For FY 1999, approximately 625,357 catchable trout weighing 202,199 lbs were released in these counties providing anglers with significant recreational opportunities.

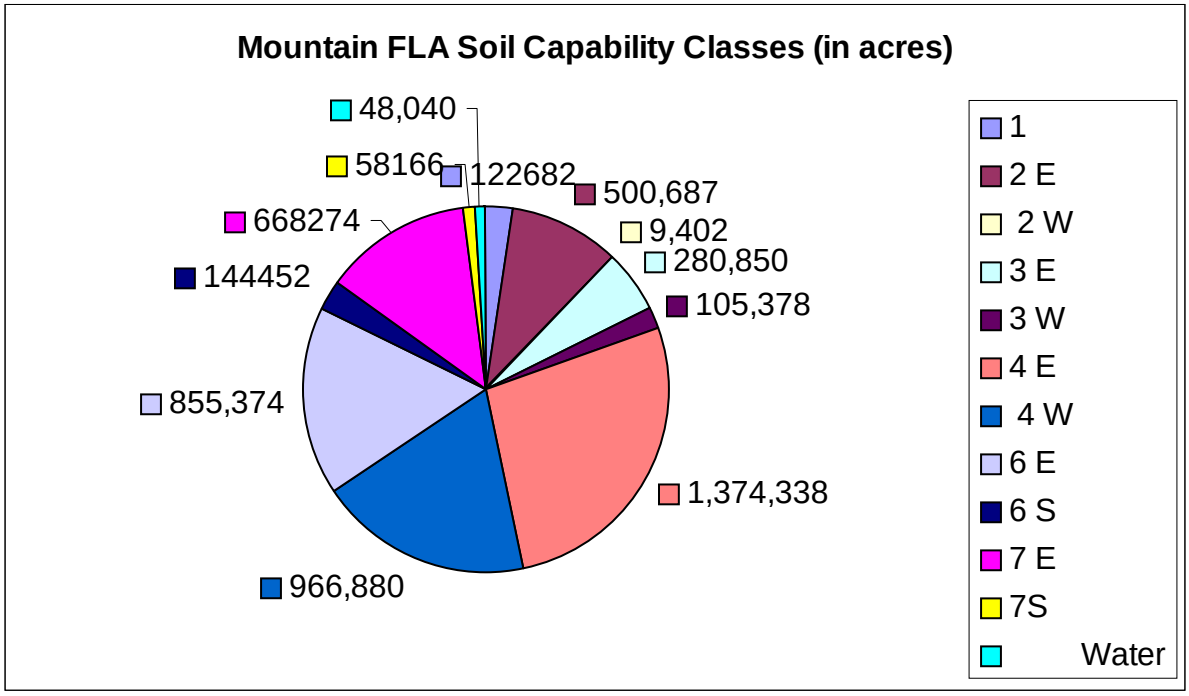
This region provides habitat for a diverse amount of aquatic species. In the Conasauga River, there are over 90 kinds of fishes, 42 kinds of mussels, numerous types of snails, crayfish, insects, and other aquatic animals. Twelve of the aquatic animals found in the river are officially recognized to be either threatened or in danger of being lost forever. The Upper Etowah River and its tributaries is especially rich in aquatic wildlife, containing 91 native fish species, eight which are imperiled (three which are Federally endangered) and four endemic fish (fish found exclusively in this watershed). Historically, the Etowah contained approximately 51 mussel species. However, it has been estimated that up to 65% of these may have been eliminated from the system. Currently, native mussels are seldom found in the Etowah River system.

Public Fishing Areas (PFAs) are areas managed intensively for fishing by the Wildlife Resources Division. The Mountain FLA has the Rocky Mountain Recreation Area and PFA in Floyd County. Most of the PFAs are made up of one or more intensively managed ponds or lakes. Fish available to the angler include: largemouth bass, bream (bluegill & redear sunfish), channel catfish and crappie.

Overall, Public Fishing Areas attract over 400,000 visitors per year, of which 60% visit PFAs located within FLA counties.

Public Fishing Area	County	Total Acres	# Impoundments	Visitors/Year
Rocky Mountain Rec. Area	Floyd	559	2	55,900

Soil and Water – All of the soils in the Mountain FLA have some degree of limitation associated with them. The main limitation on these soils is risk of erosion. Sixty nine percent of the soils are in a Class that have severe limitations that restrict the choice of plants or that require very careful management, or both. The letter ***E*** in the graph shows that the main limitation is risk of erosion, ***W*** shows that water in or on the soil interferes with plant growth or cultivation, and ***S*** shows that the soil is limited mainly because it is shallow, droughty, or stony. (See Land Capability Classification in the Appendix.)



There are five Category I watersheds in the Mountain FLA. They are the Tugaloo River, Upper Chattahoochee, Conasauga River, Coosawatee River, Oostanaula River, Etowah River, and the Tallapoosa River watersheds. The Category I classification, designated by the State Unified Watershed Assessment indicates these watersheds are impaired and most in need of restoration.

Many of the streams and rivers do not meet their designated uses due to erosion, toxic chemicals, excessive nutrients, fecal coliform, and trace metals (mainly mercury, zinc, copper and lead). There are two "Large-Scale Watershed Restoration Projects" located within this FLA, the Conasauga River and the Chattooga River.

Unique Natural Areas – Ecologically, the Mountain Region for Forest Legacy includes three ecoregions as defined by The Nature Conservancy.

1) The Southern Blue Ridge in the northeast part of the state which are high elevation hardwood forests (the ecoregion report for the Southern Blue Ridge is completed, it is the only one of the three which is completed).

2) The Cumberlands and Southern Ridge and Valley in the northwest part of the state which is composed of nearly flat-topped mountains with valleys between. Escarpments on the edges drop more than 1,000 feet to the valley floors

3) The Piedmont which is characterized by more gently rolling topography.

There are a number of important ecological habitat types in this region, prairies, sag ponds (which are natural depressional wetlands), bogs (which are low, wet areas that support few trees and provide habitat for a number of high priority species), caves, high elevation red oak or white oak forests, forested boulderfields, table mountain pine/pitch pine woodlands, shortleaf pine/shortleaf pine-oak forests, white pine/ white pine-oak forests, mountain cove forests, hemlock forests, montane oak-hickory forests, cliffs and forested outcrops, granitic domes, spray cliffs (waterfall associated), grass and heath balds.

Some of the important sites for this region include the Coosa Valley Prairies, Conasauga River (Action Site for the Southern Blue Ridge, and once the Cumberlands and Southern Ridge and Valley plan is completed it will be an action site for that ecoregion), Lookout Mountain (Cloudland Canyon State Park), Pigeon Mountain, Etowah River (will be an action site for the Cumberlands and Southern Ridge and Valley ecoregion), Tallulah Gorge, Amicalola Falls State Park, Fort Mountain, Black Mountain, Blood Mountain, Brasstown Bald, Hiawassee Seeps (Action Site for the Southern Blue Ridge ecoregion),

Recreational and Scenic Resources – This is one of the most biologically significant regions in the United States with spectacular scenery. Some of the wildest and least roaded tracts remaining in Georgia are found in this region. One can find clean mountain streams, steep, rugged terrain, scenic waterfalls, miles of hiking trails, biological diversity, and incredible views.

Georgia's State Parks offer many recreational activities such as:

State Parks	Designation	County	Acres	Annual Visitors	Attractions
Cloudland Canyon	Park	Dade	2219	168535	CT, RV, CA, PC, PL, HK
James H. "Sloppy" Floyd	Park	Chattooga	545	154833	RV, CA, PC, LK, BR, FS, HK
Etowah Indian Mounds	Historic Site	Bartow	69	33697	NT, HBR. ME
Red Top Mountain	Park	Bartow	1950	1336040	CT, RV, CA, PC, LK, BR, FS, PL, NT, HK
Pickett's Mill Battlefield	Historic Site	Paulding	765	10712	PC, NT, HK, ME
New Echota Cherokee Capital	Historic Site	Gordon	200	15407	NT, HBR. ME
Chief Vann House	Historic Site	Murray	26	7193	PC, NT, HBR, ME
Fort Mountain	Park	Murray	3428	363831	CT, RV, CA, PC, LK, FS, NT, HK
Vogel	Park	Union	280	224205	CT, RV, CA, PC, LK, PL, FS, NT, HK, ME
Amicalola Falls	Park	Dawson	2050	1450465	CT, RV, CA, PC, FS, NT, HK, ME
Dahlonega Gold Museum	Historic Site	Lumpkin	10	45297	HBR, ME
Smithgall Woods Conservation Area	Park	White	5562	17336	CT, CA, PC, NT, HK, ME
Unicoi	Park	White	1081	992497	CT, CA, PC, LK, FS, NT, HK
Moccasin Creek	Park	Rabun	32	144588	RV, CA, PC, LK, BR, FS, NT, HK
Black Rock Mountain	Park	Rabun	1803	68767	CT, RV, CA, PC, LK, BR, FS, CN, NT, HK, ME
Tallulah Gorge	Park	Rabun	3000	317214	RV, CA, PC, LK, FS, NT, HK, ME

PC = Picnic, CT = Cottages, RV = RV/Trailer/Tent Sites, BR = Boat Ramp, FS = Fishing
LK = Lake, CN = Canoeing, HBR = Historic Building/Ruin, HK = Hiking, ME = Museum/Exhibit
PG = Playground, NT = Nature Trail, PL = Pool, CA = Camping

There are numerous places to wildlife-watch in Georgia, including National Parks and Refuges, and State Wildlife Management Areas. Many of these significant wildlife-watching areas are located in the Mountain FLA: Paulding Forest WMA, Dawson Forest WMA, McGraw Ford WMA, Allatoona WMA, Talladega National Forest, Pine Log

WMA, Chattahoochee National Forest, Chattahoochee WMA, Berry College WMA, Arrowhead Public Fishing Area, Sumter National Forest, Chestatee WMA, Lake Burton, Swallow Creek WMA, Amicalola Falls State Park, Crockford-Pigeon Mountain WMA, Chickamauga & Chattanooga National Military Park, Cohutta WMA, Coosawattee WMA, and Cloudland Canyon State Park.

CURRENT STATUS – MOUNTAIN FLA

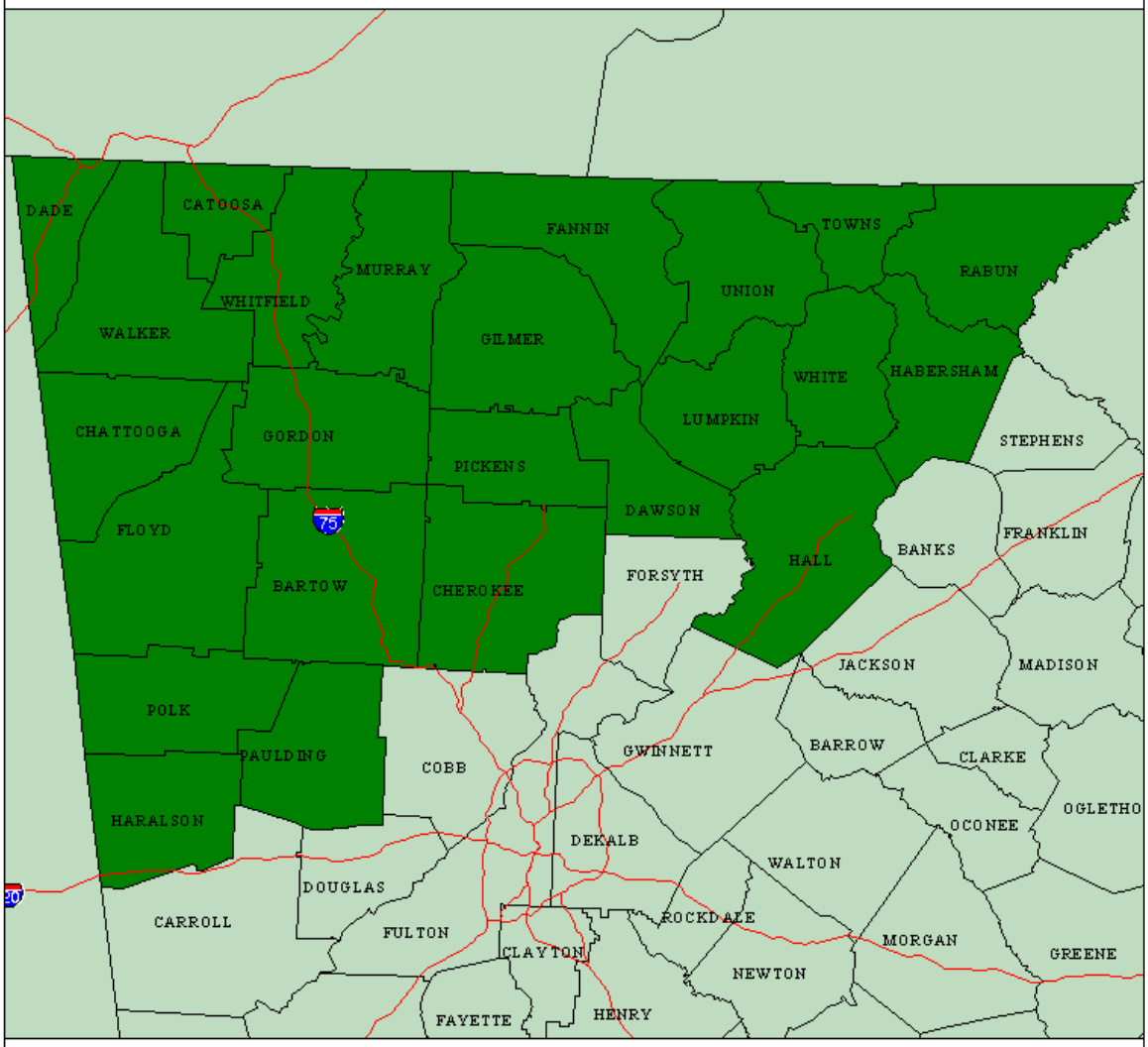
Forest Fragmentation – The most imminent threat to this region is loss and fragmentation of natural forest habitat due to development activities, degradation of the aquatic habitat by sedimentation and pollution, and threat to native species and communities due to exotic invasive species.

Existing Forest Conservation Efforts – Though much has been lost, there are still great conservation opportunities. There already exists a large number of protected areas, including the Chattahoochee National Forest, Georgia DNR state parks and wildlife management area and protected lands held by The Nature Conservancy and other land trusts.

State Listed Unusual, Rare, Threatened, or Endangered Species in Mountain FLA Counties: See Appendix E.

Mountain Forest Legacy Area

Proposed Legacy Area



Mountain Forest Legacy Areas (FLA) Counties

Dade, Walker, Catoosa, Whitfield, Gilmer, Murray, Fannin, Union, Rabun, Habersham, White, Lumpkin, Dawson, Hall, Chattooga, Gordon, Pickens, Floyd, Bartow, Cherokee, Polk, Paulding, and Haralson

The Mountain Forest Legacy Area contains 24 counties in North Georgia.

Compiled March 6, 2000 by Steve Tomlinson GFC GIS Coordinator

MAP LEGEND:

Mountain FLA

Interstate Highways

N

W E

S

Map scale

10 0 10 20 30 40 50 60 Miles

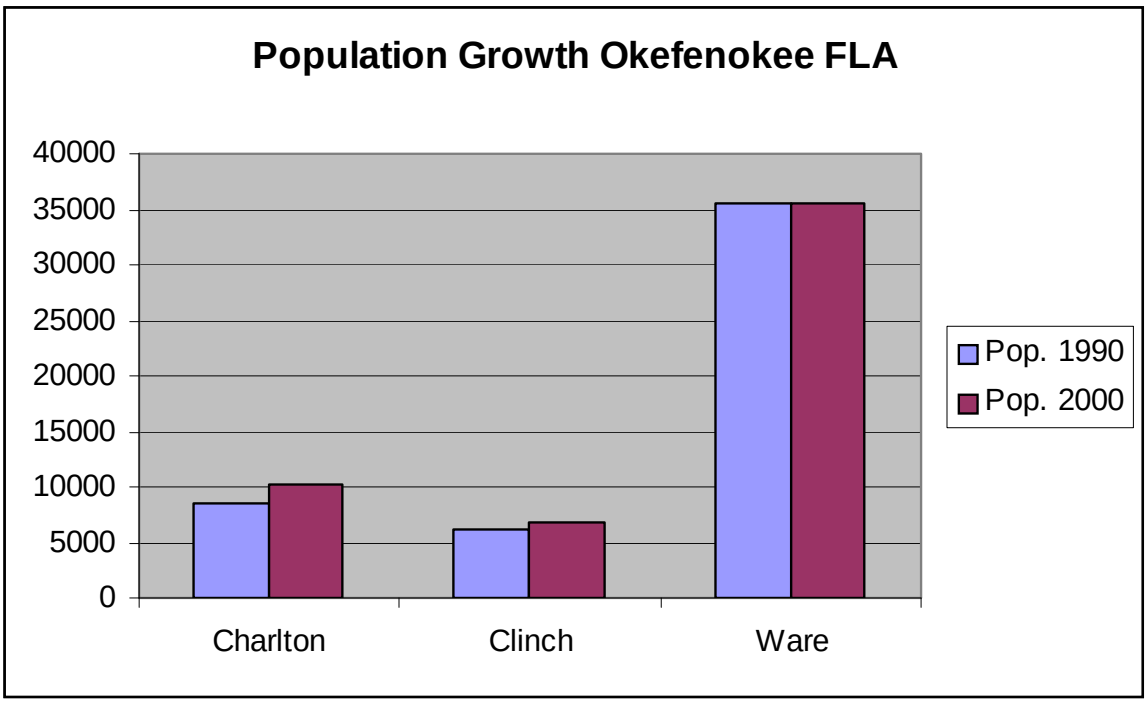
Okefenokee Forest Legacy Area

The following Georgia Counties are wholly within the Okefenokee FLA:

Charlton Clinch Ware

Population – Each county within the Okefenokee FLA has had an increase in population from 1990 to 2000. Overall, the increase was 5% above 1990 levels from 50,127 to 52,643. The greatest change occurred in Charlton County with a 17.4% increase.

Overall, the population density averages 20 persons per square mile. This density level is well below the threshold level of 45 that indicates there is a 50% probability that forest management opportunities will exist. Ware County is the high with 39.3 persons per square mile. Charlton County and Clinch County have 10.9 and 8.5 persons per square mile.



Land Area - The total land area within the Okefenokee FLA is 1,597,443 acres. (From the US Bureau of the Census, 1990.)

Ownership Patterns - The US Fish and Wildlife Service owns the majority of Okefenokee Swamp ecosystem within an area named "Okefenokee National Wildlife Refuge and Wilderness Area". The remaining lands are owned by the state of Georgia (Dixon Memorial State Forest), corporate and private landowners.

Threats to the Forest Resource –

- Mining – The mining of underground resources, principally titanium, would take productive forest lands out of production. Altered drainage patterns would have a harmful effect on the Okefenokee Swamp.

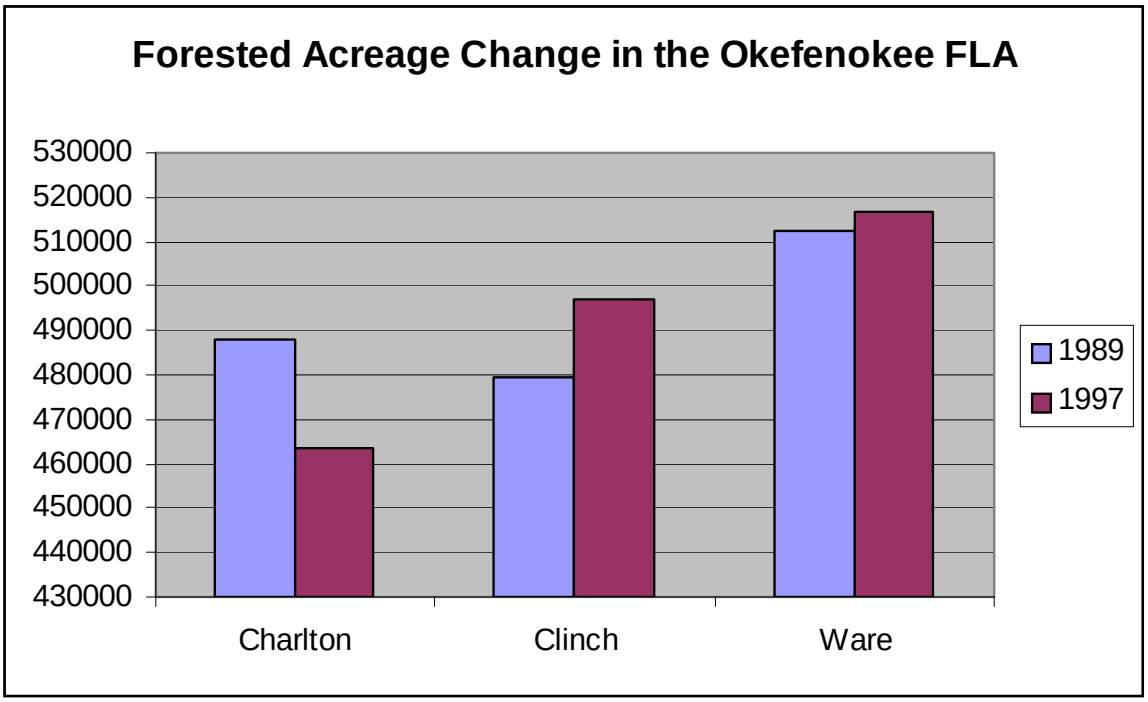
- ❖ Fragmentation/Development – Population growth within the FLA and from are leading to the subdividing and developing of forest lands within this FLA.
- ❖ Water Quality – The Okefenokee Swamp gives rise to two major river systems, the St. Mary's River and the Suwanee River. Poor land use practices, such as those associated with land clearing for development and road building, negatively effect water quality.
- ❖ Recreation/Scenic – Any negative impacts on the swamp and adjacent forest lands will, likewise, impact recreational uses of the swamp, such as fishing, canoeing, and animal watching.

FLA Specific Goals – These goals will be the focus for this FLA. These goals fall within those established in Section III, page 9 of this Assessment of Needs. Properties meeting these goals will receive additional scoring in the evaluation process.

- ❖ Protection of the Okefenokee Swamp Ecosystem from mining.
- ❖ Buffer public forestlands and swamps with upland forests.

FOREST RESOURCES

Forested Acreage –



Timber Resource - The forest statistics for the Okefenokee FLA indicate a slight decrease, less than .2%, in forest acreage since 1989. Acreage now totals less than 1.5 million acres. Only 1,121,300 of those acres are classified as timberland, the remainder is predominately classed as productive reserved and is unavailable for harvest. Approximately 18,760 acres were removed from the timberland base. Seven thousand two hundred thirty two acres were removed from the productive reserve, with

most of that acreage going into timberland. Almost 80 percent of the diversions were due to forest clearing for agriculture and urban and related uses.

The increase in timberland area occurred in the Federal and State & Public ownership classes. Federal ownership covers 15,300 acres (the Okefenokee Swamp is not classified as timberland), an increase of 30 percent since 1989. NIPF owners control almost 381,200 acres, or 34%, of the total timberland in this FLA, an increase of nearly 11 percent. State & Public agencies control over 50,600 acres, or 4.5 percent, of total timberland, an increase of about 70 percent. Timberland under forest industry control decreased 7.7 percent to 674,200 acres. Forest industry acreage includes some NIPF land under long-term lease.

Forest stands classified as a pine or oak-pine forest type occupy over 504,300 acres of timberland in the FLA. Collectively, pine and oak-pine have decreased by 2 percent since 1988, and stands classified as hardwood forest types decreased to almost 104,800 acres. Pine plantations account for 70 percent of all pine stands in the FLA. Slash pine remains the predominant pine forest and oak-gum-cypress remains the predominant hardwood forest type.

Harvesting and regeneration have been the predominant treatment and management activities in the timberland of the Okefenokee FLA since 1988. Final harvests occurred on 26,052 acres annually; 70 percent of the harvesting activity was in pine stands, 8 percent in oak-pine stands, and 22 percent in hardwood stands. The area of new stands established exceeded the area harvested by nearly 12.5 percent. Reforestation and afforestation combined averaged over 29,328 acres annually. Fifty-six percent (16,380 acres) of this total involved planting trees on forest land. Eighteen percent of this total involved both the planting and natural reversion of nonforest land. (Adapted from Thompson and Sheffield's *Forest Statistics for Southeast Georgia, 1996* and Thompson's *Forest Statistics for Georgia, 1989)*

Within the uplands, there are high-quality stands of longleaf pine forest, many of which are managed for wildlife and sustainable timber harvest. This community type ranks with tropical rainforests in natural diversity, with more than 100 species recorded in a square meter area. Longleaf pine woodlands and associated ecological communities within the uplands were once the dominant vegetation type in the coastal plain.

The Okefenokee Swamp is one of the largest and the most significant wetland complexes in the United States. It has been designated as a Wilderness Area, a National Natural Landmark and a Ramsar Wetland of International importance. It is a portfolio site for The Nature Conservancy. The headwaters of both the Suwannee and St. Mary's Rivers begin here. The swamp is a huge, sandy depression that was once part of the ocean floor. Over time, decaying vegetation accumulated on the sand floor to form peat, which continues to degrade and emit methane gas. From time to time, the gas forces entire sections of the peat base to rise to the surface, creating small, unstable islands. Swamp forests of cypress, gum and bay cover a large percentage of the swamp. Seventy upland islands make up 25,000 acres of the swamp. Few areas can match the variety and sheer abundance of wildlife in the swamp, including 233 bird, 49 mammal, 39 fish, 64 reptile and 37 amphibian species.

Forest Plant Diversity - The Okefenokee Swamp is rich in plant diversity. There are five globally rare plants found in the area, *Ctenium floridanum* (G2), *Gymnopogon chapmanianus* (G2), *Harwrightia floridana* (G2), *Litsea aestivalis* (G3), and *Platanthera integra* (G3G4).

Forest Wildlife - The region has abundant deer and turkey populations. Less well-known are the many rare species found in the region, such as the gopher tortoise (*Gopherus polyphemus*), eastern indigo snake (*Drymarchon corais couperi*), gopher frog (*Rana areolata sevosa*), sandhill crane (*Grus canadensis*), American alligator (*Alligator mississippiensis*), and the red-cockaded woodpecker (*Picoides borealis*). This is one of the five sites within Georgia that has a viable red-cockaded woodpecker population. Other federally or globally listed species found in the area include the bald eagle (*Haliaeetus leucocephalus* , wood stork (*Mycteria americana*), flatwoods salamander (*Ambystoma cingulatum)*, round-tailed muskrat (*Neofiber alleni*, striped newt (*Notophtalamus perstriatus)*, and the Florida black bear (*Ursus americanus floridanus)*. The area remains a potential reintroduction site for the endangered Florida Panther *(Felis concolor coryi).*

The following table represents the available data on hunter visitation for state-owned WMAs within the Okefenokee FLA during the 1998-1999 hunting season.

OKEFENOKEE FLA	WMA	Size (ac.)	# Hunters
	Dixon Memorial	36134	1798
TOTALS		36134	1798

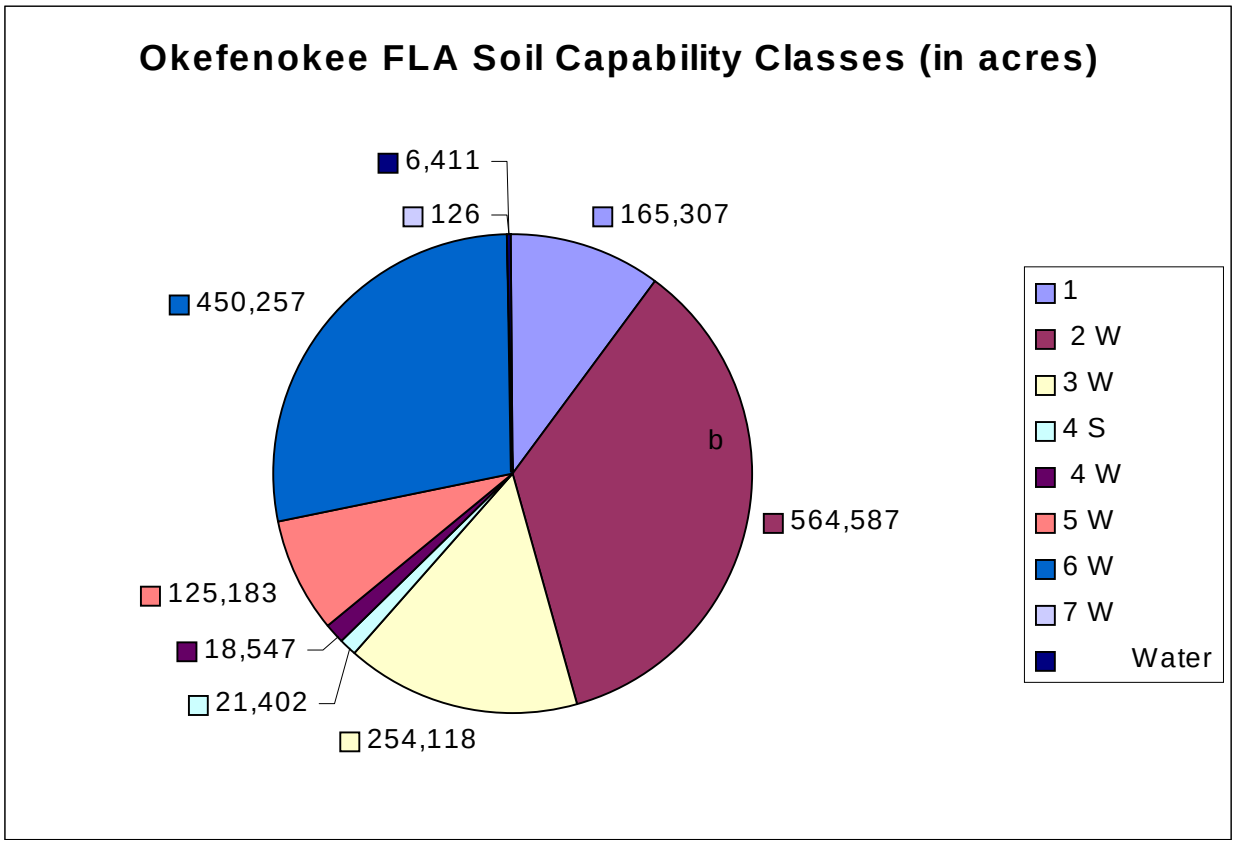
Fisheries - Freshwater Information - - The Okefenokee Forest Legacy area also includes 3 major river basins: the Suwanee, St. Mary's and Satilla.

The Okefenokee FLA has several significant areas for wildlife-related activities including Laura S. Walker State Park, Dixon Memorial Forest, the Okefenokee National Wildlife Refuge, Stephen C. Foster State Park, and King Tract WMA. In addition, the Okefenokee FLA includes part of the Georgia Colonial Coast Birding Trail within the Okefenokee National Wildlife Refuge.

The Okefenokee Swamp is similar to adjacent southeastern river drainages, although it is less diverse. The fauna comprises 36 species of fish, representing 14 families. Remarkable features of the fish assemblage of the swamp are the absence of minnows and various species of sunfish. One possible explanation for the limited variety of fish in the Okefenokee Swamp, as compared with other blackwater coastal plain waters, is the highly acidic nature of the swamp.

Soil and Water – All of the soils in the Okefenokee FLA have some degree of limitation associated with them. The main limitation on these soils is water on or in the soil interferes with plant growth or cultivation. Thirty five percent of the soils are in a Class that have moderate limitations that restrict the choice of plants or that require moderate conservation practices. An additional twenty eight per cent of the soils have severe limitations that make them generally unsuitable for cultivation. The letter ***W*** in the graph shows that water in or on the soil interferes with plant growth or cultivation, and ***S*** shows

that the soil is limited mainly because it is shallow, droughty, or stony. (See Land Capability Classification in the Appendix.)



A small portion of the Satilla River watershed is located in this FLA. This watershed is classified as a Category I watershed in the State Unified Watershed Assessment. This classification indicates the watershed is impaired and most in need of restoration

Unique Natural Areas - Okefenokee's natural beauty was first threatened in the 1890's, when timber companies began to drain the swamp for logging operations. In 1891, the Suwannee Canal Company dug a canal, 40 feet wide and six feet deep, which extended for 11.5 miles into the swamp from Camp Cornelia. The project failed, and in 1909 the Hebard Lumber Company bought the swamp and began removing timber, mainly cypress. By 1924, when logging ceased, over half a billion cubic yards of timber had been removed. Around this time, there was a growing drive to protect the swamp. One of the leaders of this movement, Mrs. Francis Harper, appealed to President Franklin Roosevelt, a personal friend, for help. On March 30, 1937, President Roosevelt established the Okefenokee National Wildlife Refuge.

The Nature Conservancy working with a multidisciplinary team of experts from many agencies, completed a study of the South Atlantic Coastal Plain Ecoregion. The SACP covers portions of North Florida, SE Georgia, and SE South Carolina. One of the purposes of this study was to determine what are the most crucial areas to protect. There were 56 portfolio sites selected with 13 chosen as "action sites". The following factors were assessed to determine action sites: irreplaceability, site functionality,

degree of threat, likelihood of success, level of effort required, leverage and feasibility. In addition, action sites were selected through the following criteria: 1) Site is biologically viable (based on size, condition and landscape context); 2) Site represents irreplaceable occurrences or contains multiple targets; 3) Site is complementary with regard to the whole portfolio (the combination of action sites should be representative of the diversity of the ecoregion); and 4) Site has a reasonable chance for conservation success within the five to 10 year period. Sites were divided into functional groups to assist in evaluating complementarily. Functional groups were barrier island and estuary, river corridors, lower coastal plain flatwoods, seepage bogs, Carolina bays and depressional wetlands, upland longleaf pine, rock outcrops, and fall-line sandhills.

One of the 13 action sites for the South Atlantic Coastal Plain was the Okefenokee Swamp .

Aesthetic and Scenic Resources - The Okefenokee Swamp has a diversity of ecological systems, ranging from island, bog, and prairie habitats. Island habitats include approximately 9,000 acres of longleaf pine flatwoods and limited hardwood hammocks. Bog habitats include cypress bays and sphagnum bogs, which comprise more than half of the entire swamp acreage. The prairies encompass approximately 60,000 acres and are described as shallow "marsh-ponds" lacking trees. This diversity makes Okefenokee both beautiful and infinitely interesting.

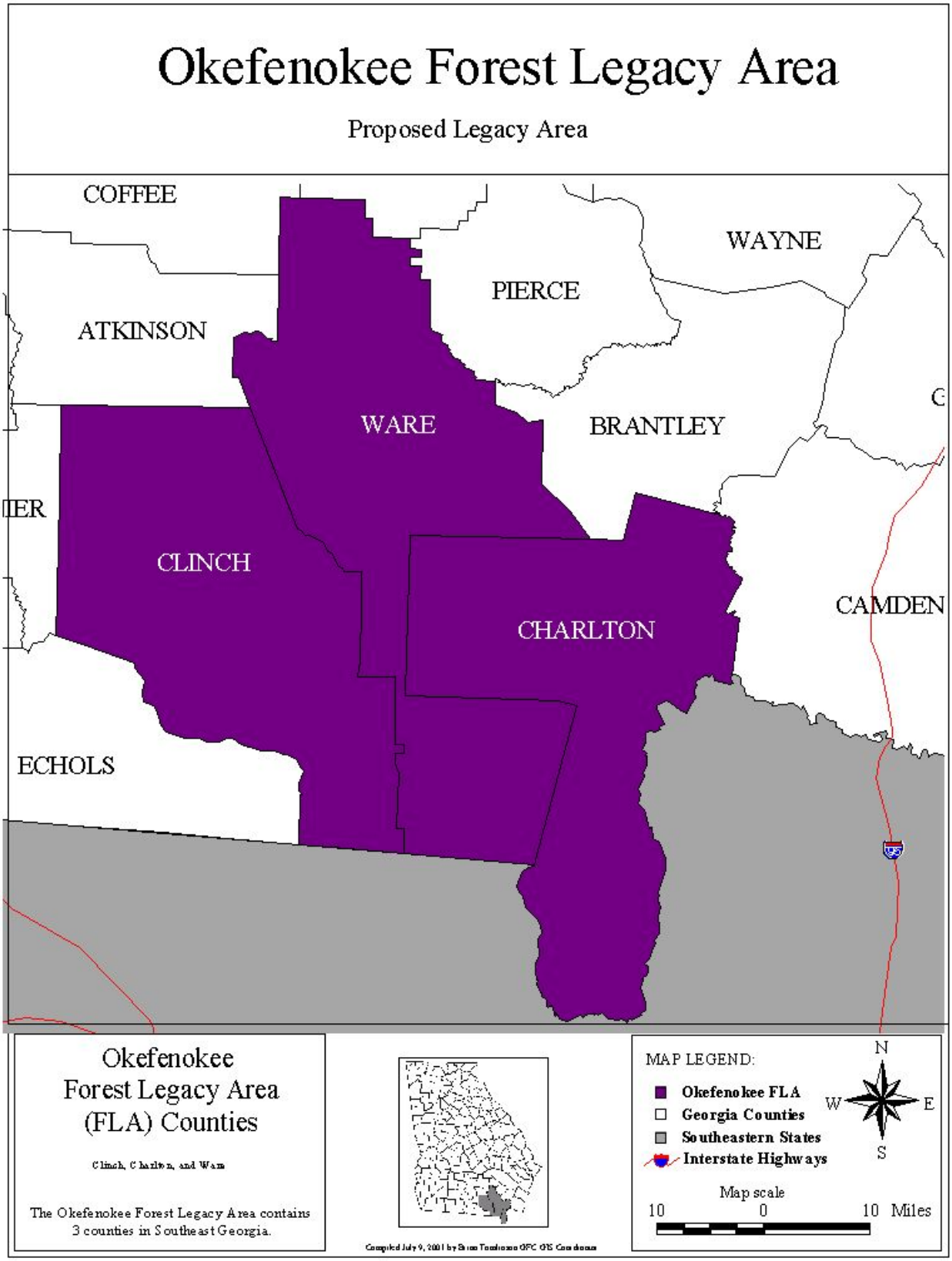
The Okefenokee FLA includes 2 state parks, Stephen C. Foster and Laura S. Walker.

Current Status - Okefenokee FLA

Forest Fragmentation - The site has been manipulated since the late 1800's. The majority of the cypress was removed in the early 1910's. The pine was cut in the late 1920's. More recently the Suwannee River sill was constructed to hold water above a minimum level. Under the flawed assumption that this would prevent the periodic peat fires that maintain open prairies and lakes; today, the sill effects only one percent of the Okefenokee Swamp under drought conditions.

Existing Forest Conservation Efforts - Though much has been preserved, there is still a tremendous amount of conservation opportunities. There are ongoing proposals to strip mine the DuPont lands which lie east of the refuge for titanium. Such mining would dramatically threaten surrounding upland pine communities and potentially effect the hydrology of the swamp. To maintain a viable population of red-cockaded woodpeckers in the refuge, additional conservation efforts with the surrounding landowners will have to be established. Protection of vegetative communities, especially uplands, surrounding Okefenokee is important in order to ensure the long-term viability of the resident Florida black bear population and maintain the possibility of Florida panther.

State & Federal Listed Unusual, Rare, Threatened, or Endangered Species in Okefenokee FLA Counties: See Appendix E.


Okefenokee Forest Legacy Area
Proposed Legacy Area
COFFEE
WAYNE
PIERCE
ATKINSON
WARE
BRANTLEY
CLINCH
CHARLTON
CAMDEN
ECHOLS
Okefenokee
Forest Legacy Area
(FLA) Counties
Clinch, Charlton, and Ware
The Okefenokee Forest Legacy Area contains
3 counties in Southeast Georgia.
MAP LEGEND:
Okefenokee FLA
Georgia Counties
Southeastern States
Interstate Highways
N
W
E
S
Map scale
10 0 10 Miles

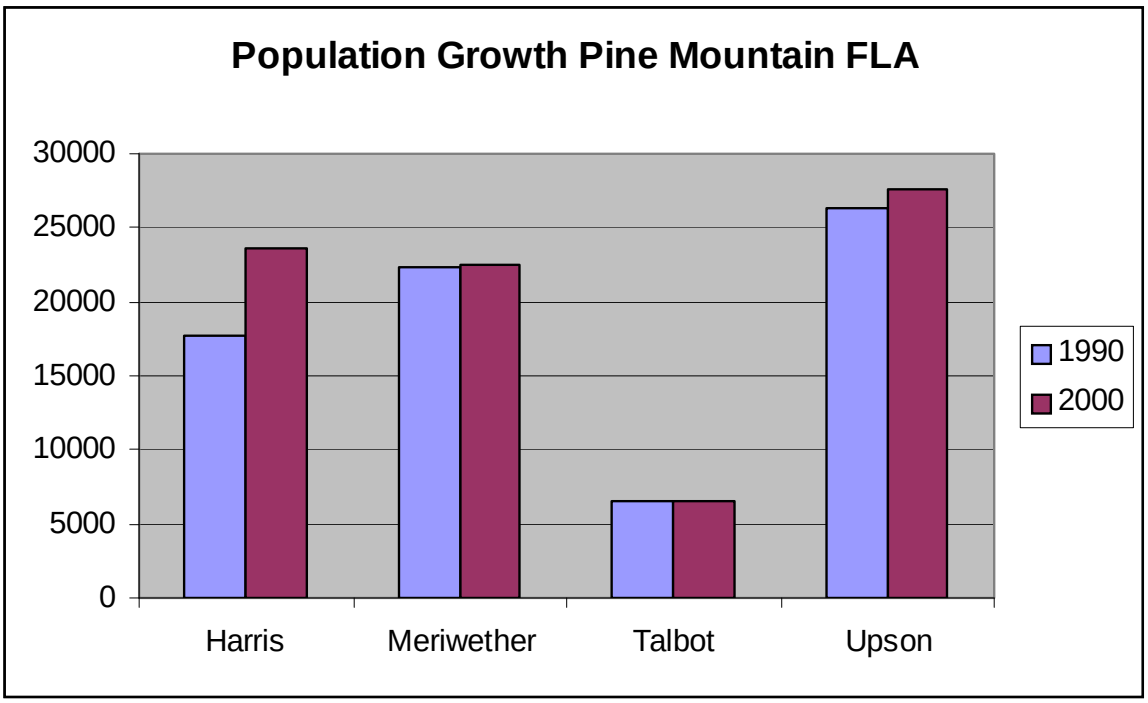
Pine Mountain Forest Legacy Area

The following Georgia Counties are wholly within the Pine Mountain FLA:

Harris	Talbot
Meriwether	Upson

Population – Every county within the Pine Mountain FLA has had an increase in population from 1990 to 1996. Overall, the increase was 7.9% above 1990 levels. The greatest change occurred in Harris County at 33.2%.

Overall, the population density averages 45 persons per square mile. This density level meets the threshold level of 45 that indicates there is a 50% probability that forest management opportunities will exist. Upson County is the high with 80.8 persons per square mile and, individually, is above the threshold level of 70 and the associated 25% probability. Talbot County is the low at 16.6 persons per square mile.



Land Area - The total land area within the Pine Mountain FLA is 1,081,856 acres. (From the US Bureau of the Census, 1990.)

Ownership Patterns - Land ownership in the Pine Mountain FLA is primarily private ownership, with scattered properties owned by the Georgia Department of Natural Resources.

Threats to the Forest Resource –

- Fragmentation/Development – Population growth within the FLA and from Columbus/Fort Benning, GA are leading to the subdividing and developing of forest lands within this FLA.

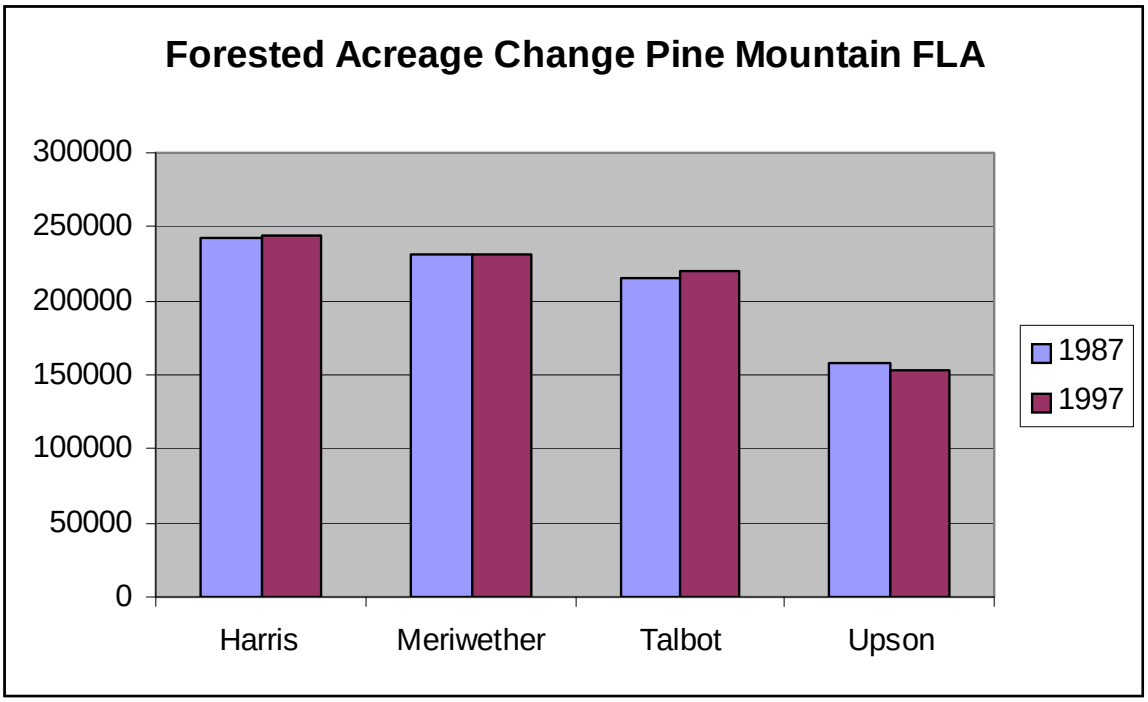
- ❖ Water Quality – Important segments of the Chattahoochee and Flint River systems are located within this FLA. Poor land use practices, such as those associated with land clearing for development and road building, negatively effect water quality.
- ❖ Declining Ecosystems – Some of the last remaining, unbroken tracts of Longleaf Pine and it's associated plant and animal communities are found in this FLA.

FLA Specific Goals – These goals will be the focus for this FLA. These goals fall within those established in Section III, page 9 of this Assessment of Needs. Properties meeting these goals will receive additional scoring in the evaluation process.

- ❖ Consolidate (i.e. connectivity) and/or buffer public forestlands or forestland already with a conservation easement.
- ❖ Protection of the longleaf pine ecosystems.

FOREST RESOURCES

Forested Acreage –



Timber Resource - The forest statistics for the Pine Mountain FLA indicate a slight increase, less than 2/10th of 1%, in forest acreage since 1989. Forest acreage now totals nearly 848,400 acres with 6000 acres of that total in productive reserve. Timberland acreage is 842,400 acres. More than 21,300 acres were added to the timberland base, while 19,800 acres were diverted from timberland to other uses. Tree planting and natural seeding on agricultural lands make up nearly 95 percent of the

additions. Almost 80 percent of diversions were due to forest clearing for agriculture and urban and related uses.

The increase in timberland area occurred in the nonindustrial private forest (NIPF) ownership sector. NIPF owners control almost 645,800 acres, or 77%, of the total timberland in this FLA, an increase of nearly 10 percent since 1989. Public agencies control over 11,800 acres, or 1.4 percent, of total timberland, a decrease of about one percent. Timberland under forest industry control, 22 percent of the total, dropped 30 percent from 1989 levels of 263,800 acres to less than 185,200 acres.

Forest stands classed as a pine or oak-pine forest type occupy over 559,200 acres of timberland, 66 percent, in the FLA. Collectively, pine and oak-pine have increased by 4 percent since 1988, and stands classified as hardwood forest types decreased by 6 percent to 274,700 acres. Pine plantations increased 28 percent to almost 318,700 acres and account for 57 percent of all pine stands in the FLA. Loblolly-shortleaf pine remains the predominant pine forest with 375,600 acres and oak-hickory remains the predominant hardwood forest type with 216,700 acres.

Harvesting and regeneration have been the predominant treatment and management activities in the timberland of the Pine Mountain FLA since 1988. Final harvests occurred on 15,376 acres annually; 60 percent of the harvesting activity was in pine stands, 12 percent in oak-pine stands, and 28 percent in hardwood stands. The area of new stands established exceeded the area harvested by nearly 28 percent. Reforestation and afforestation combined averaged over 19,886 acres annually. Thirty-eight percent (7557 acres) of this total involved planting trees on forest land. Twenty-eight percent of this total involved both the planting and natural reversion of nonforest land. (Adapted from Thompson and Sheffield's *Forest Statistics for Central Georgia, 1997* and Thompson's *Forest Statistics for North Central Georgia, 1998* and *Forest Statistic's for Georgia, 1989*)

Forest Plant Diversity- Historically, much of this region was forested until settlers began moving into West Central Georgia in 1825. Clearing began then and continued until 1920 when approximately 60% of the land had been cultivated and nearly all of the forests had been cut over for timber. Pine Mountain itself was largely spared due to its rocky soil and steep topography. (Jones, 1974)

Today, most areas previously cleared are forested in stands of loblolly pine or mixed pine hardwood forest. Portions of the Pine Mountain FLA provide good examples of best management practices on forest lands and some areas are currently enrolled in American Forest & Paper Association's Sustainable Forestry Initiative program.

Species located on Pine Mountain Ridge, which historically has been only selectively cut, include remnant stands of longleaf pine, hickories and several oaks (chestnut, black and blackjack). The floodplains have stands of sweetgum, ash, yellow poplar and beech (Wharton, 1989).

The Pine Mountain Ridge rises above the surrounding piedmont region of West Central Georgia on a formation of Hollis Quartzite, which is extremely hard and resistant to erosion. This xeric habitat is currently dominated by hardwood species (oak-hickory community) interspersed with remnant stands of longleaf pine. Historic selective harvest

and more recent exclusion of fire have led to a reduced presence of longleaf in this community. A revision of land management strategies could result in an increased presence of this species in the future.

The Pine Mountain FLA has been recognized over time as an area reflecting a unique mix of Piedmont, Appalachian, and Coastal Plain species. Harper first notes this in 1903, Duncan and Conquist in the 1940's and 1950's and more recently Dr. Sam Jones documented this uniqueness with his floristic study of the region in 1971-72. Dr. Jones cataloged 829 species of vascular plants for the area and based on his finding stated, "The flora of the Pine Mountain region is unique and probably the most varied and interesting to be found in the Piedmont of Georgia." The presence of both Appalachian and Coastal Plain species in this region has partly been explained by Ridge's proximity to two major river basins, the Flint and Chattahoochee Rivers. These rivers have provided pathways for species migration into the region.

The Hollis Quartzite that forms Pine Mountain Ridge also provides for the formation of both warm water and cold water springs. These springs and seeps provide a unique assemblage of microclimates along the slopes of the ridge.

Forest Wildlife – The western Piedmont Region of Georgia supports large populations of many of our most important game species such as white-tailed deer and wild turkey. As a result this region of the state experiences some of the highest demands for forest recreation.

The following table represents the available data on hunter visitation for state-owned WMAs within the Pine Mountain FLA during the 1998-1999 hunting season.

PINE MOUNTAIN FLA	WMA	Size (ac.)	# Hunters
	Big Lazer	5850	1365
	Joe Kurz	3622	554
TOTALS		9472	1919

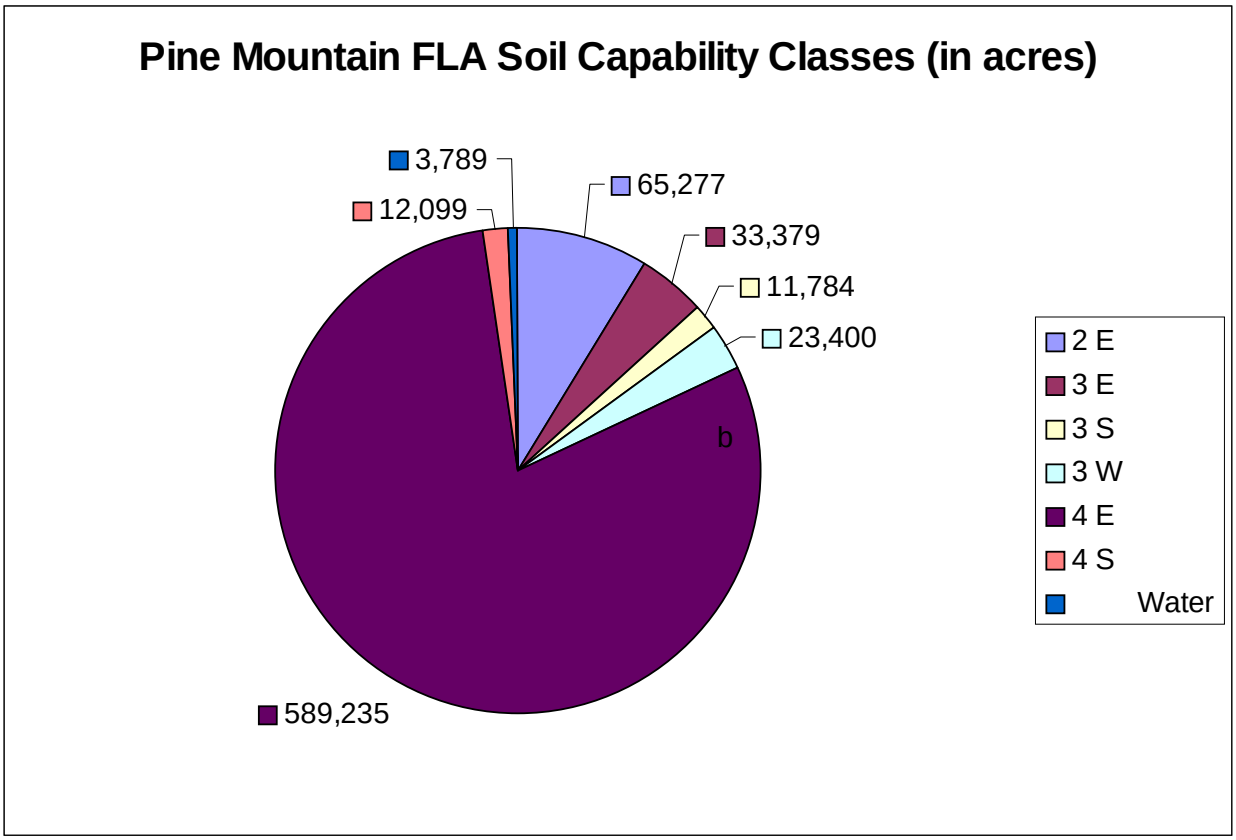
Fisheries Resources - The Pine Mountain Forest Legacy area includes 3 major river basins: the Chattahoochee, Flint, and Ocmulgee. In addition, Lake Meriwether (Meriwether County) and Lake Harding (Harris County) are located within the Pine Mountain FLA. Together, these river basins and impoundments provide recreational fishing opportunities to thousands of Georgia anglers. The Wildlife Resources Division operates eight Public Fishing Areas (PFAs) located around the state, including the Big Lazer Creek PFA, which is located within the Pine Mountain Forest Legacy Area. The 195-acre impoundment at Big Lazer attracts approximately 19,500 visitors each year and offers anglers bass, sunfish, and catfish fishing opportunities.

Freshwater aquatic diversity varies with some streams in the region being very intact, others threatened and some already significantly degraded. The Chattahoochee and Flint Rivers are waters of great concern.

Public Fishing Areas (PFA's) are managed intensively for fishing by the Georgia DNR Wildlife Resources Division. The Pine Mountain FLA contains Big Lazer Creek one of

the eight PFA's managed across the state. Fish available to anglers include: largemouth bass, bluegill, red ear sunfish, channel catfish and crappie.

Soil and Water – All of the soils in the Pine Mountain FLA have some degree of limitation associated with them. The main limitation on these soils is risk of erosion. Almost eighty percent of the soils are in a Class that have severe limitations that restrict the choice of plants or that require very careful management, or both. The letter ***E*** in the graph shows that the main limitation is risk of erosion, ***W*** shows that water in or on the soil interferes with plant growth or cultivation, and ***S*** shows that the soil is limited mainly because it is shallow, droughty, or stony. (See Land Capability Classification in the Appendix.)



There are two Category I watersheds in the Pine Mountain FLA. They are the Middle Chattahoochee and the Upper Flint watersheds. The Category I classification, designated by the State Unified Watershed Assessment indicates these watersheds are impaired and most in need of restoration.

Non-game Values

There are numerous places to wildlife-watch in Georgia, including National Parks and Refuges, and State Wildlife Management Areas. Many of these significant wildlife-watching areas are located in Forest Legacy Counties. The Pine Mountain FLA includes 7 significant areas for wildlife-related recreational opportunities. These are Joe Kurz Wildlife Management Area (WMA), Big Lazer Creek WMA, Blanton Creek WMA, Lake Meriwether, Lake Harding, and Calloway Gardens. The Pine Mountain FLA is

also significant because of its close proximity to Fort Benning, home to many rare and endangered species such as the red-cockaded woodpecker.

Unique Natural Areas – The southern location, steep and varied slope, east-west orientation and geology of the Pine Mountain Ridge provides for a variety of unique natural areas in the Pine Mountain FLA. The Pine Mountain Region is the southernmost mountainous area in Georgia, separated from the Appalachian ridge by geography and distance. Steep, north facing slopes create cool, moist microclimates with cove like conditions providing suitable habitat for species traditionally found with more northerly distributions.

Where the Flint or major streams cut through the Ridge watergaps are produced with deeply incised banks and steep bluffs providing conditions for unique assemblages of plants. The Flint itself provides a rich aquatic environment where species like the Shoal lilies thrive.

The Hollis Quartzite bedrock of the ridge allows for the formation of springheads and seeps which provide sources of consistent moisture in an otherwise predominately xeric community.

Remnant stands of mature longleaf pine lace the entire 110 mile long ridge.

Recreational and Scenic Resources – There are many recreational and scenic resources located within the Pine Mountain FLA. In addition to the state and federally owned parks and wildlife management areas, the area is home to Callaway Gardens, a natural area that includes 14,000 acres of woodlands and lush gardens. Activities available to Callaway Gardens visitors include, nature trails, bicycling, horticultural displays, and a broad spectrum of environmental education opportunities. Lynnhaven, is an 80 acre privately owned area that is managed for birding habitat and open to the public for guided tours. The 23 mile Pine Mountain Trail, which is located in FDR State Park is another valuable recreational asset to the communities in the area. The Pine Mountain FLA is also home to the 2,000 acre Boy Scout Camp Thunder and the Girl Scouts' Camp Concharty. Portions of the Pine Mountain FLA are also candidate locations for the soon to be developed Georgia DNR's Southwest Georgia Birding Trail. Scenic views from the Pine Mountain Ridge overlooking the adjacent valley areas are spectacular and can be enjoyed via several scenic highways and roads in the area.

Georgia's State Parks offer many recreational activities such as:

State Parks	Designation	County	Acres	Annual Visitors	Attractions
F. D. Roosevelt	Park	Harris	9,047		CT, RV, PC, BR, FS, LK, CN, PL, HK, NT, CA
Little White House	Historic Site	Meriwether	10		HBR, ME
Sprewell Bluff	Park	Upson	1,400		PC, BR, FS, CN, HK, NT

PC = Picnic, CT = Cottages, RV = RV/Trailer/Tent Sites
BR = Boat Ramp, FS = Fishing
LK = Lake, CN = Canoeing, HBR = Historic Building/Ruin
HK = Hiking, ME = Museum/Exhibit
PG = Playground, NT = Nature Trail, PL = Pool
CA = Camping

There are numerous places to wildlife-watch in Georgia, including National Parks, Refuges, and State Wildlife Management Areas. These significant wildlife watching areas are located in the Pine Mountain FLA: Big Lazer Creek WMA, Blanton Creek WMA, Joe Kurz WMA, and Sprewell Bluff WMA.

CURRENT STATUS – Pine Mountain FLA

Forest Fragmentation – The Pine Mountain FLA is located between Columbus and Atlanta and partially along the I-185 corridor. This area is experiencing increasing development pressure as the two metropolitan centers grow. Development is currently the largest threat to the forested areas in this region. Bordered on the south and east by Fort Benning and on the west by the Chattahoochee River, the city of Columbus and its continued growth must expand northward toward the Pine Mountain FLA. Large subdivisions and expansive development are actively being planned on forested tracts throughout the area. As this growth takes place, it is important that provisions be made to protect the natural communities and open space that currently draw people to the area.

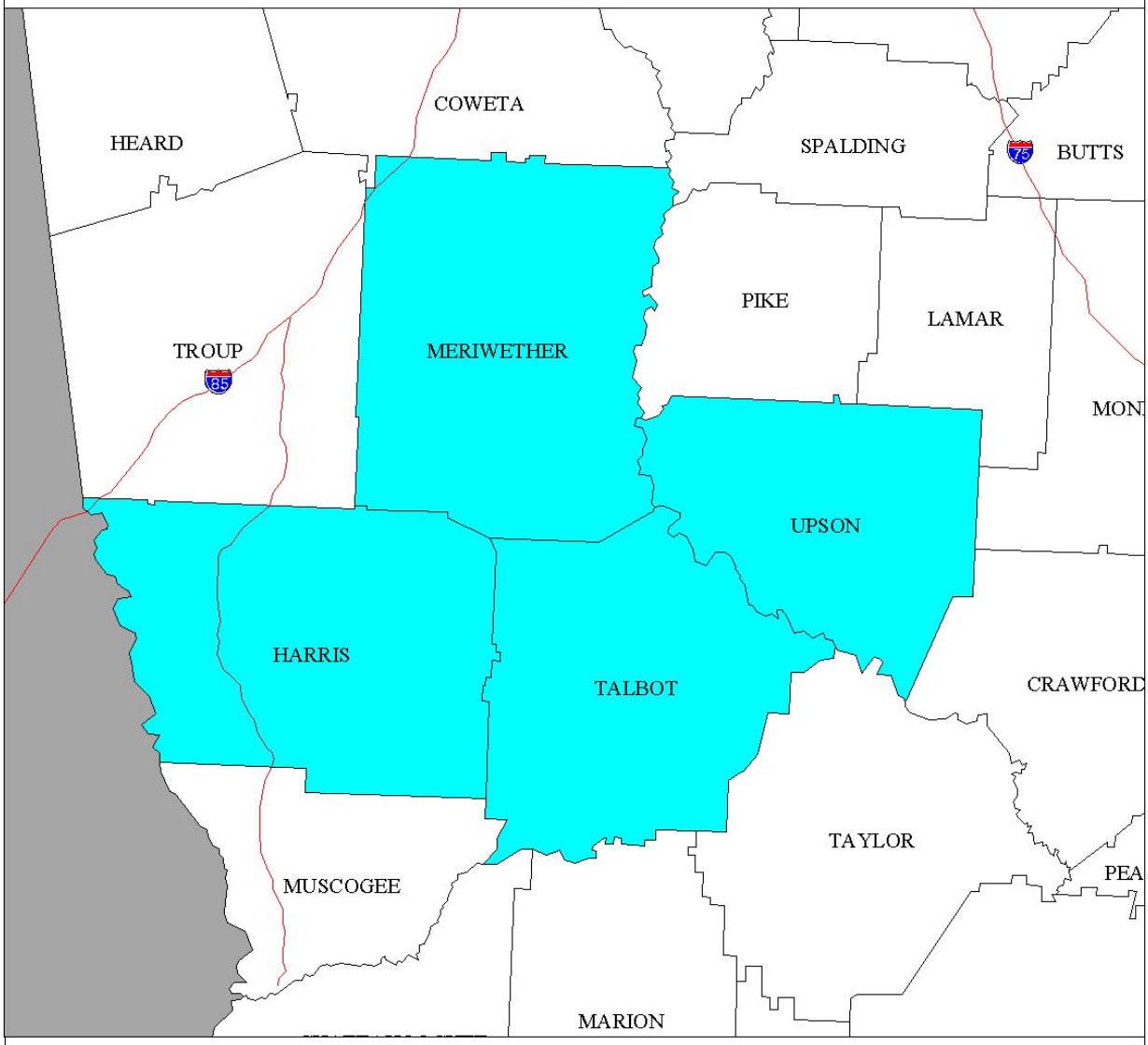
Existing Forest Conservation Efforts – The importance of the Pine Mountain FLA and its biological and cultural diversity has been recognized by a number of local, statewide and national organizations and agencies. In 1995 the Pine Mountain Ridge was nominated by the Lower Chattahoochee RDC and identified as a Regionally Important Resource through a program sponsored by the State Department of Community Affairs. The EPA funded a 3 year project studying the riparian habitat and rare species found along the Flint River and its major tributaries. In 1999 the Georgia Wildlands Charrette identified it as a core area within its *Georgia Ecological Conservation Vision.* The GA Conservancy recently launched its *Blueprints for Successful Communities* Middle Chattahoochee- Columbus Watershed Based planning initiative in Harris County. The region is expected to be identified as a high priority region of significant concern during the Piedmont Ecoregional Planning process currently underway by The Nature Conservancy. The Conservation Fund is currently working with land owners to promote the protection of and sustainable management of forestland in the area.

The Pine Mountain FLA region has also recently been renamed the Georgia Southern Rivers Region by the Georgia Department of Trade and Tourism to be marketed as a eco-tourism destination.

State Listed Unusual, Rare, Threatened, or Endangered Species in Pine Mountain FLA Counties: See Appendix E.

Pine Mountain
Forest Legacy Area

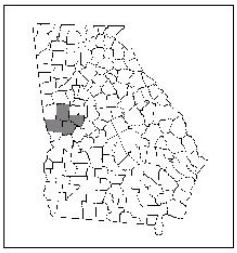
Proposed Legacy Area



Pine Mountain Forest Legacy Areas (FLA) Counties

Meriwether, Harris, Talbot, and Upson

The Pine Mountain Forest Legacy Area contains 4 counties in West Georgia.



Compiled April 11, 2001 by Brian Tomlinson GFC GIS Coordinator

MAP LEGEND:

- **Pine Mountain FLA**
- **Georgia Counties**
- **Southeastern States**
- **Interstate Highways**

N
W E
S

Map scale

5 0 5 10 Miles

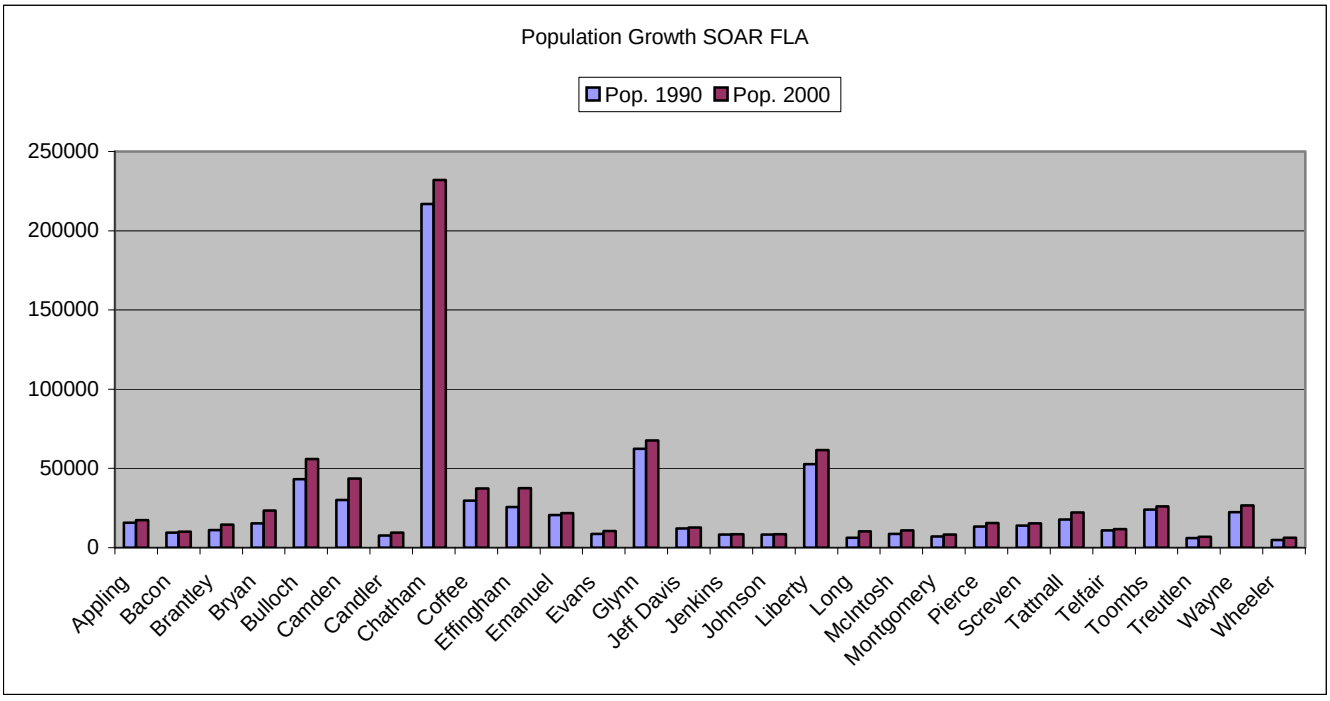
Savannah-Ogeechee-Altamaha Rivers (SOAR) Forest Legacy Area

The following Georgia Counties are wholly within the SOAR FLA:

Appling	Chatham	Jenkins	Screven
Bacon	Coffee	Johnson	Tattnall
Brantley	Effingham	Liberty	Telfair
Bryan	Emanuel	Long	Toombs
Bulloch	Evans	McIntosh	Treutlen
Camden	Glynn	Montgomery	Wayne
Candler	Jeff Davis	Pierce	Wheeler

Population – Every county within the SOAR FLA has had an increase in population from 1990 to 2000. Overall, the increase was 16.8% above 1990 levels from 713,410 to 833,312. The greatest changes occurred in Camden, Glynn, Liberty, Effingham, Bryan, and Bulloch Counties.

Overall, the population density averages 58 persons per square mile. This density level is almost midway between the threshold level of 45 that indicates there is a 50% probability that forest management opportunities will exist and the 70 level and the 25% probability. Chatham County is the high with 492.6 persons per square mile. Glynn County at 148 persons per square mile is at the 150 threshold that indicates little or no probability. Long County and Wheeler County are the lows at 15.5 and 16.5 persons per square mile. When the three highest density counties are eliminated from the equation, the average population density for this FLA is 35 persons per square mile.



Land Area - The total land area within the SOAR FLA is 5,840,300 acres. (From the US Bureau of the Census, 1990.)

Ownership Patterns - Land ownership includes both public and private ownership. Federal Lands are : - Ft. Stewart, Hunter Army Airfield, Fort Frederica National Monument, Fort Pulaski National Monument, Tybee National Wildlife Refuge, Savannah National Wildlife Refuge, Wassaw National Wildlife Refuge, Blackbeard National Wildlife Refuge, Wolf and Egg Islands National Wildlife Refuge, Harris Neck National Wildlife Refuge, and Cumberland Island National Seashore.

Threats to the Forest Resource –

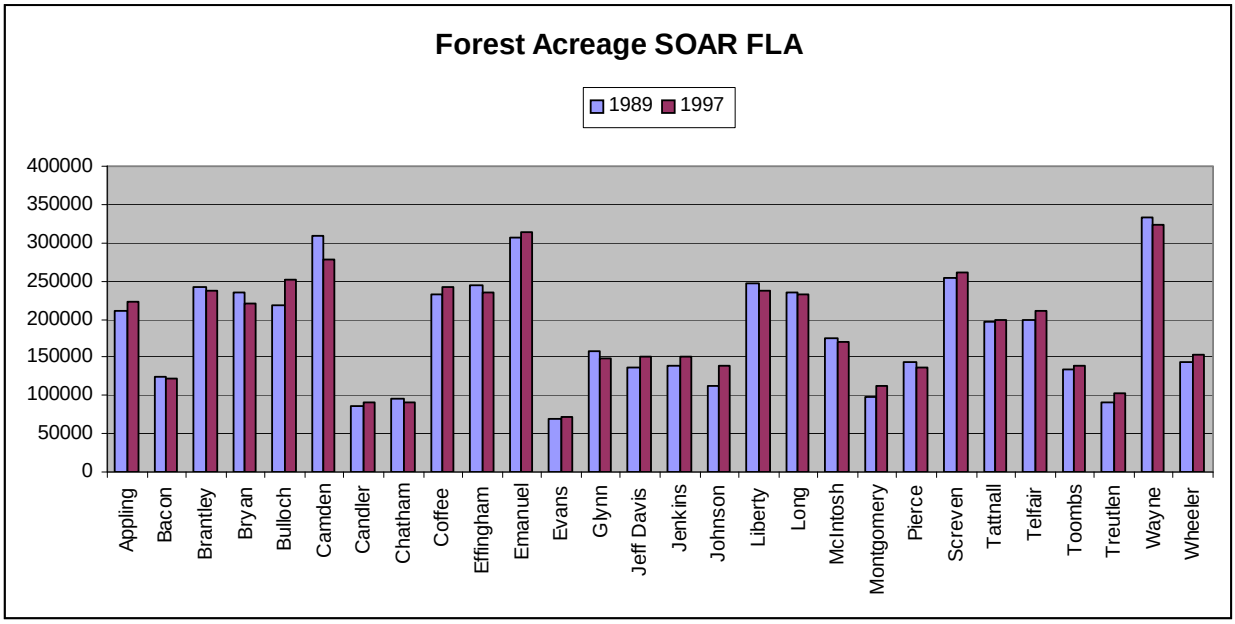
- ❖ Fragmentation/Development – Population growth within the FLA is leading to the subdividing and developing of forest lands within this FLA. Of specific concern is the growth around Savannah, Statesboro, Brunswick, and all of Camden County.
- ❖ Water Quality – Important segments of the Savannah, Ogeechee, Altamaha, and Satilla River systems are located within this FLA. Poor land use practices, such as those associated with land clearing for development and road building, negatively effect water quality.
- ❖ Declining Ecosystems – Some of the last remaining, unbroken tracts of Longleaf Pine and it's associated plant and animal communities are found in this FLA.

FLA Specific Goals – These goals will be the focus for this FLA. These goals fall within those established in Section III, page 9 of this Assessment of Needs. Properties meeting these goals will receive additional scoring in the evaluation process.

- ❖ Protection of the Savannah, Satilla, Ogeechee, Ocmulgee, and Altamaha River Corridors from development.
- ❖ Consolidate (i.e. connectivity) and conserve the longleaf pine/wiregrass system and related natural communities.

FOREST RESOURCES

Forested Acreage –



Timber Resource – The forest statistics for the SOAR FLA indicate a slight increase, only 1.5%, since 1989. Acreage now totals nearly 5.3 million acres. Approximately 226,000 acres were added to the timberland base, while over 195,000 were diverted from timberland to others uses. Tree planting and natural seeding on agricultural lands make up nearly 95 percent of the additions. Almost 83 percent of the diversions were due to forest clearing for agriculture and urban and related uses.

The increase in timberland area occurred in the nonindustrial private forest (NIPF) and public ownership sectors. NIPF owners control almost 3.3 million acres, or 64%, of the total timberland in this FLA, an increase of 6.1 percent. Public agencies control over 356,600 acres, or 6.9 percent, of total timberland, an increase of about 8 percent. Timberland under forest industry control dropped 13 percent to 1,462,300 acres.

Forest stands classed as a pine or oak-pine forest type occupy over 4 million acres of timberland in the FLA. Collectively, pine and oak-pine have increased by 1 percent since 1988, and stands classified as hardwood forest types decreased by 4.8% to 1,747,300 acres. Pine plantations increased 10 percent to almost 1.8 million acres and account for 70 percent of all pine stands in the FLA. Slash pine remains the predominant pine forest with 1.2 million acres and oak-gum-cypress remains the predominant hardwood forest type with 1.3 million acres.

Harvesting and regeneration have been the predominant treatment and management activities in the timberland of the SOAR FLA since 1988. Final harvests occurred on 119,700 acres annually; 70 percent of the harvesting activity was in pine stands, 8 percent in oak-pine stands, and 22 percent in hardwood stands. The area of new stands established exceeded the area harvested by nearly 13 percent. Reforestation and afforestation combined averaged over 135,000 acres annually. Fifty-six percent (75,600 acres) of this total involved planting trees on forest land. Eighteen percent of

this total involved both the planting and natural reversion of nonforest land. (Adapted from Thompson and Sheffield's *Forest Statistics for Southeast Georgia, 1996*)

Several forest types are found within this region of the state. Historically, vast unbroken tracts of longleaf pine forests were the dominant vegetation type in the region. These forests were characterized by an open canopy of longleaf pine with an understory of wiregrass (*Aristida stricta*) and numerous other herbaceous species. This community type ranks with tropical rainforests in natural diversity, with more than 100 plant species recorded in a square meter area. Fire-maintained longleaf pine woodlands are found across a wide range of soil moisture regimes, and support a large number of plant and animal species (including many endemics). However, due to a drastic decline of longleaf pine woodlands across the Southeast Coastal Plain, today less than 5 percent of this community remains.

Large intact river bottom swamps and bottomland hardwood forests stretch for miles on either side of the many rivers in this region. The lower elevation river bottoms which are more frequently inundated support towering cypress (*Taxodium spp*.) and tupelos (*Nyssa spp*.). The higher elevation portions of the swamp, are referred to as bottomland hardwood forests. Typical species within these forests include overcup oak (*Quercus lyrata*), swamp chestnut oak (*Quercus michauxii*), and sweetgum (*Liquidambar styraciflua*). These river swamps and bottomland hardwood forests provide habitat for multiple species, such as the majestic swallow-tailed kite (*Elanoides forficatus*).

Other, less frequent community types occur on high bluffs along the river systems. These bluffs provide habitat for many rare plants typically found further north in the Piedmont and Southern Blue Ridge Ecoregions. Scattered small, isolated wetland communities such as Carolina bays and cypress domes are found throughout the area. What these communities lack in size, they make up for in diversity. Not only are they home to globally rare plants such as Boykin's lobelia (*Lobelia boykinii*) and pondberry (*Lindera mellissifolia*), but they also provide important breeding grounds for a variety of rare amphibian species such as the flatwoods salamander (*Ambystoma cingulatum*) and the striped newt (*Notophthalamus perstriatus*).

Forest Plant Diversity - Within this region, the longleaf pine forests harbor the greatest diversity of plant life. Indeed, the longleaf pine ecosystem is considered by The Nature Conservancy to be one of the most imperiled communities in the United States. Likewise, the mesic bluff forests along the Altamaha and Savannah Rivers harbor many species disjunct from more northern portions of our state. As stated above, isolated wetland communities are also species rich with numerous rare herbaceous species. While the vast bottomland forests do not harbor great plant diversity, they provide significant habitat for migratory birds, wildlife corridors for mammalian species and spawning habitat for fish. These lowland forests also provide significant benefits to human habitation. They provide natural flood control by spreading out and retarding action from high flow events. They also function to remove silt, through overbank deposition and act as sediment and pollutant traps.

Forest Wildlife – The forests of this region support good populations of white-tailed deer, wild turkey, gray squirrels, and raccoons. These popular game species provide numerous important recreation opportunities.

Surveys within portions of the Savannah River discovered more than 75 species of rare plants and animals. Many of these species are found in the diverse terrestrial communities that set this ecosystem apart. Within the Altamaha River watershed, an ecological inventory completed in 1994 identified 132 rare plant and animal species, and numerous occurrences of high quality natural communities. There are seven species of mussels in the Altamaha found nowhere else in the world.

Conservation of intact (not fragmented) bottomland hardwoods remains a conservation priority for the Georgia Department of Natural Resources, Partners in Flight, the Nature Conservancy and other conservation groups. Swallow-tailed kite, Swainson's warbler, and numerous other high priority bird species require vast unbroken tracts of bottomland hardwoods in this region. In addition pine savannahs, typical of the longleaf pine system serve as wintering habitat for numerous imperiled grassland birds including Bachman's sparrow, Henslow's sparrow, grasshopper sparrow, southeastern kestrel, and loggerhead shrike.

The following table represents the available data on hunter visitation for WMA's within the SOAR FLA during the 1998-1999 hunting season.

SOAR FLA	WMA	Size (ac.)	# Hunters
	Griffin Ridge	5616	315
	Richmond Hill	3720	
	Ossabaw Island	8996	349
	Sapelo Island	8990	284
	Altamaha	29278	15
	Bullard Creek	13883	1459
	Big Hammock	6946	499
	Tuckahoe	15105	1835
	Ohoopee Dunes	1809	43
	Horse Creek	8559	999
	Eulonia		
	Buffalo Swamp		
TOTALS		102902	5798

Fisheries - Freshwater Information

Some of the most significant warm water streams and impoundments are found in the SOAR FLA. These areas include: The Satilla, Altamaha, Ocmulgee, Oconee, Ohoopee, Canoochee, Ogeechee, and Savannah Rivers.

Freshwater aquatic diversity is very high. River systems are primarily of two types: brownwater (with headwaters north of the Fall Line, silt-laden) and blackwater (with headwaters in the coastal plain, stained by tannic acids). These river systems are relatively free from impoundment's and often contain unique biological resources; some endemics only occur in one river system. Many of the rivers and streams in the ecoregion remain relatively intact, but are under threat. Other dominant features of this area includes a large number of freshwater wetlands, limesink depression ponds and Carolina bays. The Savannah River provides habitat for several rare fish species including 18 (10 G1-G3) species of fishes tracked by the Georgia and South Carolina Heritage Programs as species of concern. Most notable is the Robust Redhorse (*Moxostoma robustum*) previously believed to be extirpated, but recently documented in the middle section of the river. Freshwater mussels also abound, with 9 rare species documented in the Savannah River Basin.

Blackwater Creeks, tributaries to the Savannah River, of exceptional biological significance include Brier, Ebenezer, and McBean Creeks in Georgia. Stevens and Turkey Creeks, located in the Piedmont ecoregion of South Carolina, also provide outstanding habitat for a high number of vertebrate and invertebrate species. In total, more than 110 indigenous fish species have been documented in the Savannah River Basin.

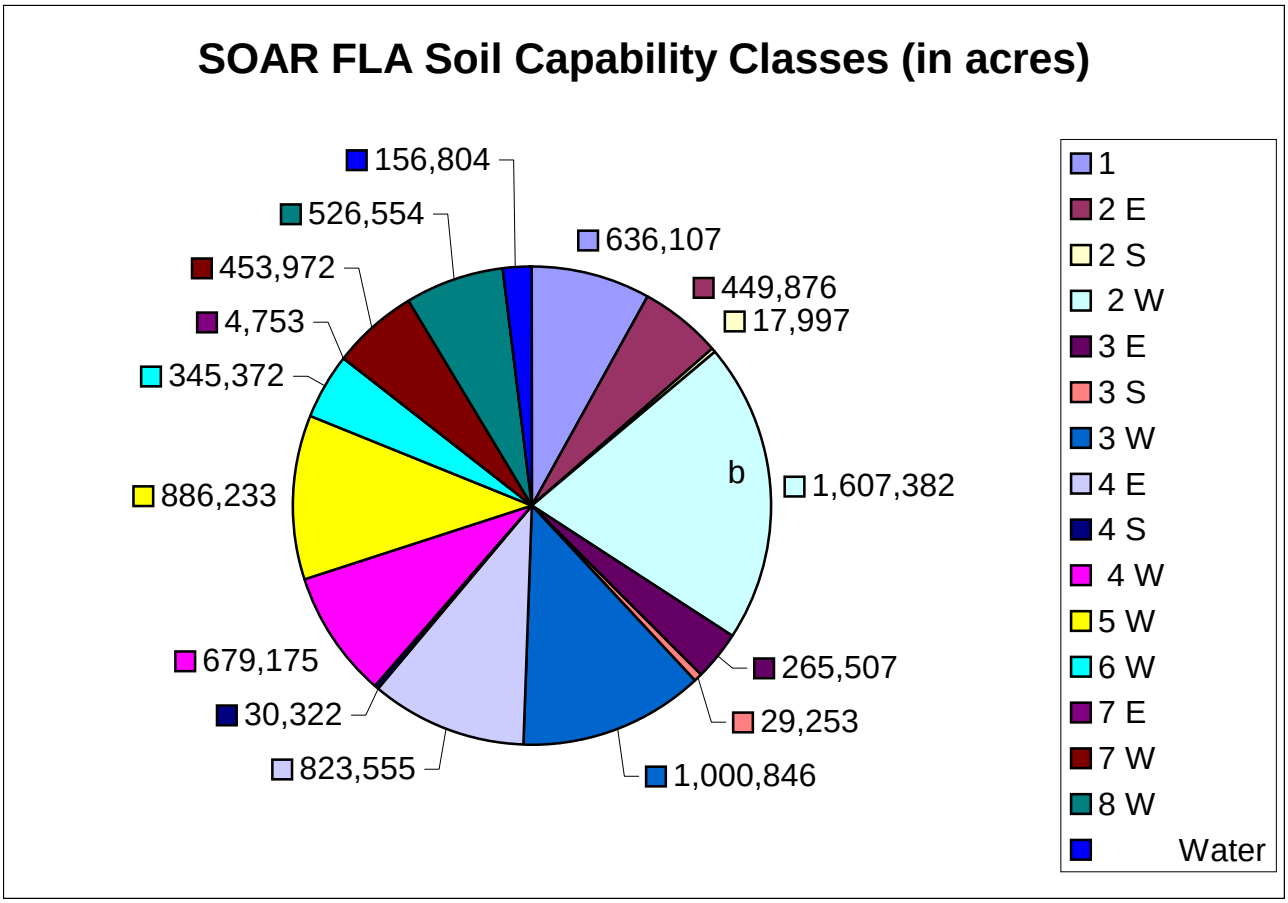
The Ohoopee River fish and mussel communities were once considered healthier than the Altamaha and a possible refugium if mussel populations in the main channel of the Altamaha declined further. Today the Ohoopee River fish and mussel populations are being threatened from collecting pressures, the decline in larval host fishes, water pollution and future threats from water supply reservoirs.

Public Fishing Areas (PFAs) are areas managed intensively for fishing by the Wildlife Resources Division. The SOAR FLA has the Treutlen PFA in Treutlen County. Most PFAs are made up of one or more intensively managed ponds or lakes. Fish available to the angler include: largemouth bass, bream (bluegill & redear sunfish), channel catfish and crappie.

Public Fishing Area	County	Total Acres	# Impoundments	Visitors/Year
Treutlen	Treutlen	189	1	18,900

Soil and Water – All of the soils in the SOAR FLA have some degree of limitation associated with them. The main limitation on 76% of these soils is water in or on the soil. Twenty nine percent of the soils are in a Class that have moderate limitations that restrict the choice of plants or that require moderate conservation practices. While twenty one per cent of the soils have very severe limitations that reduce the choice of

plants or that require very careful management, or both. The letter ***E*** in the graph shows that the main limitation is risk of erosion, ***W*** shows that water in or on the soil interferes with plant growth or cultivation, and ***S*** shows that the soil is limited mainly because it is shallow, droughty, or stony. (See Land Capability Classification in the Appendix.)



The majority of the Lower Savannah and the Satilla River Watersheds are located in the FLA and are Category I watersheds. The Category I classification, designated by the State Unified Watershed Assessment indicates these watersheds are impaired and most in need of restoration.

Unique Natural Areas - The Nature Conservancy working with a multidisciplinary team of experts from many agencies, completed a study of the South Atlantic Coastal Plain Ecoregion which covers portions of North Florida, SE Georgia, and SE South Carolina. One of the purposes of this study was to determine what are the most crucial areas to protect. There were 56 portfolio sites selected with 13 chosen as “action sites”. The following factors were assessed to determine action sites: irreplaceability, site functionality, degree of threat, likelihood of success, level of effort required, leverage and feasibility. In addition, action sites were selected through the following criteria: 1) Site is biologically viable (based on size, condition and landscape context); 2) Site represents irreplaceable occurrences or contains multiple targets; 3) Site is complementary with regard to the whole portfolio (the combination of action sites should

be representative of the diversity of the ecoregion); and 4) Site has a reasonable chance for conservation success within the five to 10 year period. Sites were divided into functional groups to assist in evaluating complementarity. Functional groups were barrier island and estuary, river corridors, lower coastal plain flatwoods, seepage bogs, Carolina bays and depressional wetlands, upland longleaf pine, rock outcrops, and fall-line sandhills.

Of the 13 action sites, 7 of them fall within the target area for SOAR, Savannah River, Ohoopee River, Sea Islands/Estuary (barrier islands), Fort Stewart, Manassas Bog, Altamaha River and Broxton Rocks.

Recreational and Scenic Resources - Though changes in topography may be slight, this area is extremely rich in species diversity and ecological community diversity making it one of the most remarkable areas in Georgia. In this region are found maritime forests on barrier islands, towering cypress and tupelo arising from bottomland forests, high bluffs along the rivers which mark the location of Indian villages, vast, unbroken tracts of longleaf pine forest, pitcherplant seepage bogs, Altamaha Grit outcrops, and pine woodlands influenced by shallow soils over Grit outcrops.

Georgia's State Parks offer many recreational activities such as:

State Parks	Designation	County	Acres	Annual Visitors	Attractions
Crooked River	Park	Camden	500	211500	CT, RV, CA, PC, BR, FS, NT, HBR, PL
General Coffee	Park	Coffee	1511	179086	CT, RV, CA, PC, BR, FS, NT, HBR, LK, CN, PL, ME
Hofwyl-Broadfield Plantation	Historic Site	Glynn	1268	54450	HBR, ME
Sapelo Island Estuarine Reserve	Park	McIntosh	6110	NA	CA, HBR, HK, ME
Fort King George	Historic Site	McIntosh	25	16365	HBR, ME
Fort Morris	Historic Site	Liberty	70	5520	PC, NT, HBR, ME
Fort McAllister	Historic Park	Bryan	1724	121308	RV, CA, PC, BR, FS, HBR, ME
Skidaway Island	Park	Chatham	588	242601	RV, CA, PC, HK, PL, HBR, PG, ME
Wormsloe	Historic Site	Chatham	822	60524	NT, HBR. ME
Little Ocmulgee	Park	Wheeler	1397	451063	CT, RV, CA, PC, LK, BR, FS, PL, NK, NT, CN
Gordonia-Alatamaha	Park	Tattnall	280	291743	RV, PC, LK, FS, CN, LK, PL
George L. Smith	Park	Emanuel	1368	97084	CT, RV, PC, LK, BR, FS, CN, NT, HK, ME

PC = Picnic,	LK = Lake,	PG = Playground,
CT = Cottages,	CN = Canoeing,	NT = Nature Trail,
RV = RV/Trailer/Tent Sites	HBR = Historic Building/Ruin	PL = Pool
BR = Boat Ramp,	HK = Hiking,	CA = Camping
FS = Fishing	ME = Museum/Exhibit	

There are numerous places to wildlife-watch in Georgia, including National Parks and Refuges, and State Wildlife Management Areas. Many of these significant wildlife-watching areas are located in the SOAR FLA: Cumberland Island National Seashore, Crooked River State Park, Sansavilla Wildlife Management Area (WMA), Altamaha WMA, Sapelo Island, Wolf Island NWR, Paulks Pasture WMA, Rayonier WMA, Little Satilla WMA, General Coffee State Park, Richmond Hill WMA, Ossabaw Island WMA, Fort McAllister State Historic Park, Harris Neck NWR, Griffin Ridge WMA, Big Hammock WMA, Bullard Creek WMA, Horse Creek WMA, Little Ocmulgee State Park, Savannah NWR, Ohoopee Dunes Natural Area, George L. Smith State Park, Wassaw NWR, Little Tybee/Cabbage Islands Natural Area, Skidaway Island State Park, Sandpiper Nature Trail, and Tuckohoe WMA.

Perhaps the most noteworthy wildlife watching areas is the Colonial Coast Birding Trail. The Colonial Coast Birding Trail currently includes 18 sites, the majority of which can be found in SOAR Forest Legacy Counties. The Department of Natural Resources is evaluating more than a dozen potential additions to the Colonial Coast Birding Trail and plans on spending $150,000/year to enhance habitat and facilities along the trail.

CURRENT STATUS – SOAR FLA

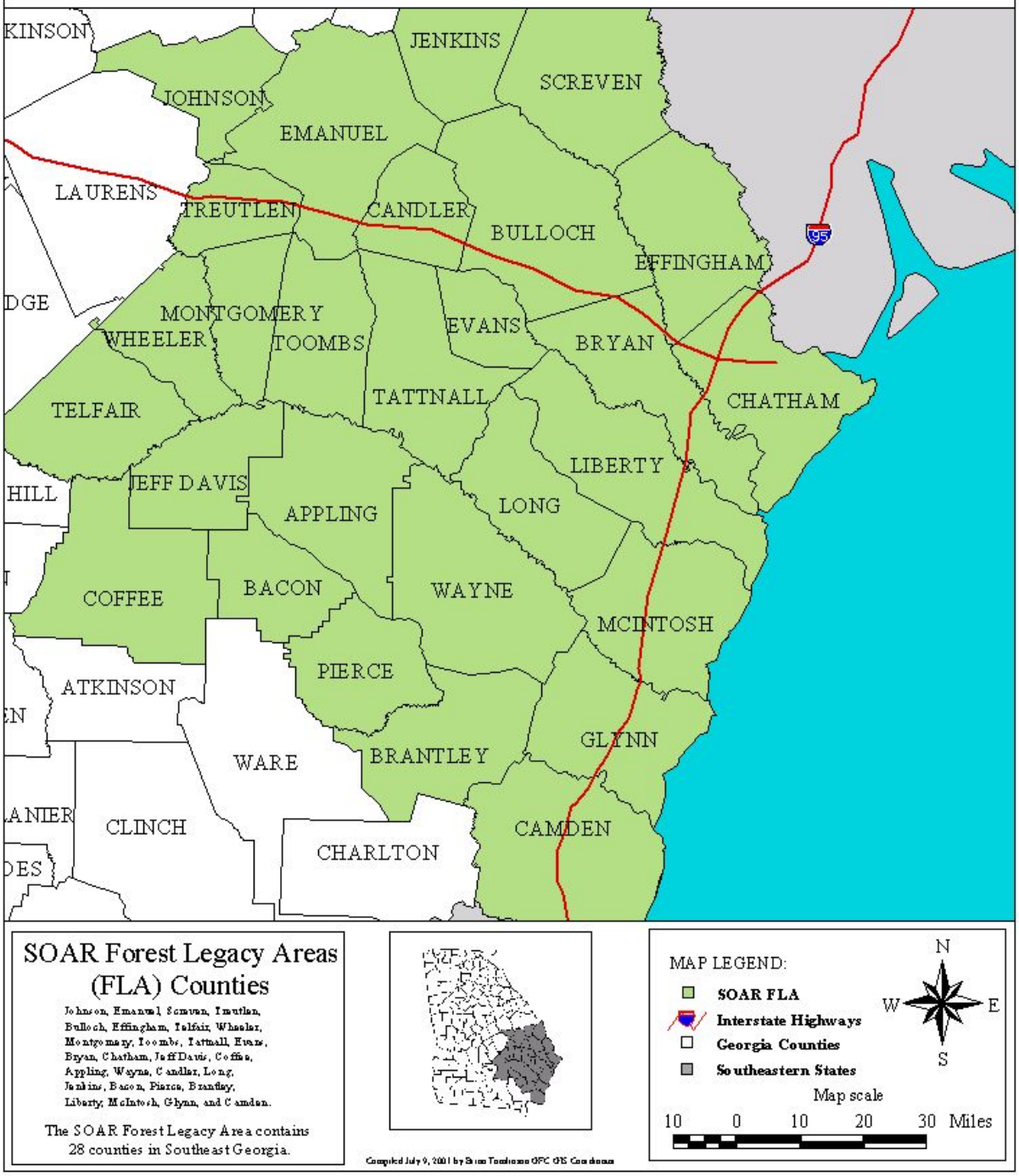
Forest Fragmentation - Key stresses to this area are intensive silvicultural practices, including conversion of natural forests to highly managed pine monocultures, the clear-cutting of bottomland hardwood forests, habitat destruction, habitat fragmentation, alteration of natural fire regime, habitat disturbance, development, and point and non-point source pollutants.

Existing Forest Conservation Efforts - Though much has been lost, there are still great conservation opportunities. Many high-quality natural areas remain as large, functioning landscapes. Many of the rivers and streams remain relatively intact, but are under threat. There is a long history of conservation work in this area allowing the opportunity to preserve the high biological diversity of this rich region.

State Listed Unusual, Rare, Threatened, or Endangered Species in SOAR Counties: See Appendix E.

SOAR Forest Legacy Area

Proposed Legacy Area



PUBLIC PARTICIPATION

Public participation and involvement is a State responsibility. The Forest Legacy Committee will solicit involvement and comments on the AON from the public including State and local governments. A multi-fronted approach was initiated that included Press Releases distributed statewide, public meetings scheduled in each of the proposed Forest Legacy Areas, announcements published in the newsletters of the organizations represented on the Forest Legacy Committee, and a web page was created for the Forest Legacy Program.

The Press Release was produced in the Georgia Forestry Commission's Information and Education Department. A copy of the release is included in Appendix H. Concerted efforts were made to insure newspaper publishing of the release especially in the Proposed Forest Legacy Areas. A listing of newspapers that printed the release is included in Appendix F.

Public meetings were held in Rome, Helen, Statesboro, Brunswick, Waycross, Eatonton, Albany, and Pine Mountain. The Forest Legacy Program was described and the Assessment of Needs process was explained during a one hour presentation. Several Forest Legacy Committee members assisted with these meetings. A question and answer period followed. Strong support for the program by the public was indicated. A list of the participants and the most frequently asked questions and comments are included in Appendix F.

The Pine Mountain Chapter of the Society of American Foresters, a professional organization, and the Georgia Forestry Association, comprised of forestry professionals and forest landowners, requested presentations on the Forest Legacy Program. These presentations followed the same format as the other public meetings.

A third group requesting a presentation of the Forest Legacy Program was the Georgia Forest Resource Council. This council is comprised of representatives from state and federal government, local communities, landowners, the timber industry and environmental organizations. The council provides a forum to promote the appropriate stewardship and utilization of healthy forest ecosystems in Georgia.

A Forest Legacy web site was created at www.gfc.state.ga.us/management/legacy to facilitate the availability of information on the program. This site includes an introduction to Forest Legacy, the federal guidelines, maps of the proposed Forest Legacy Areas, dates and directions to the public participation meetings, and a draft copy of the Assessment of Needs for Georgia's Forest Legacy Program. Also incorporated into the web site is a section on which viewer comments can be entered online.

PARTICIPANT SELECTION

Georgia's Forest Legacy Program is open to any/all owners of forested lands within the designated Forest Legacy Areas regardless of age, gender, race, creed, or National Origin. Selection of participants will be through a two phase application and ranking system based on the Program's Eligibility Criteria. Sample applications with instructions are included in Appendix I. It is emphasized that this is a voluntary program and the overriding condition for participation is on a willing buyer – willing seller basis.

APPENDIX A: GOVERNOR'S LETTER TO THE US FOREST SERVICE

STATE OF GEORGIA
OFFICE OF THE GOVERNOR
ATLANTA 30334-0900

Roy E. Barnes
GOVERNOR

July 21, 2000

Dr. Michael P. Dombeck
USDA Forest Service
14th and Independence Avenue, SW
Post Office Box 96090
Washington, D.C. 20090

Dear Dr. Dombeck:

The purpose of this letter is to initiate activity on the USDA's Forest Legacy Program for the state of Georgia as authorized under section 1217 of Title XII of the Food, Agriculture, Conservation and Trade Act of 1990. I am designating the State Forestry Commission as Georgia's lead agency with respect to the Forest Legacy Program.

The State Forestry Commission for the protection and conservation of Georgia's forestland. Also, the Forestry Commission serves as the lead agency for the State Forest Stewardship Coordinating Committee, which provides direction and public input for the Forest Legacy Program.

I am pleased that Georgia is being considered as a project area for this timely and needed forest conservation program. Thank you for your support on this and other forestry matters as they pertain to conservation and use of Georgia's forestland.

Sincerely,

Roy E. Barnes

REB:lt

Cc: Fred Allen
Director, State Forester
State Forestry Commission

APPENDIX B: GEORGIA'S FOREST LEGACY COMMITTEE

Lynda Beam, Landowner , 312 Vernonburg Road, Savannah, GA 31419
(912)925-8940 E-mail: lbeam@web.savannah.com

David Bennett, , Georgia Soil and Water Conservation Commission
P.O. Box 8024, Athens, GA 30603 (706)542-3065 E-mail:

Rex Boner, The Conservation Fund, PO Box 1362, Tucker, GA 30084
770-414-0211 E-mail: rrboner@aol.com

Bruce Bongarten, Associate Dean, D. B. Warnell School of Forest Resources
University of Georgia, Athens, GA 30602 (706)542-2686
E-mail: bongarte@smokey.forestry.uga.edu

Mary Elfner, Coastal Georgia Land Trust, 428 Bull Street, Savannah, GA 31401
(912)281-0507 E-mail: cglt@bellsouth.net

Steve Friedman, Land Protection Specialist, The Nature Conservancy
1330 West Peachtree Street, Suite 410, Atlanta, GA 30309-2904
404-873-6946 E-mail: sfriedman@tnc.org

Rick Hatten, Staff Forester, Georgia Forestry Commission, P. O. Box 819, Macon, GA
31202, (478)751-3491 E-mail: rhatten@gfc.state.ga.us

Ben Jackson, Unit Leader, Extension Forest Resources, Cooperative Extension
Service, Athens, GA 30602-4356, (706)542-1924 E-mail: bjack@uga.edu

Scott Jones, Georgia Forestry Association, Inc., 500 Pinnacle Court, Norcross, GA
30071, (404)416-7621 E-mail:

Jim Kidd, Chattahoochee & Oconee National Forests, 1755 Cleveland
Hwy, Gainesville, GA 30501, (770)536-0541 E-mail: jkidd01@fs.fed.us

Nathan Klaus, Wildlife Biologist, Georgia Department of Natural Resources-Wildlife
Resources Division, 116 Rum Creek Road, Forsyth, GA 31029,
(912)994-1438 E-mail: nathan_klaus@mail.dnr.state.ga.us

Jerry McCollum, Executive Director, Georgia Wildlife Federation, 11600 Hazelbrand Rd,
Covington, GA 30014 (770)929-3350 E-mail: jerrymc@gwf.org

Richard Oliver, Asst. State Conservationist, USDA Nat. Resources Cons. Service, 355
East Hancock Avenue, Athens, GA 30601-2775, (706)546-2272
E-mail: richard.oliver@ga.usda.gov

Clark Weaver, USDA Farm Services Agency, 355 East Hancock Avenue, Athens, GA
30613, (706)546-2266 E-mail:

Mark Whitney, Wildlife Resources Division, Georgia Dept. of Natural Resources
2111 U.S. Highway 278 SE, Social Circle, GA 30025
(770)761-3044 E-mail: mark_whitney@mail.dnr.state.ga.us

Harvey Young, Director, Georgia Department of Natural Resources – Greenspace
7 Martin Luther King Drive SW, Atlanta, GA 30334
(404) 657-9746 E-mail:

APPENDIX C: STATE FOREST STEWARDSHIP COORDINATING COMMITTEE

J. Frederick Allen, Director, Georgia Forestry Commission, P.O. Box 819, Macon, GA 31298, (912)751-3500 E-mail: fallen@gfc.state.ga.us

Clara Johnson, Supervisor, Chattahoochee & Oconee National Forests, 1755 Cleveland Hwy, Gainesville, GA 30501, (770)536-0541 E-mail:

Leonard Jordan, State Conservationist, USDA Nat. Resources Cons. Service, 355 East Hancock Avenue, Athens, GA 30601-2775, (706)546-2272 E-mail: leonard.jordan@ga.usda.gov

Teresa Lasseter, State Executive Director, USDA Farm Services Agency 355 East Hancock Avenue, Athens, GA 30613 (706)546-2266 E-mail:

David Waller, Director, Wildlife Resources Division, Georgia Dept. of Natural Resources 2070 U.S. Highway 278 SE, Social Circle, GA 30025 (706)557-3022 E-mail:

David Bennett, , Georgia Soil and Water Conservation Commission P.O. Box 8024, Athens, GA 30603 (706)542-3065 E-mail:

Ben Jackson, Unit Leader, Extension Forest Resources Cooperative Extension Service, Athens, GA 30602-4356 (706)542-1924 E-mail: bjack@uga.edu

Bruce Bongarten, Associate Dean, D. B. Warnell School of Forest Resources University of Georgia, Athens, GA 30602 (706)542-2686 E-mail:

Chris Barneycastle, Executive Director, Georgia Forestry Association, Inc. 500 Pinnacle Court, Norcross, GA 30071 (404)416-7621 E-mail:

Lynda Beam, Landowner , 312 Vernonburg Road, Savannah, GA 31419 (912)925-8940 E-mail: lbeam@web.savannah.com

Jerry McCollum, Executive Director, Georgia Wildlife Federation 11600 Hazelbrand Rd, Covington, GA 30014 (770)929-3350 E-mail:jerrymc@gwf.org

Steve Friedman, Land Protection Specialist, The Nature Conservancy 1330 West Peachtree Street, Suite 410, Atlanta, GA 30309-2904 404-873-6946 E-mail: sfriedman@tnc.org

Harvey Young, Director, Georgia Department of Natural Resources – Greenspace 7 Martin Luther King Drive SW, Atlanta, GA 30334 (404) 657-9746 E-mail:

Rex Boner, The Conservation Fund, PO Box 1362, Tucker, GA 30084 770-414-0211 E-mail: rrboner@aol.com

APPENDIX D: GEORGIA LAND TRUSTS

American Farmland Trust
Southeast Region
304 B South Main Street
Graham, NC 27253
Phone:336-221-0707
Fax:336-221-0280
Email:gcohn@farmland.org
Website:www.farmland.org

Appalachian Trail Conference Land Trust
P.O. Box 807
Harpers Ferry, WV 25425
Phone:304-535-6331
Fax:304-535-2667
Email:bwilliams@atconf.org

Athens Land Trust
195 Park Avenue
Athens, GA 30601
Phone:706-613-0122
Fax:706-353-6877
Email:nancyws@athens.net
Website:www.cs.uga.edu/~dme/KR/ALT.html

Atlanta Audubon Society
PO Box 29189
Atlanta, GA 30359
Phone:404-758-3932
Email:monkeywood@inetnow.net

Atlanta Empowerment Zone Corp.
Brownfield Land Trust
City Hall East, Second Floor
675 Ponce de Leon Avenue
Atlanta, GA 30308
Phone:404-853-7610
Fax:404-853-7315
Website:www.ezec.gov/ezec/GA/atlanta.html

Broad River Watershed Association
PO Box 661
Danielsville , GA 30633
Phone:706-542-6032
Fax:706-542-6040
Email:broadriverwa@earthlink.net
Website:www.uga.edu/brwa/brwa.html

Brown's Mount Association
360 Spring Street
Macon, GA 31201
Phone:478-742-8699
Fax:478-742-4952
Website:www.HollidayDental.com

Chattahoochee Flint Rivers Land Trust
PO Box 693
Midway, FL 32343
Phone:850-488-2351

Chattooga Land Trust, Inc.
PO Box 2006
Clayton , GA 30525
Phone:706-782-6097
Fax:706-782-6098
Email:crwc@rabun.net

Chattowah Open Land Trust
Main Office
135 Christopher's Run
Alpharetta, GA 30004
Phone:770-664-0650
Fax:678-289-1265
Email:Katherine@chattowah.org
Website:www.chattowah.org

Chattowah Open Land Trust
Rome Office
310 Shorter Avenue Suite B
Rome , GA 30165
Phone:706-802-1544
Fax:706-802-0244
Email:ctsinclair@chattowah.org

Coastal Georgia Land Trust
428 Bull Street, Suite No. 210
Savannah, GA 31401
Phone:912-231-0507
Fax:912-231-1143
Email:cglt@bellsouth.net
Website:www.cglt.org

Cobb Land Trust
PO Box 672652
Marietta, GA 30006-0045
Phone:770-955-1303
Fax:770-951-9574

Columbus Area Land Trust
Phone:706-464-6367
Contact: John Turner

Ducks Unlimited, Inc.
3870 Leeds Avenue, Suite 114
North Charleston, SC 29405
Phone:843-745-9110
Fax:843-745-9112

Durand Farm Nature Preserve
The Grand
75 Fourteenth Street, Suite 2500
Atlanta, GA 30309
Phone:404-817-0708
Fax:404-875-8757

Georgia Land Trust Service Center
380 Meigs Street
Atlanta, GA 30601
Phone:760-546-7507
Fax:706-613-7775
Email:gepi@ix.netcom.com
Website:www.GEPInstitute.com

Greener Atlanta
180 Blackland Drive
Atlanta, GA 30342-4404
Phone:404-365-9723

Gwinnett Open Land Trust
3280 Westbrook Rd
Suwanee, GA 30024
Phone:404-885-8217
Email:chassell@mindspring.com
Website:www.gwinnettlandtrust.org

Lookout Mountain Land Trust
Box 76
Lookout Mountain, TN 37350
Phone:423-757-6323
Fax:423-757-6383

Lula Lake Land Trust
730 East First Street
Chattanooga , TN 37403
Phone:423-265-6194
Fax:423-267-4292
Email:bchip@cdc.net

Mountain Conservation Trust of Georgia
104 North Main Street, Suite B3
Jasper, GA 30143
Phone:706-253-4077
Fax:706-253-4078
Email:mctg@mindspring.com

Natural Science For Youth Foundation
130 Azalea Drive
Roswell, GA 30075
Phone:700-594-9367
Fax:770-594-7738

Newton County Land Trust Alliance
1113 Usher Street, NE
Covington, GA 30014
Phone:770-784-2068

North American Land Trust
PO Box 1578
Chadds Ford, PA 19317
Phone:610-388-3670
Fax:610-388-3673

Oconee River Land Trust
140 Dunwoody Drive
Athens, GA 30605
Phone:706-354-6156
Fax:706-354-6156
Email:srthompson@peachnet.campuscwix.net

Red Hills Conservation Program
Tall Timbers Research, Inc
13093 Henry Beadel Drive
Tallahassee , FL 32312-9712
Phone:850-893-4153 ext 238
Fax:850-893-7954
Email:kmcgorty@ttrs.org
Website:www.talltimbers.org

S.P.A.C.E.
2964 Peachtree Road, #410
Atlanta, GA 30305
Phone:404-237-3774
Fax:404-237-3776
Email:rchanay@aol.com

Sapelo Island Cultural and Revitalization Society
PO Box 1
Sapelo Island, GA 31327
Phone:912-485-2126
Fax:912-485-2186 (call first)

Savannah Tree Foundation
3025 Bull Street, Room 216
Savannah, GA 31405
Phone:912-233-TREE (8733)
Email:savstf@aol.com

South Peachtree Creek Nature Preserve
1 Security Center, Suite 750
3490 Peachtree Rd
Atlanta, GA 30348
Phone:404-240-1545

Southeast Land Preservation Trust
130 Azalea Drive
Roswell, GA 30075
Phone:770-594-9367
Fax:770-594-7738

Southeastern Cave Conservancy, Inc
PO Box 71857
Chattanooga, TN 37407-0857
Phone:423-867-2846
Website:www.scci.org

Southeastern Natural Sciences Academy
540-B Telfair Street
Augusta, GA 30901-5822
Phone:706-828-2109
Email:pswampnp@bellsouth.net

Southern Appalachian Highlands Conservancy
34 Wall Street, Suite 802
Asheville , NC 28801-2710
Phone:704-253-0095
Fax:704-253-1248
Email:southapps@ioa.com
Website:www.appalachian.org

Southern Conservation Trust
201 McIntosh Trail
Peachtree City, GA 30269
Phone:770-486-7774
Fax:770-486-7775
Email:sct@mindspring.com

St. Simons Island Land Trust
PO Box 24615
St. Simons, GA 31522
Phone:912-638-3565
Fax:912-638-0285
Email:ecmain@gate.net

The Archaeological Conservancy
Southeast Regional Office
5997 Cedar Crest Road
Acworth, GA 30101
Phone:770-975-4344
Fax: unlisted
Email:archcons@nm.net
Web:www.americanarchaeology.com

The Conservation Fund
PO Box 1362
Tucker, GA 30085-1362
Phone:770-414-0211
Fax:770-938-0585
Email:rrboner@aol.com
Website:www.conservationfund.org

The Coosa River Basin Initiative
408 Broad Street
Rome, GA 30161
Phone:706-232-2724
Fax:706-235-9066
Email:crbi@roman.net
Website: www.roman.net/~crbi

The Georgia Wildlife Federation
11600 Hazelbrand Rd
Covington, GA 30014
Phone:770-787-7887
Fax:770-787-9229
Email:jerrymc@gwf.org
Website:www.gwf.org

The Land Trust For The Little Tennessee
3257 Goshen Road
Franklin, NC 28744-1148
Phone:828-524-2711
Fax:828-524-2711
Email:nikwasi@dnet.net

The Nature Conservancy of Georgia
Altamaha River Bioreserve
PO Box 484
Darien , GA 31305-2161
Phone:912-437-2161
Fax:912-437-2161
Email:clambert@tnc.org

The Nature Conservancy of Georgia
Coastal Office
PO Box 9391
Savannah, GA 31412-9391
Phone:912-239-9800

The Nature Conservancy of Georgia
State Office
1330 West Peachtree Street, Suite 410
Atlanta, GA 30309-2904
Phone:404-873-6946
Fax:404-873-6984
Email:tmccuean@tnc.org
Website:www.tnc.org

The Trust for Public Land
Atlanta Field Office
1447 Peachtree Street, Suite 601
Atlanta, GA 30309
Phone:404-873-7306
Fax:404-875-9099
Email:rand.wentworth@tpl.org
Website:www.tpl.org

Tybee Island Land Trust, Inc.
8 Fifth Street
Tybee Island, GA 31328
Phone:912-786-5523
Fax: c/o City Hall, Attn: M. Pearce, 912-786-5737

Wetlands America Trust
An affiliate of Ducks Unlimited
See Listing under Ducks Unlimited

Wildlife Land Trust
Humane Society of the United States
2100 L Street, NW
Washington, DC 20037

APPENDIX E: STATE & FEDERALLY LISTED UNUSUAL, RARE, THREATENED, OR ENDANGERED SPECIES

PLANTS	STATUS	FLINT	HEARTLAND	MOUNTAIN	OKEFENOKEE	PINE MT.	SOAR
LITTLE AMPHIANTHUS	T		X	X		X	
GEORGIA ROCKCRESS	T	X		X		X	
MARL SPLEENWORT	T	X					X
PURPLE HONEYCOMB HEAD	R	X			X		X
HAIRY RATTLEWEED	E						X
SWAMP BUCKTHORN	E	X					X
VARIABLE-LEAVED INDIAN PLANTAIN	T	X					
ASHE'S SAVORY	T						X
BALTZELL SEDGE	E	X					
BILTMORE SEDGE	T			X			
VELVET SEDGE	R	X					X
MANHART SEDGE	T			X			
WRETCHED SEDGE	T			X			
PURPLE SEDGE	T			X			
ROSEMARY	T						X
ATLANTIC WHITE-CEDAR	R					X	
SANDHILL GOLDEN- ASTER	T					X	
CROOMIA	T	X				X	
FRASER SEDGE	T			X			
MOCCASIN FLOWER	U		X	X			
GOLDEN SLIPPER	U		X	X		X	
GEORGIA PLUME	T						X
GREENFLY ORCHID	U	X			X		X
SILKY MORNING-GLORY	E						X
HARPER FIMBRISTYLIS	E	X					
DWARF WITCH-ALDER	T						X
FRINGED GENTIAN	T			X			
HARTWRIGHTIA	T				X		X
SWAMP PINK	T			X			
GOLDENSEAL	E			X			
HARPER WILD GINGER	U	X	X	X			
SHOALS SPIDER LILY	E					X	
FLORIDA ANISE	E	X					
BLACK-SPORED QUILLWORT	E		X				
MAT-FORMING QUILLWORT	E		X				
SMALL WHORLED POGONIA	T			X			
TWINLEAF	E			X			

PLANTS	STATUS	FLINT	HEARTLAND	MOUNTAIN	OKEFENOKEE	PINE MT.	SOAR
LEAST GLADECRESS	T			X			
PONDBERRY	E	X					X
ROCK FALSE PIMPERNEL	E			X			
POND SPICE	T	X			X		X
FRASER LOOSESTRIFE	R			X			
CURTISS LOOSESTRIFE	T	X					
COOSA BARBARA BUTTONS	T			X			
PINELAND BARBARA BUTTONS	R	X					X
ALABAMA SPINY-POD	T	X					X
TRAILING MILKVINE	R						X
LAX WATER-MILFOIL	T	X			X		
INDIAN OLIVE	T			X			X
ALABAMA SNOW-WREATH	T			X			
CANBY DROPWORT	E	X					X
HIRST PANIC GRASS	E	X					
CUTLEAF BEARD TONGUE	R	X					X
NARROWLEAF OBEDIENT PLANT	T	X					X
CLEARWATER BUTTERWORT	T	X					
MONKEYFACE ORCHID	T			X			
THREE-TOOTHED CINQUEFOIL	E			X			
HARPERELLA	E		X				
OGLETHORPE OAK	T		X				
PLUMLEAF AZALEA	T	X				X	
DWARF SUMAC	E		X				
CUMBERLAND ROSE GENTIAN	R			X			
CLIMBING BUCKTHORN	T	X					X
KRAL WATER-PLANTAIN	T			X			
FLORIDA WILLOW	E	X					
CANADIAN BURNET	T			X			
FLY-CATCHERS	U	X			X		X
WHTIE TRUMPETS	E	X					
HOODED PITCHERPLANT	U	X			X		X
GREEN PITCHERPLANT	E			X			
PARROT PITCHERPLANT	T	X			X		X
PURPLE PITCHERPLANT	E	X		X			X
SWEET PITCHERPLANT	E	X	X			X	X
BAY STAR-VINE	T	X		X			
CHAFF SEED	E	X	X				
LARGE-FLOWERED SKULLCAP	E			X			
OMULGEE SKULLCAP	T		X				

PLANTS	STATUS	FLINT	HEARTLAND	MOUNTAIN	OKEFENOKEE	PINE MT.	SOAR
NEVIUS STONECROP	T					X	
PUCK'S ORPINE	T		X				
BLUE RIDGE GOLDEN RAGWORT	T			X			
OCONEE BELLS	E			X			
FRINGED CAMPION	E	X	X			X	
ROYAL CATCHFLY	R	X		X			
VIRGINIA SPIREA	T			X			
GREAT PLAINS LADIES-TRESSES	E			X			
SILKY CAMELLIA	R	X				X	X
PICKERING MORNING-GLORY	T	X					X
COOLEY MEADOWRUE	E	X					
TRAILING MEADOWRUE	T			X			
BALL-MOSS	T						X
FLORIDA TORREYA	E	X					
STARFLOWER	E			X			
PERSISTENT TRILLIUM	E			X			
RELICIT TRILLIUM	E	X	X			X	
OZARK BUNCHFLOWER	R	X		X			
LIMEROCK ARROW-WOOD	E			X			
PIEDMONT BARREN STRAWBERRY	T		X	X		X	
EASTERN TURKEYBEARD	R			X			
TENNESSEE YELLOW-EYED GRASS	E			X			

Detailed information on each plant species on this list can be found in "Protected Plants of Georgia", Patrick, Allison, & Krakow, Georgia Department of Natural Resources, Wildlife Resources Division, Georgia Natural Heritage Program, 1995.

ANIMALS	STATUS	FLINT	HEARTLAND	MOUNTAIN	OKEFENOKEE	PINE MT.	SOAR
MAMMALS							
RAFINESQUE'S BIG-EARED BAT	R	X		X			X
ROUND-TAILED MUSKRAT	T	X					X
GRAY BAT	E			X			
INDIANA BAT	E			X			
APPALACHIAN COTTONTAIL	R			X			
EAST INDIAN MANATEE	E						X
BIRDS							
BACHMAN'S SPARROW	R	X	X				X
SWALLOW-TAILED KITE	R	X		X			X
BALD EAGLE	E	X	X	X			X

ANIMALS	STATUS	FLINT	HEARTLAND	MOUNTAIN	OKEFENOKEE	PINE MT.	SOAR
WOOD STORK	E	X					X
RED-COCKADED WOODPECKER	E	X	X				X
COMMON RAVEN	R			X			
PEREGRINE FALCON	E			X			X
BEWICK'S WREN	R			X			
AMERICAN OYSTERCATCHER	R						X
GULL-BILLED TERN	T						X
LEAST TERN	R						X
PIPING PLOVER	T						X
WILSON'S PLOVER	R						X
REPTILES							
SPOTTED TURTLE	U	X	X				X
EASTERN INDIGO SNAKE	T	X					X
GOPHER TORTOISE	T	X	X				X
BARBOUR'S MAP TURTLE	T	X					
ALLIGATOR SNAPPING TURTLE	T	X					
BOG TURTLE	T			X			
COMMON MAP TURTLE	R			X			
ALABAMA MAP TURTLE	R			X			
GREEN SEA TURTLE	T						X
HAWKSBILL SEA TURTLE	E						X
KEMP'S RIDLEY SEA TURTLE	E						X
LEATHERBACK SEA TURTLE	E						X
LOGGERHEAD SEA TURTLE	T						X
AMPHIBIANS							
FLATWOODS SALAMANDER	T	X					X
ONE-TOED AMPHIUMA	R	X					
GEORGIA BLIND SALAMANDER	T	X					
GREEN SALAMANDER	R			X			
HELLBENDER	R			X			
PIGEON MOUNTAIN SALAMANDER	R			X			
STRIPED NEWT	R						X
FISHES							
ALABAMA SHAD	U	X					
SPOTTED BULLHEAD	R	X					
BLUESTRIPE SHINER	T	X		X			
BLACKBANDED SUNFISH	R	X					X
GOLDSTRIPE DARTER	R	X	X				
BANDED TOPMINNOW	R	X					
BLUEFIN KILLIFISH	U	X					X

ANIMALS	STATUS	FLINT	HEARTLAND	MOUNTAIN	OKEFENOKEE	PINE MT.	SOAR
SUWANNEE BASS	R	X					
REDEYE CHUB	R	X	X				
BROADSTRIPE SHINER	R	X					
BLUENOSE SHINER	R	X					
ALTAMAHA SHINER	E		X	X			
ROBUST REDHORSE	E		X				X
HIGHSCALE SHINER	T		X	X			
BLUE SHINER	E			X			
TALLAPOOSA SHINER	R			X			
BLOTCHED CHUB	T			X			
HOLIDAY DARTER	T			X			
GREENFIN DARTER	T			X			
LIPSTICK DARTER	E			X			
COLDWATER DARTER	T			X			
BLACK DARTER	R			X			
ETOWAH DARTER	T			X			
CHEROKEE DARTER	T			X			
TALLAPOOSA DARTER	R			X			
TRISPOT DARTER	T			X			
WOUNDED DARTER	E			X			
STIPPLED STUDFISH	E			X			
NORTHERN STUDFISH	T			X			
FLAME CHUB	E			X			
BIGEYE CHUB	R			X			
OHIO LAMPREY	R			X			
PRETTY SHINER	T			X			
RIVER REDHORSE	R			X			
POPEYE SHINER	T			X			
SILVER SHINER	E			X			
SANDBAR SHINER	R			X			
MOUNTAIN MINNOW	T			X			
BLACK MADTOM	R			X			
FRECKLEBELLY MADTOM	E			X			
FRECKLED MADTOM	E			X			
AMBER DARTER	E			X			
TANGERINE DARTER	T			X			
CONASAUGA LOGPERCH	E			X			
GOLDLINE DARTER	T			X			
CONASAUGA LOGPERCH	E			X			
FRECKLED DARTER	E			X			

ANIMALS	STATUS	FLINT	HEARTLAND	MOUNTAIN	OKEFENOKEE	PINE MT.	SOAR
DUSKY DARTER	R			X			
RIVER DARTER	E			X			
MUSCADINE DARTER	R			X			
OLIVE DARTER	T			X			
SNAIL DARTER	T			X			
FATLIPS MINNOW	E			X			
STARGAZING MINNOW	T			X			
SOUTHERN CAVEFISH	R			X			
SHORTNOSE STURGEON	E						X
INVERTEBRATES							
FAT THREERIDGE	E	X					
PURPLE BANKCLIMBER	T	X					
SHINYRAYED POCKETBOOK	E	X					
GULF MOCCASINSHELL	E	X					
OVAL PIGTOE	E	X					
OCHLOCKNEE MOCCASINSHELL	E	X					
UPLAND COMBSHELL	E			X			
SOUTHERN ACORNSHELL	E			X			
FINELINED POCKETBOOK	T			X			
ALABAMA MOCCASINSHELL	T			X			
COOSA MOCCASINSHELL	E			X			
SOUTHERN CLUBSHELL	E			X			
SOUTHERN PIGTOE	E			X			
OVATE CLUBSHELL	E			X			
TRIANGULAR KIDNEYSHELL	E			X			
ATLANTIC PIGTOE	E						X

Detailed information on each animal species on this list can be found in "Protected Animals of Georgia", Ozier, Bohannon, & Anderson, Georgia Department of Natural Resources, Wildlife Resources Division, Nongame Wildlife-Natural Heritage Section, Nongame-Endangered Wildlife Program, 1999.

APPENDIX F: LAND CAPABILITY CLASSIFICATION

Capability Classes are designated by numbers **1** through **8**. The numerals indicate progressively greater limitations and narrower choices for practical use. Capability subclasses are soil groups within one class. They are designated by adding a letter, *E*, *W*, or *S*, to the class number, for example 2E. The letter *E* shows that the main limitation is risk of erosion, *W* shows that water in or on the soil interferes with plant growth or cultivation, and *S* shows that the soil is limited mainly because it is shallow, droughty, or stony. In Class 1 there are no subclasses because the soils of this class have few limitations.

Class	Description
1	Soils have few limitations that restrict their use.
2	Soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.
3	Soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.
4	Soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.
5	Soils are not likely to erode but have other limitations, impractical to remove, that limit their use.
6	Soils have severe limitations that make them generally unsuitable for cultivation.
7	Soils have very severe limitations that make them unsuitable for cultivation.
8	Soils and miscellaneous areas that have limitations that nearly preclude their use for commercial crop production.

APPENDIX G: PRESS RELEASE & NEWS ARTICLES

GEORGIA FORESTRY COMMISSION

NEWS RELEASE

P. O. Box 819
Macon, GA 31202-0819

Phone: (478) 751-3530
Fax: (478) 751-3559
Contact: Lynn Walton or Bill Edwards

FOR IMMEDIATE RELEASE: APRIL 13, 2001

STATEWIDE MEETINGS SCHEDULED FOR FOREST LEGACY PROGRAM

A series of statewide meetings are scheduled to determine Georgia's newly approved role as a participant in the national Forest Legacy Program sponsored by the US Forest Service.

"This program is completely new to Georgia and public participation is vital to success," said Rick Hatten, Forest Legacy Program Coordinator for the Georgia Forestry Commission. He describes the voluntary program as a means enabling Georgia to protect working forests threatened with conversion to non-forest uses.

"Protection of Georgia's forests will be accomplished through Conservation Easements or Fee Purchases," Hatten said. "Lands included in the program will be managed according to standards of good forest stewardship and traditional forestry"

The State Forest Legacy Committee is developing an Assessment of Needs (AON) for future agendas. The AON will define eligibility criteria and determine boundaries of Forest Legacy Areas.

The Georgia Forestry Commission urges public participation in the following Statewide meetings all scheduled for 7:00 pm: April 23, Rome, Georgia Forestry Commission District Office; April 24, Helen, Unicoi Conference Center; May 1, Statesboro, Georgia Forestry Commission Office; May 2, Brunswick, Conference Center/Quality Inn; May 3, Albany, Darton College, Room J-128; May 8, Eatonton, Rock Eagle; May 10, Waycross, Herty Building/Georgia Forestry Commission Office; May 14, Pine Mountain, Calloway Inn/Conference Room.

Maps and additional Forest Legacy Program information can be found at

www.gfc.state.ga.us/management/legacy.

"FEDERAL FOREST PROGRAM COULD START HERE"

(article printed in the White County News/ Telegraph, Thursday, May 3, 2001

A federal government program that buys forested land from willing property owners or pays them to keep the land undeveloped may be implemented in White County.

First, though, it has to be approved for the whole state, and state forestry officials say they want to know whether the public is even interested before pursuing that approval.

The Georgia Forestry Commission held a public forum Tuesday, April 24 at Unicoi Lodge to discuss the proposed Forest Legacy Program. The forum was one of several being held around the state to inform the public about the initiative.

The Forest Legacy Program was authorized by Congress in 1990 to allow the U.S. Department of Agriculture to protect "environmentally important" forest areas threatened by conversion to non-forest uses. The program allowed the USDA to buy forestlands from private owners or to purchase "conservation easements"-agreements that would let the owner keep the land but ensure that he and his successors would never develop it.

A 1996 law expanded the FLP to allow states to administer the program at their request, so that the states hold the titles or easements purchased through the program rather than the federal government. In July of 2000, GA. Gov. Roy Barnes wrote to the USDA's Forest Service branch (USFS) to request that Georgia be considered for the program.

Barnes designated the Georgia Forestry Commission as the "lead agency" for implementing the program. As such, the commission has been working with numerous other agencies-including the state Department of Natural Resources, the Georgia Soil and Water Conservation Commission, The Nature Conservancy and others-to compile the "assessment of needs" (AON) required to secure federal approval and participation in the state's FLP.

The draft of the AON is an 81-page document examining the condition of forestlands in Georgia. According to Rick Hatten, Forest Legacy Program Coordinator for the GFC, the committee compiling the AON relied extensively on existing data on the topic, rather than undertaking an entirely new study. "We know that studies have been done on just about everything," he said, "and we're trying to pull some of that out."

According to the AON, Georgia has the most timberland of any state in the country; but it also is ranked third in the annual rate of development. One study cited by the AON estimated that between 1982 and 1987, three million acres of the state's forestlands were converted to non-forest uses.

Hatten cited statistics showing that, although recent tree-planting efforts have added million of acres to Georgia's forests, by 2030 the state's forest acreage could be almost back down to where it was just after the Depression before government tree planting programs began.

And although 2030 may seem a long way off right now, he noted, "When you're talking about forests, the immediate future is 40 to 60 years down the road.

The FLP committee has proposed six Forest Legacy Areas which it considers to contain "environmentally important" forest areas. The Mountain Forest Legacy Area (FLA) includes White and 23 other North Georgia counties. According to the AON, in 1997 this area contained nearly 3.46 million acres of forestland-down about 93,500 acres from 1989 levels. White County lost almost 9,500 acres of forest in this time.

The report says the greatest threats to the area's forests are loss and fragmentation due to development, degradation of aquatic habitats through erosion and sedimentation, and the invasion of exotic species that threaten native ones.

To help combat these threats, the FLP, if implemented, would seek to buy forestlands or conservation easements from private landowners. The report estimates that 68 percent of the Mountain FLA's forests lie in private ownership.

Hatten stressed that the program would be purely voluntary-that the FLP would seek only willing property owners. "We can't strong-arm anybody into anything," he said.

If the program purchases a conservation easement for a landowner's property, that owner will work with the GFC to develop a forest management plan. The plan, Hatten said, will be based on the landowner's priorities, such as timber or wildlife management or providing recreational opportunities. However, the owner and his successors would be restricted from developing the land to which the easement applies.

The FLP also might simply purchase the land from a private owner in order to protect it. In the case of either an easement or an outright purchase, though, the program can pay only 75 percent of the cost. The rest must come from other agencies or a donation by the landowner.

The U.S. Congress is considering setting aside $30 million nationwide for the 24 states participating in the Forest Legacy Program. So far, the GFC has been allotted only a half-million dollars-a figure that, as Terrell Sims of Habersham County noted at last Thursday's meeting-wouldn't go very far toward buying forested land in this area.

However, Hatten said that if the USDA approves Georgia for the FLP, more money might be allocated to the state. The Georgia FLP committee must submit its assessment of needs to the USDA by September 15.

But the committee would like to receive any comments from the public on the program by June 16, so that it can revise the AON draft if necessary. "I can't tell you enough times, we need to hear what you want out of this project," Hatten told the audience at the meeting. "You may not want us to be in it, and if that's the case, we need to hear that," he said.

After the meeting, White Countian Jerry Williams said he hadn't had time to make up his mind about the program. "I've got concerns. I'm not sure I understand the full intent of it," he said, holding a copy of the assessment of needs document. Earlier, Williams had questioned the need for another government entity to promote conservation.

"I don't disapprove of it, I just don't approve of it yet," he said after the meeting.

Those interested in commenting can write to: the Georgia Forestry Commission Forest Legacy Program Coordinator PO Box 819, Macon, GA 31032

"PROGRAM WOULD PROTECT GA FORESTS"

(article printed in The Times, Gainesville, Georgia)

The Georgia Forestry Commission is launching a program that could pay private landowners to keep their forest out of development.

Sponsored by the U.S. Forest Service, the Forest Legacy Program already exists in more than 20 other states but is new to Georgia. It's aimed at preventing "working" forests from being converted to non-forest uses, such as residential subdivisions.

Rick Hatten, coordinator of the project for the Georgia Forestry Commission, has been holding a series of public meetings throughout the state to get input on how the program should be operated.

I've seen a lot of interest," he said. "This isn't for every landowner out there, but you'd be surprised how many people would be willing to do this. They've put their life's work into managing their forest and don't want to see it broken up."

Landowners accepted into the program would sell an easement to the federal government, forfeiting their right to ever develop that property. They could be paid up to 75 percent of the market value for the land.

"Their taxes would remain at the agriculture/forestry rate, which is much cheaper than residential," said Hatten.

The potential tax break was what interested Bill Kimsey, who co-owns about 200 acres in White County adjacent to Unicoi State Park. He attended last week's public meeting in Helen to learn more.

I was impressed with the program," he said. "It would be especially good for elderly people, who can get some cash to live on by selling their development rights.

The Legacy easement is in perpetuity and becomes part of the land's deed. Right now, Kimsey has his land in a different federal conservation program that's renewable every 10 years, and he's not sure if he wants to switch to a permanent arrangement.

"The downside is that it limits the number of potential buyers for your property, because you can't sell to anyone who wants to develop it," he said.

Jennie Burrell of Hiawassee also attended the meeting to see what the program was about. She was disappointed to learn it applies only to forests managed for timber, hunting or other uses, and is not intended for wilderness preservation.

"We thought it would be more along the lines of what we're doing with our land," she said.

Burrell and her husband Martin own 169 acres in Towns County. Five years ago, they put the property into a conservation easement with the Chattowah Open Land Trust, a private, non-profit group with offices in Alpharetta and Rome. The agreement will keep their land in its natural state.

"We don't trust the government on this," Burrell said. "They could open up the land to ATVs (all-terrain vehicles) and everything else.

But Heather Seckman, spokeswoman for the Chattowah Open Land Trust, said the Forest Legacy Program could complement other projects, such as the state's Greenspace initiative.

"It has its own value in Georgia, where forestry is the number-one industry," she said. "Everybody needs wood."

Hatten said a committee will use feedback from the public meetings to create an outline and eligibility criteria for the program. A report will be sent to the Forest Service by Sept. 15, and the first landowner transaction could take place next year.

Jim Kidd, lands program manager for the Chattahoochee National Forest in Gainesville, said his agency initially requested $60 million for the Legacy Program in next year's federal budget, but the Bush administration cut the amount to $30 million.

Georgia is expected to get about $500,000 for its first year of participation, according to Kidd, though he hopes the allocation will increase as the program grows.

It's not a tremendous amount of money this year, but every little bit helps," he said.

APPENDIX H: DEFINITIONS

Conservation easements are partial interests in lands conveyed by deed from a landowner to an easement holder with the intent of restricting present and future owners of the property in order to achieve conservation objectives.

Fair Market Value is generally defined by the Uniform Appraisal Standards for Federal Land Acquisitions as being the amount in cash, or on terms reasonably equivalent to cash, for which in all probability the property would be sold by a knowledgeable owner willing but not obligated to sell to a knowledgeable purchaser who desired but is not obligated to buy. (Uniform Appraisal Standards for Federal Land Acquisitions: Interagency Land Acquisition Conference, 1992, p.4.)

Federal Appraisal Standards are those standards contained in the publication entitled "Uniform Appraisal Standards for Federal Land Acquisitions: Interagency Land Acquisition Conference, 1992." These standards are available for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington D.C. 20402-9328 (ISBN 0-16-038050-2).

Federal Acquisition Procedures, as listed below, must be followed when Federal funds are used to complete an acquisition of land or interests in land using Forest Legacy authority: 1. Federal appraisal standards must be met; 2. The landowner must be informed of the fair market value and that sale of the property is strictly voluntary; 3. The landowner must be notified in writing that the property will NOT be purchased if negotiations do not result in amicable agreement; 4. Payment to the landowner for lands or interests in lands is not more than the fair market value determined under #1; 5. Assure title is free and unencumbered or that title insurance is secured for the full value of the encumbered property; and 6. If relocation is involved the requirements in PL 91-646 must be followed.

Forest Legacy Area (FLA) is a forested area with important environmental values, that satisfies identified eligibility criteria and has been delineated, described, and mapped in a State's Assessment of Need for the FLP. Acquisition of lands and interests in lands for the FLP can only occur within approved FLA's.

Full fee purchase is a land conveyance where a vendor conveys all rights, title and interest in a property to a purchaser.

Indirect costs relate to the management and administration of the FLP. Indirect costs, unlike salary, which is a direct cost, are defined as costs not readily assignable to the cost objectives specifically benefited. Examples of indirect costs would be overhead, secretarial, and vehicular costs.

In-kind contributions are non-cash contributions, including third-party contributions. In-kind contributions must be necessary to accomplish program activities, and allowable if the Federal Government were required to pay for them.

Non-forest uses are uses of the land inconsistent with traditional forest uses including, but not limited to, residential subdivisions, commercial development, extensive pasture (generally meaning more than 10 percent), cultivated farmland, and mining that causes extensive surface disturbance.

Pass-through as used herein describes a land transaction whereby a third party, such as a land trust, acquires interests in lands with the intent to convey such interests to a government. The transaction can include a full or partial donation, or sale at fair-market value.

Secretary is the U.S. Secretary of Agriculture.

State Forest Stewardship Coordinating Committees (SFSCC) are chaired and administered by the State Foresters, or equivalent State officials, with membership composed of representatives from the following agencies, organizations, or individuals: Forest Service; Natural Resources Conservation Service; Farm Services Agency; Cooperative, State, Research, Education, and Extension Service; local government; consulting foresters; environmental organizations; forest products industry; forest land owners; land trusts; conservation organizations; the State fish and wildlife agency; and others determined appropriate by the Secretary.

State Lead Agency is responsible for coordinating the establishment and implementation of the FLP in the State. The State lead agency may be a forestry agency, or other natural resource agency as designated by the Governor or pursuant to State law.

Stewardship Management Plans, or multi-resource management plans, are prepared with the purpose of achieving long-term stewardship of forest land. Such plans identify landowner objectives and describe actions the landowner may take to protect and manage soil, water, range, aesthetic quality, recreation, timber, and fish and wildlife resources. Plans are to be prepared by a professional resource manager. A Forest Stewardship Plan that meets the requirements of the Forest Stewardship Program or a multi-resource management plan is required for FLP qualification. Either plan's content must be acceptable to the State.

APPENDIX I: SAMPLE PARTICIPATION APPLICATIONS

Phase 1 – Initial contact document

GEORGIA'S FOREST LEGACY PROGRAM
PHASE 1 APPLICATION

SITE NAME: _____ TOTAL ACREAGE: _____

LANDOWNER: _____ COUNTY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

TELEPHONE: _____ E-MAIL: _____

AVAILABILITY: FEE PURCHASE? YES ☐ NO ☐ ESTIMATED VALUE _____

CONSERVATION EASEMENT? YES ☐ NO ☐ ESTIMATED VALUE _____

FOREST TYPES: (Check all that apply)

BOTTOMLAND HARDWOODS ☐ UPLAND HARDWOODS ☐

NATURAL PINE ☐ PINE PLANTATION ☐

MIXED PINE/HARDWOODS ☐ OTHER ☐

WATER RESOURCES: (Check all that apply)

RIVERS AND CREEKS ☐ NAMES: _____

LAKES AND PONDS ☐ SIZES: _____

WETLANDS ☐ SIZES: _____

OTHER ☐ LIST: _____

ENVIRONMENTALLY IMPORTANT FEATURES: (Use additional sheets if needed)

NATURAL COMMUNITIES: _____

_____

RARE PLANT OR ANIMAL SPECIES: _____

_____

UNUSUAL LANDFORMS: _____

_____

SCENIC FEATURES: _____

ADJACENT LAND OWNERSHIPS: FEDERAL ☐ STATE ☐ FOREST INDUSTRY ☐

PRIVATE ☐ PRIVATE w/ CONSERVATION EASEMENT ☐ OTHER ☐

My signature below certifies that I am the owner of this property and that I am interested in participating in Georgia's Forest Legacy Program.

Signature _____ **Date:** _____

Send this Application along with a map or aerial photograph of the property to:

Georgia's Forest Legacy Program
Georgia Forestry Commission
PO Box 819
Macon, GA 31202-0819

FOREST LEGACY PROGRAM
PROJECT PROPOSAL EVALUATION FORM
Page 1 of 2

Application Number: _____
Forest Legacy Area: _____

I. ACQUIRABILITY	**"No" answer to any of first three disqualifies application**	
Willing Seller	Yes	No
25% Matching Funds Available	Yes	No
Clear Title	Yes	No
Relative Costs		
Price (Per Acre & Total)		
Other Matching Funds Available	Yes	No
If yes, what percentage		
II. CONVERSION THREAT (0-20 Points)	**Comments**	**Score**
Parcel Currently for Sale on the Open Market		
% Change in County Population Last 5 Years		
% Change in Per Acre Real Estate Value Last 5 Years		
% Change in Forested Land in County Last 10 Years		
High Development Potential (e.g. highway corridor, waterfront, mountain top)		
	II. Subtotal	
III. ENVIRONMENTAL VALUES (0-50 Points)	**Comments**	**Score**
A. Timber Management/Productivity (0-6 Points)		
Soil productivity will produce quality timber products		
Growing timber stock present		
Timber products can be easily transported to user		
Timber is accessible		
Diversity of age classes & timber type		
	A. Total	
B. Wildlife Resources (0-5 Points)		
Diversity of habitats on property		
Significant habitats and/or species present		
Wetlands present		
Active management to enhance wildlife habitat		
Overmature timber stands present		
Connectivity		
	B. Total	
C. Protected Species/Endangered Communities (0-10 Points)		
Known occurrence of RTE communities or species of plants &/or animals		
Habitats suitable for reoccupation by, or harboring of, RTE species present		
	C. Total	

FOREST LEGACY PROGRAM
PROJECT PROPOSAL EVALUATION FORM

D. Soil & Water Resources (0-9 Points)		
Total # of acres of bottomland/wetland forest		
Total length of forest/wetland interface		
Steep slopes &/or highly erodible soils present		
	D. Total	
E. Public Recreation Opportunities (0-4 Points)		
Public has access		
Proximity to a population center		
Significant recreational assets (e.g. lake, river, hunting available)		
	E. Total	
F. Scenic Resources (0-4 Points)		
Public visibility		
Unique/unusual features		
	F. Total	
G. Cultural Resources (0-3 Points)		
Site contains significant cultural or historical resources		
	G. Total	
H. Ecosystem Integrity (0-9 Points)		
Size of tract		
Connectivity to other protected lands		
Exotic/off-site species present **(up to –9 points)**		
	H. Total	
	III. Subtotal	
IV. APPROPRIATE TO FLA (0-20 Points)	**Comments**	**Score**
How well does proposed property satisfy the criteria used to establish the FLA containing the tract (see attached criteria)		
	IV. Subtotal	
V. OTHER (0-10 Points)	**Comments**	**Score**
Reliability of protection (fee purchase or easement)		
Synergy of primary categories		
Potential for initiating other conservation projects		
Cost-sharing or bargain sale		
Manageability		
Educational opportunities		
	V. Subtotal	
TOTAL SCORE		

The Project Proposal Evaluation Form will be completed for every proposed tract by a subcommittee of the Forest Legacy Committee. The scoring system will be used to provide an initial ranking of properties. The Forest Legacy Committee will then select tracts to be submitted to the U.S. Forest Service for funding based on acquirability, value and confirmation of environmental values

Reviewers responsible for completing the Evaluation Form should have access to aerial photos, plats, topo maps, property descriptions, and the landowner to aid in the evaluation process. Following is an explanation of how to complete the evaluation form.

Application Number – Use the number found on the original application.

Forest Legacy Area – Name the Legacy Area in which the evaluated tract is located.

The Form is divided into 5 Primary Categories:

I. Acquirability
II. Conversion Threat
III. Environmental Values
IV. Appropriate To FLA
V. Other

Category **III. Environmental Values** is further divided into 8 sub-categories:

A. Timber Management/Productivity
B. Wildlife Resources
C. Protected Species/Endangered Communities
D. Soil & Water Resources
E. Public Recreation Opportunities
F. Scenic Resources
G. Cultural Resources
H. Ecosystem Integrity

Each Category (except for **Acquirability**) and sub-Category listed above has an associated point total range and a list of considerations to be taken into account by the reviewer when assigning points to that category/sub-category. The reviewer should account for each of the considerations when deciding on the point total for each category/sub-category but be aware that each consideration does not have an assigned point value. This allows for flexibility on the part of the reviewer if a tract is outstanding in relation to particular considerations but is lacking in others.

Under **Acquirability** an answer of "No" to any of the first 3 considerations automatically disqualifies the application and the reviewer can end the evaluation.

For the other 4 categories, the reviewer can use the "Comments" column to make whatever notes necessary to help in scoring and points associated with any consideration can be placed in the "Score" column. Total points for any category should be placed in the subtotal box under the "Score" column. For example, up to 20 total points for the **Conversion Threat** category should be placed in the highlighted box under the "Score" column adjacent to **II. Subtotal**. For the category **III. Environmental Values**, total points for each sub-category should be placed in the "Score" column in the highlighted box at the end of each sub-category. For example, in the sub-category **A. Timber Management/Productivity**, up to 6 points should be placed in the "Score" box adjacent to **A. Total**. Then scores for **A. Total – H. Total** will be summed and placed in the box adjacent to **III. Subtotal**.

All subtotal boxes (**II. Subtotal – V. Subtotal**) then will be summed to get the **Total Score** at the bottom of the page.

APPENDIX J: REFERENCES

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