SmartWood

Practical conservation through certified forestry

Forest Management Public Summary

for

Tennessee Department of Agriculture – Forestry Division

Certification Code: SW-FM/COC-213
Date of Certification: October 1, 2002
Date of Public Summary: September 2002, updated for 2003, 2004, 2005

This document was produced according to the guidelines of the Forest Stewardship Council (FSC) and the SmartWood Program. No part of the report should be published separately.

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To earn SmartWood certification, a forest management operation must undergo an on-site field assessment. This Public Summary Report summarizes information contained in the initial assessment report, which is produced based on information collected during the field assessment. Annual audits are conducted to monitor the forest management operation's activities, to review the operation's progress toward meeting their certification conditions, and to verify compliance with the SmartWood standards. Addenda providing the updated information obtained during these annual audits are included as attachments to the Public Summary Report.

3. GENERAL SUMMARY

1.1. Name and Contact Information

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1.2. General Background

A. Type of operation

The Forestry Division is part of the Tennessee Department of Agriculture. It was established in 1937 to manage those public lands obtained by the State for the benefit of the citizens of Tennessee. Specifically, these lands are "to provide for the multiple-use management of the various renewable and non-renewable resources such that those resources are utilized in the combination that best meets the needs of the people of Tennessee". The state is divided into seven management districts, with 14 state forests distributed throughout nine physiographic regions. Total area of all forests combined is about 158,708 acres (64,228 ha).

TDOA, FD manages these forestlands for multiple-use, with revenue generation and recreation being a primary objective. Several of the State Forests are actually located adjacent to State Parks and all receive a considerable amount of recreational use by the public. Revenue is generated primarily through timber sales and provides a share of the operating funds for the Division. The State has no manufacturing facilities of production size, although there is a small mill located in the Bledsoe State Forest that is occasionally used to provide raw lumber for Division projects. State nursery operations that produce seedlings for the public and state use exist on state land as well.

TDOA, FD staff has various responsibilities to the citizens of the state such as fighting fires, assisting landowners, managing State Forests, protecting water quality, providing quality seedlings, monitoring insects and diseases, improving urban forests, and collecting forest inventory data for the state.

B. Years in operation

TDOA, FD has been in existence under several agencies since 1937 and has managed many of the forests since that time. There are a few forests and/or expansion parcels that were acquired after 1937 and management began after acquisition.

C. Date first certified

October 1, 2002

D. Latitude and longitude of certified operation

State Forest	Latitude	Longitude
Bledsoe	N 35° 42’ 55”	W 85° 15’ 09”
Cedars of Lebanon	N 36° 05’ 38”	W 87° 20’ 09”
Chickasaw	N 35° 22’ 29”	W 88° 49’ 51”
Chuck Swan	N 36° 19’ 26”	W 83° 56’ 51”
Franklin	N 35° 05’ 17”	W 88° 49’ 51”
Gulf	N 35° 47’ 57”	W 83° 00’ 10”
Lewis	N 35° 30’ 32”	W 85° 51’ 22”
Lone Mountain	N 36° 03’ 34”	W 84° 34’ 00”
Natchez Trace	N 35° 46’ 01”	W 88° 16’ 42”
Pickett	N 36° 34’ 46”	W 84° 48’ 56”
Prentice Cooper	N 35° 07’ 49”	W 85° 25’ 41”
Scott	N 36° 28’ 27”	W 84° 41’ 37”
Standing Stone	N 36° 27’ 52”	W 85° 26’ 40”
Stewart	N 36° 23’ 37”	W 87°45’ 21”

1.3. Forest and Management System

A. Forest type and land use history

The 14 properties that make up the Tennessee State Forest (TSF) System were acquired largely under the Resettlement Administration. Other lands were either donated or purchased by the State or transferred from other State or federal agencies. The properties are distributed across the State in nine physiographic provinces from the mountains in the east, across the Cumberland Plateau, the Highland Rim and Nashville Basin, to the Coastal Plain in the west. Patterns of vegetation vary by physiographic province, and in most cases were significantly influenced by past land practices, particularly agriculture and timber harvesting. Agricultural use generally resulted in severe degradation of the sites as a result of soil erosion. Over much of the area, poor farming practices depleted the sites to the point where they had been abandoned for agriculture prior to purchase by the Resettlement Administration. Timber harvesting was largely in the form of high grading, so that timber quality was very poor. There are no known areas of primary forests remaining on TSF.

Bledsoe State Forest - (6,782 acres/2,745 ha)
Bledsoe State Forest is located on the Cumberland Plateau in Bledsoe, Cumberland, Van Buren, and White Counties. It is part of a larger land purchase made by the State Department of Institutions in 1907. It was placed under the TDOA, FD in 1933. The timber type consists primarily of mixed upland hardwoods and most stands are in the 40 to 80+ age classes.

Chuck Swan State Forest - (24,831 acres/10,449 ha)
Prior to 1930, numerous farmers with small properties owned the land now in Chuck Swan Forest. In 1934 the Tennessee Valley Authority began acquiring land in connection the construction of Norris Lake. TVA sold the land to the State of Tennessee in 1952 with the understanding the land would be developed as a multiple use forest for demonstration and recreation. Hardwood types compose about 65% of the forest area and pines about 35%. Approximately 5% of the Forest is 30 years and younger as a result of timber harvests during 1966 and 1994. An estimated 29% of the land is old farmland that reverted to forests and is 30- to 50-years old. About 55% of the forests are 50- to 90-years old, and about 20% is considered mature or over-mature timber over 90-years old. The oldest timber stands are around 200 years old.

Chickasaw State Forest - (13,104 acres/5,303 ha)
Chickasaw State Forest is located in Chester and Hardeman Counties on the Coastal Plain in West Tennessee. The Forest originated with the Resettlement Administration Program in 1935. The entire project area was deeded to the State of Tennessee in 1955 and the TDOA, FD assumed responsibility for the portion that is now a State Forest. Approximately 63% of the Forest is in hardwood types, about 29% is in southern yellow pines, and the remainder is in mixed pine and hardwood types. The Forest is dominated by stands of mature sawtimber. About 35% of the stands are upland hardwoods in excess of 80 years old

Franklin State Forest - (6,941 acres/2,809 ha)
The area was purchased by the State from Gross Creek Coal Company in 1936. TDOA, FD assumed management of the area in 1940. The Forest is on the Cumberland Plateau. About 99% of the land is forested and about 96% of the land is in mature hardwood sawtimber and pole timber. Only about 3% of the Forest is in pine types. The area has a history of timber abuse by diameter-limit cuts and uncontrolled wildfires.

Cedars of Lebanon State Forest - (6,943 acres/2,810 ha)
The Forest is located in the Central Basin of Tennessee in the southern part of Wilson County. This is another of the forests that originated from the Resettlement Administration. TDOA, FD assumed responsibility for the Forest in 1955. Before purchase by the Resettlement Administration, numerous landowners with small acreage held the land. Land use was for row crops, pasture, and forests. The farmland was impoverished by erosion and the forestland was heavily cut, burned over, and damaged by grazing. About 14 % of the area is designated a Tennessee Natural Resource Area and contains at least two threatened or endangered plant species. The majority (85%) of the area is classified as forestland. Eastern red cedar is the predominant species and is found in pure stands on the very poor soils. On deeper soils and better sites it is found in mixture with hardwoods.

Natchez Trace State Forest - (35,904 acres/14,530 ha)
The Forest originated from lands purchased by the Resettlement Administration and became a State Forest in 1949. At time of purchase the land was severely abused by poor agricultural practices that caused severe erosion and resulted in a deeply gullied landscape. When the TDOA, FD took over management of the land, the emphasis for many years was on fire control and establishment of vegetation to prevent erosion. Loblolly pine, because of high rates of litter production, proved very satisfactory for that purpose and hundreds of acres of pine plantations were established. The Forest now consists of 67% hardwood types and 30% pines. Hardwood stands exceeding 60 years of age occur on 39% of the forest on land that was never cleared for agriculture or had been abandoned for farming. On the other hand, 57% support trees whose age are 10 to 60 years and probably originated on former farmland.

Pickett State Forest - (18,302 acres/7,407 ha)
This Forest originated from a land donation to the State by Stearns Coal and Lumber Company in 1933. It became a State Forest in 1935. At the time of donation, most of the merchantable sawtimber had been removed and the area had been repeatedly subjected to fire and grazing. About 53% of the Forest is in hardwood types, 24% in pine type, and 21% in mixed hardwood and pine. Ninety-five percent of the Forest is in trees older than 40 years and most of the area is well stocked. Basal area averages about 80 square feet per acre and 60% of that is hardwood.

Prentice Cooper State Forest - (23,759 acres/9,615 ha)
The property for Prentice Cooper was acquired by simple purchase between 1938 and 1944. The site was proclaimed a State Forest in 1945. Sixty-nine percent of the forest is in multiple use-regulated forests and the remainder is in conservation areas that include the Hicks Gap Natural Area and unregulated scenic areas.

Standing Stone State Forest - (8,445 acres/3,418 had)
This Forest had its beginning in lands purchased by the Resettlement Administration and deeded to the State in 1955. It became a State Forest in 1961. It is located on the Eastern Highland Rim in Overton and Clay Counties. Ninety-eight percent of the land is in regulated forest and 89% is in upland hardwoods, 6.8% in pine, and 4% in mixed hardwood and pine. Thirty-four percent of the forest is in stands 80+ years old and 48% is in stands 50-80 years old, and only 18% is less than 50 years old.

Stewart State Forest - (4,000 acres/1,619 ha)
This Forest is located on the Western Highland Rim in south-central Stewart County. The Forest is part of a larger tract of land acquired by the State in 1935 from the Cumberland River Land Company in lieu of taxes. The forests had been cut over time and again for charcoal used in iron furnaces. In addition, the land was subjected to repeated burning. Approximately 81% is in hardwoods and only about 3% is in pine. The dominant hardwood type is oak/hickory and is generally even aged (70-95 years) containing mostly mature to over-mature hardwood in a declining state, especially the dominant and co-dominant red oaks.

Scott State Forest - (2,842 acres/1,150 ha)
The Forest is located on the Northern Cumberland Plateau in Scott and Fentress Counties. Some land was purchased by the State, but the main portion of the Forest was acquired by the State at a tax delinquent sale in 1938. The Forest is unique in the system in that it is completely surrounded by the Big South Fork National River and recreation Area. Most timber stands on the Forest are sawtimber size hardwood stands, with many of the stands at or near rotation age. Superior stands of eastern white pine were located on the Forest, but most have been lost to the southern pine beetle in the last two years. Recreational activities (hunting, hiking, horseback riding) will be a primary use for this Forest.

Lewis State Forest - (1,257 acres/509 ha)
This area was purchased from the Chancery Court of Lewis County for delinquent taxes in 1933 and became a State Forest in 1936. It is on the Western Highland Rim. Most of the land (97%) is in forest cover and the remainder is open land. This Forest is somewhat unique in the TSF system in that about 71% of the forested area is in the southern yellow pine type. Primary use of the Forest is for hunting.

Lone Mountain State Forest - (3,597 acres/1,456 ha)
Land for the Forest was acquired by the state through a tax delinquency sale from the Morgan county Chancery Court in 1939 and through a donation by Lone Mountain Land Company in 1938. The Forest was known as the Lone Mountain Section of Morgan State Forest until 1970 when Morgan State Forest became part of the Division of State Parks and Lone Mountain became a separate State Forest. The Forest is located in the Cumberland Plateau and Mountains physiographic province in Morgan County. Forest types consist of 55% upland hardwoods, 24% of mixed hardwood-pine, and 21% of pine. Little timber management has taken place because of the under stocked nature of the stands.

Gulf State Forest (2001 acres, (810 ha)
This tract of land was purchased in 2001 from International Paper Company (formerly Champion International Corporation). It is located in the Blue Ridge physiographic province. The Forest is composed of mature mountain and cove hardwoods. The Cherokee National Forest borders the tract on three sides. There has been very little cutting on the Forest in the recent past. It will be used primarily for recreation, hunting, and demonstration.

B. Size of management unit and area in production forest, conservation, and/or restoration

TSF consists of about 158,708 acres (64,228 ha) of land available for forest management. There has been no mapping or determination of how much of the area is dedicated to active or production forestry. There is, however, a large area of conservation forests or zones. These represent a variety of purposes such as SMZs, view sheds, historic and cultural sites, natural areas, and buffer zones around State Parks. It is estimated that 30%-40% of the land area is dedicated to this purpose, which means that the production forest is about 95,200- 111,000 acres (36,423- 42,493 ha).

TSF are divided into 14 individual State Forests, the largest of which (Natchez Trace) is 35,904 acres (14,530 ha) and the smallest (Scott) is 1,137 acres (460 ha). Total area in each Forest is shown in Table 2, Section 2.3.

C. Annual allowable cut and/or annual harvest covered by management plan

The silvicultural and management system used on TSF is best described as even-aged with a 10-year cutting cycle and a rotation of 60 years for pine and 80 years for hardwoods. Area control is used for regulation of the cut. Clear cutting is the main method used for regeneration. Natural regeneration is used for hardwoods, and conifers are artificially regenerated primarily.

Each Forest is divided into compartments of roughly 1000 acres each. The compartments are composed of stands that vary in size from 5-50 acres, with the average size being about 30 acres. Each stand is delineated based on forest type, age, and local features of the landscape. Area regulation is at the compartment level. In each 10- year cycle, 1/8 of the hardwood type and 1/6 of the conifer type is planned for regeneration harvests. All compartment plans have been completed for Chickasaw, Chuck Swan, and Standing Stone State Forests. Compartment planning is incomplete on the other State Forests.

D. General description of details and objectives of the management plan/system

Each of the TSF has individual management plans based on their specific uses and needs, but there are some fundamental overriding objectives that cover them all. In general, the purpose of the TSF is " to provide for the multiple-use management of the various renewable and non-renewable resources such that those resources are utilized in the combination that best meets the needs of the people of Tennessee." (Tennessee State Forest System Plan, 1989) Multiple use management and demonstration/research are the two principles that guide the overall management of TSF.

To accomplish these fundamental purposes, each Forest establishes specific objectives or goals in a management plan for the 10-year planning period. Eleven guidelines have been developed to help achieve forest management objectives. These include 1) demonstrate forest resource management practices, 2) protect and improve the quality of renewable resources, 3) protect and interpret sensitive resources including RTE species, cultural sites, and other resources such as view sheds, 4) provide low density recreational opportunities, 5) provide sustained yield of timber, 6) maintain and improve fish and wildlife habitats, 7) provide a base of operations for other TDOA, FD programs, 8) participate in cooperative forestry research, 9) provide a resource base for development and management of seed orchards, 10) protect soil and water resources, and 11) evaluate and develop mineral resources upon development of a state mineral leasing policy.

While specific objectives may vary slightly between Forests, the following examples from the plan for the Chuck Swan Forest demonstrate what are usually included:

1. Protect water quality and forest site productivity – Best management practices will be utilized and enforced during all timber harvests, site preparation for tree planting, and road and trail construction. Log landings and main haul roads will be sown in grass for soil stabilization.
2. Maintain forest health – The forest will be monitored for gypsy moth, southern pine beetle, and any other insect or disease problems. Corrective actions will be carried out if necessary.

3. Protect all special resources, including cemeteries and cave openings- Buffer zones will be maintained around all cemeteries and caves.
4. Carry out timber harvests to improve wildlife habitat and diversify age classes – For example, on Chuck Swan Forest, approximately 1000 acres will be harvested and naturally regenerated during the current planning period. Harvest areas will be limited to 50 acres or less, and different harvests will be spread out to improve edge effect, wildlife benefits, and reduce visual impact. Clearcuts create important browse for emergency winter food for deer.
5. Convert non-commercial, low quality stands to a more desirable species – On Chuck Swan, an estimated 400 acres will be prepared and planted in white, shortleaf, and loblolly pine. On non-steep areas site preparation will be mechanical. On steeper sites, chemical site prep will be used.
6. Begin prescribed burning program in planted pine stands – A schedule of annual prescribed burns will be established in shortleaf and loblolly pine stands to reduce hardwood competition and fuel loading, plus improve wildlife browse availability. An eventual rotation will be set up to control burn each stand every 3 years.
7. Establish demonstrations of forest multiple use practices – Demonstrations will include: harvest road construction, tree planting, thinning, prescribed burning, mechanical site preparation methods, and chemical site preparation methods.
8. Convert low quality Virginia pine stands to a more desirable species- Pulpwood buyers will be sought and if possible pulpwood sales will be carried out to remove the existing stand. Following the harvest, the stand will be site prepared by burning and chemical means, then hand planted into a more desirable species.
9. Conduct information/education programs for students and the public – Provide tours and educational programs to college, high school, F.F.A., and 4-H students. Provide workshops for loggers and private landowners on BMPs and proper forest management.
10. Provide sites for forestry research – The University of Tennessee and TDOA, FD specialists will be assisted in carrying out forest research such as tree genetic improvement, silviculture, and wildlife management.
11. Develop trails for mountain biking, hiking, and horseback riding – An attempt will be made to develop an agreement with a local mountain bike club to build single-track trails for bike riding. The same trails could also be utilized for horseback riding and hiking. The club could supply the workers and signs.
12. Maintain boundary lines – Some surveying may be needed.
13. Improve wildlife habitat through forest practices - This is an ongoing process, and all ten-year compartment plans will be reviewed with TWRA. Timber harvests will be limited to 50 acres or less and scattered to improve edge effect and winter browsing. Prescribed burning under pine stands will generate heavy sprouting from hardwood stumps. Scattered pine plantations will diversify habitat and provide cover. Log landings and harvest roads will be sown in vegetation useful for food and cover where possible.
14. Road improvements – If equipment can be obtained, all Type I and II roads will have brush and trees removed 10 feet on each side. This will “daylight” the roads helping with winter snow and ice melt, plus it will provide wildlife browse along the roadsides. Some roadsides could be sown in grass and perennial vegetation beneficial to wildlife. Once initial removal is accomplished, bush hogging every three years will keep the vegetation in a “brushy” stage and continue to provide browse and possibly grass grazing areas.

1.4. Environmental and Socioeconomic Context

TSF System consists of 14 forests, providing a variety of recreational, social, and economic benefits to the public. TSF contain an array of natural and managed biological communities within nine physiographic provinces across the state. These provinces include the Blue Ridge, Southern Appalachian Ridge and Valley, Cumberland Plateau, Eastern Highland Rim, Nashville Basin, Western Highland Rim, Southern Coastal Plain, Southern Mississippi Valley Silty Uplands, and Southern Mississippi Valley

Alluvium. Physiographic provinces are unique and are defined by geologic features that heavily influence soil types, hydrologic characteristics, and forest community types. TSF are managed on an individual basis and high consideration is given to their unique natural and physical attributes. (Tennessee State Forest System Plan, 1989)

The majority of the TSF are located in rural Tennessee where the major industries are related to farming, forestry, logging, wood products processing, hunting and recreation. State forests in rural areas are part of the overall agricultural land base that supports these livelihoods. Farming dominates Tennessee's landscape with 90,000 farms producing and selling crops, livestock, and forest products. Forty-three percent of the state's land area is farmland. More than 14 million acres of farm and non-farm forest lands produce approximately 934 million board feet of hardwood and 194 million board feet of softwood lumber. Tennessee continues to be one of the nation's leading producers of quality hardwood lumber. Statewide income from the sale of timber (round wood) topped $420 million in 2000 (TDOA 2001 Department Report and Statistical Summary).

The citizens of Tennessee expect sustainable forest management for multiple use objectives. However, the priorities of these objectives, needs and desires vary between rural, suburban, and urban constituents. Many people in Tennessee's rural communities expect management that includes timber production and game habitat improvement. Logging and hunting are traditional forest uses in rural communities and still seem to be the most common today, although other uses are increasing. On the other hand, management that gives a higher value to aesthetics, non-game species, camping, hiking, and non-hunting recreation seems to be more desired by communities of State Forests that are within an hour drive of cities. Urban and suburban forest users look to the State Forests to provide undeveloped wilderness-like areas for hiking, hunting, picnicking, cycling, tent-camping, OHV and horseback riding, and bird watching. Although Tennessee State Parks are managed primarily for recreation and preservation, these State Forest users desire an area less developed and more "wild" in which to recreate. Importantly though, the one objective that all forest users want, regardless of their vision for how the forest should be managed, is that healthy, sustainable forests be maintained on State Forests and for this land base to remain forested. (Stakeholder comments and survey results)

Descriptions of the Forests by physiographic province (from east to west), are presented below:

Blue Ridge

Gulf State Forest (2,001acres) is the most recent acquisition to TSF and is the only forest that occurs in the Blue Ridge province. This tract of land was purchased in 2001 from International Paper Company, who owned the property since about 1930. It is located in eastern Tennessee, in Cocke County near the North Carolina-Tennessee border. It is 30-40 miles east of Knoxville. The Gulf tract is surrounded by the Cherokee National Forest on three sides and consists of one drainage system. The topography of the forest is mountainous and contains examples of mountain hardwood and cove hardwood forests. Most of the timber harvests that have occurred on the property have been cuts of less than 50 acres in size. This tract is considered a wildlife management area and has special provisions for bear hunting.

Southern Appalachian Ridge and Valley

Chuck Swan State Forest (24,831 acres) is the only representative of the Southern Appalachian Ridge and Valley province. This forest is located in northeastern Tennessee, 25 miles north of Knoxville, in Union and Campbell Counties. Norris Lake borders it on three sides. Small-acreage farmers originally owned the land making up this forest. During the 1930's, TVA began buying these lands for construction of Norris Lake. In 1952, TVA sold the land to the state with the understanding that it was to be used as a multiple-use forest, emphasizing recreational opportunities. Currently, TWRA has 10 in-holdings (455 acres) and TDOA, FD and TWRA manage the entire forest jointly, with the primary objectives of

improving wildlife habitat and improving forest stand conditions. The forest contains 53 cemeteries and at least 8 caves. TDOA, FD has cooperated on a variety of research projects in conjunction with the University of Tennessee. The forest contains a firing range. Major uses of the forest include hunting, fishing, horseback riding, mountain biking, and caving.

Cumberland Plateau

Lone Mountain State Forest (3,597 acres) occurs in east-central Tennessee, in Morgan County. It is located approximately 20 miles west of the Tennessee River and 30 miles west of Knoxville. It is situated near the southwestern edge of the Cumberland Mountains. The land was acquired by the state at a tax sale in 1929. The land was heavily cut-over and degraded by the Lone Mountain Land Company. As a result, a hands-off management strategy has been employed on the forest to help it regenerate. There has been essentially no timber harvesting on the forest, with the exception of three small timber sales from "day lighting" roads and an occasional salvage cut of pine due to tree mortality caused by the southern pine beetle. A small portion of the forest (52 acres) is being used for seed orchards and genetic studies. Recreational uses of the forest include hunting, hiking, horseback riding, mountain biking, and backcountry camping. Approximately 14 miles of trails exist on the forest, including an interpretive nature trail.

Scott State Forest (2,842 acres) occurs in northeastern Tennessee, in Scott and Fentress Counties. It is completely surrounded by the Big South Fork National River and Recreation Area. The forest was acquired by the state at a tax sale in 1938. Bandy Creek Campground, the largest camping facility in the Big South Fork, is located almost in the center of the forest. As a result, a large number of visitors pass through the forest each year. The forest contains no interior holdings, cemeteries, or natural areas. The forest is used for research including tree improvement studies, where improved strains of various species are grown and tested. A superior stand of white pines also exists on site, and seeds have been collected annually for the state nursery because of their excellent growth qualities. Recently, the southern pine beetle has heavily impacted this stand. The forest has been used traditionally for hunting. Horseback riding and to a smaller extent hiking are the primary recreational uses of this forest.

Bledsoe State Forest (6,782 acres) is located in east-central Tennessee, in Bledsoe, Cumberland, Van Buren, and White Counties. Fall Creek State Park is approximately 3 miles southwest of the forest. The land was originally purchased by the State Department of Institutions in 1907. In 1933, 6,656 acres were designated as state forest, with the remaining lands, known as the Taft Youth Center, left under the jurisdiction of the Department of Institutions, now the Department of Corrections. Areas of the forest are used for tree improvement studies, where strains of various species are grown to determine their suitability as high quality timber. The forest has been used traditionally for hunting. Other recreational uses of the forest are low. A small amount of fishing and some hiking and horseback riding occur on the forest.

Franklin State Forest (6,941acres) is located in south-central Tennessee, in Marion and Franklin Counties. The forest is 35-40 miles west of Chattanooga. The land was acquired in 1936 from the Cross Creek Coal Company and was highly degraded. Today, hardwoods, with only 200-300 acres of softwoods, dominate the composition of the forest. Silvicultural prescriptions are geared towards timber stand improvement and management of wildlife habitat. A small lake occurs in the northwest corner of the forest. The forest has been traditionally used for hunting. Other recreational uses include horseback riding, hiking, mountain biking, and camping.

Prentice Cooper State Forest (23,759 acres) is located in southeastern Tennessee, in Marion County. The forest is approximately 10 miles west of Chattanooga and is heavily utilized by the public. It includes the south side of the Tennessee River Valley Gorge and provides exceptional views of the gorge. Approximately 6,939 acres are designated as unregulated scenic zones that protect this view shed and

other scenic areas of the forest. Hicks Gap Natural Area (350 acres) also occurs in the forest and was developed to protect the federally endangered Large-flowered Skullcap. The forest also includes several in-holdings owned by TWRA and three cemeteries. Management activities of the forest focus primarily on wildlife habitat improvement and maintaining recreational opportunities for the public. There are 35 miles of hiking trails, including the south end of the Cumberland Trail State Park. There also are two designated camping areas. TDOA, FD has provided labor and portions of the forest for various types of research in collaboration with the University of Tennessee. No recent timber cutting has occurred on the forest, with the exception of several salvage cuts and road improvement/wildlife linear strip projects. Hunting has been a traditional use of the forest. Other recreational activities include OHV use, rock climbing and rappelling, hiking, bird watching, and camping.

Pickett State Forest (18,302 acres) is located in northeastern Tennessee in Pickett and Fentress Counties near the Kentucky-Tennessee border. The Stearns Coal and Lumber Company donated the majority of lands that make up the forest in the 1930s. Prior to the state's ownership, most of the merchantable sawtimber had been removed and the lands had been heavily grazed. Today, the eastern side of the forest is adjacent to the Big South Fork Recreation Area. Pickett State Park, which provides camping facilities and cabins, is located within the forest. There are also two unregulated areas (862 acres) that have been set aside to protect the integrity of view sheds and water quality. There are 46 known archaeological sites on the forest. The forest has been the site of research projects conducted by various Universities. Hunting has been a traditional use of the forest. In addition, there are 35 miles of hiking trails, and all forest roads are available for horseback riding. All types of OHVs use unimproved roads. Rock climbing, bird watching, and swimming are also popular activities on the forest.

Eastern Highland Rim

Standing Stone State Forest (8,445 acres) is located in northeastern Tennessee, in Overton and Clay Counties. The forest is approximately 20 miles north of Cookeville and is bisected by State Route 136. State Route 292 also bisects the very western portion of the forest. The land was acquired in the 1930s when the Resettlement Administration began a program of land acquisition and relocation of farm families. The majority of lands were eroded and degraded due to extensive row cropping and poor farming practices. The forested areas had been subjected to heavy timber cutting, high grading, and frequent fires. Today, an 855-acre State Park is situated within the forest along with a lake and a stretch of river. There are 14 cemeteries and two in-holdings on the forest. Hunting has been a traditional use of the forest. Other recreational uses include an archery range, hiking, and horseback riding.

Nashville Basin

Cedars of Lebanon State Forest (6,943 acres) is located in central Tennessee, in Wilson County. The forest is approximately 15 miles east of Nashville. Because of its close proximity to a large urban population, this forest is heavily used for recreation. Lands were originally acquired in the 1930s, and at that time of acquisition were impoverished by farming, grazing, and timber harvesting. Presently, the forest contains a Natural Area (1,034 acres), a state park (831 acres), several in-holdings (304 acres), 6 cemeteries, and 1 cave. The forest is of Natural Heritage significance because it is part of the largest contiguous cedar glade-barren complex in public ownership in middle Tennessee. There have been two endangered plants identified on the forest. No timber harvest activities have occurred on the forest, with the exception of a few salvage cuts as a result of pine mortality from the southern pine beetle. The forest has been highly degraded and eroded by high OHV use. As a result, OHVs have been prohibited, resulting in management and enforcement challenges for TDOA, FD. Hunting has been and continues to be a traditional use of the forest. OHV use is still a popular activity on the forest, although it is prohibited.

Western Highland Rim

Stewart State Forest (4,000 acres) is located in northwestern Tennessee, Stewart County. State Highway 49 bisects the forest. It is adjacent to the western boundary of the Cross Creek National Wildlife Refuge. The lands making up this forest were originally acquired in 1921 at a tax sale. There are two in-holdings (41 acres) within the boundaries of the forest. There also are many sites of historic or cultural interest on the forest, including a number of areas where charcoal was produced, an iron ore pit, and several old house sites and stills. There are also several small areas where native prairie grasses occur. The 101st Airborne Division of Fort Campbell Military Reservation utilizes the forest on a renewable permit basis for training purposes on a biannual basis. Hunting has been a traditional use of the forest. Other recreational activities on the forest include hiking and some mountain biking. A large proportion of the forest has received salvage cutting due to blow down of older age class stands in 1998.

Lewis State Forest (1,257 acres) is located in central-western Tennessee, in Lewis County. Lands were originally acquired in 1933 in a tax sale. There are no known cultural sites on the forest. There is a demonstration forest road, exemplifying the use of BMPs and appropriate engineering specifications. Other areas of the forest have served for past research studies. A small wetland occurs in the southwestern corner of the forest. Hunting is the primary recreational activity. All timber harvests include objectives for improving habitat for wildlife.

Southern Coastal Plain

Natchez Trace State Forest (35,904 acres) is located in central-western Tennessee, in portions of Henderson, Carroll, and Benton Counties. It is approximately 30 miles east of Jackson and is bisected by I-40. The land was acquired in 1935 by the Resettlement Administration and consisted of marginal and sub-marginal farms. Most of the land was severally eroded and in some cases row crops could no longer be grown because deep gullies had developed in the fine sand-clay soils. The forest contains an in holding by TWRA. Large areas have been salvaged as a result of approximately 7,300 acres of older age class stands being blown down to various degrees by a severe thunderstorm in 1999. It also has a state park adjacent to its south boundary. There are 16 cemeteries, 62 historic sites, 1 prehistoric site, 4 ponds, and 1 primitive campsite on the forest. Hunting has been a traditional use of the forest. Other recreational uses include 28 miles of hiking trails, horseback riding on all forest roads, camping, and picnicking.

Chickasaw State Forest (13,104 acres) is located in southwestern Tennessee, in Hardeman and Chester Counties. The Resettlement Administration purchased the majority of lands making up the forest in 1938; the lands at the time of acquisition were highly eroded and degraded by farming and timber harvesting. Two state parks surrounding lakes occur within the forest. There are various educational and demonstration areas highlighted with signs throughout the forest. In addition, there are 115 acres of forest set aside as an experimental forest and nursery. There are 8 cemeteries and 4 in-holdings. Large salvage cuts have occurred as a result of 446 acres of forest being blown down by a tornado in 1988 and 300 acres damaged by southern pine beetles in 1986-87. Hunting has been a traditional use of the forest. Other recreational activities include horseback riding, hiking, and camping.

1.5. Products Produced and Chain of custody

A. Species and volumes covered by the certificate

Table 1: Volume of Forest Products Harvested, FY 2000-2001

Species	Scientific name	Volume (m^3 per yr)	Product
Planned Harvest			
Loblolly Pine	*Pinus taeda*	2484	Sawtimber

Shortleaf Pine	*Pinus echinata*	425	Sawtimber
Misc. Pine	*Pinus spp.*	200	Sawtimber
Hickory	*Carya spp*	256	Sawtimber
Red Oak	*Querecus spp*	2050	Sawtimber
Post Oak	*Quercus stellata*	278	Sawtimber
Scarlet Oak	*Quercus coccinea*	329	Sawtimber
Southern Red Oak	*Quercus falcatda*	46	Sawtimber
Gum	*Nyssa sylvatica*	177	Sawtimber
White Oak	*Quercus alba*	2503	Sawtimber
Yellow-poplar	*Liriodendron tulipifera*	1320	Sawtimber
Misc. Hardwoods		148	Sawtimber
Salvage			
Pine	*Pinus spp*	28388	Sawtimber
Pine	*Pinus spp*	34232	Pulpwood

B. Description of current and planned processing capacity

There is no current and planned processing capacity within TDOA, FD.

4. CERTIFICATION ASSESSMENT PROCESS

1.1. Assessment Dates

Scoping

March 20-22, 2001	On-site Scoping field work conducted.
August 1, 2001	Scoping Report Finalized

Forest Assessment

August 28, 2001	Stakeholder public notices distribution starts (email, FAX, newspaper and mail)
September 30	Initial team planning
October 1-11	Field assessment at TDOA, FD
October 3	Public stakeholder meeting in Chattanooga, TN
October 9	Public stakeholder meeting in Jackson, TN
October 11	Public stakeholder meeting in Nashville, TN
October 12	Begin report write-up and continue stakeholder interactions (emails and interviews)
October 21	Draft report to TDOA, FD for initial review & fact-checking/comment
March-November	Comments received from stakeholders
November 1	Comments received from TDOA, FD
November 5	Draft report to peer reviewers and SmartWood headquarters
November 18	Comment back from peer reviewers
November 21	Final draft submitted to SW Certification Committee
December 1	Certification decision made by SmartWood

1.2. Assessment Team and Peer Reviewers

- Loy Jones, Team Leader, B.S. in forest management, 23 years international experience in forestry and environmental assessments and impacts. Loy is the Manager of the SmartWood Southern USA Region and has been a Team Leader for forest management and chain of custody certifications,

specialist in environmental impact of forestry operations (for both natural forest management and plantation forestry), community forestry and certification.

- Amy Cimarolli, Forester, B.S. in Forestry and Wildlife, M.S. in Forestry, 3 years in forest research at Virginia Tech, 9 years as consulting forester with Foresters Incorporated. Amy has worked on several SmartWood assessments and audits. Her consulting work with private non-industrial as well as industrial landowners involves all aspects of forest management for timber, wildlife, and non-timber forest products. Foresters Incorporated specializes in assisting forestry operations in reaching their certification goals.

- John Hodges, Silviculture and Forest Management, B.S. in forest management, M.S. in Silviculture and Ph.D. in Ecology and Plant Physiology, 12 years in management and research with the U.S. Forest Service, 23 years as professor of silviculture at Mississippi State University, and 3 years as V.P and Land Manager for Anderson-Tully Company. John is a specialist in ecology and silviculture of bottomland hardwoods

- C. Reed Rossell, Jr.; Wildlife Biologist; A.A.S in Wildlife; B.S. in Wildlife Ecology & Management; M.S. in Wildlife Ecology. Reed has been a professional in the field of wildlife ecology, management, and research for 10 years. He is a certified Wildlife Biologist, a member of the North Carolina Non-game Advisory Committee, and has worked with a variety of species including salamanders, box turtles, Golden-winged Warblers, Red-cockaded Woodpeckers, small mammals, and black bears. Reed is currently a self-employed contract biologist and a part-time research associate at the University of North Carolina at Asheville.

Two different peer reviews were sought for this assessment. The peer reviewers included:

1. Senior forest and ecology researcher from the Southeast USA with extensive field and research experience on the ecology and conservation of Southern pine and hardwood forests, with both public and private agencies.
2. Senior ecologist from the Southeast USA, with long-term teaching and research responsibility in wildlife biology/ecology

1.3. Assessment Process

An initial scoping was conducted March 20-22, 2001 in order to provide feedback to the TDOA on their readiness for a full assessment and to help them prepare for it.

During the field phase of the assessment process, the team conducted the following steps as part of the normal SmartWood certification process.

1) Pre-Assessment Analysis – The team prepared for the assessment by reviewing the State Forest System Plan, individual State Forest Management Plans, examples of compartment level plans, stand prescriptions, draft procedures, and other documents provided by TDOA, FD.

2) Selection of Sites – The team chose sites for observation by creating a list of areas or operations to view and then sharing that with each State Forest representative. A State Forest tour was then developed by the team and the foresters so that as many examples as possible of management activities and sites could be seen during the visit

3) Field Interviews and Site Reviews – The first day of the field assessment involved meeting with senior management staff at the Nashville Headquarters Office. During this session, an overview of TSF was provided to the team and discussions focused on planning, policies,

procedures, and budgets. Plans, policies, procedures and other documents were reviewed. In addition, interviews of GIS and TWRA staff occurred. Field visits involved an office discussion with Forest staff to determine how they manage each individual forest, review policies and procedures used in conducting their routine and non-routine work, review planning and operational documents, and determine the level of consistency among the different forests. Field inspections were then conducted to observe how management was implemented on the ground, understand the rationale used by field staff in making decisions, verify that objectives of the Division were being achieved, and determine how the management met or didn't meet the FSC P&C. Sites for inspection were chosen based on the need of the team to see as broad a cross section of different management approaches on each forest as could be scheduled and observed within the allotted time. Throughout the process, the team conducted interviews with non-agency stakeholders in addition to the scheduled public meetings.**Assessment Report Development** – The assessment report was developed over a 14-day period after the fieldwork was completed. Throughout this write-up period the assessors continued to conduct stakeholder interviews and other research.

5) **Peer and Candidate Operation Review of the Report** – The final draft report was reviewed by operation and two independent peer reviewers (normal FSC requirement is two).

6) **Certification Decision** – SmartWood headquarters made the certification decision. This was completed after review of comments made on the draft report by operation and peer reviewers.

Table 2. Summary of Forest Areas & Areas Visited by SmartWood Assessors

Forest/Block Name	**Total Area in Hectares**		**Assessment Site**
*Visited	**Ac**	**Ha**	**Description**
***Bledsoe**	6,782	2,745	
Compartment 7			Clearcut – plant SL pine
Compartment 7			Clearcut – hdwd. Regen.
Compartment 3			Pine removal –2 age hdwd
Compartment 3			Site prep. for pine
Compartment 2			Harvest in hdwd stand
Compartment 3			Culvert removal –road close
***Franklin**	6,941	2,809	
Compartment 3			Road construction
Compartment 3			Proposed harvest –plant pine
***Prentice Cooper**	23,759	9,615	
Compartment 8			Wildlife strips & openings
Compartment 8			Recreation – Tn. Rv. Gorge
Compartment 4			Rec. area – public use
Compartment 8			Site prep. for hdwd.Planting
***Chuck Swan**	24,831	9,932	
Compartment 10			Hdwd. Regen – 3 years old
Compartment 10			Harvest and wildlf. Habitat
Compartment 4			Pine beetle kill and hdwd. Regeneration
Compartment 13			Group Selection – hdwds.
Compartment 15			Hdwd. nat. regen. with retention

Compartment 17			Nat. hdwd. regen. after removal of very old stand
Compartment 17			Two-aged hdwd. stand
***Standing Stone**	8,445	3,418	
Compartment 1			Beetle kill – hdwd. regen.
Compartment 1			Crop tree release in hdwds.
Compartment 2			Native prairie
Compartment 2			Removal of old age in two-age stand
***Pickett**	10,887	4,406	
Compartment 5			Special use area
Compartment 4			Hdwd regen. after wildfire
Scott	2,842	1,150	Rec. uses of the forest
***Natchez Trace**	35,904	14,530	
Compartment 7			Hdwd. group selection
Compartment 11			Kudzu – invasive
Compartment 18			Hdwd. group selection
Compartment 26			Proposed 2-aged hdwd. std.
Compartment 27			2-age hdwd. regen. – 3yrs old
Compartment 25			Roads, skid trails, SMZs, logging job
Compartment 6			5,000 acre blow-down
***Chickasaw**	13,104	5,303	
Compartment 8			Tornado blow-down
Compartment 5			Protected Old Pine Site
Compartment 7			Clear cut for browse – 2 yr.
Compartment 8			Rec. abuse – off-road vehic.
Compartment 9			Hdwd. stand marked for sale
Compartment 11			CCC camp and lake
***Cedars of Lebanon**	6,943	2,810	
Natural Area 1			Endangered plant
Compartment 7			Off road vehicle damage
Compartment 10			Old hdwd. – mgt. choices
Gulf	2,200	880	
Lewis	1,257	509	
Lone Mountain	3,597	1,439	
Stewart	4,000	1,619	
TOTALS	**151,492**	**60,597**	

1.4. Guidelines

This assessment report is based on the FSC Principles, Criteria and Indicators as presented to the team. The document used was titled *SmartWood Generic Guidelines for Assessing Forest Management, Southern USA Region (May, 2001).* The team leader explained that this document is a compilation of the following:

SmartWood "Generic Guidelines for Assessing Forest Management (March 2000);
FSC-US National Indicators as adopted by the Board of Directors (February 2001);
Elements of the draft standards for the Southeast USA determined by SmartWood for inclusion.
Field tests of the guidelines on several forest management operations in the region.

At a minimum, these guidelines are based upon SmartWood's "Generic Guidelines for Forest Assessment" which have been reviewed and accredited by the FSC.

1.5. Stakeholder consultation process and results

The purpose of the stakeholder consultation strategy for this assessment was threefold:

1) to ensure that the public is aware of and informed about the assessment process and its objectives;
2) to assist the field assessment team in identifying potential issues; and,
3) to provide diverse opportunities for the public to discuss and act upon the findings of the assessment.

This process is not just stakeholder notification, but wherever possible, detailed and meaningful stakeholder interaction. The process of stakeholder interaction does not stop after the field visits, or for that matter, after even a certification decision is made. SmartWood welcomes, at any time, comments on certified operations and such comments often provide a basis for field auditing.

In the case of Tennessee Division of Forestry, prior to the actual assessment process a public consultation stakeholder document was developed for each State Forest by the agency through input from the District and State Forest foresters. An initial list of stakeholders was developed and Steve Grado, University of Mississippi, distributed public meeting announcements and a survey to them. Surveys and stakeholder meeting announcements were sent to 878 people (871 by mail and 7 by e-mail) to gain stakeholder input. There were 84 surveys returned primarily because individuals had moved, were deceased, or they no longer claimed an affiliation to the Division's State Forests. Eighty-seven surveys were returned as of October 18, 2001, a return rate was almost 11%. State Forest stakeholder documents also provided a basis for the assessment team to select people for interviews by telephone. Three stakeholder meetings were held during the week, 7-9 pm, in the following cities (number of attendees follows each city): Chattanooga (one stakeholder), Jackson (4 stakeholders), and Nashville (4 stakeholders).

Issues Identified Through Stakeholder Comments and Public Meetings

The stakeholder consultation activities were organized to give participants the opportunity to provide comments according to general categories of interest based upon the assessment criteria. The table below summarizes the issues identified by the assessment team with a brief discussion of each based upon specific interview and/or public meeting comments.

Table 3: Stakeholder Comments

FSC Principle	Stakeholder Comments	SmartWood Response
P1: FSC Commitment/ Legal Compliance	A stakeholder commended TDOA, FD's willingness to engage in proactive measures such as third-party auditing	Not necessary.
P2: Tenure & Use Rights & Responsibilities	There were no comments from stakeholders on land disputes. There were several "Neighbors," either landowners or non-landowners, who expressed that they had had problems with Division of Forestry on a number of issues including harvesting and dumping.	See Principle 4.

P3 – Indigenous Peoples' Rights	No specific comments were made in reference to Indigenous Peoples' Rights. However, one respondent shared a concern about digging at "Rock House" sites, and 11% of respondents (n=10) thought that the Division needed to improve upon how they address historical and cultural issues.	See Condition 5 (on procedures for identifying and protecting archaeological and cultural resources) in Assessment report.
P4: Community Relations & Workers' Rights	Overall, 32% (n=28) of respondents expressed a desire for better public relations and communications with the TDOA, FD and State Forests. The Division of Forestry staff needs to initiate a process or strategy for developing relationships with organized stakeholder groups. Eight percent were unable to respond to this issue. The largest number of stakeholders concerned about public relations and communications issues were familiar with Chickasaw (n=12), Chuck Swan (n=9), Natchez Trace (n=15), and Prentice-Copper (n=8) State Forests. A number of comments were made by scientists, educators, and those in the timber industry indicating that the forest health, wildlife habitat, and the economic vitality of the State Forests were being compromised due to harvest restrictions. The largest number of stakeholders concerned about harvesting issues was familiar with Chickasaw (n=11), Chuck Swan (n=8), Franklin (n=5), Natchez Trace (n=16), Prentice-Copper (n=12), and Standing Stone (n=5) State Forests. Several stakeholders commented that TDOA, FD provides valuable education to landowners through demonstration areas and State Forest tours, and that a greater variety of silvicultural methods and long-term sustainable hardwood management should be shown, and that more research should be incorporated. A number of comments were made on the poor funding position of the Division. This impacts upon employee retention and the ability to practice forest management to its fullest extent.	The Division of Forestry needs to develop a proactive strategy for capturing stakeholder attitudes, opinions, and perceptions of the State Forest and their operations. This includes a continual updating of stakeholder lists. There were many stakeholders' surveys (n=84) that could not be delivered primarily because of address changes, deceased individuals, and those no longer claiming an affiliation with the State Forests. See Condition 10 (on gathering public input) in Assessment report. (The response to the SmartWood survey was broad-based as a wide variety of individuals who associate themselves with the State Forests responded to the survey.) See Conditions 8 (strategy to deal with attrition in TDOA, FD), 11 (evaluation of program operations), 12 (timber inventory to justify harvests), and 16 (ecological and silvicultural rationales for prescriptions and management decisions) in Assessment report.
P5: Benefits from the Forest	A large number of respondents were recreational users (n=41) of the State Forests. There was general acceptance of the recreational opportunities afforded to the public as 78% (n=868) of those who responded to the SW stakeholder survey were satisfied with forest management's approach to providing	Recreational use brings with it associated economic impacts to local communities and supporting businesses. See Conditions 10 (on gathering public input), 15 (on mapping conservation zones) & 27 (on management objectives) in

	recreation. Responses varied on whether TDOA, FD was performing multiple use management or not. Some stakeholders commented that State Forests are not being valued for more than timber production by TDOA, FD as only a small % of SF land is "set aside" from harvest planning. Others thought TDOA, FD is doing a good job at balancing management of SF for variety of public uses. Stakeholders want TDOA, FD to manage for the native hardwood forest (rather than pine plantations). There was support for production of high quality hardwoods so that TDOA, FD could promote secondary processing & production of high-end wood products in Tennessee. Stakeholders commented that revenues were being lost because the State Forests were not being harvested enough. The Division is viewed as falling way below its annual allowable cut. A number of timber industry operations expressed a difficulty in dealing with the State Forests or coping with various regulations. However others commented on the great working relationship they had with TDOA, FD on the State Forests.	Assessment report. This difficulty as expressed by some timber industry operations would have a negative effect on the local economy for this business sector.
P6: Environmental Impact	Stakeholders from logging/timber industry and conservation groups affirmed that TDOA, FD limits the environmental impact of their harvesting operations through the proper application of BMPs and management prescriptions on the ground. A number of comments were made by scientists, educators, and those in the timber industry indicating that forest health and wildlife habitat were being compromised due to harvest restrictions. On the other hand, there were many comments bemoaning clear cutting operations and the lack of selective harvests, particularly of old growth forests. The largest number of stakeholders concerned about harvesting issues was familiar with Chickasaw (n=11), Chuck Swan (n=8), Franklin (n=5), Natchez Trace (n=16), Prentice-Copper (n=12), and Standing Stone (n=5) State Forests.	See Conditions 12 (timber inventory to justify harvests), 16 (ecological and silvicultural rationales for prescriptions and management decisions), 27 (management objectives) in Assessment report. See Conditions 11 (evaluation of program operations), 13 (training of foresters on RTE species and unique communities), 14 (completion of biological inventories), and 22 (designation of wetlands). See Principle 8 on Monitoring.

	Stakeholders expressed a concern that TDOA, FD doesn't have personnel or budget to inventory or monitor for special areas or rare species. There were some problems expressed by SW survey respondents relating to the environment. Of the 87 respondents to the SW survey the most frequently mentioned environmental problems were: aesthetics, (17%), biodiversity (23%), buffer zones (18%) erosion control (17%), road maintenance (15%), site maintenance (13%), and issues related to wildlife habitat (22%). The largest number of stakeholders concerned about biodiversity was familiar with Chickasaw (n=11), Chuck Swan (n=8), Natchez Trace (n=16), and Prentice-Copper (n=12) State Forests. The largest number of stakeholders concerned about wildlife habitat issues was familiar with Chickasaw (n=4), Chuck Swan (n=6), Franklin (n=4), Natchez Trace (n=9), and Prentice-Copper (n=7) State Forests.	
P7: Management Plan	A number of respondents made comments about the influences of politicians and special interest groups on forest management. These forces were viewed as detriments to the proper management of State Forests. Almost 17% of respondents (n=15) expressed a concern about the management plan quality and 10% were unable to answer this question. Forest management was criticized by 33% of respondents (n=29). The largest number of stakeholders concerned about forest management was familiar with Chickasaw (n=10), Natchez Trace (n=18), and Prentice-Copper (n=10) State Forests. Stakeholders felt the management plans did not include adequate public input, and that plans placed a priority on wood production through even-aged management.	See Conditions 10 (gathering public input for management planning), 27 (on development of management objectives), and 28 (on management plan revisions) in Assessment report.
P8: Monitoring & Assessment	There were some problems expressed by SW survey respondents relating to the monitoring of the State Forests. Of the 87 respondents to the SW survey the most frequently mentioned monitoring problems were: poaching (16%), road maintenance (15%), site maintenance (13%), and vandalism, theft, and arson (16%).	See Condition 29 on the Monitoring Plan.
P9: Maintenance	Few stakeholders (n=20) had ever heard of	See Conditions 31 (on evaluation and

of High Conservation Value Forest	HCVFs. Some expressed difficulty with the definition as stated in the FSC Principles. However, 78% of the survey respondents felt HCVFs were important but only 55% felt forests should be included as HCVFs. Forest landowners were particularly concerned about the issue of HCVFs. Some felt that it might infringe upon their property rights. Several comments were made about the extent to which the State Forests might be classified as HCVFs. Some stakeholders thought TDOA, FD was resistant to creating set-aside areas to preserve forest values other than timber production.	maintenance of HCVF attributes) and 29 (on monitoring HCVF areas).
P10 - Plantations	Only 13% of respondents (n=11) felt plantation management needs improvement. Some stakeholders expressed concern that native hardwoods were being cut and pines planted on State Forests.	There were few issues raised concerning plantation management on the State Forests.

5. RESULTS, CONCLUSIONS AND RECOMMENDATIONS

1.1. General Discussion of Findings

Table 4: Findings by FSC Principle

Principle/Subject Area	Strengths	Weaknesses
P1: FSC Commitment and Legal Compliance	TDOA, FD appears to be meeting environmental, labor, and forestry laws and regulations. Forestry operations meet or exceed Best Management Practices. Forest managers are actively working to control the damage caused by OHV use on State Forests. TDOA, FD actions and statements indicate strong commitment to certification.	TDOA, FD is in need of a state policy for timber trespass incidents. TDOA, FD needs to continue training of personnel on civil rights and diversity issues. Division staff needs to become familiar with those international treaties and agreements that the U.S. is a party to and how they may affect their forest management.
P2: Tenure & Use Rights & Responsibilities	TDOA, FD recognizes and is considerate of the customary and traditional uses of State Forests. TDOA, FD makes an effort to address and resolve conflicts between management activities and forest users or other stakeholders.	No comments.

P3 – Indigenous Peoples' Rights	Forest managers contact TDEC personnel to search records for significant archeological sites as part of management planning prior to conducting activities. TDOA, FD protects all identified cultural and archeological sites from management activities.	Need better documentation of procedures used in the identification and protection of special sites.
P4: Community Relations & Workers' Rights	Despite low wages and limited training opportunities, TDOA, FD staff is dedicated, conscientious, and motivated to perform their best for the good of the State Forest lands TDOA, FD provides educational tours and forest management demonstration areas on State Forest lands. State Forest staff incorporates concerns and issues of local stakeholders into their management decisions. Controversial State Forest issues are addressed through public meetings, formation of advisory groups, and on the ground visits.	Employee wages are below local and regional norms for professional and technical forestry staff. Due to low wages, there is a history of young foresters leaving TDOA, FD for other agencies or the forest industry positions after just a few years on staff. This results in a concern with program continuity and corporate memory loss over time. Direction is not clear to field staff on who is responsible for ensuring contractor compliance with Master Logger safety requirements. Continuing education and training programs are weak for TDOA, FD forestry staff. The agency's safety program is not being consistently implemented in the field. TDOA, FD does not conduct a formal, regular process of gathering, information, comments and concerns from stakeholders as part of the management planning process.
P5: Benefits from the Forest	Commitment of TDOA, FD personnel to principles of multiple use management. Use of good forest management practices and protection of the forest. Commitment to sustainability of timber harvests	Lack of inventory data and information on growth and yield as a result of dependence on current method of area regulation. Low level of staffing, and thus inability to do many needed management activities.
P6: Environmental Impact	Field staff is very attentive to all environmental impacts associated with logging operations. Field staff is very conscientious in protecting natural and cultural resources that occur within TSF. TDOA, FD is doing a good job protecting and maintaining representative ecosystems, Natural Heritage and Cultural sites, and view sheds throughout the forests. Chemicals are used minimally on TSF. Managing for wildlife is considered in all	Field staff lacks knowledge regarding the identification of RTE species and their habitat preferences and other unique community types that occur throughout TSF. Biological inventories are not completed on all TSF and there is no plan in place to determine the size and extent of representative ecosystems that should occur on each forest. Maps of forests are deficient in identifying conservation zones, and unregulated and regulated areas within each forest. Clear-cutting is the predominate technique

	logging activities.	used in TSF, and little or no consideration is given to other harvest methods. Documentation is lacking for rationale of selected prescription treatments including the use of fire and chemicals on TSF. Field staff is not provided adequate training opportunities to improve their stewardship of the forests.
P7: Management Plan	Personnel are highly committed to achieving the goals of current management plans and are willing to accept changes to improve current management. Personnel have a good understanding of the objectives and purposes of the State Forests.	Management plans have not been prepared for some Forests and for numerous compartments on most Forests. Revision and updating of plans is not current Lack of concern for silvicultural alternatives to clear cutting for regeneration of hardwoods Plans do not contain provisions for monitoring of forest resources other than timber
P8: Monitoring & Assessment	Personnel have an intimate knowledge of the forest under their supervision Personnel do an outstanding job of "informal" monitoring of activities and effects of activities on lands under their supervision	Formal plans have not been developed for monitoring the effects of management practices on forest resources, especially non-timber resources. There is no formal procedure for incorporation of monitoring results into new management plans or revisions of current plans
P9: Maintenance of High Conservation Value Forest	TDOA, FD has done a good job protecting and setting aside lands with HCV attributes, including known locations of RTE species, unique natural communities, and view sheds. TDOA, FD has a good working relationship with agencies such as TNC, TNH, TWRA, and U.S. Fish and Wildlife Service for protecting areas within the forests that likely have HCV attributes.	No formal planning process is in place to identify and determine HCV attributes that are important to the public and that should be protected. No formal monitoring program is in place to ensure that HCV attributes are being maintained and protected.
P10 - Plantations	The team determined there was no plantation management occurring on TSF.	

1.2. Certification Decision

Based on a thorough field review, analysis and compilation of findings by the SmartWood assessment team, peer review, and SmartWood headquarters, TDOA, FD was approved to receive joint FSC/SmartWood Forest Management and Chain of Custody (FM/COC) Certification with the stipulated conditions listed below.

In order to maintain certification, TDOA, FD will be audited annually on-site and required to remain in compliance with the FSC principles and criteria as further defined by regional guidelines developed by SmartWood or the FSC. TDOA, FD will also be required to fulfill the conditions as described below. Continued forest management performance, and compliance with the conditions described in this report, will be reviewed during scheduled annual and random audits.

1.3. Conditions and Recommendations

Conditions are verifiable actions that will form part of the certification agreement that TDOA, FD will be expected to fulfill at the time of the first audit or as required in the condition. Each condition has an explicit time period for completion. Non-compliance with conditions will lead to de-certification.

Conditions:

Condition 1: Within one year of the issuance of a certificate, TDOA, FD shall develop a strategy to complete the necessary Civil Rights training to employees. (Criterion 4.1.1)

Condition 2: Within three years of the issuance of a certificate, TDOA, FD will research the elements of CITES, and the Convention on Biological Diversity that may influence or affect State Forest management and ensure that relevant staff understand CITES implications. . (Criterion 4.1.3)

Condition 3: Within two years of the issuance of a certificate, TDOA, FD shall formalize policies and procedures to provide guidance on effectively dealing with timber trespass. (Criterion 4.1.5)

Condition 4: Within one year of the issuance of a certificate, TDOA, FD shall demonstrate in writing a long-term commitment to FSC P&C. (Criterion 4.1.6)

Condition 5: Within two years of the issuance of a certificate, TDOA, FD shall document their procedures and methods for identifying and protecting archeological, cultural, and historic resources on State Forest lands. (Criterion 4.3.3)

Condition 6: Within two years of the issuance of a certificate, TDOA, FD shall develop a clear policy for field personnel on ensuring compliance of logging contractors with applicable safety provisions. (Criterion 4.4.1)

Condition 7: Within two years of the issuance of a certificate, TDOA, FD shall develop and implement a training program for TDOA, FD foresters, technicians, and forest aids to further their education in natural resources management and other relevant topics. (Criterion 4.4.1)

Condition 8: Within one year of the issuance of a certificate, TDOA, FD shall develop and implement a strategy that will deal with the attrition within the agency. (Criteria 4.4.2 and 4.5.1)

Condition 9: Within one year of the issuance of a certificate, TDOA, FD shall demonstrate how they will consistently implement their safety program within the Division. (Criterion 4.4.2)

Condition 10: Within one year of the issuance of a certificate, TDOA, FD shall develop and implement a process for gathering public comments and information for use in formulating the management approach and goals on State Forests. The process shall include a means for reaching out to all citizens of Tennessee beyond the traditional users of the state forest. (Criterion 4.4.4)

Condition 11: Within three years of the issuance of a certificate, TDOA, FD shall develop and implement a strategy for determining the effectiveness and efficiency of State Forest management, and identify areas such as staffing, processes, technology, and revenue that may or may not be needed to match the increasing pressures and demands for more effective operation of the State Forests. (Criterion 4.5.1)

Condition 12: Within two years of the issuance of a certificate, TDOA, FD shall develop and implement a plan to inventory the forest resource that will give reliable information on timber growth rates,

composition, regeneration, and volumes by species and size classes to clearly support the continued use of area regulation. (Criteria 4.5.6, 4.7.1, and 4.8.2)

Condition 13: Within two years of the issuance of a certificate: TDOA, FD shall develop and implement a periodic training program for all TSF foresters on the identification of RTE species and their associated habitats, as well as on the identification of rare and unique communities (including wetlands), so that foresters remain current on the status of listed species and communities. (Criterion 4.6.1)

Condition 14: Within two years of the issuance of a certificate: TDOA, FD shall document a strategy for completing a biological inventory on all state forests and demonstrate how the results will be incorporated into the system planning and operations procedures. (Criteria 4.6.1 and 4.8.2)

Condition 15: Within one year of the issuance of a certificate: TDOA, FD shall map all conservation zones and wetlands currently identified on TSF, and shall develop, document, and implement a process for how such zones and wetlands are identified, designated, and included on maps in the future. (Criteria 4.6.2, 4.6.4, 4.6.5 and 4.7.1)

Condition 16: Within one year of the issuance of a certificate, TDOA, FD shall document the ecological and silvicultural rationale behind selected prescription treatments or other management decisions at the stand level prior to operations, using site specific field data or published analyses of local forest ecology. (Criterion 4.6.3)

Condition 17: Within one year of the issuance of a certificate, TDOA, FD shall develop and implement written guidelines for prescribed burning on TSF. (Criterion 4.6.3)

Condition 18: Within one year of the issuance of a certificate, TDOA, FD shall develop and use written burn plans when conducting prescribed fire on all TSF. (Criterion 4.6.3)

Condition 19: Within one year of the issuance of a certificate, TDOA, FD shall develop, adopt, and implement a policy of retaining live trees and native vegetation within even-aged harvest units in a proportion and configuration consistent with the natural disturbance regime in each community type. (Criterion 4.6.3)

Condition 20: Within three years of the issuance of a certificate, TDOA, FD shall develop a planning process that includes consultation with stakeholders, local governments, and scientific authorities to determine the size and extent of representative ecosystems that should occur on each of the forests. (Criteria 4.6.4 and 4.8.4)

Condition 21: Within three years of the issuance of a certificate, TDOA, FD shall develop and implement a training plan for each position on the state forests to ensure knowledge of: 1) the position's specific duties, 2) State Forest policies, and 3) the methods and practices necessary to understand and implement goals and objectives of the respective forest management plan. (Criteria 4.6.5 and 4.7.4)

Condition 22: Within one year of the issuance of a certificate, TDOA, FD shall develop written prescriptions of chemicals that are used, including an explanation of the risks and benefits of their use and documentation of alternative methods considered. (Criterion 4.6.6)

Condition 23: Within two years of the issuance of a certificate, TDOA, FD shall develop and implement written IPM and vegetation control strategies to provide guidance to TSF personnel. (Criterion 4.6.6)

Condition 24: Within one year of the issuance of a certificate, TDOA, FD shall document efforts to reduce or eliminate the use of chemicals on TSF. (Criterion 4.6.6)

Condition 25: Within five years of the issuance of a certificate, TDOA, FD shall develop and implement a plan to deal with invasive exotics. (Criterion 4.6.9)

Condition 26: When management plans are revised, TDOA, FD shall state their objectives of management so that they will be specific, achievable, and measurable. (Criterion 4.7.1)

Condition 27: Within two years of issuance of a certificate, TDOA, FD shall demonstrate progress in the revision of management plans and have a schedule for completion of missing compartment plans. (Criteria 4.7.2 and 4.9.4)

Condition 28: Within three years of issuance of a certificate, TDOA, FD shall develop and implement a monitoring plan that incorporates adequate indicators to assess effects of management activities on all forest resources, particularly those affecting RTE species and unique areas such as those having high conservation value attributes. This plan shall also specify how results of monitoring are incorporated into revisions of management plans. (Criteria 4.8.1 and 4.8.2)

Condition 29: Prior to the next timber sale, TDOA, FD shall develop a clear tracking system to indicate volume and species sold as certified and provide identification and chain of custody certification number on related sales documents. (Criterion 4.8.3)

Condition 30: Within three years of the issuance of a certificate, TDOA, FD shall develop and implement a process that identifies the attributes of HCVF for State Forests, determine if these attributes are present in the existing protected areas or in any other sites on the State Forests, and plans for maintaining these areas where they do exist. The process and determination of sites on State Forests shall include consultations with stakeholders, local governments, environmental agencies, and scientists. (Criteria 4.9.1, 4.9.2 and 4.9.3)

Recommendations:

In addition to the above conditions there were a total of 10 recommendations.

SmartWood Certification Annual Addendum to the Public Summary for Tennessee Department of Agriculture, Division of Forestry, 2003

1.1. Audit Process

A. **Audit year:** 2003

B. **Dates of Audit:** October 26-31, 2003

C. **Audit Team:** John Hodges, Consultant, Retired. Former positions and experience include: V.P. and Land Manager for Anderson-Tully Company, Professor of Silviculture at Miss. State University, and management and research positions with the U.S. Forest Service; B.S. in Forest Management from Miss. State University and M.S. and Ph.D. in Ecology and Plant Physiology from University of Washington; Team leader and/or member of numerous FM assessment teams, scoping teams, FM and CoC audits, and Resource Manager audits.

D. **Audit Overview:** A meeting was held with David Todd, State Forest Forester, on the evening of October 26 to make plans and establish schedules for the audit. It had previously been decided to use aerial observations as well as ground visits for evaluation of management activities on the state forests. It was planned to do aerial observations and limited ground visits on Monday and Tuesday (October 27 and 28) and ground visits as needed on Wednesday, Thursday, and Friday (October 29-31). However, fog and low cloud cover prevented use of the aircraft on Monday, so the day was used for a ground visit to Lewis State Forest and office discussions of progress made in meeting conditions imposed in the original assessment.

On Tuesday October 28, aerial observations of management activities performed on the Natchez Trace, Chickasaw, John Tully, Franklin, and Bledsoe state forests were conducted. These activities included regeneration cuts of several ages and sizes, salvage operations, site clean up by burning, proposed cuttings, and road construction. On Wednesday October 29, aerial observations of similar operations were made on the Lone Mountain, Standing Stone, and Chuck Swan State Forests. In addition, ground visits were made to the Franklin and Chuck Swan State Forests. Ground observations were made of management activities on the Natchez Trace State Forest on Thursday October 30. Activities observed included ongoing regeneration and recent regeneration cuts, a recent shelterwood cut, midstory and understory removal for a shelterwood cut, road work, and a proposed regeneration cut. Much discussion occurred of retention in regeneration cuts, visual buffer zones, and two-aged retention areas. Friday October 31 was used to complete discussions with TDOA, DF personnel in Nashville concerning conditions given in the original assessment, and obtaining the necessary maps and documentation for the audit report.

E. **Sites Visited:** Of the 15 separate properties (forests) managed by the TDOA, DF, visits were made to 10, either by air, from the ground, or both. These 10 state forests were selected because of management activities occurring since the original assessment. Little or no activity had occurred on the other forests.

Aerial Observations: Flights were made over the John Tully, Chickasaw, Natchez Trace, Franklin, Bledsoe, Lone Mountain, Standing Stone, and Chuck Swan state forests. These flights permitted a good evaluation of such things as location in relation to the landscape, layout of the harvest area, retention in the regeneration areas, use of SMZs, overall

quality of the logging job, and site damage. The aerial observations were used to select individual management activities for further observation from the ground.

Ground Observations:
Lewis State Forest:
Stop 1 – 31 acre salvage and regeneration cut of mixed loblolly, white pine and hardwood stand. Good logging job. Very little retention. Sale made before certification.
Stop 2 – First thinning in 15.4 acre loblolly pine stand. Cut every other row. Very good logging job. Residual slash at logging deck will be burned.
Stop 3 – Thinning in 87 acre 40 year old loblolly pine stand. Used strip thinning with marked trees to be removed. Light thinning but good logging job.
Stop 4 – Road construction. Coweeta type road constructed for demonstration and operational purposes. Could compare with older type construction.

Franklin State Forest:
Stop 1 – Regeneration harvest about 20 acres in size. Logging job left piles of residue apparently as a result of whole tree skidding. Retention is good overall but low in places in the cut.
Stop 2 – Regeneration harvest. Retention is lower than desirable. Logging slash in piles due to use of whole tree skidding.

Chuck Swan State Forest
Stop 1 – Road to Stand 41. Improvement work to road before harvest. Road in very good condition even after harvest
Stop 2 – Stand 41. Sale made before certification. Good job of seeding of logging deck and rehab of logging road with water bars. Retention good in places but low overall.
Stop 3 – Stand 90. Regeneration area. Good logging job and good road work and rehab. Questionable amount of retention.
Stop 4 – Stand 49. Regeneration harvest. Logging incomplete, quality white oak not yet removed. Scattered retention trees and some cases left in groups.

Natchez Trace State Forest -
Stop 1 – Lewis Trail sale. Regeneration harvest. Good logging job. Discussion of retention and use of buffer zones and two-aged stands along roads. Left some strips.
Stop 2 – Sale # 090401. Regeneration cut. Left two-aged uncut area in middle and 100 foot uncut strip next to road and 50 foot of two-age along one side of clearcut.
Stop 3 – Road improvement. Excellent work on road rehab and improvement.
Stop 4 – Wildersville Trail harvest 090202, 28 acres. Sold and marked before certification.
Stop 5 – Hester Trail and Maple Loop. Proposed harvest cut. 22 acres. Discussion of how retention should be achieved.
Stop 6 – Red oak shelterwood. Cut BA to about 40 sq. Ft. and left all red oaks and some white oaks and slashed residue.
Stop 7 – Shelterwood regeneration. Did midstory and understory control by cutting all trees and shrubs 6 inches and less in diameter. Excellent oak regeneration (number and size). Time to do removal cut.

F. Personnel Interviewed:

The following people were consulted during this audit:

Person interviewed	Position/Organization
David Todd	State Forest System Forester
Christy Gearhieser	Area Forester
Woody Escue	Forest Technician
Robin Bible	State Forester, Fire Operations
John Mueller	State Forest Forester, Chuck Swan
Darren Bailey	State Forest Forester, Chuck Swan
Roy Ward	District Forester
David Clepper	State Forest Forester, Natchez Trace
Philip Morrissey	State Forest Forester, Natchez Trace
John Doty	State Forest Forester
David Arnold	State Forester, Training and Personnel
Rick Meriner	District Forester

G. Documentation reviewed:

SmartWood Certification Assessment Report, Tennessee Division of Forestry, November 2001 .

SmartWood Forest Assessors Manual, January 2001

SmartWood Guidelines for Assessing Forest Management, Southern USA Region, May 2002.

SmartWood Forest Management Audit, Generic Guidelines for Report Template

Tennessee Department of Agriculture, Division of Forestry – Multiple documents addressing issues relating to Conditions raised in the original assessment, including those relating to Title VI of the Civil Rights Act, timber trespass, acquisition and disposal of property, support for FSC and certification, safety and training program, public comments and information in formulating forest management goals, ecological and silvicultural rationale for stand level prescriptions, identification and mapping of conservation areas and other significant features, prescribed burning on state forests, variable retention, chemical use on state forests, pesticide prescriptions, policy and procedures for the application of forest pesticides, and chain of custody for certified material.

1.2 General Audit Findings and Conclusions

Forest management practices employed by TDOA, DF for the most part meet or exceed SmartWood standards for SmartWood and FSC certification. The possible exception pertains to the requirement for variable retention in areas clearcut for regeneration. This requirement is essentially being met on recently harvested areas, but there appeared to be a lack of consistency in how it is applied. The auditor believes that this inconsistency is a result of: 1) a lack of understanding of the purpose of retention and the ways it can be accomplished, and 2) the requirement that live trees and native vegetation be retained in the regeneration area in a proportion and configuration that is consistent with the characteristics of natural disturbance areas. Wind and ice are the primary disturbance forces in this area and there has been no scientific documentation of retention following such natural catastrophes. Some observations on a natural catastrophe occurring on one of the State Forests and possible approaches for determining retention are presented under “additional comments” in section 2.1 below. There

has been a concerted and largely successful effort to address the conditions and recommendations given in the original assessment.

The auditor was impressed by the commitment of all TDOA, DF personnel to the principles of FSC and to maintaining certification. All personnel asked expressed the view that certification had improved the level of forest management and their satisfaction with their efforts.

There have been no changes in management objectives for the state forests or in primary methods used, but there has been a significant increase in acreage in the system due to recent acquisitions, some change in personnel, and a number of additions to the management plan as a result of efforts to address conditions given in the original assessment. The Martha Sundquist (2001 Acres) and the John Tully State Forests (2135 Acres) were added to the system. Three people – Derrick Miller, Clint Sthromier, and Chris Goetz – left the Division and nine new people were employed. These included Steve Scott (State Forester), Rick Harrington, Phillip Morrisey, David Clepper, Andy McBride, Chris Ellis, Ward Tarkington, Steve Brabec, and Jason McGaughey.

1.3 Status of Conditions and Corrective Action Requests (CARs)

A. Compliance Summary of Previously Issued Conditions and CARs

The Certification Assessment resulted in the issuance of 30 Conditions. Of these Conditions, 14 had a one year time frame for completion or the beginning of an event that occurred the first year, nine had a two year time frame, six had a three year time frame, and one has five years for completion. Of the 14 Conditions with a one year time frame, eight (1,4,9,16,17,18,22,29) were closed as a result of this audit, while in four others (8,10,15,26) the requirements were met but work is ongoing, Two of the Conditions (19 and 24) with a one year time frame were only partially met and received a CAR. Two Conditions with a two year time frame (3,5) were closed as a result of this audit. Significant progress has been made on the other Conditions with a two year time frame and some work has been accomplished on the other Conditions.

B. New CARs Issued in this Audit

CAR 1-03: Before the next annual audit, TDOA, DF should develop better guidelines on how retention is to be accomplished on TSF and should hold training sessions to make sure these guidelines and the purpose and benefits for leaving retention are understood by people making the decisions on the State Forests.

CAR 2-03: Before the next annual audit, TDOA, FD shall document specific examples in which they have chosen methods other than chemicals or have examined other methods and found them to be unacceptable at present

SmartWood Certification Annual Addendum to the Public Summary for Tennessee Department of Agriculture, Division of Forestry, 2004

1.1. Audit Process

A. Audit year: 2004

B. Dates of Audit: December 6-10, 2004

C. Audit Team: Amy Cimarolli, Consultant, Cimarolli Forestry & Wildlife, Nettie, WV. Former positions and experience include: Forester, Foresters Incorporated, Blacksburg, VA; B.S. in Forestry and Forest Products from Virginia Tech, Blacksburg, VA; M.S. in Forestry from Virginia Tech, Blacksburg, WV; Team leader and/or member of Forest Manager and Resource Manager assessment and audit teams, scoping teams, and Chain of Custody assessments and audits; certification consultant for private forestry companies.

D. Audit Overview: An introductory meeting was held Monday, December 06 at the Nashville TDOA, DF office with David Todd, Jere Jeter, David Arnold, Ward Tarkington, John Fenderson, and Laura Craft the morning of December 6th to review the audit requirements and schedule the process. The afternoon was spent at the office reviewing documents and interviewing personnel to assess work on specific Conditions and CAR's due this audit (2 years after the certification contract was signed.) These discussions were continued with David Todd, Jerry Jeter, Ward Tarkington, and David Arnold while traveling to State Forests during the rest of the week.

TN State Forest's were considered candidates for field visit during the 2004 audit based upon the following criteria: the occurrence of management activities (timber sales, road building, site rehabilitation) on the ground since the last audit, not being visited on the ground at last audit, and finally logistics. Rainy and windy weather precluded using the state airplane for aerial observations as was done in 2003.

State Forest visits were conducted December 7-10. Currently active, nearly initiated, and recently closed management activities were visited on each forest, and the foresters responsible for each State Forest were interviewed on site. Stewart and Natchez Trace Forests were visited Tuesday December 7; a pine thinning, understory cleaning, new road construction, regeneration cuts, and salvage harvests were viewed. On Wednesday December 8, Standing Stone and Pickett State Forests were visited; a marked regeneration harvest, wildlife habitat improvements, exotic species control, a completed hardwood thinning and regeneration harvest; a chemical pine release demonstration; and the new acquisition to the forest were seen. Prentice Cooper State Forest was visited December 9 in the pouring rain: regeneration cuts, a shelterwood, and hardwood thinning were observed. Finally, on Friday December 10, the Lone Mountain State Forest was visited and its management discussed. A final review of the Conditions and CAR's was conducted at the Lone Mountain State Forest office, followed by a discussion on TDOA DF's progress with certification, ongoing challenges, and new accomplishments.

E. Sites Visited: Six State Forests were visited during the audit, including five of the seven State Forests with active timber sales in the last year. Little or no forest management activity had occurred on the other forests.

Stewart State Forest

Stop 1 – A14-05-02. 72 acre 45-year old loblolly pine thinning that is marked, sold but not yet harvested. Marking job good; goal is 70 sq.ft./acre pine residual stand. No southern pine beetle damage in forest so pine management to 60 years is goal. Japanese stiltgrass noticed along forest road between stops; forester notes it is on skid trails but no negative impact on regeneration noted. Loggers given credit for good jobs on signs informing public of harvest job. Boundary being surveyed at 6 miles/year.

Stop 2 – Understory cleaning in a mixed oak stand, all suppressed and many intermediate trees smaller than sawtimber size cut by hand. Objective is to allow view from road into forest for visitors and to release sawtimber stems from below. Discussion about value of under and mid-story stems for diversity; fact that only small areas done near roads and evidence from other treated areas that understory redevelops with numerous sprouts in 3-5 years was reassuring. Discussion of burning understory in oak stands to encourage oak regeneration. Charcoal furnace site visited; nearby sinkhole identified as area to protect from disturbance.

Stop 3 – A14-05-01 Patch clearcuts done as "Group Selection" project. Forty acre regeneration harvest divided into three harvest units. Very scattered trees left. Due to storm events in last week water was flowing in all drains that do not qualify by TN BMP definition as streams requiring SMZ's; discussion of SMZ's and Equipment Retention Zones initiated. Retention discussion: use equipment restriction zones as "retention areas" by leaving trees standing in zone. David Todd explained to DF foresters that retention strips along any drains plus scattered trees throughout harvest area ("dispersed retention") are required now in regeneration harvests that are 25 acres and up, and such retention measures are expected to a lesser extent in smaller areas as well.

Natchez Trace State Forest

Stop 1—A09-04-02 Storm damage (1998 wind storm) salvage harvest. This harvest area was a clearcut of mixed oaks and loblolly pine, including some large 65 year old pines. DF plans to plant loblolly this winter to regenerate the stand to a productive timber species for the site. Buffer on stream channel (an old agricultural ditch with flow only during wettest times of year) at lower boundary of harvest area consisted only of scattered hardwood stems as main canopy had been loblolly sawtimber trees, which were all cut. Discussion ensued about DF policy to have SMZ's that are above and beyond the TN BMP requirements, even if it means leaving mature valuable loblolly trees that may indeed "fall over in a storm" as the primary canopy trees in the zone. Perhaps SMZ's were met since no trees were cut across the channel, leaving over 50% basal area in the zone, and equipment had been kept away from the streamside, but David Todd and Jere Jeter made it clear to the new State Forest forester that when it doubt, err on the side of caution. Additionally, the SMZ quality at the site will be ameliorated over time as plans were made on the spot to allow hardwoods to grow streamside by moving the herbicide site preparation spray boundary back 50' from the stream.

Stop 2—A09-03-04. Clearcut harvest. Examined excellent example of a retention area centered on intermittent stream channel running through harvest area. SMZ/retention area averages 66 feet wide, is intact hardwood good quality forest of yellow-poplar and oaks, and all equipment was kept out of it during harvest. Discussion of seed tree/pine planting vs. natural pine regeneration.

Standing Stone State Forest

Stop 1—A13-04-01. Uncut hardwood timber sale. Clearcut harvest to regenerate maturing oak-hickory stand. New road constructed with Coweeta design; protected cemetery adjacent to timber sale area. Examined layout of SMZ which extended to where water begins to flow in stream channel and includes 50% basal area retention. Visited no-cut Water Protection Special Area designated at lower boundary of harvest area; this was created by foresters to protect water quality where perennial streams flow over rock ledges and into a hard to access narrow, steep stream valley.

Stop 2—New game field with pond for openland wildlife habitat, birdwatching, hunting.

Stop 3—Warm-season grasses planting on road gated to keep out people trespassing in field with off-road vehicles.

Stop 4—Roadside *Ailanthus altissima* control adjacent to timber sale area to control spread.

Stop 5—A13-03-01. Yellow-poplar thinning and adjacent clearcut harvest. Thinned harvest area had good quality residual trees, goal of 60-80 sq. ft. of remaining basal area met. Skid roads
closed properly. Clearcut harvest area designed with road buffer, recreational trail buffer of 100' that serves as a retention strip across cut area, and additional retention trees scattered throughout cut area. Fifty percent of retention strip has blown over; discussion ensued about science available to help foresters decide upon best type of retention to leave depending on the real users of the resulting habitat. It was decided that configuration (e.g. hourglass vs. square cut) of the harvest area counts in amount and type of retention left in a clearcut; and that it is an evolving practice at the TN DOF.

Pickett State Forest
Stop 1—Wildlife management area, 17 acres of unproductive old mining site planted to warm and cool season grasses.

Stop 2—Herbicide demonstration area; white pine release in an oak stand.

Stop 3—Warm season grasses planted on a 25 year old planted pine site that has been killed by pine beetle. Used opportunity to create additional open space wildlife habitat.

Stop 4—Wagon Gap Overlook. Viewed new addition, Jim Creek tract, and discussed DF's management ideas for tract. DF has already consulted with the TN chapter of The Nature Conservancy about cave protection and acceptable forest management adjacent to the cave.

Prentice Cooper State Forest
Stop 1—A11-03-01. Demonstration harvest, cut over two years ago, patch clearcuts, 3-4 acre size with whole tree skidding. Discussed burning of piled residue to "clean site" rather than dispersing tops and blocks from landing to retain Nitrogen and woody debris on site. Will check area for increased oak regeneration in burned areas. Undesirability of whole tree skidding restated with State Forest foresters from Jere Jeter.

Stop 2—A11-03-01. Demonstration harvest, cut over two years ago, of seed tree method on pine-hardwood site. Residual good quality shortleaf did well until hurricane blew down a few. Garlon used in July to kill red maple, considering burning area to

experiment with hardwood control. Planting pine in areas where natural regeneration is not sufficient.

Stop 3—A11-03-01. Demonstration thinning of two-aged stand of hardwoods. Cut 80-year-old trees, left 50-year-olds. Took the worst first. SMZ's in place and loggers required to abide by rules to keep tops out of streams.

Stop 4—A11-03-01. Clearcut demonstration, discussed from truck (due to pouring rain.) Hardwood-pine mix, cut out beetle-damaged pine, and followed up with harvest of the low-medium quality hardwoods. No-cut 100' SMZ in center of harvest area serves as good retention. Have treated red maple with Accord/Arsenal (herbicide test, will go back to Garlon if able) in preparation to burn site, but has been too wet to proceed with burn plans. May allow mixed oak-pine stand to develop at this point.

Lone Mountain State Forest

Stop 1—Forest office for presentation about forest, uses, management activities, and recent natural disturbances.

Stop 2—Old regenerated group selection harvests in white pine-dry oak forest.

Stop 3—Stand 6 and 7. Tornado salvage harvest. Very scattered trees with sufficient crowns for survival were left by the tornado in its path of travel—such trees were left standing during salvage operations. This is an excellent area to study natural disturbance regimes: more residuals remain in the draws; majority of the dominants and codominants were damaged, leaving midstory and understory of red maple and sourwood to dominate stand regeneration. Therefore, to regenerate stand to a more desirable mix of hardwoods, the salvage cut also included cutting the midstory and understory. Foresters may burn some red maple dominated hillsides where fire breaks exist in the forest roads.

Stop 4—Stand 5. Old white pine dominated area. Beetle kill, salvaged all dying/dead pine, leaving occasional hardwood wolf tree.

Stop 5—Stands 1-4. Examined salvaged tornado damaged area, snags of 2-4" DBH trees remain, red maple sprouts and oak seedlings abundant in spots. Yellow pines were killed 2-3 years before the storm and remain standing dead.

Stop 6—Tree Study Area under management of Division of Forestry Regeneration Team at University of Tennessee. Question whether the DF is responsible for reporting the herbicide usage of the team when it is area not under certified management.

Stop 7—Water hole constructed for wildlife on dry ridgetop.

Stop 8—End of road on western end of Forest. Forest closed to ATV's; hunters cannot take them off their vehicles or trailers. Foresters use logs to block access to trails.

Stop 9—Drive on new road constructed to access upper end of mountain for salvage harvest. Good layout and demonstration of different methods of construction.

Stop 10—Old pine salvage areas, now dominated with shortleaf pine, red maple and oak regeneration.

F. Personnel Interviewed:

The following people were consulted during this audit:

Person interviewed	Position/Organization
David Todd	Unit Leader, State Lands
Robin Bible	Unit Leader, Safety/Training
David Arnold	Assistant State Forester, Grants/Programs/Support
Jere Jeter	Assistant State Forester, Operations
Ward Tarkington	Forestry Program Specialist (GIS systems)
John Fenderson	Public Outreach/Environmental Affairs Unit
Laura Craft	Administrative Assistant
Mike Huddleston	Area Forester, Stewart State Forest forester
Bill Steele	Forestry Aid
Danny Jackson	Forestry Aid
David Clepper	State Forest Forester, Natchez-Trace State Forest
John Doty	State Forest Forester
Richard Merriner	District Forester
Andy McBride	State Forest Forester, Standing Stone
Chris Ellis	State Forest Forester, Pickett and Scott State Forests
Jim Lane	State Forest Forester, Prentice Cooper State Forest
Tom Hudlow	District Forester
Ed Smith	Area Forester, Lone Mountain State Forest forester
Ted Dailey	District Forester

G. Documentation reviewed:

SmartWood Certification Assessment Report, Tennessee Division of Forestry, November 2001.

SmartWood Forest Management Annual Audit Report, Tennessee Division of Forestry, 2003.

SmartWood Forest Assessors Manual, January 2001.

SmartWood Guidelines for Assessing Forest Management, Southern USA Region, May 2002.

Tennessee Department of Agriculture, Division of Forestry: Safety and Health Manual, 2003.

Chuck Swan State Forest Compartment 7 Plan, November 2004.

TDOA Polices and procedures developed in 2004: Attached as Exhibits to this report.

"Variable Retention Guidelines" Tennessee Division of Forestry, State Forests Training Program.

Hemlock Woolly Adelgid Strategic Plan for Tennessee State Lands, Draft, Hemlock Woolly Adelgid Task Force, 2004.

1.2 General Audit Findings and Conclusions

The TDOA DF is making big advances in its program, with forest certification the instigator of many changes in operations, personnel, and management.

Significant changes in the last year (2004) include:

- A new State Forester came on board: Steve Scott
- A new Forestry Program Specialist was hired: Ward Tarkington. He oversees the new GIS system and software for the DF, and trains the field foresters on its use.
- A new Public Outreach/Environmental Affairs Unit was created and a Leader hired: John Fenderson.
- A new Safety/Training Unit was created and a Leader hired: Robin Bible.
- A new timber sale database has been developed by Laura Craft.
- The Forestry Committee examined all DF positions, reorganized personnel, and created new staff positions.
- Salary adjustments were made for foresters: B.S. Foresters enter DF service in a State Forest position as Forester 1 or Forester 2. Area Foresters have opportunity to be promoted to a Forester 3 step.
- Reorganization has been requested to create a new State Forest supervisor position at the Forester 3 step.
- State funding has "loosened up" in the last year.
- The Biological Survey at Cedars State Forest has been completed.
- Memorandums of Agreement/Understanding have been completed with Tennessee Division of Environmental Conservation (TDEC), Tennessee Wildlife Resources Agency (TWRA), and The Nature Conservancy (TNC) to facilitate cooperation in the conservation of special habitats and management of the state's natural resources.
- A tract, McGlaughlin Tract, has been added to Prentice Cooper State Forest along the Tennessee River Gorge; it is important as part of the viewshed there.
- A new tract has been added to Pickett State Forest: Jim Creek drainage showcases caves and dramatic escarpments; a second tract is up for consideration by the governor, Poke Creek.
- A new species has been found at Franklin State Forest: a snail on limestone.
- The conservation of the Walls of Jericho near Franklin State Forest is being supported through coordinating USFS Forest Legacy Funds and cooperation of TDEC, TWRA, and TNC. The "Walls" will become a Wildlife Management Area and a part will likely become a State Designated Natural Area.
- A land swap between the DF and Tennessee State Parks occurred at Natchez Trace State Forest in July. The goal was to have more efficient use and administration of recreation in a "big tree" forest area popular with horseback riders. The DF traded the popular riding area for additional forest where active management will be applied.
- ATV use has been virtually stopped at Cedars State Forest with help from law enforcement staff.
- A hemlock woolly adelgid task force headed by John Kirksy of the Resource Protection Unit has been created to address the threat to the hemlock resource.
- There is a project on State Forests being headed by retired USFS employee and Sewanee University adjunct professor Glen Smalley to landtype map the forests with an Ecological Land Classification system to assist in State Forest planning. Uses of the landtype mapping on State Forests will be presented as a poster at the 13th Biennial Southern Silvicultural Research Conference.

Discussions with personnel suggest that the foresters managing State Forests have broadened their views of forest management. The majority of them indicated that certification has had a positive affect on their jobs and on how they manage the State Forests.

Efforts to meet Conditions and CAR's have been good as the audit findings show. The auditor was impressed by the professionalism and knowledge of the forestry staff, and their openness to the certification process and to sharing their management challenges and successes.

1.3 Status of Conditions and Corrective Action Requests (CARs)

A. Compliance Summary of Previously Issued Conditions and CARs

All Conditions and CAR's due in Year 2 were Closed or Met and will be Ongoing. One Condition due next year was also Closed this year.

Condition #	Year Due	Status in 2003	Status in 2004
1	1	Closed	Progress continues
2	3	Not Due	Closed
3	2	Closed	In use
4	1	Closed	--
5	2	Closed	Progress continues
6	2	Not Due	Closed
7	2	Met/Ongoing	Met/Ongoing
8	1	Met/Ongoing	Met/Ongoing
9	1	Closed	Progress continues
10	1	Met/Ongoing	Met/Ongoing
11	3	Not Due	Progress made
12	2	Not Due	Met/Ongoing
13	2	Not Due	Met/Ongoing
14	2	Not Due	Met/Ongoing
15	1	Met/Ongoing	Met/Ongoing
16	1	Closed	--
17	1	Closed	--
18	1	Closed	--
19	1	Partially Met, CAR 1-03	CAR 1-03 Met/Ongoing
20	3	Not Due	Progress made
21	3	Not Due	Progress made
22	1	Closed	--
23	2	Not Due	Closed
24	1	Partially Met, CAR 2-03	CAR 2-03 Closed
25	5	Not Due	Progress made
26	Management plan revisions	Met/Ongoing	Met/Ongoing
27	2	Not Due	Closed
28	3	Not Due	Not Due
29	Prior to next timber sale	Closed	In use
30	3	Not Due	Progress made

B. New CARs Issued in this Audit

None

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1. AUDIT PROCESS

1.1. Auditors and qualifications:

John Hodges. John has a bachelors degree in forest management from Mississippi State University and a Masters and Ph.D from the University of Washington. He has 12 years experience in management and research with the U.S. Forest Service, 23 years teaching experience, and 3 years as VP and land manager for Anderson-Tully company. He has served as team leader and team member on dozens of FM and CoC assessments as well as annual audits for SmartWood and FSC.

1.2. Audit schedule

Date	Location /main sites	Main activities
December 4, 2005	Nashville, TN	Evening: met with David Todd and discussed procedures for the week and documents needed for the audit.
December 5, 2005	Nashville, TN	Morning – Office of TN Division of Forestry, discussion of the process to be used for the audit; changes in TN Division of Forestry management and Personnel; progress in meeting outstanding CARs; and decision on sites to visited during the audit.
December 5, 2005	Nashville, TN and Lebanon, TN	Afternoon – continued discussions as above and traveled to Lebanon State Forest for site visit and then to Knoxville, TN.
December 6, 2005	Chuck Swan and Standing Stone State Forests	Site visits of management activities on the two state forests.
December 7, 2005	Chickasaw and Natchez Trace State Forests	Examine field management activities on the two state forests.
December 8, 2005	Nashville, TN	Discussion of additional information needed for the audit; wrap-up session to give preliminary findings of the audit and answer questions about the audit findings.
Total number of person days used for the audit:5 = number of auditors participating **1** times total number of days spent for the audit **5**		

1.3. Sampling methodology:

The auditor first met with David Todd and other staff members of TDF in their State office in Nashville. This meeting was used to review the audit process and to discuss progress on previously assigned CARs; review documents relating to those CARs and others related to activities of TDF occurring since the last audit. The auditor was given a list of all management activities over the past year and made a random selection of sites to be visited for the audit. Emphasis was placed on harvest and regeneration activities. The auditor then made visits to offices and management activities on four state forests. On the last day of the audit, the auditor conducted an exit session with staff members in the State office in Nashville in which he discussed the audit findings and answered questions about the audit and future efforts that needed to be made.

FMU or Site audited	Rationale for selection
Cedars of Lebanon State Forest	Observe activities designed to protect habitat of threatened or endangered plant species
Chuck Swan State Forest	Selected on basis of recent or ongoing management activities
Standing Stone State Forest	Selected on basis of kinds and number of management activities
Chickasaw State Forest	Selected on basis of kinds and number or management activities
Natchez Trace State Forest	Selected on basis of variety of activities and time available for travel

1.4. Stakeholder consultation process

No stakeholder consultation was conducted as part of this audit.

1.5. Changes to Standards (if applicable)

No changes to the standard have occurred since the last evaluation. For the implementation of this audit as well as for the implementation of previous audit/assessment the following standard was used: Revised Final Forest Certification Standard for the Southeastern United States, v 9.0.

2. AUDIT FINDINGS AND RESULTS

1.1. Changes in the forest management of the FMO

No changes have occurred in silvicultural or other forest management practices. Some land acquisition has occurred, most notable a purchase of an inholding on the Natchez Trace State Forest of about 378 acres that prevents development within the forest. Procedures have been developed for handling requests for private interests in state properties. There were also significant changes in personnel during the year:

- State level: The following positions were filled:
  - Forest Management Program Specialist – John Woodcock
  - Program Specialist in Forest Protection – Clint Strohmeier
  - Data Technology Unit Leader – Ward Tarkington

- Forest Business Specialist – Doug Schnabel
- Urban Forestry Program Specialist – Brian Rucker

- Chickasaw SF: Rick Herrington resigned, position is vacant

- Natchez Trace SF: Justin Dewberry hired as Forester

- Franklin and Bledsoe SF: John Kunz was hired

- Chuck Swan SF: John Muller resigned and Danny Osborne hired

- Pickett SF: Chris was promoted to Area Forester, Jordana Ellis hired as State Forest Forester.

- Newly created positions of State Forest Supervisor and filled by State Forest Foresters:
  - Chickasaw and Tully SF: Position currently vacant
  - Natchez Trace SF: David Clepper
  - Standing Stone Pickett SF: Andy McBride
  - Chuck Swan, Lone Mt., Scott: Darren Bailey
  - Prentice Cooper, Franklin, Bledsoe SF: Jim Lane

Other changes in the Division not directly related to management are given Section 1.6 “Audit Decision”.

1.2. Stakeholder issues

No stakeholder issues were identified in this audit and no issues have arisen during the course of the year.

1.3. Compliance with applicable corrective actions

The section below describes the activities of the certificate holder to address each applicable corrective action issued during previous evaluations. For each CAR a finding is presented along with a description of its current status using the following categories. Failure to meet CARs will result in noncompliances being upgraded from minor to major noncompliances with compliance required within 3 months or face suspension or termination of the SmartWood certificate. The following classification is used to indicate the status of the CAR:

CAR Status Categories	Explanation
Closed	Certified operation has successfully met the CAR and addressed the underlying noncompliance.
Open	Certified operation has not met the CAR; underlying noncompliance is still present. CAR becomes a Major CAR with a 3 month deadline for compliance

CAR #: 7	**Reference Standard #:** 4.1
Non-compliance: Major ☐ Minor ☒	Some staff members demonstrated lack of understanding of goals of the management program.
Corrective Action Request: TDOA, FD shall develop and implement a training program for TDOA, FD foresters, technicians, and forest aids to further their education in natural resource management and other relevant topics.	
Timeline for Compliance: Within two years of issuance of a certificate	

Audit findings: This CAR was found to be met/ongoing in during the 2004 audit and it is continuing to be addressed. Training plans have been developed and implemented. The agency has contracted with University of Tennessee for some of the training programs.
Status: Closed
Follow-up Action: None

CAR #: 8	**Reference Standard #:** 4.2 & 5.1
Non-compliance: Major ☐ Minor ☒	Low salaries and personnel turnover have hampered implementation of agency management goals.
Corrective Action Request: TDOA, FD shall develop and implement a strategy that will deal with attrition within the agency.	
Timeline for Compliance: Within one years of issuance of a certificate	

Audit findings: Much progress has been made in this area. Numerous new positions have been created along with improvement in salaries. One example used to improve this situation is the establishment of the position of State Forest Supervisors that permitted upgrading of some of the State Forest Foresters. This CAR has been found to be met/ongoing in the 2003 and 2004 audits and can now be closed.
Status: Closed
Follow-up Action: None

CAR #: 10	**Reference Standard #:** 4.4
Non-compliance: Major ☐ Minor ☒	Stakeholders have not been involved as much as should be in formulating management approaches and goals of the State Forests.
Corrective Action Request: TDOA, FD shall develop and implement a process for gathering public comments and information for use in formulating the management approach and goals on State Forests. The process shall include a means for reaching out to all citizens of Tennessee beyond the traditional users of the state forests.	
Timeline for Compliance: Within one year of the issuance of a certificate	

Audit findings: Policy and Procedures have been developed. The agency has created and staffed a position of "Outreach/Information and Education Unit Leader." A Forum on State Forest Practices has been held. This CAR has been addressed during the 2003 and 2004 audits and was found to met/ongoing. It can be closed at this time.
Status: Closed
Follow-up action: None

CAR #: 11	**Reference Standard #:** 5.1
Non-compliance: Major ☐ Minor ☒	The agency has no means for assuring that management programs of the agency are effective or efficient.

Corrective Action Request: TDOA, FD shall develop and implement a strategy for determining the effectiveness and efficiency of State Forest management, and identify areas such as staffing, processes, technology, and revenue that may or may not be needed to match the increasing pressures and demands for more effective operation of the State Forests.
Timeline for Compliance: Within three years of the issuance of a certificate,

Audit findings: A 14 page document entitled "A Framework for State Forest Resource Monitoring" has been developed and implemented. The adaptive management approach outlined in the document provides that the monitoring results be evaluated and that changes be made in management plans at the appropriate level or in operating policies and procedures. This has already resulted in several staff changes and implementation of new programs.
Status: Closed
Follow-up Action: None

CAR #: 12	**Reference Standard #:** 5.6.a & 7.1 & 8.2
Non-compliance: Major ☐ Minor ☒	There is no current inventory of the state forests.
Corrective Action Request: TDOA, FD shall develop and implement a plan to inventory the forest resource that will give reliable information on timber growth rates, composition, regeneration, and volumes by species and size classes to clearly support the continued use of area regulation.	
Timeline for Compliance: Within two years of the issuance of a certificate,	

Audit findings: This CAR was found to be met/ongoing during the last audit as a three phased plan was designed to address this nonconformance and has been implemented. The current status is that the details of implementing an inventory are being addressed by the State Forest System Specialist.
Status: Closed
Follow-up Action: Future audits should check on the progress of the inventory.

CAR #: 13	**Reference Standard #:** 6.1
Non-compliance: Major ☐ Minor ☒	Some employees are not well-informed on identification or habitat requirements of RTE species
Corrective Action Request: TDOA, FD shall develop and implement a periodic training program for all TSF foresters on the identification of RTE species and their associated habitats, as well as on the identification of rare and unique communities (including wetlands), so that foresters remain current on the status of listed species and communities.	
Timeline for Compliance: Within two years of the issuance of a certificate	

Audit findings: A training program has been developed that addresses this CAR. Some training has been done and more will be accomplished under a Memorandum of Agreement with the Tennessee Department of Environmental Conservation. This CAR was found to be met/ongoing during the 2004 audit and can be closed at this time.
Status: Closed
Follow-up Action: Future audits should check on progress of the training.

CAR #: 15	**Reference Standard #:** 6.2, 6.4, 6.5, 7.1
Non-compliance: Major ☐ Minor ☒	Conservation areas and wetlands have not been identified and/or mapped on some areas of the State Forest system.

Corrective Action Request: TDOA, FD shall map all conservation zones and wetlands currently identified on TSF, and shall develop, document and implement a process for how such zones and wetlands are identified, designated, and included on maps in the future.
Timeline for Compliance: Within one year of the issuance of a certificate

Audit findings: Many areas have been identified and mapped. The process is in place to address this CAR and the remainder of the work is on a schedule and will be completed as inventories are completed. This CAR was evaluated in the 2004 and 2005 annual audits and was found to met/ongoing as the work is being conducted as per the process outlined to address the CAR. The CAR can be closed at this time.
Status: Closed
Follow-up Action: Check progress in yearly audits.

CAR #: 20	**Reference Standard #:** 6.4.b, 8.4
Non-compliance: Major ☐ Minor ☒	The need for and extent of representative ecosystems on the State Forests has not been determined.
Corrective Action Request: TDOA, FD shall develop a planning process that includes consultation with stakeholders, local governments, and scientific authorities to determine the size and extent of representative ecosystems that should occur on each of the forests.	
Timeline for Compliance: Within three years of issuance of a certificate	

Audit findings: Planning process has been developed and documented (Exhibit #1). A committee has been formed and will hold first meeting in early 2005. This is same committee that will deal with HCVF areas (CAR 30).
Status: Closed
Follow-up Action: None

CAR #: 21	**Reference Standard #:** 6.5 & 7.4
Non-compliance: Major ☐ Minor ☒	Some employees did not seem aware of their specific duties or state forest practices,
Corrective Action Request: TDOA, FD shall develop and implement a training plan for each position on the state forests to ensure knowledge of: 1) the position's specific duties, 2) State Forest policies, and 3) the methods and practices necessary to understand and implement goals and objectives of the respective forest management plan.	
Timeline for Compliance: Within three years of issuance of a certificate	

Audit findings: A plan has been developed and implemented by the Unit Leader for Safety/Training (Robin Bible). At the time of the audit, training sessions had been held for most TDF State Forest employees.
Status: Closed
Follow-up Action: None

CAR #: 26	**Reference Standard #:** 7.1
Non-compliance: Major ☐ Minor ☒	In some plans the objectives were not well defined and progress was not measurable.
Corrective Action Request: TDOA, FD shall state their objectives of management so that they will be specific, achievable, and measurable.	

Timeline for Compliance: When management plans are revised

Audit findings: Examples of recent management plans were observed that showed specific and achievable objectives. The template for these plans is now being used for all plan revisions. This CAR has been evaluated during the 2004 and 2005 audits. TDOA has been found in conformance each year. The CAR can be closed at this time.
Status: Closed
Follow-up Action: None needed.

CAR #: 28	**Reference Standard #:** 8.1 & 8.2
Non-compliance: Major ☐ Minor ☒	Agency does not have a formal monitoring plan nor do they indicate how monitoring will be used to revise management plans.
Corrective Action Request: TDOA, FD shall develop and implement a monitoring plan that incorporates adequate indicators to assess effects of management activities on all forest resources, particularly those affecting RTE species and unique areas such as those having high conservation value attributes. This plan shall also specify how results of monitoring are incorporated into revisions of management plans.	
Timeline for Compliance: Within three years of issuance of a certificate	

Audit findings: A State Forest Monitoring Plan has been developed and is being implemented (Exhibit #2). Implementation is being done in connection with the biological assessment by Tennessee Department of Environmental Conservation and the land type mapping by Glendon Smalley.
Status: Closed
Follow-up Action: Yearly audits should follow progress of monitoring activities.

CAR #: 30	**Reference Standard #:** 9.1 & 9.2 & 9.3
Non-compliance: Major ☐ Minor ☒	The Division of Forestry has not identified all potential HCVF areas on the State Forests.
Corrective Action Request: TDOA, FD shall develop and implement a process that identifies the attributes of HCVF for State Forests, determine if these attributes are present in the existing protected areas or in any other sites on the State Forests, and plans for maintaining these areas where they do exist. The process and determination of sites on State Forests shall include consultations with stakeholders, local governments, environmental agencies, and scientists.	
Timeline for Compliance: Within three years of the issuance of a certificate	

Audit findings: Planning process has been developed and documented (Exhibit #1). A committee has been formed and will hold first meeting in early 2006. This is same committee that will deal with the extent of representative ecosystems on the state forests (CAR #20)
Status: Closed
Follow-up Action: Next audit should check on progress of the process.

CAR #: 1-03	**Reference Standard #:** 6.3.a.8
Non-compliance: Major ☐ Minor ☒	In regeneration harvest areas, retention is often not adequate as required by Southeastern Standards
Corrective Action Request: TDOA, DF should develop better guidelines on how retention is to be accomplished on TSF and hold training sessions to make sure these guidelines are understood by people making the decisions on the State Forests.	

Timeline for Compliance: Before the next annual audit

Audit findings: Training sessions have been held and personnel seem to understand the requirements for retention. Retention was adequate on all areas examined. However, in a few cases the auditor thought the layout of the retention could be improved (OBS 03/05). This CAR was also found to be met/ongoing during the 2004 audit and can be closed at this time.
Status: Closed
Follow-up Action: Auditors should continue to check retention in harvest areas.

1.4. New corrective actions issued as a result of this audit

None

1.5. Audit observations

Observation	Reference Std #
OBS 01/05: It is realized that utilization is market driven, but TDF could make greater efforts to improve utilization, perhaps by addressing improved markets.	5.3.b
OBS 02/05: Whole tree skidding was observed on some harvest operations. TDF could consider included language in the harvest contracts prohibiting whole tree skidding.	6.3.c.2
OBS 03/05: Overall, retention in harvest areas meets FSC/SW standards, but arrangement on the site could be improved, perhaps by leaving more strips but with the same amount of merchantable timber.	6.3.a.8

1.6. Audit decision

The Division of Forestry has made very good progress in meeting outstanding CARs and continuing to show support for FSC certification. The auditor recommends that they maintain their FSC certification. Some examples of the excellent work they do:

- David Todd is working with the Conservation Heritage Foundation to develop an inventory of available lands for conservation easements and fee purchase.
- The Division of Forestry is working with Tennessee Nature Conservancy to develop maps showing habitat and findings for RTE plant and animal species.
- Hosted a visit by Will Martin Chairman of Conservation Commission who also headed a Forum on State Forest Practices.
- David Todd participated with Tennessee Wildlife Resources Association in developing their non-game state strategy. Non-game inventory has been done on Chuck Swan SF and will be done on all Wildlife Management Areas on state forests.
- Problem with horseback riders on Natchez State SF has greatly improved primarily because of more effective communication.