

South Carolina Forestry Commission

Annual Report 1999-2000

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STATE COMMISSION OF FORESTRY

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William Boykin, Deputy State Forester

Dean Carson, Technical Assistant to the State Forester

Judy J. Weston, Executive Assistant to the State Forester

Tim Adams, Division Director, Field Operations Support

Joe M. Richbourg, Division Director, Administration

Cecil Campbell, Division Director, Coastal Region

Steve Scott, Division Director, Pee Dee Region

Charles Ramsey, Division Director, Piedmont Region

MISSION

The mission of the Forestry Commission is to protect, promote, enhance, and nurture the forest lands of South Carolina in a manner consistent with achieving the greatest good for its citizens.

The Commission will utilize Total Quality Management concepts in meeting its responsibilities.

Responsibilities extend to all forest lands, both rural and urban, and to all associated forest values and amenities including, but not limited to, timber, wildlife, water quality, air quality, soil protection, recreation, and aesthetics.

The Forestry Commission shall have general and specific responsibilities for the promulgation and enforcement of laws and regulations related to protection of the forest and its associated values.

The Commission shall be responsible for promoting and developing the appropriate technologies to accomplish its objectives, and for the development and promulgation of Best Management Practice Guidelines for South Carolina's forest land.

FIELD OPERATIONS SUPPORT

The Field Operations Support (FOS) Division provides operational and technical staff direction to the Forestry Commission field organization in each of the major program areas of forest management, forest protection, nurseries and tree improvement, and state forests and other state lands. During FY 1999-2000, the FOS Division was reorganized to reflect these primary program areas.

FOREST MANAGEMENT

The Forest Management Section assists South Carolina citizens with management and development of the forest resources of the state. Programs include woodland management assistance, reforestation assistance, forestry services, forest products utilization and marketing assistance, resource conservation and development, water quality, urban forestry, and forest inventory. These programs assist owners in growing more timber, aid industries in more efficient utilization of the timber resource, and foster conservation and multiple use of the forest resource.

There are 12.4 million acres of commercial forestland in South Carolina. According to the 1993 US Forest Service Survey, farmers and miscellaneous private owners own 72% of this land. Forest industry owns approximately 19% with 9% in public ownership.

The Forest Management programs are designed to assist the non-industrial private landowner with multiple-use forest management.

FOREST MANAGEMENT ASSISTANCE

Professional foresters from the Forestry Commission provide forest management advice and assistance to landowners. The land is examined and a written forest management plan is prepared. Recommendations for management may include such silvicultural practices as forest protection, reforestation, harvesting, prescribed burning, wildlife habitat improvement, and recreation.

This year, 3,113 management plans were prepared for 160,965 acres. Beginning in July of 1999, customer satisfaction surveys were sent to every landowner that received a forestry management plan. In FY 00, 94% of the landowners that responded to the survey indicated that they were very satisfied or somewhat satisfied with the management plan they received. Of these landowners, 82% also indicated that they intended to complete most or all of the recommendations in their plan. Where practical, the landowner is referred to consulting or industrial foresters to assist in carrying out management recommendations. This year 399 cases were referred to consulting foresters and 70 to industrial foresters.

COST SHARE PROGRAMS

Forest Renewal Program (FRP) - State

In 1982 the program was funded for the first time by a \$100,000 state appropriation. This permitted an assessment of \$400,000 from forest industry, and created a \$500,000 Forest Renewal Fund. The funding was doubled effective July 1, 1996 increasing the program to \$1,000,000.

Forest Incentives Program (FIP) - Federal

FIP funding for fiscal year 1999-00 was \$460,112.

Agricultural Conservation Program (ACP) - Federal

The Agricultural Conservation Program was not continued with the 1996 Farm Bill. The figures below refer to completion of previously obligated funds.

Conservation Reserve Program (CRP) - Federal

The Program began with crop year 1986 and was renewed with the passage of the 1990 Farm Bill. Twenty signups have been held. This year 9,691 acres were planted. The CRP program has been renewed again with the 1996 Farm Bill.

Statewide Accomplishments for All Cost-Share Programs Reforestation and Timber Stand Improvement

Program	Number of Landowners	Acres Planted	Natural Regeneration	TSI Acres	Cost Share Payments
FRP	327	6,494	0	1,643	\$657,438
FIP	350	7,500	0	1,100	\$500,000
ACP	1	40	0	0	\$7,139
CRP	273	9,691	0	0	\$508,178
SIP	31	1,435	0	0	\$73,198
Totals	982	25,160	0	2,743	\$1,745,953

SEEDLING SURVIVAL

Survival checks were made on 10 percent of plantings using a row count or tenth acre plot method for determining survival. A weighted analysis involving all survival checks was used to determine the statewide survival of 73%.

Forest Management Assistance 1999 – 2000

County	<u>Non Cost-Share</u>		<u>Cost-Share</u>		<u>Forest Stewardship</u>	
	Exams	Acres	Exams	Acres	Exams	Acres
Abbeville	37	1,387	5	113	3	454
Aiken	32	2,150	49	2,875	2	628
Allendale	3	143	45	1,794	2	1,146
Anderson	37	4,758	11	460	0	0
Bamberg	4	314	35	1,384	2	266
Barnwell	13	665	60	2,335	2	420
Beaufort	13	1,039	3	180	1	11
Berkeley	24	1,472	20	780	4	664
Calhoun	11	858	131	5,954	6	996
Upper Charleston	5	173	2	139	1	40
Lower Charleston	31	950	7	280	4	442
Cherokee	9	490	12	433	4	1,036
Chester	22	2,489	19	891	7	1,193
Chesterfield	20	3,359	51	2,065	4	2,026
Clarendon	25	996	104	2,170	5	1,193
Colleton	19	946	35	1,253	3	388
Darlington	38	2,087	31	1,056	4	397
Dillon	11	930	68	1,266	3	676
Dorchester	28	1,221	34	1,029	4	472
Edgefield	19	1,357	80	3,707	3	750
Fairfield	32	710	20	1,027	7	1,154
Florence	16	1,268	120	2,049	0	0
Georgetown	8	720	28	873	0	0
Greenville	35	2,682	3	57	2	154
Greenwood	5	110	29	1,308	3	192
Hampton	27	1,995	39	1,465	10	4,812
Horry	50	3,495	194	3,126	9	665
Jasper	13	759	19	1,043	1	25
Kershaw	13	1,211	24	737	2	605
Lancaster	26	1,150	29	2,036	2	170
Laurens	10	890	33	1,892	2	148
Lee	6	163	29	1,509	1	249
Lexington	23	2,035	52	1,562	1	27
McCormick	6	241	1	18	4	198
Marion	15	989	27	446	1	108
Marlboro	34	1,604	21	536	1	322
Newberry	36	3,913	33	1,842	0	0
Oconee	12	706	24	1,063	3	108
Orangeburg	14	729	161	4,500	12	2,015
Pickens	19	995	16	646	1	124
Richland	39	1,863	39	1,639	4	320
Saluda	6	493	74	2,568	2	182
Spartanburg	18	1,262	10	444	12	911
Sumter	5	386	33	1,408	1	143
Union	14	1,006	12	649	1	106
Williamsburg	14	795	161	5,647	1	774
York	8	720	24	1,451	4	1,872
State Totals	905	60,676	2,057	71,707	151	28,582

FOREST SERVICES

Through this program the Commission provides assistance to landowners and other state agency lands with afforestation, reforestation, and maximization of production from their woodlands. The landowner is charged the cost of all services performed.

These services were available to landowners during the year:

Firebreak Plowing - performed by Forestry Commission employees using agency equipment for \$75 for the 1st hour and \$50 for each additional hour.

Prescribed Burning - performed by Forestry Commission employees using agency equipment for \$12 per acre for the 1st 50 acres, \$10 per acre for the 2nd 50 acres and \$8 per acre for all over 100 acres. Firebreak plowing costs are not included. Minimum fee \$100.00.

Prescribed Burning Standby - an agency tractor and employee on standby at burning site while landowner performed burning under an approved plan for \$45 for the 1st hour and \$20 for each additional hour. Minimum fee \$100.00.

Equipment Rental Program - agency owned tree planters, bedding plows and drum choppers made available to private landowners at rates from \$4 to \$15 per acre.

Timber Marking - performed by Forestry Commission employees at the rate of \$5 per thousand board feet and \$2.00 per cord.

Service	Number of Tracts	Units of Measure	Receipts FY 99-00
Firebreak Plowing	556	2,726 miles	\$121,955
Prescribed Burning	166	12,314 acres	\$133,329
Prescribed Burning Standby	42	2,269 acres	\$6,500
Equipment Rental	55	986 acres	\$7,850
Water Bar Construction	9	335 bars	\$3,325
Timber Marking	18	3,846 cords	\$26,890
		1,398,474 board feet.	
Totals	846		\$299,849

Beginning in July of 1999, a customer satisfaction survey was sent to all landowners that received forestry services. In FY 00, 56% of the surveys were returned and 96% of these landowners indicated that they were very satisfied or somewhat satisfied with the services they had received.

ENVIRONMENTAL MANAGEMENT

The Environmental Management program is responsible for the development and implementation of South Carolina Forestry Commission services that are related to the environmental protection of forest and associated natural

resources. Issues that are addressed include the protection of water quality, site productivity, endangered species, and unique ecosystems.

BMP Implementation Monitoring

Compliance with harvesting BMPs has been documented in three previous surveys. Compliance for harvesting BMPs was 84.5% in 1990, 84.7% in 1991, and 89.5% in 1994. A new survey was initiated in the spring of 1997 to update BMP compliance. Two hundred sites were randomly located and inspected throughout South Carolina by BMP Foresters. Compliance with harvesting BMPs in the 1997 survey improved to 91.5%. In the winter of 1998, site preparation BMPs were evaluated on the same 200 sites as the first part of a two-year monitoring study. A third and final site visit to each monitoring location was conducted in early 1999 to determine site preparation BMP compliance, regeneration methods, site stabilization, conversion to other uses, and other related factors. In the last site preparation monitoring survey, conducted in 1996, overall compliance was 86.4%. Overall compliance with site preparation BMPs in the 1999 survey rose to 98%. Data from the 1997, 1998, and 1999 site visits was published this year in the monitoring report entitled *Implementation Monitoring of Forestry Best Management Practices for Harvesting and Site Preparation in South Carolina 1997-1999*.

BMP Education/Training Program

BMP education and training are essential to the success of the Forestry Commission's non-regulatory BMP program. During this fiscal year, 53 BMP meetings were held across the state for forest landowner groups, government agencies, and professional organizations. A total of 1,665 people attended these meetings. Included in these meetings were five Timber Operations Professional (TOP) workshops, one TOP Road Construction workshop, four TOP Refresher courses, and one Braided Stream BMP workshop, which reached 476 loggers, landowners, foresters, and road construction contractors.

Courtesy Exam Program

The SC Forestry Commission's BMP Foresters, located in each of the three operating regions of South Carolina, offer courtesy BMP exams to landowners, foresters, and timber buyers. The BMP Forester makes site-specific BMP recommendations to follow while conducting forestry activities. During the 1999-2000 fiscal year, the BMP Foresters completed 303 courtesy exams. Of the 303 sites, 297 (98%) were completed in compliance with our recommended guidelines.

Endangered Species

This year, the Environmental Management program continued training on endangered species biology and management, with an emphasis on those species that may impact forestry operations. The BMP Foresters are available to provide information and assistance to SCFC personnel, foresters, and private landowners. This assistance may include site visits, cooperating on the Safe Harbor program administered by the SC Department of Natural Resources, and assisting State Forests and other state-owned properties upon request. This year, the BMP foresters made 23 site visits to assist landowners and foresters with endangered species identification and information and presented information regarding forestry and endangered species to 8 groups, reaching 124 college students, forest landowners, foresters, and the public.

URBAN FORESTRY

Urban forestry seeks to improve the quality of life in populated areas by providing direct technical assistance to municipal and county governments, educational institutions, non-profit conservation organizations, businesses and homeowners. This is accomplished by working through diverse and cooperative partnerships to protect, conserve and improve the management of community tree resources. Clean air, clean water, increased property value, energy

conservation, improved aesthetics, noise buffering, and public safety are some of the products of these endeavors.

Urban and Community Forestry Grant Program

The Urban and Community Forestry Grant Program is a national program funded by Congress through the US Forest Service. South Carolina received \$150,000 in base funding to provide technical assistance and training. Three full-time urban foresters are responsible for providing that technical assistance on a regional basis for the Piedmont, Pee Dee, and Coastal regions of the state. Other Commission foresters provide urban forestry assistance in their respective areas on a time-available basis. A full-time Grants Administrator works in the Columbia office along with the Urban Forestry Coordinator for statewide program management.

Pass-through grants in the amount of \$290,000 were provided to county and local governments, non-profit organizations, and educational institutions to assist in the establishment and enhancement of long-lasting urban forestry programs for their communities.

Partnership Development and Educational Programs

Through the technical assistance of the urban and community forestry staff and utilization of grant funds, the urban forestry program strives to develop partnerships with a variety of organizations and units of local government. Often these partnerships result in educational programs about the benefits and importance of urban forest resources. During FY 00, the urban and community forestry staff and grantees developed partnerships with 135 organizations and presented 52 educational sessions to approximately 3,050 participants.

Tree City/Tree Line USA

Sponsored by the National Arbor Day Foundation, Tree City USA is administered in South Carolina by the SC Forestry Commission. The program seeks to stimulate and promote the management of urban and community trees by recognizing towns and cities which meet the following criteria: (1) establishment of a municipal tree ordinance, (2) expenditure of at least two dollars per capita on tree care and planting, (3) a legally constituted tree board or permanent staff, and (4) observance of Arbor Day by a mayoral proclamation and official ceremony. The SC Forestry Commission has recognized and awarded 23 municipalities and 3 military bases as a Tree City USA.

Another program sponsored by the National Arbor Day Foundation is Tree Line USA. The Tree Line USA program seeks to stimulate and recognize proper line clearing and safety techniques of private and public utility companies. In order to qualify as a Tree Line USA, a utility must meet three criteria: (1) Perform quality tree care regarding pruning, trenching and tunneling methods, (2) Provide opportunities for annual utility line worker training, and (3) Sponsor an ongoing community tree planting program to include an Arbor Day celebration and at least one educational mailing to customers. This year, the Forestry Commission recognized and awarded the first and only South Carolina Tree Line USA to the Gaffney Board of Public Works.

Types of Technical Assistance	U&CF Program Accomplishments Through Technical Assistance of SCFC Urban Foresters	U&CF Program Accomplishments of Grantees
Program Development/Expansion		
Municipal Government	85	NA
Non-Profit Organizations	23	
Educational Institutions	26	
State/County Government	<u>31</u>	
Total Assists (#)	165	
Public Vegetation Ordinances Passed or Revised		
	2	1
Urban Forest Cultural Practices		
Commercial / Business	116	NA
Residential	1,121	
Public Agency	<u>96</u>	
Total Assists (#)	1,333	
Public Trees Inventoried		
Street	NA	16,453
Park	NA	<u>0</u>
Total Trees Inventoried (#)		16,453
Public Trees Planted		
Saplings (<2" caliper)	NA	101
Street / Park (>2" caliper)	NA	<u>409</u>
Total Trees Planted (#)		510
Public Trees Maintained (#)	NA	1,840
Demonstration Planting Projects	NA	20
Partnership Development	135	1,206
Public Information / Education		
Municipal	18	NA
Civic Organizations	9	NA
School/Youth Groups	<u>25</u>	NA
Total Programs (#)	52	
Total # of hours	81	1,346
Total # of people	3,066	7,851

FOREST STEWARDSHIP

The Forest Stewardship Program is a cooperative effort among the USDA Forest Service, Forestry Commission, other natural resource agencies and organizations, forest industry, and private forest consultants in South Carolina to encourage the long-term stewardship of non-industrial private forestlands. Landowners are provided technical assistance by having a multiple-resource management plan developed for their property addressing their management objectives.

During Fiscal Year 1999-00, 238 Forest Stewardship plans were written in South Carolina on 49,794 acres. The Stewardship plans were written by the following cooperators: South Carolina Forestry Commission: 151 plans; Private Forest Consultants: 66 plans; and Forest Industry: 21 plans.

Stewardship Incentive Program

Once landowners have an approved Stewardship Management Plan, they may be eligible to participate in the Stewardship Incentive Program (SIP). This is a federal cost-share assistance program to provide financial incentives to private landowners to carry out some of the management practices outlined in their Stewardship Management Plan.

Congress did not allocate any Federal funding for SIP during FY 99-00, therefore South Carolina did not receive any new funds to allocate towards this cost-share program.

FOREST INVENTORY AND MONITORING

The Forest Inventory and Monitoring program is a cooperative program with the US Forest Service to collect forest inventory and forest health data from a network of permanent sample plots. There are 3,840 total forest inventory plots located in South Carolina. Plots are sampled in 20% increments of the total. Plots will be measured for growth projections, damage assessments, and land-use classification. The US Forest Service furnishes data analysis and reporting for this program.

The Forest Health Monitoring section of the program consists of 204 total plots in South Carolina. Each year, during the summer, 20% of these plots will be measured for health, soil chemistry, pollution indicators, and related parameters. In addition, separate bio-indicator sample plots will be surveyed to monitor the level of ozone pollution.

Currently, six full-time inventory crews are stationed throughout the state. The program coordinator is stationed in Columbia. All crew members are required to exceed a minimal accuracy average of 87% for all inventory plots. US Forest Service personnel conduct quality control and quality assurance checks to monitor accuracy of the field crews. During FY 1999-2000, average accuracy for all crews was 94%.

During FY 00, field crews have collected data from 1806 forest inventory plots or 47% of the total plots in the state. Panel 2 for forest inventory was completed in May 2000 and Panel 3 began immediately. Data collection for health monitoring plots began and will be finished for the year by mid-August.

STATE FORESTS AND OTHER STATE LANDS

MANCHESTER STATE FOREST

Manchester State Forest, located south of Wedgefield in Sumter County is currently comprised of approximately 23,745 acres. From 1939 to 1955, Manchester was leased by the State of South Carolina from the federal government and managed by the South Carolina Forestry Commission. The State received title to the property on June 28, 1955.

Receipts

Receipts For Operating Budget

<u>Activity</u>	<u>Receipts</u>
Timber Sales	\$348,893.75
Pinestraw Sales	\$30,803.01
Land Lease Payments	\$28,855.50
Wildlife Management Area Payments	\$21,534.49
Special Use Permits	\$15,541.84
Total	\$445,628.59

Note: 25% of all forest receipts paid to Sumter County - \$111,407.15

Timber sales were concentrated on thinnings in overstocked stands and conversion of older slash pine stands to longleaf plantations.

Silvicultural Practices

Site preparation by burning and drum chopping was completed on 88 acres. These areas included stands which were previously understocked and therefore clearcut. Four hundred sixty acres were planted – 18 acres of improved coastal loblolly and 442 acres of containerized and bareroot longleaf pine.

The following species and number of trees were planted:

Bareroot Longleaf Pine	177,000
Containerized Longleaf Pine	96,000
Improved Coastal Loblolly Pine	<u>33,000</u>
Total Trees Planted	306,000

A total of 178 acres were prescribed burned for site preparation, wildlife habitat enhancement, hardwood control and fuel reduction. Drought conditions and smoke management concerns were the limiting factors in the completion of the proposed schedule of burning.

A small aesthetic enhancement area was planted on the southwest corner of the Bland tract with cooperation from the City of Sumter, the SCFC Sumter Area, the SCFC Urban Forester and Manchester personnel.

Forest Protection

Nine wildfires occurred burning less than 21 acres with minimal damage. Firebreaks were maintained on those areas that were either high risk or of high value.

Recreation/Education

Recreational use of the forest continues to escalate over previous years. Hunting, fishing, horseback riding, motorcycle/ATV riding, mountain biking, and use of the rifle/pistol range continue to be favorite activities. Recreational trails have been marked and brochures printed.

Six special-use permits were issued for organized events with approximately 2,800 participants.

Six (6) educational programs were conducted with the assistance of the forest staff and area personnel with approximately 83 individuals involved. Several training sessions were also held at Manchester for SCFC personnel; including law enforcement training and technician training.

Wildlife Management

Approximately 17,000 acres of the forest are presently included in the Wildlife Management Area Program through a cooperative agreement between the Department of Natural Resources (DNR), and the South Carolina Forestry Commission. DNR provided technical assistance with game food plot establishment monitoring, deer herd dynamics, tracking various nongame and game species, and pond management. Law enforcement on the forest is provided through interagency cooperation with Department of Natural Resources. Manchester also hosted its first youth dove hunt with approximately 30 participants.

Planting and maintenance was conducted on 357 acres of wildlife areas. Corn, sunflowers, sorghum, browntop millet, quail mix, wheat, rye, clover, vetch and bicolor were utilized to diversify the food supply. Several of the plantings were donated by the Department of Natural Resources and planted by Manchester and DNR personnel.

Rare, Threatened, and Endangered Species Management

Manchester currently maintains six (6) clusters of Red Cockaded Woodpecker. Colony sites continue to be monitored along with scouting for new cavity and start trees in cooperation with biologists from the neighboring Poinsett Gunnery Range (USAF). An agreement was reached with the USAF that would allow them to monitor and work on the colony sites only with prior agreement with the Manchester State Forest director.

Research

Tentative agreements have been reached with Clemson University to establish hardwood research plots in the Wateree Swamp; however, actual proposals have yet to be presented.

Manchester also continues to cooperate with the SCFC Nursery Section by providing eight (8) sites for clone banks, seed orchards, and progeny tests.

SAND HILLS STATE FOREST

Sand Hills State Forest (SHSF) covers approximately 46,000 acres with 45,000 acres in Chesterfield County and 1,000 acres in Darlington County. The forest was operated under a use agreement with the federal government from 1939 until 1991. In July of 1991, title to Sand Hills State Forest was transferred to the South Carolina Forestry Commission.

Receipts

Since 1967, Sand Hills has been totally self-supporting. The only appropriated funds coming to Sand Hills are earmarked for the development of the H. Cooper Black Memorial Field Trial and Recreation Area.

Receipts For Sand Hills Operating Budget

Activity	Receipts
Timber Sales	\$844,608.09
Pinestraw Sales	\$56,018.00
Land Lease Payments	\$2,204.00
Wildlife Management Area Payments	\$14,356.34
User Fees (includes permit sales from PRT)	\$10,520.67
Total	\$927,707.10

Note: 25% of all receipts are paid to Chesterfield and Darlington County School Systems.

Chesterfield County Schools \$226,360.54

Darlington County Schools \$ 5,566.24

Total \$231,926.78

Sand Hills began accepting credit cards for payment in fall of 1999. This method of payment was implemented for the convenience of customers. Credit card transactions for Cooper Black totaled \$3,355 and for Sand Hills \$3,215.

Silvicultural Practices

Site preparation for planting longleaf pine by disking and V-blading was completed on 695 acres. These areas were in slash pine that had stagnated. Bareroot longleaf seedlings were planted on 1088 acres on SHSF and containerized longleaf seedlings were planted on 20 acres on Sand Hills and 140 acres on Carolina Sandhills National Wildlife Refuge. Prescribed burning was done on 5,000 acres.

The following species and number of seedlings were planted:

Bareroot Longleaf Pine	560,000
Containerized Longleaf Pine	<u>90,000</u>
Total	650,000

In 1999 Sand Hills started a pinestraw enhancement program. Under this program an individual from the general public can enter into a four-year agreement with the Forestry Commission to clear up land for pinestraw production. The individual agrees to eradicate 90% of all hardwoods on a tract of land using chemicals. In exchange that person may harvest all the pinestraw that falls during the 4 years of the agreement. After the agreement expires, the acreage becomes part of SHSF's quality straw production program. The straw from these areas is offered for sale on a lump sum sealed bid basis at three-year intervals. Currently there are 16 individuals working on approximately 10,200 acres of land. The value of the pinestraw in the year 2005 will approach \$1,000,000.

Pinestraw Enhancement Program

Fiscal Year	Contracts	Acres
1999	15	4,565
2000	29	5,635
Total	44	10,200

Sand Hills personnel assisted Nursery and Tree Improvement section with longleaf pinecone collection. During the month of October Sand Hills staff issued permits for gathering cones on the Forest and issued checks totaling \$3,400 for 680 bushels of cones.

Forest Protection

No wildfires occurred on Sand Hills this year. SHSF boundary lines and the road system are maintained as firebreaks and as access in case of wildfire.

Recreation/Education

Recreational use of the Forest continues to escalate. Hunting, fishing, horseback riding, riding, mountain biking, hiking, bird watching and camping continue to be favorite activities.

ATV use was discontinued July 1, 1999 based on an opinion from the attorney general's office. Refunds were made to 43 customers that had purchased trail use permits for ATV use. Environmental studies and mapping on a planned 5,000 acre off highway vehicle (OHV) trail were started. US Fish and Wildlife Service must approve the OHV plan before it can be completed. U.S. Fish and Wildlife Service will possibly make a decision on the OHV trail in the fall.

The Headquarters Mountain Bike Trail continues to attract riders from the surrounding areas. Visitors from 6 North Carolina cities and 25 South Carolina cities used the mountain bike trail. One rider hailed from Provo, Utah. Seventy permits were issued for bike riding. This represents 12% of all of trail use permits for this year.

At Sugarloaf Mountain, there are 7 primitive camping sites for people without horses and 8 primitive camping sites for people with horses. Sand Hills personnel booked 316 reservations for these sites this year. An estimated 3,674 visitors with 1,025 horses used the campsites and trails.

In the Cooper Black Recreation area, there are 11 camping sites for RV campers. These sites have electrical hookups and water access. A clubhouse, kitchen, and dump station is available for use. A new horse arena was added this year complete with lights for night events. Campfire rings were added at each campsite this year. Food strips that are 12 feet wide were created along 12 miles of the Cooper Black horse trails. Bahia grass was planted on 100 acres surrounding Goose Pond and Mallard Pond for retriever field trials. Fifteen hundred feet of tether lines and 4 corrals were installed this year.

Twenty-three events were scheduled at Cooper Black. Reservations for Cooper Black showed a marked increase from the previous year. 504 reservations were booked. Reservations are required for campsites, stalls, corrals, training sites, arena, clubhouse, kitchen and grounds. Receipts from all reservations totaled \$11,663.

Summary of Sand Hills State Forest Recreation Areas

Year	Cooper Black Reservations	Sugarloaf Reservations	Total	Cooper Black Visitors/Horses		Sugarloaf Visitors/Horses		Total Visitors/Horses*	
FY 1999	129	284	413	3,000	815	3,000	1,000	6,000	1,815
FY 2000	504	316	820	3,790	1,662	3,674	1,025	7,464	2,687

*Number of Visitors and Horses does not include day users.

Designated use permit sales for trail use had a 13.5% increase this year. Sales increased from 505 permits in 1999 to 573 in FY 2000. Receipts from designated trail use permits totaled \$10,520.

Free use permits are issued for camping at Sugarloaf Mountain, raking pinestraw for personal use, and gathering firewood. Free use permits also increased this year. Last year, 329 free use permits were issued and this year, 412 were issued. Twenty-four of the permits were for raking pinestraw for personal use, 1 for gathering firewood already on the ground, 45 for picking longleaf pinecones and the remaining were for camping.

Sand Hills State Forest Permit Summary

Year	Trail Use Permits	Free Use Permits	Total
FY 1998	271	217	480
FY 1999	505	329	834
FY 2000	573	412	985

Sand Hills' personnel conducted 10 educational programs that involved approximately 250 children and adults. Sand Hills is an annual participant in a recertification program conducted by Bowater for schoolteachers. Personnel attended two career day programs to inform students about job opportunities with the Forestry Commission. An elementary school group visited Sand Hills for their annual field day that included a hike up Sugar Loaf Mountain followed by a wildlife scavenger hunt.

Francis Marion University frequently uses Sand Hills as a place to bring botany students for hands on plant identification. Sand Hills staff assisted with one of those classes this year.

The Governor's School of Science and Mathematics in Hartsville visited the Forest for a presentation on the Red Cockaded Woodpecker and an overview of forest management practices.

Rutgers University sent several representatives to learn about white cedar and the habitat in which it grows.

A group of students from Warren Wilson College came to Sand Hills to learn more about the Red Cockaded woodpecker and forestry management.

Wildlife Management

Approximately 40,000 acres of the Forest is included in the Wildlife Management Area Program. This is a cooperative agreement between the SC Department of Natural Resources and the SC Forestry Commission. Department of Natural Resources personnel provide assistance with the game food plot establishment, monitoring deer herd dynamics, tracking various game and non-game species, and pond management. Law enforcement on the forest is provided through interagency cooperation. Sand Hills has a 57-acre public dove field. Thirty-five acres of

this field were planted to annual crops with the remainder planted and maintained in bicolor lespedeza.

Eighty-two acres (125 plots) were planted as wildlife food plots. These plots were planted in chufa, corn, sunflower, spring game mix, dove mix, dove proso, wild turkey mix, quail mix, sorghum, and bicolor. All plantings were fertilized and limed at the recommended rates. All manageable bicolor patches in compartments 12, 13, and 17 were bushhogged, fertilized, and limed. One hundred mast-producing hardwoods were planted throughout the Forest.

Five turkey wildlife openings were added. Two were added in Compartment 13, two in Compartment 14, and one in Compartment 15.

Sand Hills staff planted and maintained 12 wildlife openings for quail. The quail project is a joint project with Quail Unlimited. Quail Unlimited supplied \$1,000 worth of seed and fertilizer for the quail project.

Sand Hills continues to conduct surveys for South Carolina Department of Natural Resources. A furbearer scent survey, fox squirrel survey, turkey survey, and a quail survey were conducted to track population trends.

Seventy-eight established wood duck boxes were monitored, cleaned and repaired.

Rare, Threatened and Endangered Species Management

There were 47 documented Red Cockaded Woodpecker (RCW) nesting attempts on SHSF this year. A total of 64 fledglings were banded. This is a significant increase from the 55 that were banded last year. One unbanded adult bird was discovered at Sand Hills. That bird was captured, properly banded, and released.

One new recruitment site was constructed on the forest this year. There will be no more new recruitment sites implemented until the recently installed sites have been improved and RCWs are established there. Sixty-five artificial cavities were installed throughout the forest this year with plans to install an additional 4 later in the year. Approximately 100 acres in 5 RCW clusters were roller chopped to eliminate hardwood understory. All new trees with cavity inserts have been painted and tagged and are in the process of being mapped with the GPS.

Twelve RCW clusters are located in pine straw enhancement areas. These 12 sites have been enhanced by mechanical removal of all hardwood understory. Herbicide was applied to the remaining stems to eliminate the hardwood recurrence.

Currently roosting checks on all fledglings are being conducted to provide data for the upcoming translocations throughout the forest.

Research

A longleaf pine natural regeneration research project in conjunction with the U.S. Forest Service is ongoing and has been in effect for 25 years.

A University of Georgia student pursuing a doctorate in biology continued research that began in 1999 to establish a baseline population of the Pine Barren Tree Frog and the Gopher Frog. The Pine Barrens Tree Frog project is part of the mitigation plan for two ponds built in the Cooper Black Area for retriever field trials.

A professor from the University of Georgia set up a turkey litter/water quality survey on the forest in 1999. The study will last four years.

A sludge research project is on going. A new four-year cycle that was started in 1999 continued this year. Turkey litter was added to the study site for comparison with sludge and commercial fertilizer applications and their effects on tree growth and soil chemistry.

STATE LANDS MANAGEMENT PROGRAM

The State Lands Forest Management Program was created to provide professional forest management assistance to South Carolina state agencies that own timberlands. During fiscal year 1999-2000, four agencies requested assistance from the state lands coordinator. The agencies and facilities were as follows:

Department of Natural Resources

Webb Wildlife Center
Donnelley Wildlife Management Area
Palachucola Wildlife Management Area
Mason Wildlife Management Area

S.C. Department of Corrections

McDougall Correctional Institute

S.C. Department of Commerce

Lakeside at Russell

S.C. Department of Mental Health

Fort Lawn tract

Timber Revenue

Four state-owned tracts were marked or cruised for timber sales and produced an estimated volume of 1.81 million board feet of sawtimber and 1,722 cords of pulpwood valued at \$563,621.00

FOREST PROTECTION

The Forest Protection Section was formed on August 17, 1999. The section encompasses the Fire Management Program, Law Enforcement Program, Forest Health (formerly Insect & Disease) and the Equipment Program.

FIRE MANAGEMENT

Area protected: 12,807,924 acres. Acres protected is based on 1993 Forest Survey data for non-federal forest land, plus 10% to cover adjacent non-forest land. Also included is 101,320 acres of federal land protected under special contract. Mutual aid is provided on 802,147 acres of additional federal land

Wildfire Summary

Agency firefighters recorded 4,715 wildfires during the fiscal year. These fires burned a total of 21,399 acres of forest and grassland.

Fire Protection Cooperatives

The Forestry Commission has cooperative arrangements with 11 fire and emergency management entities. Activities for each cooperative during FY 1999-00 are as follows:

Southeastern States Forest Fire Compact Commission: Formed in 1954, the Compact allows member states to provide and receive mutual aid in fighting wildland fires. Member states include: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. The Forestry Commission responded to requests from Florida, Georgia, Kentucky, and Texas (inter-compact) during the year.

SC Division of Emergency Preparedness: There was 1 emergency activation (Hurricane Floyd) involving SCFC during the year. Staff foresters participated in several EPD emergency response training sessions.

SC Army National Guard: Under an agreement with the National Guard, helicopter firefighting support is available when requested by SCFC. Requests from SCFC are be channeled through EPD and the Governor's Office to activate the Guard.

The Guard's primary firefighting mission is providing helibucket service to SCFC Incident Commanders using the SCFC's 750 gallon Bambi bucket. Guard helicopters are also available to transport firefighters into rough or inaccessible terrain.

Volunteer Fire Assistance Program: Federal funds for this program have decreased significantly over the past few years. During the year, 48 fire departments were approved for matching-fund grants totaling \$27,250.

Federal Excess Property Program: Two hundred and thirty pieces of federal excess equipment were loaned to fire departments during the year. At present, 1184 pieces of equipment are assigned to 376 departments statewide.

National Weather Service: NWS provides daily fire weather forecasts and atmospheric dispersion information. During the year, SCFC and NWS worked to improve content and timing of daily forecasts.

USDA Forest Service: Under the terms of a 1996 contract, SCFC provides aerial wildfire detection on 611,407 acres of National Forest land and 198,000 of Savannah River Site land in SC. A mutual aid agreement between the US Forest Service and SCFC allows both parties to provide initial attack firefighting within one-quarter mile of National Forest boundaries.

SCFC provided initial attack on a number of fires on the Francis Marion National Forest during the spring fire season, and SCFC investigators assisted with wildfire investigation and stake-outs.

DOD Corps of Engineers: Beginning in 1997, SCFC has provided all fire suppression services on 55,320 acres of

Corps of Engineers land. Under the terms of the agreement, actual fire suppression costs are reimbursed to the SCFC.

USDI Fish and Wildlife Service: Under the terms of a 1992 land acquisition agreement, SCFC provides initial attack fire suppression on the 46,000 acre Carolina Sandhills National Wildlife Refuge. The agreement terminates in 2042. SCFC maintains mutual aid firefighting agreements with the following National Wildlife Refuges: Ace Basin, Cape Romain, Savannah, Pinckney Island, and Santee.

USDI Park Service: Agreement maintained; no reportable activity.

Wildland Fire Protection Partnership: Organized in 1991, the Partnership seeks solutions to wildfire management problems in the wildland-urban interface. Membership includes the SC Forestry Commission, US Forest Service, SC Firemen’s Association, Department of Health and Environmental Control, SC Division of Emergency Preparedness, SC Fire Marshal, SC Fire Academy, and SC Forestry Association (ex officio).

During the year, the Partnership concentrated on developing wildland fire training opportunities for Fire Departments. Delivery systems were developed to provide national courses in wildland-urban interface fire operations and basic wildland firefighting.

Fire Weather

Weather Stations. The Forestry Commission, USDA Forest Service, National Park Service, Department of Defense (Ft. Jackson), and USDI Fish and Wildlife Service share a network of 13 Automated Weather Stations across the state. Data from these stations are used in daily calculations for the National Fire Danger Rating System. Weather readings from these stations are available 24 hours a day for wildfire and prescribed fire management purposes.

Inches Precipitation: FY 2000*

Month	Precipitation
July 98	3.79
August	3.25
September	6.87
October	4.29
November	1.96
December	2.33
January 2000	6.02
February	1.65
March	4.20
April	2.76
May	1.21
June	3.91
Total	42.24

*measured by NOAA and the SC Climatology Office, averaged for state.

Precipitation Last 5 Years*

Fiscal Year	Precipitation Inches	Departure from Normal
1995-96	47.72	-2.95
1996-97	50.62	-0.05
1997-98	62.62	+11.95
1998-99	42.83	-7.84
1999-2000	42.24	-8.43
Normal Precipitation	50.67*	

*measured by NOAA and SC Climatology Office, averaged for state

Readiness Plan. The daily readiness level of Forestry Commission firefighters is based on fire danger data, available number of firefighters, and status of firefighting equipment. Average statewide readiness levels for FY 2000 are as follows:

Readiness 1 (No wildfire danger)	55 days
Readiness 2 (Low wildfire danger)	131 days
Readiness 3 (Moderate wildfire danger)	140 days
Readiness 4 (High wildfire danger)	35 days
Readiness 5 (Extreme wildfire danger)	4 days

Burning Ban and Red Flag Fire Alert. The State Forester issued three burning bans during the FY. One was in advance of Hurricane Floyd and two were associated with smoke dispersion problems along the upper coast. Red Flag Fire Alerts were issued on five different occasions during the year.

Dispatch and Air Operations

Dispatch. Forestry Commission dispatch is by closest available resource, regardless of political or administrative boundaries. Dispatching was handled by Region Dispatch Centers located in Walterboro, Florence, and Newberry.

Air Operations. Specially trained private aerial contractors provide basic wildfire detection services. Eight Forestry Commission pilots equipped with Federal Excess planes provide incident reconnaissance as well as additional detection service.

During the year, SCFC pilots flew a total of 3,193 hours; contractors flew a total of 4,496 hours.

Fire Prevention Information

During the year, Fire Management produced and distributed 40 written news releases, and the staff provided 183 media interviews. Of these, 87 were for television, 69 for newspapers, and 27 for radio.

Fires By Cause

Cause	Number	Acres Burned	Average Acres per Fire	Percent Total FY 99
Lightning	221	2,341.8	10.6	5
Campfire	23	60.3	2.6	1
Smoking	147	703.5	4.8	3
Debris Burning	2,039	7,708.5	3.8	42
Incendiary	1,206	6,428.5	5.3	26
Equipment	307	1,686.6	5.5	7
Railroad	77	348.8	4.5	2
Children	294	538.9	1.8	6
Miscellaneous	401	1,582.4	3.9	8
TOTALS	4,715	21,399.3	4.5	100

Acres Protected and Total Burning Notifications by County

County	Acres Protected	Dispatch Cntr. Notifications	VoiceMail Yard Debris
Abbeville	202,645	598	2,351
Aiken	455,540	1,373	11,438
Allendale	178,794	550	921
Anderson	214,724	1,843	11,537
Bamberg	182,062	425	1,338
Barnwell	147,093	599	2,925
Beaufort	136,739	1,078	7,633
Berkeley	390,299	2,068	16,707
Calhoun	168,997	496	2,108
Charleston	244,835	1,369	9,065
Cherokee	165,386	539	3,997
Chester	307,154	555	3,101
Chesterfield	350,594	839	7,023
Clarendon	241,314	877	3,215
Colleton	502,776	1,634	13,457
Darlington	206,641	546	4,690
Dillon	158,914	461	3,772
Dorchester	283,205	975	12,311
Edgefield	238,766	591	2,387
Fairfield	409,985	345	2,095
Florence	322,779	1,274	9,240
Georgetown	417,150	1,154	8,765
Greenville	271,893	2,567	16,222
Greenwood	212,203	581	3,663
Hampton	279,511	1,145	4,737
Horry	492,064	3,375	20,017
Jasper	329,574	899	3,450
Kershaw	413,527	736	12,680
Lancaster	289,284	480	3,858
Laurens	325,714	635	4,858
Lee	149,375	395	931
Lexington	280,985	2,136	40,923
Marion	203,906	439	8,958
Marlboro	140,099	366	5,295
McCormick	239,275	184	961
Newberry	254,485	462	2,516
Oconee	226,058	1,151	8,265
Orangeburg	438,154	1,679	6,977
Pickens	233,056	1,222	7,299
Richland	280,398	1,835	7,510
Saluda	203,906	437	1,342
Spartanburg	289,043	2,136	7,693
Sumter	258,685	987	8,741
Union	229,078	201	537
Williamsburg	450,241	1,205	3,866
York	290,432	1,772	10,951
Federal Land	101,320	----	----
Grand Total		47,214	332,326

Grand Total All Notifications Received: 379,540

Five-Year Summary: All Fires

Fiscal Yr.	Acres Protected	# Fires	Acres Burned	Av.Acres/Fire	% Area Burned
1995-96	12,707,604	4,341	27,112.1	6.2	0.21
1996-97	12,807,924	3,204	21,730.7	6.8	0.17
1997-98	12,807,924	1,943	10,425.1	5.4	0.08
1998-99	12,807,924	6,615	35,155.5	5.3	0.20
1999-00	12,807,924	4,715	21,399.3	4.5	0.17
Five Year Averages		4,164	23,164.5	5.6	0.17

Prescribed Fire

Certified Prescribed Fire Manager Program. Three Certified Prescribed Fire Manager Schools were conducted during the year. Interest in this program continues to be high.

Prescribed Burning for Forestry, Wildlife, and Agriculture

Region	Forest Understory		Forestry Site Prep.		Wildlife		Agriculture	
	Number	Acres	Number	Acres	Number	Acres	Number	Acres
Coastal	2,620	199,935	2,647	12,127	469	53,589	3,721	65,186
Pee Dee	1,540	68,303	2,084	7,846	306	27,828	3,745	81,285
Piedmont	333	36,652	297	10,011	56	3,910	482	4,385
Totals	4,493	304,890	5,028	29,984	831	85,327	7,891	150,856

FOREST HEALTH

The Forest Health Unit in cooperation with the State Division of Plant Industry and the US Forest Service maintains a program to detect, evaluate, and suppress forest pests. Through cooperative agreements, these agencies make their technical assistance and advice available to the Forestry Commission.

The current forest pest detection and reporting system involves the reporting by field foresters of forest pests that are causing abnormal losses, require control action, or which may present new problems. Aerial surveys are made periodically for specific pests to determine occurrence and the need for suppression action.

Major Insect Problems

Southern Pine Beetle

The Southern Pine Beetle epidemic which began in York County in 1997 intensified and spread throughout the year. As of 6/30/00 the outbreak area contained all or portions of 9 counties. These counties were Cherokee, northern Chester, Edgefield, McCormick, eastern Oconee, western Pickens, western Saluda, Union and York. Spots as large as 5 acres were occurring in the outbreak area.

Losses to Southern Pine Beetle were slightly above the yearly average of \$7.8 million per year. During the year we sketch-mapped 3,840 beetle spots containing 585,550 trees. These infested trees had a volume of 33,280 cords and 23,421,938 board feet. The green stumpage value lost to the beetles was \$9,546,234.

During the spring, 31 counties were pheromone trapped for prediction of Southern Pine Beetle population trends. Of the counties trapped, 6 yielded enough beetles to receive a prediction of a severe outbreak. These were Cherokee, Chester, Edgefield, McCormick, Saluda and York. In an additional 6 counties in the Piedmont enough beetles were trapped to predict an increasing-high population trend. The remaining counties had less beetles caught and were predicted to have a either low level or a moderate increase in population. At the end of the fiscal year, the beetle population predictions were close to target. Surveys of 100% of the affected area were planned or in progress.

Major Disease Problems

Oak Wilt

Oak wilt disease has been identified in Aiken, Barnwell, Chesterfield, Kershaw, Lancaster, Lee, and Richland counties. Except for the recent discoveries in Aiken and Barnwell counties the disease appears to be static and causing losses only to low value oaks. Since there is potential for loss of valuable trees, including urban trees, periodic surveys are made to evaluate the spread.

Dutch Elm Disease

Dutch Elm disease has been confirmed in Aiken, Anderson, Cherokee, Chester, Chesterfield, Edgefield, Fairfield, Greenville, Greenwood, Kershaw, Lancaster, Laurens, Lexington, Marlboro, Newberry, Oconee, Pickens, Richland, Saluda, Spartanburg, and York counties. It is expected to gradually spread through the state because the primary agent of spread, the smaller European elm bark beetle, occurs statewide.

Dogwood Anthracnose

In 1988 a new anthracnose disease of dogwood was noted for the first time in South Carolina. This disease is caused by the fungus Discula destructiva. Symptoms include foliage blighting, canker formation and progressive deterioration. Infected trees usually are killed by the fungus in 2-3 years. At this time infected trees have been found in Anderson, Greenville, Laurens, Oconee, Pickens, and Spartanburg counties. As part of a southwide effort, the Forestry Commission

has established 19 permanent plots in the counties known to harbor infections of the fungus. The dogwoods in those plots will be monitored periodically to determine the rate of spread of this potentially devastating disease.

Miscellaneous Insect and Disease Checks

Commission foresters made approximately 838 field checks of insect and disease problems and made recommendations for prevention and control. Other inquiries were handled by telephone, mail, and personal contact.

Mycorrhizal Inoculation

A project was continued at Creech Seed Orchard this year to inoculate containerized longleaf seedlings with the mycorrhizal fungus *Pisolithus tinctorius* (Pt.). Funding was not available to operationally inoculate the seedling crop for this year. However, approximately 50,000 seedlings were inoculated by I&D with sprayed spores. We have now done spore inoculations for 11 years and have had 100% success.

Insect and Disease Laboratory

During Fiscal Year 1999-2000 the Insect and Disease Laboratory processed 82 samples. These were submitted for analysis by Commission employees and private individuals. Recommendations for control of various pests identified were given where needed. In addition to these samples, 71,902 southern pine beetles and 23,284 clerids were counted in the lab. Insect and disease collections from 11 Ranger-Technicians were processed.

Forest Health

The SCFC entered into agreement with the USFS to evaluate permanent Forest Health plots throughout South Carolina. This was done by the Management Section and reported there. As another part of this program, the Forestry Commission also received additional funding for off-plot activity to survey for and report on other forest insects and diseases.

In conjunction with the spring 20% beetle survey, the entire state was surveyed for defoliation, beaver damage and fire damage.

Major defoliation occurred this year due to an outbreak of Forest Tent Caterpillar. Larvae of this insect defoliated gum and other bottomland hardwoods over 257,610 acres in 12 counties. Defoliation occurred until late May at which time the insects pupated and became adults. The most impacted areas were along the Congaree, Wateree, Upper Santee and Pee Dee basins.

Timber losses due to beaver impoundment and feeding were seen on 20,325 acres. Fire mortality was detected on 12,085 acres. The estimated value of this damaged timber was \$14.2 million.

Snow and Ice Damage Evaluation

On January 24-25 a heavy snowstorm occurred in South Carolina. Significant accumulations coupled with a wet and heavy snow resulted in major timber breakage. Ten counties received major damage but Chesterfield, Laurens, Lancaster and Union counties were most impacted. In these counties, 100,220 acres were identified as having lost 1 cord/ acre or more due to trunk breakage. An estimated 388,860 cords of pine and hardwood with a value of \$8,943,780 was plotted during aerial surveys.

Insect life history plots were installed in 11 plots of damaged trees. On these plots the progression of different bark beetles was recorded. Ips engraver beetles quickly colonized most of the broken tops. By late May, over half of the standing broken boles with no limbs had been colonized by Ips beetles or Black Turpentine beetles. At the end of the fiscal year there were still no recorded attacks by any bark beetle on either the leaning or the standing green trees. These plots will be monitored until the beetle populations in them collapse.

Forest Health Program Review

From May 1-3, 2000 the US Forest Service conducted a Program Review of the Forest Health Unit. This review examined aspects of the program for which the Forestry Commission received federal funding. This review included commendations for the program and recommendations for future training for field personnel.

EQUIPMENT

The Equipment Unit is responsible for development and implementation of statewide programs concerning use, design and maintenance of specialized forest fire control equipment.

This unit provides technical assistance and advice to repair shops, developing specifications for fire suppression equipment and motor vehicle fleet, and arranging training for all field mechanics.

All regular and specialized fire control equipment is modified and processed for field use at the Commission's Central Repair Shop. The Central Repair Shop personnel made numerous repairs to Forestry Commission vehicles and equipment and manufactured fire control equipment. The following list is some of the major accomplishments performed by the Central Repair Shop.

- Central Repair Shop assumed the responsibility of maintaining Fire Suppression vehicle/equipment in Richland and Lexington Counties
- Serviced and maintained vehicles assigned to Columbia Office/Shop Complex
- Provided maintenance assistance to the Region Repair Shops
- Processed new motor vehicle equipment
- Various truck and equipment parts from cannibalized equipment were issued to field shops
- Regions, State Forests, Taylor Nursery, Neiderhof Seed Orchard and Central Repair Shop maintenance facilities were certified by the State Fleet Management. Coastal Shop received an outstanding rating.

Equipment Purchased

Coastal Region

- Two (2) Holden lowbed trailers (Orangeburg and Berkeley Counties)
- Two (2) WildFire Pacific 200 gallon pumpers (Upper Charleston and Lower Charleston County).
- Two (2) Mallory 200 gallon pumpers (Dorchester and Berkeley Counties)
- Five (5) 2000 Dodge 3/4 ton trucks 4x4 (Berkeley, Upper Charleston, Lower Charleston, Dorchester and Orangeburg Counties).
- Six (6) Dresta Crawler Tractors (Barnwell, Berkeley, Colleton, Jasper and Hampton (2) Counties)

Pee Dee Region

- One (1) 2000 Chevrolet Blazer for Law Enforcement
- Five (5) 2000 Chevrolet Transports (Marlboro, Sumter, Chesterfield, Clarendon and Williamsburg Counties).
- Two (2) 2000 Dodge 3/4 ton trucks 4x4 (Williamsburg and Georgetown Counties).
- Refurbished Carolina Firemaster 200 gallon pumper (Georgetown County).
- Six (6) 2000 Dresta Crawler tractors (Kershaw, Lancaster, Florence, Clarendon, Horry and Marlboro Counties).

Piedmont Region

- One (1) 2000 Chevrolet Transport (Anderson County)
- One (1) 2000 Dodge 3/4 ton truck 4x4 (Lexington County)
- Five (5) 2000 Dresta Crawler Tractors (McCormick, Fairfield, Richland, Oconee and Greenville Counties)

Manchester State Forest

- One (1) WildFire Pacific 200 gallon pumper

Sand Hills State Forest

- One (1) 2000 Chevrolet Transport

Columbia Headquarters

- Central Repair Shop initiated purchasing, fabrication, and organized the building of truck bodies for the new equipment.
- The Central Repair Shop prepared and organized the fire suppression equipment for one auction held at its headquarters in October of 1999. The Forestry Commission netted \$79,510.00 that was used to purchase like equipment.
- A balance of \$6,944.26 in the surplus equipment budget will be carried forward for FY 00-01.
- Revenue from the sale of scrap metal was \$205.60.
- Received 1.8 million dollars in recurring funds to purchase fire control equipment.
- One (1) 2000 Dodge 3/4 ton Cargo Van (Information & Education)
- One (1) 2000 Dodge 3/4 ton truck 4x4 (Harbison Environmental Center)
- Fifty-Six (56) Underbody Tool boxes for Coastal & Piedmont Regions
- Purchased track shoes for Dresser tractor (Williamsburg County)
- Purchased Computerized Software Program (FleetMax) for all Forestry Commission shops, \$6504.00
- Provided training for the FleetMax Software Program \$2953.99
- Developed draft Vehicle/Equipment Directive Manual
- Developed draft Vehicle/Equipment Standards for Fire Suppression Equipment
- Central Repair Shop fabricated 100 seedling racks

Training for Mechanics

- One (1) Attended Hydraulic Course
- Two (2) Attended an Allison World Transmission Electronic Workshop.

LAW ENFORCEMENT

The Forestry Commission has 62 commissioned officers, including 4 full time investigators, trained and experienced in the investigation of arson, forest product theft and fraud, and related crimes. During the fiscal year investigators settled 114 cases involving timber theft or fraud for a total timber value of \$1,800,000. Ninety-eight cases with a timber value of \$726,000 were pending court or pleas at the end of the year.

Investigators presented 21 timber theft awareness and prevention programs to landowners and forestry professionals.

Law Enforcement Report, Fiscal Year 2000

County	Prosecutions				Investigations				State Forests			
	Outdoor Burning		Woods Arson	Juvenile cases	Total	Fire	Smoke	Timber Theft/Fraud		Burn Site	Prosecutions	Fines
	Prosecutions	Fines					Investigated	Settled	Inspections			
Abbeville	1	\$75.00	0	0	1	1	0	1	1	0	0	\$0.00
Aiken	1	\$75.00	0	0	1	7	0	8	7	1	0	\$0.00
Allendale	1	\$50.00	0	0	1	8	0	0	0	1	0	\$0.00
Anderson	0	\$0.00	0	0	0	0	0	2	2	0	0	\$0.00
Bamberg	4	\$550.00	0	0	4	11	0	3	2	5	0	\$0.00
Barnwell	8	\$485.00	0	0	8	24	1	1	1	1	0	\$0.00
Beaufort	4	\$225.00	0	0	4	10	0	3	3	5	0	\$0.00
Berkeley	28	\$4,875.00	3	0	31	250	6	8	7	17	0	\$0.00
Calhoun	16	\$2,240.00	0	0	16	40	0	5	5	3	0	\$0.00
Charleston	17	\$810.00	0	0	17	69	0	1	1	8	0	\$0.00
Cherokee	1	\$80.00	0	0	1	1	0	2	2	1	0	\$0.00
Chester	3	\$330.00	0	0	3	4	0	1	0	2	0	\$0.00
Chesterfield	17	\$925.00	0	0	17	62	3	3	3	17	0	\$0.00
Clarendon	2	\$125.00	0	0	2	69	0	3	3	0	0	\$0.00
Colleton	13	\$780.00	0	0	13	54	0	10	4	13	0	\$0.00
Darlington	4	\$325.00	0	0	4	8	4	1	1	0	0	\$0.00
Dillon	7	\$625.00	1	0	8	10	0	1	1	0	0	\$0.00
Dorchester	10	\$460.00	0	0	10	55	0	5	2	16	0	\$0.00
Edgefield	0	\$0.00	0	0	0	0	0	3	2	0	0	\$0.00
Fairfield	0	\$0.00	0	0	0	2	0	2	2	0	0	\$0.00
Florence	22	\$1,660.00	0	0	22	74	26	1	1	3	0	\$0.00
Georgetown	17	\$3,450.00	1	0	18	39	16	0	0	16	0	\$0.00
Greenville	3	\$0.00	4	0	7	30	0	1	1	0	0	\$0.00
Greenwood	0	\$0.00	0	0	0	0	0	2	1	0	0	\$0.00
Hampton	4	\$325.00	0	0	4	28	0	1	0	1	0	\$0.00
Horry	11	\$475.00	0	0	11	21	31	5	4	3	0	\$0.00
Jasper	3	\$475.00	0	1	4	42	0	0	0	2	0	\$0.00
Kershaw	27	\$3,051.00	0	0	27	30	4	6	7	15	0	\$0.00
Lancaster	0	\$0.00	0	0	0	0	1	1	0	4	0	\$0.00
Laurens	1	\$50.00	0	0	1	1	1	3	3	2	0	\$0.00
Lee	1	\$260.00	0	0	1	0	3	2	1	17	0	\$0.00
Lexington	32	\$5,425.00	0	1	33	46	64	3	2	14	0	\$0.00
Marion	1	\$125.00	0	0	1	3	4	0	0	9	0	\$0.00
Marlboro	11	\$425.00	9	0	20	34	2	1	1	2	0	\$0.00
McCormick	0	\$0.00	0	0	0	4	8	2	1	0	0	\$0.00
Newberry	1	\$25.00	0	0	1	2	1	6	7	0	0	\$0.00
Oconee	9	\$550.00	0	0	9	17	6	2	2	4	0	\$0.00
Orangeburg	43	\$8,300.00	0	0	43	72	0	33	10	43	0	\$0.00
Pickens	12	\$975.00	0	0	12	13	16	0	0	3	0	\$0.00
Richland	15	\$2,700.00	0	0	15	42	0	51	10	0	0	\$0.00
Saluda	1	\$50.00	0	0	1	2	0	3	1	4	0	\$0.00
Spartanburg	0	\$0.00	0	0	0	0	0	6	6	4	0	\$0.00
Sumter	5	\$600.00	0	0	5	0	8	0	0	15	0	\$0.00
Union	0	\$0.00	0	0	0	1	9	4	4	0	0	\$0.00
Williamsburg	26	\$2,475.00	3	0	29	71	1	1	1	0	0	\$0.00
York	0	\$0.00	6	0	6	11	11	3	2	10	0	\$0.00
Manchester	0	\$0.00	0	0	0	0	0	0	0	0	30	\$3,300.00
Sandhills	8	\$3,400.00	0	0	8	0	0	0	0	0	9	\$1,075.00
Totals	390	\$47,831.00	27	2	419	1,268	226	200	114	261	39	\$4,375.00

NURSERIES AND TREE IMPROVEMENT

This year the SC Forestry Commission grew a total of 23,436,000 seedlings. Of this North Carolina Division of Forestry received 1,912,000 seedlings grown for them using their seed. The remaining 21,524,000 seedlings were planted in SC. A total of 104,594,000 seedlings from all sources were planted on 168,158 acres in the state during the year.

Taylor Nursery expansion is completed with new ground sown to produce a crop in 2000. This will allow Taylor to get back to a 1:1 rotation. Large areas of fall-sown longleaf have resulted in back to back planting in many blocks. The second year of spring and summer drought have resulted in losses of loblolly, hardwoods and increased culls. Modifications to the irrigation system will be in effect next year to double capacity.

The old Piedmont Nursery (now an education center), Coastal Nursery (now a seed orchard) and Tilghman Nursery (now Sumter Area Office) facilities continue to house white pine, Virginia pine and a hardwood genetics program. Spartanburg, Sumter and Walterboro Area Offices plus Taylor Nursery are used as seedling distribution centers.

Creech Greenhouse in Wedgefield produces containerized seedlings, rooted cuttings and progeny test material. This facility gives the Commission the capacity to grow a million plus containerized seedlings annually. The greenhouse production was 1,077,000 for fiscal year 1999-2000. The demand for longleaf pine doubled to 10 million this year fueled by new CRP cost share incentives. Even though we grew a record crop of nearly 6 million we were unable to meet demand. The facilities at Creech will be expanded this coming year by adding a mechanized production line and building. The existing extraction and boxing line will be moved into the new building. We plan to increase production by 700,000 container longleaf in one year with the potential to increase container production to 3 million. The main limiting factor is the availability of quality longleaf seed.

The Nursery Section conducted a 100% customer survey in the spring of 1999 concerning the 1998-99 season. Of 1600 surveys sent out, 806 were returned. The results showed that 93% of customers were satisfied with our seedlings and services. A 10% random sample was surveyed in 2000 with 64 of 160 responding and 97% were satisfied with seedlings and services.

RESEARCH

The South Carolina Forestry Commission continues cooperative research projects with Clemson University, Auburn University and US Forest Service. The Commission also maintains membership in the North Carolina State University Pine Tree Improvement Cooperative, the North Carolina State Hardwood Research Cooperative, and the Auburn University Southern Forest Nursery Management Cooperative.

FOREST TREE SEED COLLECTION PROGRAM

Each year the South Carolina Forestry Commission collects or purchases pine cones and other forest tree seed for seedling production. During the past year, walnut, yellow poplar, Texas loblolly and longleaf pine seed were purchased for future seedling production. Sawtooth oak was collected from Savannah, GA. and Sumter, SC. The SCFC collected 900 bushels of longleaf pine from Bladen Lakes State Forest in NC, 1200 bushels from the Savannah River Site and Sandhills State Forest purchased 680 bushels. The availability of longleaf pine remains a limiting factor in longleaf seedling production. A poor seed crop was harvested in 1999 and crops for 2000 and 2001 also look below average in South Carolina.

TREE IMPROVEMENT

Niederhof Seed Orchard produced 538 bushels of second generation coastal loblolly pine and 836 bushels of second generation piedmont loblolly. The Virginia pine orchard produced 21.5 bushels. The second generation coastal orchard has been rogued to twenty clones and the piedmont orchard to ten clones. Based on SCFC and North

Carolina State University field tests these coastal trees produce 18% more volume/acre than unimproved and the piedmont trees produce almost 30% more volume/acre than unimproved. Both sources have demonstrated one half the rust infection of unimproved trees. This performance exceeded our expectations. Over 125 genetic field studies are being managed with eight studies being measured this year. A total of 91 have been measured since 1988-89. Third cycle clones are being grafted each spring into a new breeding orchard at Niederhof Seed Orchard. Breeding will begin in another year or two. All new third cycle selections will be complete by 2003 and new third cycle orchards will be established at Niederhof.

State Nurseries Seedling Production by Species 1999-00

Bareroot Seedlings

2 nd Generation Coastal Loblolly Pine	9,747,518
2 nd Generation Piedmont Loblolly Pine	6,338,000
Longleaf Pine	4,914,350
Attaway Lespedeza	920,130
1 st Generation Virginia Pine	138,500
1 st Generation White Pine (2-0)	84,200
Texas Loblolly	76,500
Baldcypress	46,400
Sawtooth Oak	27,700
Red Cedar	25,545
Improved Sycamore	20,106
Yellow Poplar	10,600
Black Walnut	7,700
Buttonbush	2,000
Total	22,359,249
Trees grown for NC Forest Service not planted in SC	1,912,250
Hardwoods carried over for next year	230,000
White Pine (1-0) Not For Sale	80,000

Containerized Seedlings (Creech Greenhouse)

Longleaf Pine	964,870
Leyland Cypress	80,000
Wiregrass	20,000
Virginia Pine	6,500
Clemson Greenspire	2,000
Atlantic White Cedar	2,000
Carolina Sapphire	1,700
Total	1,077,070
Grand Total Produced by SCFC nurseries	23,436,319
Total Distributed in South Carolina	21,524,000

Tree Seedling Distribution By Landowner Classification

Land Ownership	Percent of Total	Number of Trees Planted
Private Ownership	60	63,085,000
Forest Industry (Pulp & Paper)	30	31,613,000
Forest Industry (Other Corp.)	4	4,350,000
Lumber	2	1,808,000
Federal Land	1	1,401,000
Other Government Land	1	1,093,000
State Forest	1	934,000
Other State Land	<1	155,000
Christmas Tree Growers	<1	55,000
Schools	<1	50,000
Associations/Clubs	<1	50,000
Total	100	104,594,000

Source of Seedlings Planted in the State:

1. Nurseries in South Carolina

Industry Nurseries	74,479,000
South Carolina Forestry Commission (Includes Greenhouse)	21,524,000
Total	96,003,000

2. Nurseries Outside of South Carolina

Industry Nurseries	5,702,000
Private Nurseries	2,245,000
Georgia Forestry Commission	625,000
North Carolina Forest Service	19,000
Total	8,591,000

**Total Seedlings and Acres Planted In South Carolina
1928-2000 by County**

County	Seedlings Planted 1999-00	Grand Total Planted To Date 1928-00	Acres Planted 1928 - 6/30/00
Abbeville	479,000	65,960,000	84,786
Aiken	1,646,000	242,904,000	291,372
Allendale	970,000	108,561,000	136,447
Anderson	619,000	55,103,000	65,187
Bamberg	621,000	73,362,000	94,351
Barnwell	1,094,000	146,481,000	178,651
Beaufort	483,000	31,203,000	37,283
Berkeley	2,382,000	139,654,000	178,735
Calhoun	192,000	51,320,000	66,575
Charleston	1,488,000	57,424,000	78,767
Cherokee	977,000	35,791,000	43,838
Chester	1,929,000	89,798,000	113,436
Chesterfield	2,103,000	154,839,000	184,848
Clarendon	1,201,000	74,663,000	96,527
Colleton	3,889,000	159,537,000	206,784
Darlington	978,000	41,323,000	52,258
Dillon	505,000	33,647,000	44,165
Dorchester	1,459,000	90,881,000	117,853
Edgefield	1,192,000	98,058,000	130,998
Fairfield	3,081,000	119,634,000	158,048
Florence	1,112,000	38,182,000	50,961
Georgetown	1,568,000	151,081,000	200,319
Greenville	823,000	32,418,000	38,200
Greenwood	1,806,000	89,664,000	117,635
Hampton	3,675,000	124,514,000	160,500
Horry	161,000	79,053,000	98,809
Jasper	1,377,000	101,486,000	128,088
Kershaw	3,287,000	198,323,000	233,315
Lancaster	1,402,000	85,187,000	107,667
Laurens	1,880,000	109,650,000	136,671
Lee	359,000	38,369,000	48,719
Lexington	649,000	78,388,000	96,210
Marion	185,000	45,145,000	59,832
Marlboro	815,000	65,068,000	81,979
McCormick	727,000	57,148,000	76,108
Newberry	1,674,000	102,027,000	133,643
Oconee	717,000	40,876,000	50,023
Orangeburg	1,795,000	161,745,000	209,322
Pickens	353,000	31,024,000	37,307
Richland	859,000	73,097,000	87,333
Saluda	1,316,000	67,657,000	92,776
Spartanburg	853,000	65,889,000	77,934
Sumter	1,014,000	76,316,000	90,940
Union	1,706,000	84,100,000	105,453
Williamsburg	3,812,000	126,776,000	172,202
York	2,708,000	71,179,000	87,523
Multiple Counties	40,673,000	330,275,000	383,114
Total	104,594,000	4,394,780,000	5,523,492

NOTE: This table has been recalculated using the original historic data from annual reports from 1969 to 1999. This corrected typographical errors that had accumulated over the years of typing the tables. The original data was not changed from the historical documents. This table supersedes previous tables. Corrections to the data set are kept on file in the Columbia office.

SCFC Active Seed Orchards

Orchard Type	Year Established	Acres
Creech Greenhouse/Seed Orchard		
Genetic Diversity Archives (clone banks)	1977-83	25
Coastal Loblolly Pine 1.0 Rust Resistant	1971	5
Longleaf Pine 1.0	1971	12
Virginia Pine 1.0 (Creech)	1980	1
Virginia Pine 1.0 (Manchester SF)	1986	2
Sawtooth Oak 1.0 Seedling	1990	2
Total		47
Niederhof Seed Orchard		
Coastal Loblolly Pine 2.0	1985-88	204
Piedmont Loblolly Pine 2.0	1985-88	118
Longleaf Pine 1.0	1988-90	30
Loblolly Pine Breeding Orchard 3.0	1997-	2
Longleaf Pine Seedling Seed Orchard	1998	8
“Gobbler” Sawtooth Oak Seedling S.O.	1998	1
Total		363
Coastal Seed Orchard		
Sycamore 2.0	1992-95	4
Sweetgum 2.0	1992-95	6
Willow Oak Seedling Seed Orchard	1992-95	1
Swamp Chestnut Oak Seedling S.O.	1992-95	1
Green Ash Seedling Seed Orchard	1992-95	3
Red Maple Seedling Seed Orchard	1992-95	1
Southern Red Oak Seedling Seed Orchard	1992-95	2
White Oak Seedling Seed Orchard	1992-95	2
Total		20
Piedmont Seed Orchard		
White Pine 1.5	1991-93	12
Virginia Pine 1.0	1993	3
Northern Red Oak Seedling Seed Orchard	1993-95	2
Total		17
Grand Total		447

Seedling Distribution 1928-2000

Year	Total State Nurseries	Total All Sources	Year	Total State Nurseries	Total All Sources
1928-29	142,000	142,000	1964-65	49,010,000	60,683,000
1929-30	148,000	148,000	1965-66	42,311,000	56,529,000
1930-31	986,000	986,000	1966-67	48,575,000	69,598,000
1931-32	976,000	976,000	1967-68	39,970,000	58,812,000
1932-33	996,000	996,000	1968-69	29,529,000	51,453,000
1933-34	1,031,000	1,031,000	1969-70	31,415,000	49,203,000
1934-35	7,529,000	7,529,000	1970-71	31,940,000	54,541,000
1935-36	23,000,000	23,000,000	1971-72	23,678,000	41,357,000
1936-37	22,000,000	22,000,000	1972-73	30,978,000	45,239,000
1937-38	11,192,000	11,192,000	1973-74	28,443,000	42,306,000
1938-39	10,854,000	10,854,000	1974-75	40,082,000	55,997,000
1939-40	12,244,000	12,244,000	1975-76	40,664,000	59,063,000
1940-41	21,165,000	21,165,000	1976-77	39,795,000	59,238,000
1941-42	10,275,000	10,275,000	1977-78	45,735,000	64,380,000
1942-43	4,742,000	4,742,000	1978-79	43,010,000	65,937,000
1943-44	5,663,000	5,663,000	1979-80	46,375,000	76,207,000
1944-45	1,963,000	1,963,000	1980-81	53,513,000	86,420,000
1945-46	6,402,000	6,402,000	1981-82	55,728,000	87,793,000
1946-47	1,963,000	1,963,000	1982-83	47,799,000	86,265,000
1947-48	11,357,000	11,357,000	1983-84	50,170,000	100,394,000
1948-49	30,389,000	30,339,000	1984-85	51,636,000	107,718,000
1949-50	29,502,000	29,502,000	1985-86	65,465,000	124,381,000
1950-51	20,615,000	20,615,000	1986-87	73,555,000	157,523,000
1951-52	16,619,000	16,619,000	1987-88	78,788,000	164,095,000
1952-53	22,036,000	32,246,000	1988-89	55,052,000	153,450,000
1953-54	36,210,000	42,852,000	1989-90	38,356,000	128,475,000
1954-55	35,373,000	45,182,000	1990-91	29,297,000	102,384,000
1955-56	34,414,000	42,932,000	1991-92	31,984,000	94,710,000
1956-57	55,754,000	69,659,000	1992-93	22,665,000	84,287,000
1957-58	60,846,000	93,369,000	1993-94	23,286,000	119,311,000
1958-59	123,985,000	166,351,000	1994-95	16,154,000	90,336,000
1959-60	147,146,000	187,516,000	1995-96	16,841,000	99,549,000
1960-61	145,609,000	158,331,000	1996-97	16,058,000	99,439,000
1961-62	71,892,000	83,844,000	1997-98	23,278,000	97,963,000
1962-63	56,191,000	64,202,000	1998-99	17,955,000	94,539,000
1963-64	51,446,000	62,424,000	1999-00	21,524,000	104,594,000

Total State Nurseries: 2,493,269,000
 Total All Sources: 4,394,780,000

Type of Trees Planted Per County 1999-2000

County	Total	Loblolly	Longleaf	Other Conifer	Hardwoods
Abbeville	479,000	464,000	0	6,000	9,000
Aiken	1,646,000	1,208,000	409,000	8,000	21,000
Allendale	970,000	754,000	140,000	0	76,000
Anderson	619,000	590,000	0	18,000	11,000
Bamberg	621,000	582,000	27,000	2,000	10,000
Barnwell	1,094,000	732,000	338,000	2,000	22,000
Beaufort	483,000	457,000	19,000	4,000	3,000
Berkeley	2,382,000	2,146,000	115,000	5,000	116,000
Calhoun	192,000	125,000	49,000	5,000	13,000
Charleston	1,488,000	1,294,000	151,000	14,000	29,000
Cherokee	977,000	972,000	0	3,000	2,000
Chester	1,929,000	1,922,000	3,000	4,000	0
Chesterfield	2,103,000	1,107,000	982,000	3,000	11,000
Clarendon	1,201,000	1,160,000	16,000	3,000	22,000
Colleton	3,889,000	3,524,000	202,000	4,000	159,000
Darlington	978,000	848,000	119,000	8,000	3,000
Dillon	505,000	486,000	15,000	3,000	1,000
Dorchester	1,459,000	1,400,000	9,000	4,000	46,000
Edgefield	1,192,000	1,123,000	21,000	27,000	21,000
Fairfield	3,081,000	3,053,000	1,000	1,000	26,000
Florence	1,112,000	1,078,000	21,000	9,000	4,000
Georgetown	1,568,000	1,484,000	26,000	1,000	57,000
Greenville	823,000	801,000	1,000	15,000	6,000
Greenwood	1,806,000	1,795,000	1,000	5,000	5,000
Hampton	3,675,000	3,406,000	231,000	4,000	34,000
Horry	161,000	71,000	13,000	7,000	70,000
Jasper	1,377,000	1,239,000	127,000	2,000	9,000
Kershaw	3,287,000	3,014,000	258,000	6,000	9,000
Lancaster	1,402,000	1,359,000	39,000	3,000	1,000
Laurens	1,880,000	1,843,000	0	13,000	24,000
Lee	359,000	266,000	80,000	4,000	9,000
Lexington	649,000	833,000	437,000	33,000	13,000
Marion	185,000	182,000	1,000	1,000	1,000
Marlboro	815,000	776,000	28,000	1,000	10,000
McCormick	727,000	723,000	0	0	4,000
Newberry	1,674,000	1,665,000	0	4,000	5,000
Oconee	717,000	698,000	0	12,000	7,000
Orangeburg	1,795,000	1,546,000	108,000	13,000	128,000
Pickens	353,000	324,000	0	24,000	5,000
Richland	859,000	694,000	100,000	34,000	31,000
Saluda	1,316,000	1,308,000	2,000	3,000	3,000
Spartanburg	853,000	818,000	1,000	23,000	11,000
Sumter	1,014,000	671,000	311,000	21,000	11,000
Union	1,706,000	1,697,000	0	4,000	5,000
Williamsburg	3,812,000	3,680,000	66,000	3,000	63,000
York	2,708,000	2,641,000	1,000	16,000	50,000
Multiple Counties	40,673,000	39,758,000	735,000	29,000	151,000
Total	104,594,000	98,317,000	5,203,000	414,000	1,327,000

DISPATCH AND FOREST TECHNOLOGY

The Commission's Forest Fire Computer Aided Dispatch System (CADS) was upgraded to the most current map display data available for South Carolina. This will increase the accuracy and reduce the time required to locate burning notifications and wildfires. Large forest landowners' properties (i.e. US Forest Service, forest industry, etc.) are being added to or updated in the mapping system of CADS as it becomes available to the Commission. A statewide set of 1994 digital orthophoto quarter quadrangles (DOQQs) for South Carolina were received from the USDA Forest Service with plans to incorporate this data in CADS.

Purchase and installation of a communications recording system for the Dispatch Centers moved forward with the formation of a committee to look at agency needs and capability of current recording systems. The Commission also cooperated in an effort with the US Geological Survey on a Hazard Support System being developed to detect wildfires utilizing classified ballistic missile satellites, weather satellites, and other technology. South Carolina served as a test site in the spring/summer of 2000 and provided valuable feedback to the program managers and contractors on the system.

The Commission was a major cooperator in the 1999 National Aerial Photography Program, which acquired 1:40,000 color infrared aerial photography of South Carolina during January and February of 1999. The Commission is currently working with the Department of Natural Resources and other agencies to have this photography converted into DOQQs so various computer applications and geographical information systems can more easily utilize it.

Work was completed on upgrading dispatch center and field computer software and operating systems to be Year 2000 Compliant by December, 1999. Global Positioning Systems (GPS) that could be upgraded to be GPS Weeks Rollover and Year 2000 Compliant were completed prior to those events in August, 1999. GPS units are utilized to measure and map forest management activities (i.e. reforestation, timber stand improvement, stand boundaries, etc.), wildfires, etc.

Computers were installed or upgraded at ten (10) area or project forester's offices to assist in the preparation of forest management plans, correspondences to landowners, record keeping, etc. Mapping software and scanners were selected and purchased for all field foresters with computers to assist in the development of forest management plans and related management work. The mapping software will be used in conjunction with the 1994 DOQQs and 1999 NAPP photography when it becomes available in DOQQ format.

ADMINISTRATION

Financial Statement

REVENUES

State Appropriations 20,091,775

Federal Grants 2,187,106.87

Earmarked Funds

Hunting & Fishing License 38,483

Refund of Prior Year Expenditure 31,793

Burning Assistance Fee 130,529

Fire Lane Fee 125,741

Timber Marking Fee 30,217

Training Conf - Registr Fee 2,349

User Fee - State Park & Forest 38,201

Miscellaneous Fee 11,623

Construction of Water Bar 3,325

Stand By for Prescribed Burning 5,870

Sale of Seedlings 1,231,244

Sale of Timber 1,438,080

Settlements 550

Rent - Residence 13,680

Rent - Farm Land 71,466

Rent - State Owned Property 17,355

Rent - Equipment 7,358

Contributions & Donations 1,242

Insurance Claims 28,018

Sale of Services 40,240

Sale of Publications 79

Commission-Vending Machines 941

Sale of Junk 348

Forest Product Assessment 602,323

Sale of Assets 999,018

Total Earmarked \$4,870,073

Total Revenue \$27,148,955

EXPENDITURES

Transferred to General Fund 22,636

State 18,723,987

Federal 2,176,671

Earmarked 4,331,373

Total Expenditures \$25,254,667

EXCESS OF REVENUE O/(U) \$1,894,287

EXPENDITURES

Majority of balance represents funds encumbered for equipment

HUMAN RESOURCE MANAGEMENT

The Human Resource Management Section administers the following programs for the SCFC:

- Coordination of Total Quality Management efforts: 27 employees attended “What Matters Most Training”; 2 members of the executive team attended Baldrige based training on organizational assessment, performance measures and the annual accountability report. A Mechanic Career Path Development Team was established. 25 employees received certificates from the State Budget and Control Board, Office of Human Resources, for completing the requirements for the Associate Public Manager Award. The Records Retention Team received the Award of Achievement in Archives and Records Management from the S.C. Department of Archives and History.
- Quarterly Training Sessions for Field Administrative Support Staff.
- Classification and Compensation: 17 Performance Pay Increases, 7 Bonuses, 1 Retention Increase, 10 Promotions, 24 Reclassifications, 40 Additional Duties/Responsibilities Increases, 43 New Hires, 25 Resignations (includes 13 retirements)
- Employee Relations, to include progressive discipline, EPMS, counseling, ADA, legal proceedings, and grievances.
- Career Fairs
- Job Announcement Postings
- Recruitment
- Employee Benefits to include health, dental, life and Long Term Disability, Employee Wellness, Employee Innovation System and Tuition Assistance.
- Leave Program to include annual, sick, LWOP, FMLA and leave transfer.
- Affirmative Action
- Worker’s Compensation: 31 claims filed between 7/01/99 and 6/30/00.
- Service Awards: 28 State Certificates and Pins awarded; 65 SCFC Certificates awarded
- Retirement to include counseling and assistance with the process for both service and disability applications. 3 Disability retirements and 10 Service retirements
- Position Descriptions Files
- Personnel Files
- Commercial Drivers’ License Drug & Alcohol Testing Program
- Overtime and Fair Labor Standards Act
- Reduction in Force

TRAINING

The Training Section is responsible for coordinating and recording training for all South Carolina Forestry Commission employees. The goal of the section is to provide the training employees need to perform their jobs safely, effectively, and efficiently. During fiscal year 1999-2000, 151 training sessions were held with 2052 employees attending. (Some employees attended multiple sessions.) These sessions are listed by major subject area below.

Category	Number of Sessions	Number of Employees Attending
Fire Management	43	836
Forest Management	14	159
Equipment Maintenance	16	148
Safety	25	309
Law Enforcement	10	69
Personnel Management	8	106
Administration	35	425
TOTAL	151	2052

ECONOMIC AND RURAL DEVELOPMENT

Forest and wood product business development and recruiting as well as rural development assistance is a component of the Forestry Commission's mission. The goal is to maximize the benefits to the state from the forest resource base.

BUSINESS DEVELOPMENT

3 business assists this year resulted in announced new investment of \$119.0 million and creation of 286 new jobs.

26 business recruiting contacts were maintained, with 21 contacts initiated this year.

53 existing business assists were provided.

91 requests for information or industry contacts were handled.

Business promotion activities included a South Carolina exhibit at the Woodworking and Furniture Supply Fair in Anaheim, CA, as well as participation in Forest Product Society Annual Meeting, and Particleboard & Composit Materials Symposium.

International Trade activities included assisting with a forestry tour for a delegation from Chile, as well as continuing to serve on South Carolina Export Consortium Advisory Board and an appointment to South Carolina World Trade Center Advisory Board.

RURAL DEVELOPMENT

Rural Development activities included participation in Governor's Rural Summit, and continuing to represent the Forestry Commission on the South Carolina Rural Development Council.

INTERNAL AUDIT

The Internal Audit Department is an independent appraisal function that examines and evaluates the adequacy and effectiveness of Commission activities as a service to all levels of Management and the Commissioners. Emphasis is on auditing the agency's activities, processes, systems, and operations to ascertain efficiency in quality services.

During Fiscal Year 1999-2000, the Internal Auditor was added as a member of the Quality Council. The Quality Council oversees the TQM efforts, gives direction, and approves projects. The Commission has shared the results (pros and cons) of our TQM efforts with other state agencies.

In addition, the Internal Auditor has attended Public Issues Management School and is a Certified Facilitator. Such skills have been utilized at various internal and external meetings during this fiscal year.

Other activities include: an audit of the Seedling Distribution Process; a follow-up audit of Fixed Assets; an audit of the Headquarters' Petty Cash Account; a follow-up audit of the Headquarters' Petty Cash Account; an audit of the Piedmont Region's Petty Cash Account; a follow-up audit of the Piedmont Region's Petty Cash Account; an audit of the South Carolina Department of Corrections Outside Labor Crew; a follow-up audit of the South Carolina Department of Corrections Outside Labor Crew; a follow-up audit of the Pee Dee Region's Petty Cash Account; and year-end physical inventories of shop supplies in all relevant locations.

In addition, memorandums were prepared and submitted to Management noting various issues that warranted attention.

The Internal Audit Department was also aware and involved where applicable in reviews performed by internal and/or external sources. For example, the Forest Management Section performed an internal review in the Florence Area. An external review was performed by State Fleet Management at Kingstree. Scott McElveen, L.L.P., Certified Public Accountants, performed an audit of the agreed upon Procedures for Fiscal Year 1998 – 1999.

The Internal Auditor has obtained adequate training to maintain compliance with the continuing education requirements of the Government Auditing Standards.

RECORDS MANAGEMENT

The Internal Audit Department oversees the Records Management System for the Commission. The Internal Auditor serves as Records Officer. Twenty-nine Record Liaison Officers were selected based on the organizational structure of the Commission. The Records Officer is responsible for training the Record Liaison Officers. Such training is performed periodically to ensure consistency and continuity. In addition, the Record Liaison Officers are kept abreast of other training opportunities available.

During Fiscal Year 1999-2000, retention schedules that are specific to the Commission were approved by the South Carolina Department of Archives and History. Such schedules were copied and distributed to applicable personnel. Thus, creating the initial revision to the Records Management Manual.

Our efforts in Records Management have been recognized by the South Carolina Department of Archives and History. The Commission received the Award of Achievement in Archives and Records Management in May 2000.

During Fiscal Year 2000, a total of 157.5 cubic feet of official records were destroyed in accordance with the retention schedules approved by the South Carolina Department of Archives and History. This total does not include the destruction of copies. In addition, 9 cubic feet of records were transferred to the Department of Archives and History for possible retention.

INFORMATION AND EDUCATION

The Department includes Information Services, Environmental Education, and Harbison State Forest.

INFORMATION SERVICES

Information Services produces audio-visual and print material for use by schools, Forestry Commission personnel, and the public in general for both educational and training purposes. The department handles public information about forest management subjects, is the contact point for interagency outreach activities, and maintains an Internet website. Information Services is also responsible for internal communication in the form of a quarterly, tabloid-sized newsletter and a weekly electronic news bulletin.

Internet Website

The Forestry Commission's website at <http://www.state.sc.us/forest> has been expanded and updated since we went online in 1997 to include comprehensive forestry information and information about the Commission's services. Categories for search include Fire/Outdoor Burning, Forest Recreation, Forest Management, Forest Products, SCFC Facts and Facilities, Environmental Education, Reference Resources, and Bulletin Board. Entire publications are available online, such as the BMP guidelines for forestry practices in SC and its supplement on treatment of braided streams, SC's Smoke Management Guidelines, and the Forest Fire Law Handbook. The website is a research tool for students of forestry. It is a reference for users of our services, with complete lists of county forestry personnel, outdoor burning information and relevant phone numbers, grant application information, seedling and services prices and ordering

information and forms, location and trail maps for the state forests and trail user permit applications. It is a continually updated source for fire weather and current news. And it provides convenient links to related online resources. During fiscal 99-00 the site was visited 202,267 times.

Planning

- 5-year I&E Plans completed for Coastal, Pee Dee, and Piedmont Regions
- Served on USDA Forest Service Southern Region 8 Conservation Education Strategy Team to complete regionwide cooperative plan

Outreach

- Served on statewide Small Farmers and Landowners Outreach Committee
- Served on State Outreach Committee
- Planned program and exhibit for the first Small Farmers and Landowners Workshop in Saluda, SC
- Participated in Hope for Kids outreach program at W.A. Perry Middle School, Columbia
- Ninety-six RC&D Woodland Clinic: participated and designed promotional hats and other materials

Exhibits

- Tabletop exhibit “Services of the Forestry Commission”
- “This is Your Backyard” prescribed fire exhibit for Winyah Bay Prescribed Fire Task Force
- *Discovering the Urban Forest* activity book tabletop exhibit
- Freestanding promotional exhibit, “South Carolina”, for Economic and Rural Development
- Two outdoor classroom educational displays for Harbison State Forest: “Decomposition” and “Forests Renewed”
- Wood Magic Forest Fair banners and signage

Exhibit Venues:

- SC State Fair
- Wildlife Expo in Charleston
- SC Science Council convention in Greenville
- SC Urban Forestry Conference in Hartsville
- International Society of Arboriculture annual conference in Charleston
- Small Farmers and Landowners Workshop, Saluda, SC

Print

- Produced *Discovering the Urban Forest* activity book for the 13 states in the USFS Southern Region, the state of Georgia, Pacific Northwest “Toolbox” CD-ROM, and USFS in California
- BMP Monitoring Survey for 1999
- 1999-2000 Price Guide
- Two bookmarks to be used as handouts for students statewide
- Full color booklet, with photos, describing and promoting the Wood Magic Forest Fair

Video

- In cooperation with US Forest Service and the Dept. of Natural Resources, produced and distributed 2 PSAs on the subject of prescribed fire: multiple benefits and hazard mitigation
- “The Wood Magic Forest Fair”, short video with natural sound and graphic titles

Training

- “Fighting Wildfire with a Suppression Unit”, 23 minute video
- Photographed and duplicated 35 new slides for S-305, “Firefighting in the Wildland-Urban Interface”
- Information Services staff taught classes in computer-based design and production for a graduate course in computer technology at the University of South Carolina and the Lowcountry Instructional Technology Workshop at the College of Charleston

CD-ROM

- “The Virtual Forest” – rewrote and supervised production, for distribution throughout the Southern Region, of a program originated by the state of Virginia

Furniture/Signs

- New outdoor signs for Harbison, Sand Hills, and Manchester State Forests
- Outdoor signs for various county offices and Sumter, Orangeburg, Newberry Area offices
- Book cases, literature racks, computer tables designed and built for field and Columbia offices

Publicity

10 News Releases

ENVIRONMENTAL EDUCATION

The Environmental Education Coordinator plans, develops, supports, and coordinates the Forestry Commission's environmental education effort. The Coordinator oversees the development of Harbison State Forest's Environmental Education Center and serves as State Coordinator of Project Learning Tree (PLT) which is an international environmental education program designed for students in pre-kindergarten through high school. Last fiscal year (July '99 to June '00) SC PLT conducted 32 educator workshops throughout the state to train 453 teachers. In addition, PLT participated in 11 exhibits and/or presentations at various functions across the state to reach approximately 4000 participants. The Coordinator represents the Commission on the Coalition for Natural Resource Education and various other committees involved with environmental education throughout the state.

The Assistant Environmental Education Coordinator was instrumental in assisting the training and conducting of this year's state Envirothon competition. The Envirothon is a program for high school students to learn more about our natural environment. It tests the student's knowledge on topics such as soils, water resources, forestry, wildlife, and current issues. The Assistant Coordinator established contacts and training throughout the state, teaming Commission employees and high school teams in their areas, conducting a training session for the teachers and coordinating the forestry part of the competition and test. The Assistant Coordinator also coordinated the Wood Magic Forest Fair for October '99 which involved approximately 650 students and 125 teachers and adult chaperones. Due to the success of this program, the Wood Magic forest Fair is expanding to other sites throughout the state next year.

The Forestry Commission was instrumental in organizing the SC Teachers' Tour Coalition, an association of forest industry representatives, state and federal agencies, which conducted the SC Teachers' Tour in the Columbia/Sumter area in June of this year. This successful tour provided 34 teachers with a first-hand experience of the forest industry and forest management, and provided them with training, resources and information to conduct lessons dealing with sustainable forestry for their students.

The Forestry Commission continues to be a strong supporter of the Coalition for Natural Resources' environmental education efforts throughout the state. Foresters are trained to help conduct Teaching KATE (Kids About The Environment) environmental education lessons in forestry at Camp Long in Aiken County and Camp Cooper in Clarendon County.

Harbison Environmental Education Forest

Harbison Environmental Education Forest, located within the city limits of Columbia, contains 2,177 acres. The tract is being managed as a public greenspace to emphasize environmental and forestry education, demonstrate forest management practices, and serve as a forest recreational area. The forest is open seven days a week, with estimated annual attendance of 75,000 – 80,000.

Harbison's education staff and other SCFC employees associated with Harbison conducted 79 programs this past year, serving approximately 4398 participants. Sixty-four programs were conducted at Harbison, with 3646 participants, and 13 programs were conducted outside of Harbison by the staff, serving approximately 752 participants. The Environmental Education Center was also one of the locations for the spring Pre-KATE (Teaching Kids About The Environment) program where 171 third and fourth graders were instructed in forestry, wildlife, soils and water related topics.

Harbison continues to offer support to the Scouting community. Fourteen Cub Scout programs, 5 Girl Scout programs, and two Boy Scout forestry merit badge programs were held at Harbison. Approximately 421 scouts and their leaders participated in these programs. Two Girl Scout Leadership adult training programs were conducted at Harbison. Scouts continue to use the facilities at Harbison for camping and other activities. Fifty-seven groups used the camping facilities with a total of 916 campers. They also give back to the Forest – 2 Eagle Scout projects were completed on Harbison State Forest during the 1999-00 fiscal year, with several more in progress. Scouts built 1 trail

bridge, installed 6 trail benches, and constructed and installed 1 firewood shelter to fulfill their Eagle Scout requirements.

The Harbison Environmental Education Center is a 5000 square foot log building containing three offices, a small conference room, a screened porch, a deck and a 100-seat conference room. The Center is offered free to groups or agencies conducting Environmental Education workshops or classes. Thirty environmental education meetings were held at the center free of charge last fiscal year. SCFC conducted 70 meetings using the Environmental Center at no charge. Seventy-two other groups or agencies used the facilities for a fee. A total of 172 meetings were held in the Environmental Center with 6166 participants. This generated an income of \$14,250.00.

Harbison State Forest contains over 15 miles of roads and trails for bicycling, hiking, jogging and nature study. A permit system for recreational users requires bikers to pay a user's fee and promotes donations from other users. Harbison sold 1080 bike permits for an income of \$13,376.00 and received \$684.00 in donations. The Gazebo and Eagle Shelter were used frequently by both school groups and visitors who may rent the facilities. One hundred-one groups used these facilities, for a total attendance of 5151. Among those were 61 paying groups, which generated an income of \$1750.00 and 40 educational groups that were not charged a fee.

Access to the Broad River is now available at canoe landing located on Middle Creek. One hundred and forty-six float plans were filed last year for approximately 400 canoeists.

Other projects this fiscal year included replacing one of the culverts on the main road and trail connection located along the Midlands Mountain Bike Trail. This was completed with a grant obtained from SCPRT. This project included replacing two culverts, refurbishing the two existing bridges along the road, and constructing a wooden guard rail/pedestrian rest along the road. A demonstration wildlife backyard habitat area is being established as part of the grounds improvement for the Environmental Education Center. An Urban and Community Forestry Grant made this project possible. A state of the art sprinkler system was installed on the grounds of the Education center by the Harbison staff. Work has been completed on installing a working sawmill and a steam loader, both of which were donated to Harbison, on the grounds surrounding the Environmental Education Center. These structures, along with a short fire tower and outdoor classrooms surrounding the complex, complement the educational facilities and mission of the Environmental Center.

Forest Management

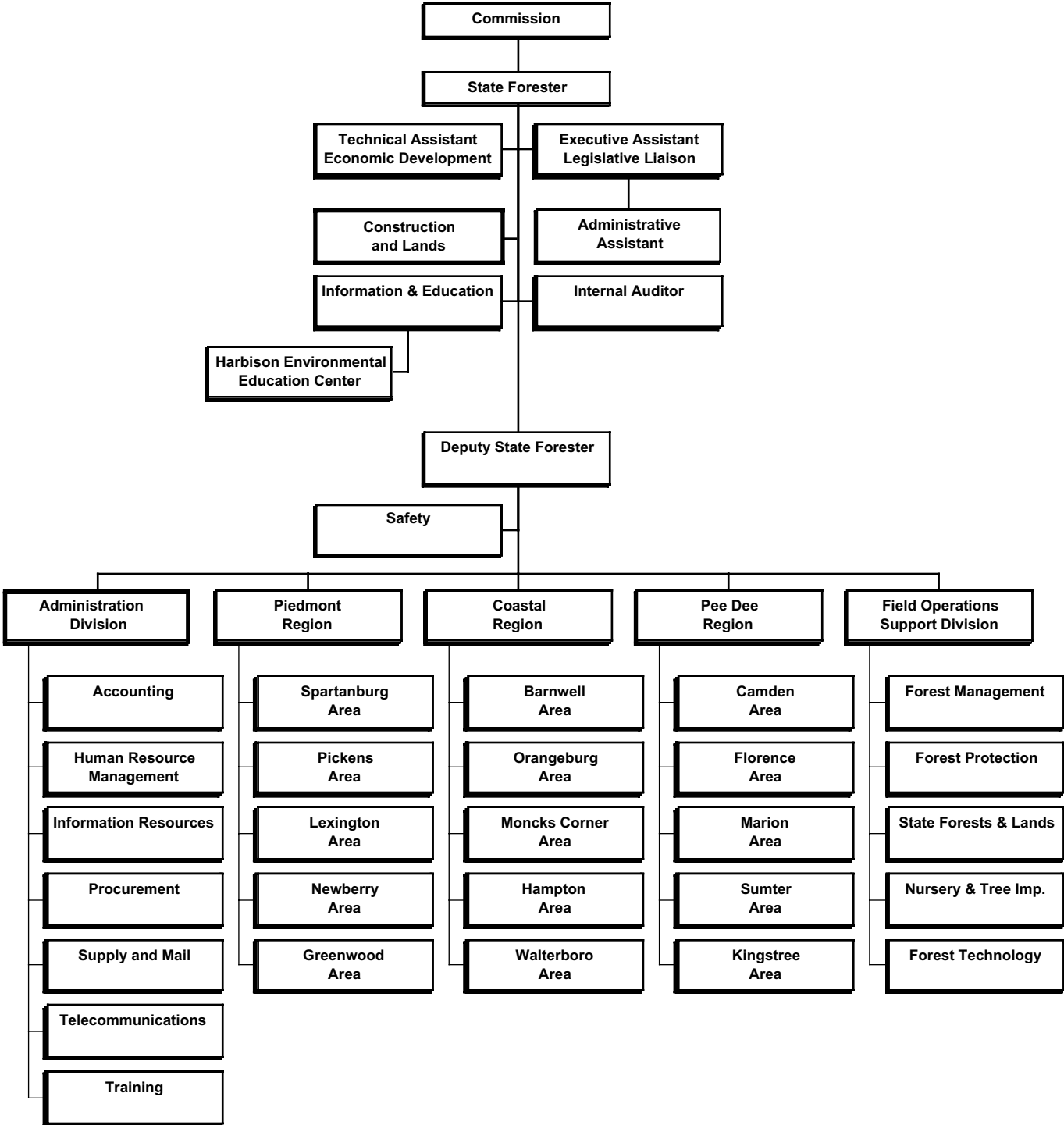
Two timber sales were conducted during the 1999-2000 fiscal year on Harbison State Forest. Both were advertised sales, one removing 219,320 board feet of pine sawtimber at \$420.92 per MBF and 138 cords of pine pulpwood at \$21.40 per cord for a total of \$95,268.50 in an 81-acre improvement cut. The other sale removed 92,543 board feet of pine sawtimber, 1.9 cords of pine pulpwood cords, 1,925 board feet of hardwood sawtimber, and 4.0 cords of hardwood for a total of \$27,557.00 in a 10-acre harvest cut.

Two prescribed burns were conducted last year, one encompassing two nearby areas with a total of 10 acres. The other prescribed burn involving 1 acre was conducted as part of an educational area. The smaller wildlife food plots were also burned to enhance lespedeza growth.

STATEWIDE INFORMATION AND EDUCATION ACTIVITIES

Exhibits	36	
News Releases/Articles	105	
Interviews:		
Television	141	Forestry Commission personnel participated in
Newspaper	151	approximately 1023 educational programs attended by
Radio	77	some 80,264 people.
Parades	69	

South Carolina Forestry Commission Organizational Chart



June 30, 2000