

The South Carolina Forestry Commission Annual Report

FY 2008-2009

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STATE COMMISSION OF FORESTRY

Members of the Commission

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James F. Barker, President, Clemson University

Sam Coker, Gilbert

James B. Thompson, Greenwood

Administration

Henry E. (Gene) Kodama, State Forester

Joel T. Felder, Deputy State Forester

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.

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.

FOREST PROTECTION

This section encompasses Fire Management, Law Enforcement, Forest Health, and Equipment programs.

FIRE MANAGEMENT

The South Carolina Forestry Commission is responsible for protecting 13,657,033 acres of forestland in South Carolina from wildfire. This total area protected is based on the 2001 Forest Inventory Analysis data with 10% added to cover adjacent non-forest land. This figure includes 101,320 acres of federal land protected under special contract, which includes such lands as the Carolina Sandhills National Wildlife Refuge and the Corps of Engineers land around such lakes as Lake Thurmond, Hartwell, and Russell. Also included is forestland protected by Mutual Aid, which is approximately 824,801 acres of additional federal land that includes lands such as the Francis Marion and Sumter National Forests, National Park lands, and lands owned by US Fish and Wildlife Service.

Wildfire Summary

Agency firefighters recorded 2,001 fires that burned 30,739.6 acres of forestland and grassland during the fiscal year. The number of fires was well below average, but the acreage was above. This was due to the Highway 31 Fire in Horry County that started on April 22 and burned a total of 19,130 acres. This fire destroyed 76 structures and damaged 97 more. This was the most damaging wildfire in South Carolina's history.

In fiscal year 2008-2009 wildfires destroyed 100 homes and damaged 109 others. In addition, 45 other buildings were destroyed and 19 buildings were damaged. There were 86 vehicles damaged.

Fire Protection Cooperatives

The Forestry Commission has cooperative arrangements with 12 fire and emergency management entities. Activities for each cooperative agreement during FY 2009 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 of the Southeastern States Forest

Fire Compact include: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. During fiscal year 2008-2009 the Forestry Commission requested assistance from NC on 2 separate fires under the compact.

SC Emergency Management Division: SC Forestry Commission personnel participated in several EMD emergency response training sessions involving hurricanes, earthquakes, weapons of mass destruction, and dam failures. Incident management teams deployed in response to Hurricane Ike, the Highway 31 Fire, and participated in the several exercises across the State, including the annual full-scale exercise.

SC Army National Guard: Under an agreement with the National Guard, helicopter firefighting support is available when requested by SCFC. Requests from SCFC are channeled through EMD and the Governor's Office to activate the Guard. The Guard's primary firefighting mission is providing helibucket service to SCFC Incident Commanders using SCFC's 780-gallon Bambi buckets. Guard helicopters are also available to transport firefighters into rough or inaccessible terrain. Joint training between the SC National Guard and the SC Forestry Commission was held in April of 2009. One week later the SC and NC National Guard were activated to help with the Highway 31 fire in Horry County. The black hawk helicopters flew 93 hours and dropped 904,000 gallons of water on the fire.

Volunteer Fire Assistance Program: Pass through funds from the National Fire Plan were distributed as follows:

Title II Grants for structural and wildland firefighting needs: 86 Fire Departments requested \$533,006 worth of firefighting equipment of which 85 fire departments were funded for \$92,224.

National Fire Plan Grants for wildland firefighting needs: 69 Fire Departments requested \$389,585 worth of firefighting equipment of which 69 fire departments were funded for \$106,010.

Federal Excess Property Program: During the year, SCFC acquired three aircraft with a total acquisition value of \$86,882 for use in the aerial detection program. Additional equipment obtained through the USFS FEPP program brought the total value of items acquired this year to \$276,000. The total inventory value of FEPP property now stands at over \$37 million, most of it on loan to Volunteer Fire Departments. In an effort to improve the program and bring all departments into compliance, we encouraged departments to turn in any equipment that was not being properly maintained or actively used. Field visits were also conducted to help with the inventory verification and reiteration of its purpose and intent. As a result, four Internet GSA auctions were held, disposing of over 175 items and reducing the inventory by \$2.3 million.

National Weather Service: NWS provides daily fire weather forecasts and atmospheric dispersion information. During the year, SCFC and NWS work to improve content of daily weather forecasts. The NWS provided spot weather forecasts for several wildfires as requested by the SCFC.

USDA Forest Service: 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. During fiscal year 2008-2009, the Cooperative agreement was updated using a national template. SCFC provided initial attack on a number of fires on the Francis Marion and Sumter National Forests during the fire season, and SCFC investigators assisted with wildfire investigation.

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. In April of 2009, the USFWS provided assistance on a 1,050 acre fire in Georgetown County.

USDI National 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, USDA 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).

Prescribed Fire Council: Organized in 2003, the goal of the Prescribed Fire Council is to increase the amount of prescribed burning in SC. The Council is working on increasing the capacity to get burning done in SC and in educating the public on the benefits of burning. The SCFC is a charter member and active participant in the council.

Homeland Security: Through a grant from the Department of Homeland Security (DHS) and the South Carolina Law Enforcement Division (SLED), the SCFC continued to train incident management teams (IMT) to improve the effectiveness of response to large incidents. Forestry Commission IMTs were staffed, training was conducted for individual team members and teams, and team members participated in training assignments to complete taskbooks to validate their training. Grant funds continued to support an Incident Management Team (IMT) Coordinator position to facilitate the development of nationally-qualified IMTs from within the Forestry Commission and to ensure consistency among four multi-disciplinary (non-SCFC) Type 3 IMTs located in each region of the State. Teams participated in regional full-scale exercises this year, including the State Earthquake Exercise. IMTs deployed in response to Hurricane Ike in Texas and to the Highway 31 Fire in Horry County. These teams are being developed to increase the capability of the state to manage wildfires, natural disasters, or other large incidents that may occur.

Fire Weather

Weather Stations: The Forestry Commission, USDA Forest Service, USDI National Park Service, Department of Defense (Ft. Jackson), and USDI Fish and Wildlife Service share a network of 12 Automated Weather Stations across the state. Data from these stations is 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 2009*

Month	Precipitation
July, 2008	4.65
August	7.53
September	4.15
October	4.66
November	3.76
December	3.12
January, 2009	2.13
February	2.06
March	5.32
April	2.99
May	5.16
June	3.83
Total	49.36

Precipitation Last 5 Years*

Fiscal Year	Precipitation (inches)	Departure from Normal**
2004-05	52.43	4.23
2005-06	44.63	-3.57
2006-07	43.07	-5.13
2007-08	37.53	-10.67
2008-09	49.36	1.16

*Source National Climatic Data Center

**statewide normal, based on previous 30 years is 48.20 inches

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 readiness levels for each of the three regions for FY 2009 are as follows:

Region	Coastal	Pee Dee	Piedmont
Readiness 1 (No wildfire danger)	5days	1 day	0 days
Readiness 2 (Low wildfire danger)	248 days	300 days	224days
Readiness 3 (Moderate wildfire danger)	107 days	52days	129 days
Readiness 4 (High wildfire danger)	5 days	12 days	12 days
Readiness 5 (Extreme wildfire danger)	0 days	0 days	0 days

Burning Ban and Red Flag Fire Alert: There was 1 Burning Ban declared during fiscal year 2008-2009. There were no Red Flag Fire Alerts during the year. The Burning Ban was for:

April 23-27, 2009 Statewide Ban due to limited available resources because of the HWY 31 Fire

Dispatch and Air Operations

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

Air Operations: Forestry Commission pilots equipped with Federal Excess aircraft provide incident reconnaissance (suppression assistance) as well as wildfire detection service. The SCFC has 13 aircraft with 2 full time pilots and on average 13 temporary pilots which fly on as needed basis. Specially trained private aerial contractors provide basic wildfire detection services in the Piedmont Region.

During the year, SCFC pilots flew a total of 1,776.8 hours (Coastal-708.5 hours, Pee Dee- 523 hours, Piedmont-545.3 hours).

Prescribed Fire

Certified Prescribed Fire Manager Program: Three Certified Prescribed Fire Manager Programs were conducted during the year with 75 participants. This course focuses on planning prescribed burns to comply with mandated air quality standards.

Prescribed Burning for Forestry, Wildlife, and Agriculture FY09

REGION	Forest Understory		Forestry Site Prep		Wildlife		Agriculture	
	Number	Acres	Number	Acres	Number	Acres	Number	Acres
Coastal	2,494	208,600.3	1,944	7,454.1	754	79,874.4	2,393	38,671.8
Pee Dee	1,242	62,976.4	941	3,830.9	482	28,652.4	2,330	39,595.6
Piedmont	537	62,000.6	1,741	4,870.5	106	4,513.5	375	2,910.4
State Total	4,273	333,577.2	4,626	16,155.4	1,342	113,040.3	5,098	81,177.7

Total Forestry, Wildlife & Agriculture Burns: 15,339 for 543,950 acres

Fire Prevention Information

Wildland-Urban Interface (WUI): Work continued on assessing wildland-urban interface communities and their risks to wildfire. Emphasis this year was on increasing awareness of homeowners in their responsibility to help reduce the risk of their homes burning in a wildland fire. This awareness was accomplished by conducting Firewise workshops such as 'How to Have a Firewise Home' and Firewise presentations (16) to interested communities and community leaders. The Firewise mobile exhibit and a table top Firewise Home exhibit were used on 12 different occasions demonstrating the wildfire potential and associated risks to communities and homeowners as well as how homeowners can mitigate those risks. The exhibit was used in cooperation with the USFS, USFWS, and NPS. Fuels mitigation plans, workdays and assessments were conducted on 15 different occasions. Honey Hill became the states 4th Firewise Community/USA with two others in the making. The Highway 31 fire has increased the interest in Firewise efforts as the affected and neighboring communities especially in Horry County has increased dramatically in an area we had previously little interest.

Wildfire Prevention: A statewide wildfire prevention awareness effort was made across the state prior to the spring 2009 wildfire season to promote safe debris burning; the states number one cause of wildfires. In cooperation with and assistance from local fire departments field personnel throughout the state distributed "Think Before You Burn" promotional materials to over 1,225 schools, businesses and public buildings. Spanish versions of the Think Before You Burn brochure were also distributed in appropriate areas mainly in the Pee Dee region.

Interviews were conducted with local media, public service announcements were distributed and billboards placed in areas where debris burns occur to increase public awareness. The Think Before you Burn message was distributed via posters for country store windows. caution-like signs for fire department stations,, and burning notification magnets noting the appropriate phone number by county for rural residents. Field personnel utilized trap lines in every county to hit those communities situated in high-fire occurrence areas or those communities at risk situated in the wildland urban interface.

Fires by Cause				
			Average Acres	Percent of Total
Cause	Fires	Acres Burned	per Fire	Fires FY09
LIGHTNING	104	1,267.2	12.2	5.20%
CAMPFIRE	11	386.9	35.2	0.55%
SMOKING	45	121.6	2.7	2.25%
DEBRIS BURNING	874	23,469.4	26.9	43.68%
INCENDIARY	454	3,616.2	8.0	22.69%
EQUIPMENT USE	176	722.1	4.1	8.80%
RAILROAD	17	63.3	3.7	0.85%
CHILDREN	101	290.7	2.9	5.05%
MISCELLANEOUS	219	802.2	3.7	10.94%
Totals	2,001	30,739.6	15.4	100.00%

Five-Year Summary: All Fires

Fiscal Yr.	Acres Protected	# Fires	Acres Burned	Avg. Acres/Fire	% Area Burned
2004-05	13,657,033	2,283	13,477.2	5.9	0.10
2005-06	13,657,033	3,020	16,294.2	5.4	0.12
2006-07	13,657,033	2,972	16,677.1	5.6	0.12
2007-08	13,657,033	3,678	21,945.7	6.0	0.16
2008-09	13,657,033	2,001	30,739.6	15.4	0.23

**Acres Protected and Total Burning Notifications by
County, Fiscal Year 2009**

County	Acres Protected	Smoke Mgt. Notifications	Other Notifications
Abbeville	248,551	148	2,498
Aiken	524,743	704	13,840
Allendale	199,005	463	841
Anderson	216,023	182	13,688
Bamberg	202,862	469	1,887
Barnwell	266,959	431	3,565
Beaufort	130,448	294	8,481
Berkeley	595,291	721	15,752
Calhoun	151,294	270	2,973
Charleston	318,526	340	6,913
Cherokee	168,077	80	4,120
Chester	315,565	140	3,020
Chesterfield	416,239	363	7,034
Clarendon	238,952	458	4,807
Colleton	560,896	1,005	13,221
Darlington	176,333	272	7,271
Dillon	163,935	193	2,742
Dorchester	272,524	335	9,300
Edgefield	279,433	217	2,317
Fairfield	408,433	120	2,597
Florence	308,707	434	11,231
Georgetown	400,136	507	8,474
Greenville	296,082	166	12,683
Greenwood	205,593	88	2,929
Hampton	303,663	964	3,308
Horry	493,012	561	18,082
Jasper	341,036	597	3,694
Kershaw	376,376	233	14,355
Lancaster	291,845	125	4,856
Laurens	337,499	102	4,261
Lee	121,735	234	1,492
Lexington	256,939	306	29,489
Marion	226,896	205	5,795
Marlboro	226,676	122	4,224
McCormick	223,394	103	1,118
Newberry	334,566	158	2,971
Oconee	292,590	93	10,145
Orangeburg	446,887	992	11,724
Pickens	236,029	117	10,359
Richland	352,904	282	7,721
Saluda	196,376	133	1,594
Spartanburg	286,496	122	8,363
Sumter	268,338	321	11,641
Union	277,640	75	481
Williamsburg	407,761	967	6,609
York	293,768	127	11,028
Total	13,657,033	15,339	335,495
	Total Smoke Mgt. & Other Notifications	350,834	

Total All Land Fires by County & Cause -- Fiscal Year 2009

COUNTY	LIGHTNING		CAMPFIRE		SMOKING		DEBRIS BURNING		INCENDIARY		EQUIPMENT		RAILROAD		CHILDREN		MISC		Total Fires	Total Acres
	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres		
ABBEVILLE			1	2.0	2	1.1	16	22.2	8	13.0	7	7.1					4	4.4	38	49.8
AIKEN	12	35.6	1	2.0	1	4.0	42	144.3	4	40.0	8	15.4	1	15.0	15	24.2	9	39.3	93	319.8
ALLENDALE	2	0.6					6	84.3	4	32.6	3	1.4					1	50.0	16	168.9
ANDERSON			2	5.1	3	7.3	19	23.0	10	7.9	2	5.5			1	0.5	2	1.2	39	50.5
BAMBERG	1	0.2					9	55.1			2	3.0					2	7.0	14	65.3
BARNWELL	4	93.5					7	25.5	4	60.5	4	3.1			1	0.5	6	11.7	26	194.8
BEAUFORT							13	24.6	27	92.0					3	4.0			43	120.6
BERKELEY	2	20.4			2	3.8	42	307.2	29	511.4	1	1.0	1	14.6	4	5.0	5	9.0	86	872.4
CALHOUN	1	0.1			1	0.2	19	19.8	1	0.1	3	10.0					4	8.5	29	38.7
CHARLESTON					1	0.2	12	51.9	5	101.4			1	10.0			2	11.6	21	175.1
CHEROKEE					3		3	19.5	2	3.0	2	0.8			2	0.9	1	0.4	10	24.6
CHESTER	1	0.3			1	1.0	7	14.7	4	8.1	1	12.0					1	2.0	15	38.1
CHESTERFIELD	10	80.3			2	2.2	31	52.4	9	6.6	1	2.0	2	10.5	1	0.1	1	8.0	57	162.1
CLARENDON					1	30.0	40	265.8	26	197.5	1	9.0			5	13.5	3	21.0	76	536.8
COLLETON	5	88.2					66	265.5	20	194.1	13	7.0			3	2.2	2	4.1	109	561.1
DARLINGTON	3	3.1			1	0.5	39	89.9	4	27.5	4	10.3	1	0.3	4	9.6	7	65.9	63	207.1
DILLON	1	0.1					1	2.5	4	3.9	5	7.6			3	4.1	9	15.9	23	34.1
DORCHESTER	1	0.1			1	6.0	18	117.3	15	141.7	8	247.1			3	4.1	1	5.0	47	521.3
EDGEFIELD	1	0.5					10	36.5			2	9.5					3	2.5	16	49.0
FAIRFIELD	4	0.7			1	0.2	7	9.8			4	7.7	1	0.1	2	2.3	3	2.5	22	23.3
FLORENCE	6	110.7			2	1.5	38	125.7	22	274.1	11	44.7			6	5.6	22	84.9	107	647.2
GEORGETOWN	5	75.3					10	1,167.2	24	474.4	2	1.3			1	6.0	4	1.0	46	1,725.2
GREENVILLE	1	4.0	4	377.0			14	27.3	2	5.0	6	14.5			3	6.2	8	51.1	38	485.1
GREENWOOD	1	0.3					7	10.7	1	1.0	3	6.0							12	18.0
HAMPTON	1	0.1					23	252.0	11	49.9	5	5.4	1	0.5	1	2.0	4	18.4	46	328.3
HORRY	1	0.3					28	19,230.2	29	111.1	1	0.1			4	9.4	9	6.0	72	19,357.1
JASPER	4	166.5			2	4.2	38	119.1	38	485.7	1	0.2	1	1.0	3	28.2	2	0.2	89	805.1
KERSHAW	2	1.2			2	1.6	20	72.7	6	9.4	2	4.0	1	0.2	7	79.8	3	2.5	43	171.4
LANCASTER	1	6.0			1	0.2	9	26.7	3	4.7	11	19.1	1	1.0	2	5.0	3	0.6	31	63.3
LAURENS	2	15.3	1	0.2	2	6.3	6	6.8			2	2.1					8	59.8	21	90.5
LEE					2	4.5	13	84.6	10	39.3	2	45.0					4	32.5	31	205.9
LEXINGTON	2	3.5					14	40.4	11	53.3	1	13.8			5	22.7	23	47.6	56	181.3
MARION	4	22.4					7	49.0	1	5.0			1	0.1	1	0.1	1	3.0	15	79.6
MARLBORO	2	0.6					21	47.8	7	13.1	6	4.6			3	4.6	5	53.1	44	123.8
MCCORMICK							4	13.7			1	0.2	1	2.0			2	1.2	8	17.1
NEWBERRY	6	135.7					2	3.3	3	7.3	2	1.6					4	2.4	17	150.3
OCONEE	4	2.4	1	0.5	3	3.0	19	44.5	4	3.8	5	25.4			1	0.2	6	2.7	43	82.5
ORANGEBURG	2	3.1			9	26.2	61	116.9	13	92.8	14	72.3			5	34.5	6	40.0	110	385.8
PICKENS	1	1.5	1	0.1			12	24.5	1	2.0	5	7.1	2	3.0	3	1.5	5	3.6	30	43.3
RICHLAND	2	29.1					5	39.5									6	16.0	13	84.6
SALUDA							7	9.9	8	27.0	5	56.2			2	4.3	2	1.1	24	98.5
SPARTANBURG							14	42.7	1	4.0	4	15.8	1	1.0	2	0.6	11	43.0	33	107.1
SUMTER	1	180.0			2	14.0	32	83.3	13	33.7	3	3.2	1	4.0	2	2.5	8	44.9	62	365.6
UNION	4	39.5					6	19.1	3	0.7	1	0.5			1	5.0	2	2.7	17	67.5
WILLIAMSBURG	4	146.0			1	0.1	50	165.1	64	471.4	11	19.2			1	1.0	5	13.9	136	816.7
YORK					2	3.5	7	14.9	3	6.2	1	0.3			1	0.5			14	25.4
Grand Total	104	1,267.2	11	386.9	45	121.6	874	23,469.4	454	3,616.2	176	722.1	17	63.3	101	290.7	219	802.2	2,001	30,739.6

**Total All Land Fires by County & Month -- Fiscal Year
2009**

COUNTY	2008												2009									
	July		August		September		October		November		December		January		February		March		April		Fires	Acres
	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres				
ABBEVILLE	5	2	11	17.5			2	2.5	4	5.6	2	7.1	1	2.1	7	6	5	6.8	1	0.2		
AIKEN	13	18.3	6	19.1	6	12.3	3	6.5	6	22.5	4	42	3	5	10	85.6	15	37.7	17	54.5		
ALLENDALE	5	13.5							1	0.1			1	0.1	5	83.7	3	71	1	0.5		
ANDERSON	3	1.4	4	7.5	1	0.1	2	2.5	2	1.5			2	2.2	16	22.5	4	3.8	4	8.5		
BAMBERG	2	5									1	1			4	48	4	9	2	2.1		
BARNWELL	6	98.5	1	0.1			3	6	1	0.1			2	0.9	7	74	1	6	2	7		
BEAUFORT	1	0.5	1	0.5					4	9	1	2	3	4.5	17	33.1	15	66	1	5		
BERKELEY	6	13.8	4	22.2	2	2	2	0.3	4	6.3	4	5.2	9	21	29	478.7	18	300.6	3	14		
CALHOUN	1	0.1	1	1	1	0.1			2	2.1	3	4.5	1	0.5	6	9.5	7	19.2	6	1.6		
CHARLESTON	1	0.5													4	98.6	11	50	4	24.5		
CHEROKEE	4	3.3	1	0.6							1	2.5			2	17	2	1.2				
CHESTER	2	1.6	1	0.3	3	8.1					1	2	1	0.1	3	18			3	7		
CHESTERFIELD	6	19.7	5	52	1	0.2	1	0.3	2	0.6	2	3.5	2	2.1	16	29.2	9	12.6	10	26		
CLARENDON	2	2.5			5	31.7	4	9.6	7	29.6	4	16	3	8	22	179.3	18	244.6	8	10.9		
COLLETON	14	98.7	4	0.5	1	0.1			6	8	6	16.2	11	49.2	21	164.1	27	194.3	16	23.9		
DARLINGTON	4	5.5	1	0.1					3	6.6	7	44	5	16.5	22	56.7	5	58.8	9	8.7		
DILLON	4	1.1			1	0.8			1	0.2	1	0.6	1	1	7	13.2	4	11	2	0.2		
DORCHESTER	3	3.1	1	4							4	5.9	3	8	15	170.9	14	274.9	3	40		
EDGEFIELD	4	6.1			4	1.4	2	7.5	2	4							2	16	2	14		
FAIRFIELD	3	2.5	5	1	1	1	1	0.7			1	5.1	1	2	4	2.4	3	4.7	2	3.4		
FLORENCE	7	147.2	5	0.9			3	1.2	8	23.5	4	30.1	9	26.9	38	242.3	22	84.4	9	89.3		
GEORGETOWN	1	60	4	15.3	1	0.1	1	1	2	0.7	1	6	2	4.1	12	50.9	10	86.6	8	1,497.0		
GREENVILLE	8	28.1	5	37.5	2	0.8			6	29.5					7	368.1	2	2.3	8	18.8		
GREENWOOD	3	3.5	3	3.3			1	1							2	3.2	1	2	2	5		
HAMPTON	4	4.7			1	0.2					2	2.5	7	42.1	16	180	11	95.2	1	0.2		
HORRY	5	4.9	3	2.4	1	1	3	2.3	4	6.5	2	1.4	2	0.9	20	108.9	19	61.1	11	19,166.9		
JASPER	2	40	7	193.7	3	13.3	1	40			5	22	7	11.7	46	406.3	14	68.5	3	9.5		
KERSHAW	4	20	2	6.5	1	0.1			1	0.2	4	1.4	3	1.8	5	10.1	11	36	5	76.9		
LANCASTER	6	15.3	1	6	1	0.3			1	1.2	2	2	3	8.2	8	15.9	3	5	4	8.2		
LAURENS	10	69.3	1	1	1	3.2					2	0.3	1	5.5	2	2.1	2	1.6	2	7.5		
LEE	5	11.3							3	6.9	1	4	1	1.5	9	41.7	6	89.5	3	7.5		
LEXINGTON	6	10.1			1	2			6	11.5	9	6.3	2	15.3	13	48	9	54.6	7	31.7		
MARION	1	0.1	5	22.6			1	0.1	1	0.1	1	0.5			2	7.2	1	1	3	48		
MARLBORO	4	4	1	0.1	1	0.1	2	5.1	2	3.5					15	59.6	9	40.7	3	2.6		
MCCORMICK	3	2.4					1	0.5					1	0.2	2	10	1	4				
NEWBERRY	7	75	1	63	2	0.2			1	1	2	2			2	5.1	1	3				
OCONEE	6	5.6	8	15	2	1.1	1	0.5	4	2.2			2	2.5	8	45.2	9	10	2	0.3		
ORANGEBURG	6	13.2	3	2.3	6	2.9	3	2.6	10	18.8	8	34.7	10	44.6	23	97.8	26	133.5	10	26.3		
PICKENS	2	1.5	2	8.1	3	3.1	2	5.5	3	3			2	0.6	11	15.5	2	3.5	1	0.5		
RICHLAND	2	7.1	3	30							1	15	1	3	3	21	2	6	1	2.5		
SALUDA	5	56.2	1	0.5			1	0.2	1	4.1					7	31.4	2	5	7	1.1		
SPARTANBURG	10	22.2	4	4	1	0.5									13	62.6	4	16.6	1	1.2		
SUMTER	2	1.1	2	180.1	1	3			1	1.5	5	11.5	5	33	16	33.5	12	66.7	12	26.4		
UNION	3	15.7	2	24.3			2	0.8			1	0.1	1	10	2	8.2	2	2.1	3	5.8		
WILLIAMSBURG	9	20.7	8	156.8	1	1			7	59.1	6	11.9	9	14.3	44	179.5	35	310.9	13	38.5		
YORK	4	5.3			1	0.2			2	0.5			1	2	2	0.4	4	17				
Grand Total	214	942.2	117	899.8	56	90.9	42	96.7	108	270	98	309.3	118	351.4	545	3,645.0	387	2,595.0	215	21,323.7		

FOREST HEALTH

The Forest Health Program, in cooperation with the State Division of Plant Industry and the U.S. 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 outbreak that began in York County in 1997 collapsed over most of the outbreak zone. As of June 30, 2009, there were no counties in outbreak status.

The calendar year 2003 was our worst on record for losses to Southern Pine Beetle. In that period, we had over \$255 million in pines killed by the SPB.

In fiscal year 2008-2009, the losses were minimal. During that time, SCFC foresters and technicians plotted 344 active beetle spots containing 12,610 trees. This timber had an estimated volume of 701 cords and 0.49 million board feet. The green value of this timber was \$159,917.

During the spring of 2009, 31 counties were pheromone trapped for prediction of Southern Pine Beetle population trends. No counties trapped enough beetles to predict a severe outbreak. Abbeville County trapped sufficient beetles receive a prediction of static – moderate pine mortality. Aerial surveys were in progress at the end of the fiscal year and little beetle activity was found statewide. Surveys will continue as needed.

The SCFC continued in a SPB Prevention and Restoration Program funded by the U.S. Forest Service. This programs' aim is to prevent or reduce the potential damage due to Southern Pine Beetle. In this program SCFC personnel make forest management recommendations for practices known to minimize future beetle damage. These include thinning, prescribed burning, planting at low density, matching planted species to site, and other known mitigation measures. This program funded approximately six full time SPB forester level positions and a coordinator.

Hemlock Woolly Adelgid

An exotic insect pest of hemlock, the Hemlock Woolly Adelgid (HWA) was discovered in South Carolina in 2001. Hemlock Woolly Adelgid is a small insect that feeds by sucking plant juices from the host hemlock tree. Unfortunately, heavy infestations of this pest can kill hemlocks and control is very difficult, especially in the general forest. Clemson University has established an insect rearing facility to raise insect predators of the Adelgid. The laboratory is currently rearing two species of predatory beetles; these beetles are released in HWA infested stands. Unfortunately, we may face the loss of hemlock as an important forest species. We continued a sub-grant contract with Clemson University Department of Entomology, Soils, and Plant Sciences to rear and release HWA predatory beetles in South Carolina.

Emerald Ash Borer

Currently, this exotic beetle is not yet a problem in South Carolina, but it is currently found in Illinois, Indiana, Kentucky, Maryland, Michigan, Minnesota, Missouri, New York, Ohio, Ontario, Pennsylvania, Quebec, Virginia, West Virginia, and Wisconsin. We performed checks of stressed, dying, or dead Ash in South Carolina on an on-call basis to certify our lack of infestation. Additionally, field assistance was given to USDA APHIS and Clemson University Department of Plant Industry in EAB trap placement.

European (*Sirex noctilio*) Woodwasp

The Insect and Disease section trapped for an exotic woodwasp (*Sirex noctilio*) that is currently found in several counties in New York, Pennsylvania, Michigan, and Vermont. Two pheromone traps with *Sirex* lure (alpha- and beta-pinene) were placed in 38 South Carolina counties between August and November 2008. Traps were checked every two weeks and were active from August through December. We trapped 83 individual native woodwasps representing four (4) species. No *Sirex noctilio* woodwasps were trapped in the 2008 survey.

Redbay Ambrosia Beetle/ Laurel Wilt Disease

In November 2004, an exotic ambrosia beetle, *Xyleborus glabratus* Eichhoff, was discovered in a dead redbay tree on Hilton Head Island. The beetle attacks redbay trees and introduces a fungus (*Raffaelea lauricola*) into the tree. Since the discovery of *X. glabratus* in 2004, the beetle and its associated fungus has been found in eleven (11) South Carolina counties: Jasper, Beaufort, Hampton, Colleton, Charleston, Bamberg, Barnwell, Allendale, Dorchester, Orangeburg and Berkeley. The beetle and fungus has also been found in 25 Georgia counties, in 22 Florida counties, and in one county in Mississippi. Unfortunately, in the areas where the beetle has been found, there is a large loss of red bay (up to 90% in some locations). A formal survey of the South Carolina counties with redbay trees was conducted. In this survey, redbay trees in uninfested counties were sampled and sent to a USDA Forest Service pathologist for testing for the Laurel Wilt disease. Three new counties infested counties were found in this survey.

Major Disease Problems

Oak Wilt

Oak wilt disease has been identified in Aiken, Barnwell, Chesterfield, Kershaw, Lancaster, Lee, Lexington, and Richland, Darlington counties. Oak wilt was detected in a new county, Darlington County, in June of 2009. This 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, surveys and on-call evaluations 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 is the smaller European elm bark beetle that 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. The fungus usually kills infected trees in two to three 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.

Sudden Oak Death (caused by *Phytophthora ramorum*)

Sudden Oak Death is an exotic disease caused by a fungus in the genus *Phytophthora*. It is presently known to occur only on the West Coast in the United States. This disease kills oaks and causes leaf spots on many other plant species. Testing of eastern species of oaks in California has shown that they could be susceptible to this disease if the disease were to occur in the eastern United States. Unfortunately, several nursery plants infected

with *Phytophthora ramorum* were shipped to South Carolina from the area of know infestation. No local spread of the disease was detected and the infected nursery stock was destroyed.

As part of a southeastern project, we are cooperating in a stream baiting survey to determine if the disease occurs in South Carolina. Stream baiting survey to detect the fungus that causes SOD continued in the spring of 2009. This survey was ongoing at the end of the fiscal year.

Miscellaneous Insect and Disease Checks

Commission foresters made approximately 253 field checks of insect and disease problems and made recommendations for prevention and control. Other inquiries were handled by telephone, mail, and personal contact.

Insect and Disease Laboratory

During Fiscal Year 2008-2009, the Insect and Disease Laboratory processed 25 samples submitted by SCFC employees and private individuals. Recommendations for control of various pests identified were given where needed. In addition to these samples, 3,339 southern pine beetles and 17,482 clerids, and 83 native woodwasps (Siricidae) were counted in the lab.

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, fire, and apparent annosus root rot damage.

During the aerial survey, the observed damage due to forest tent caterpillars (defoliators) was found across 371,700 acres. Beaver damage were estimated at 459 acres (acreage is based on 20% survey); fire-caused mortality was observed on 3,825.5 acres of forestland (acreage is based on 20% survey); annosus root rot was identified on 14,448 acres with an estimated value lost of \$2,326,272.

EQUIPMENT

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

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

Maintenance facilities in the Coastal and Pee Dee regions, state forests, and Taylor Nursery were all certified by State Fleet Management. The maintenance facility in Newberry was found to have some faults in Material Safety Data Sheets and labor hours reported by the mechanics. These problems are currently being rectified and a reinspection of the shop is scheduled for early November. The Forestry Commission has eight maintenance facilities.

One training session was offered to our mechanics during the fiscal year in the area of battery testing and electrical trouble shooting. The training was held at Michael Waltrip Racing in Mooresville, NC.

Equipment Purchased

- A 1993 Ford L8000 Truck Tractor was acquired through the Federal Government at no cost to the Forestry Commission. The truck was repainted and is currently in use.
- A Type 6 Wildland Engine was purchased using money appropriated last fiscal year. The truck is a Dodge 5500 4-wheel drive chassis with a 300 gallon water tank. It has a diesel pump and has been fully outfitted for wildland fire use as per NWCG standards. A four wheeler with trailer was also purchased as well as a Kubota diesel UTV. A 55-gallon fire fighting unit was placed in the UTV and it also came with a separate trailer.
- One 2009 Ford F-350 service truck for the Spartanburg Shop
- One 2009 F-150 for the Piedmont Region Communications Specialist
- One 2009 F-350 pickup for the Coastal Region to replace a pickup totaled in a very serious accident.
- Bed Boards for transports statewide

During the Highway 31 Fire, one of our fire suppression dozers was burned over while sitting on a transport truck. The operator had to abandon the tractor as the head of the fire shifted and crossed the road he was parked on. The operator received no injuries, but the tractor suffered over \$17,000 damage.

The Forestry Commission prepared and organized equipment for auction. The auction process now takes place exclusively online at www.govdeals.com. The sale of equipment netted the Forestry Commission approximately \$73,000. This money is being used to purchase equipment in FY '10.

LAW ENFORCEMENT

During FY 09 the Forestry Commission had 39 sworn officers statewide. Three of these were investigators that focused primarily on complex timber theft, timber fraud, and woods arson cases.

Officers prosecuted 278 fire tickets, 24 litter and environmental cases, 103 violations of state forest regulations, and 15 miscellaneous cases. Total fines collected were \$90,227.00. Fines collected from these cases are retained in the county where the offense occurred.

SCFC Law Enforcement Investigators investigated 111 timber theft / fraud cases which represented a loss of \$484,765.00 to the victims. SCFC collected and returned 62% or \$304,826.00 of that money to the affected landowners. During the year, 35 arson fires were reported and investigated. Agents arrested 5 individuals for arson who were responsible for a total of 30 fires. Arson is historically hard to prove and this figure represents an impressive 85% arrest rate. During the year, there were 982 fire investigations conducted.

During FY 09 SCFC Law Enforcement Officers saw an increase in the theft of pine straw. There was also an increase in the prosecutions associated with this crime. SCFC Officers made 37 prosecutions with total fine collections of \$8,907.50. See chart next page.

County	Prosecutions				Investigations				Burn Site Inspection	State Forests	
	Outdoor Burning		Wood s Arson	Total	Fire	Timber Theft/Fraud		Prosecution s		Fines	
	Prosecution s	Fines				Investigated	Settled				
Abbeville	3	\$320.00	0	1	3	0	0	0			
Aiken	9	\$2,602.00	0	37	37	0	0	3			
Allendale	3	\$30.00	0	17	8	0	0	0			
Anderson	5	\$341.00	0	35	28	2	2	0			
Bamberg	4	\$677.50	0	8	8	0	0	0			
Barnwell	1	\$526.00	0	15	15	0	0	0			
Beaufort	3	\$321.00	0	12	12	0	0	0			
Berkeley	17	\$2,147.50	0	67	71	0	0	1			
Calhoun	11	\$1,372.50	0	16	16	1	1	2			
Charleston	1	\$250.00	0	5	5	0	0	0			
Cherokee	0	\$0.00	0	0	0	0	0	0			
Chester	1	\$0.00	0	3	3	0	0	1			
Chesterfield	12	\$1,757.00	0	98	34	5	3	2			
Clarendon	13	\$250.00	1	64	33	2	2	1			
Colleton	16	\$2,010.00	0	48	46	0	0	2			
Darlington	5	\$1,839.00	2	82	35	0	0	1			
Dillon	0	\$0.00	0	22	13	0	0	1			
Dorchester	3	\$492.50	0	18	18	1	1	0			
Edgefield	0	\$0.00	1	0	0	2	2	0			
Fairfield	3	\$275.00	0	8	3	2	2	0			
Florence	29	\$3,008.00	2	108	100	10	5	3			
Georgetown	3	\$330.00	0	5	3	1	1	0			
Greenville	5	\$1,225.00	0	20	16	1	1	6			
Greenwood	0	\$0.00	1	0	0	1	1	0			
Hampton	1	\$262.00	0	48	16	0	0	2			
Horry	24	\$3,185.00	0	80	77	2	2	1			
Jasper	4	\$428.00	0	39	20	0	0	0			
Kershaw	3	\$0.00	6	41	28	1	1	0			
Lancaster	1	\$55.00	0	30	10	8	5	0			
Laurens	0	\$0.00	0	1	0	3	3	1			
Lee	1	\$100.00	0	23	14	0	0	0			
Lexington	2	\$262.50	13	9	9	1	1	0			
Marion	3	\$100.00	0	13	13	3	1	1			
Marlboro	1	\$400.50	0	39	25	0	0	0			
McCormick	8	\$0.00	8	8	8	2	2	0			
Newberry	0	\$0.00	0	0	0	2	2	0			
Oconee	7	\$953.00	0	43	42	0	0	0			
Orangeburg	31	\$5,927.75	0	68	65	0	0	3			
Pickens	10	\$2,177.75	0	29	24	1	1	13			
Richland	3	\$470.00	0	12	6	6	6	0			
Saluda	1	\$230.00	0	8	1	3	3	1			
Spartanburg	2	\$565.00	0	4	4	1	1	0			
Sumter	8	\$1,432.00	1	112	41	0	0	1			
Union	1	\$0.00	0	1	1	0	0	0			
Williamsburg	19	\$4,007.00	0	109	67	4	4	1			
York	1	\$50.00	0	4	4	3	3	1			
Manchester									39	\$18,664.50	
Sandhills									63	\$16,563.00	
Poe Creek									0	\$0.00	
Harbison									1	\$470.00	
Totals	278	\$40,379.50	35	1410	982	68	56	48	103	\$35,697.50	

FOREST MANAGEMENT

There are 12.9 million acres of commercial forestland in South Carolina. According to 2007 forest inventory data, 88% of South Carolina's forests are privately owned, 67% of private forests are family-owned, and 74% of these owners live on the land. Forest industry owns 1.2 million acres (9%), which is down 39% since 2001 and public agencies control 12% of South Carolina's forests.

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, and urban & community forestry. 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. The urban & community forestry program strives to help local government, educational institutions and non-profit organizations develop and enhance the benefits provided by trees and greenspace where we live and work.

In addition to programs designed to assist private landowners and local communities, the Forest Management section also coordinates development and management of over 90,000 acres of forests included in the state forest system. These lands are owned by the Forestry Commission and provide forest based recreation opportunities and serve as examples of the benefits of active 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, 1,213 management plans were prepared for 80,416 acres. Beginning in July of 1999, customer satisfaction surveys were sent to every landowner that received a forestry management plan. In FY 09, 94% of the landowners that responded to the survey indicated that they were satisfied with the management plan they received. Of these landowners, 88% 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 75 cases were referred to consulting foresters and 10 were referred 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 state funding was doubled effective July 1, 1996. This increase permitted an assessment of \$800,000 increasing the program to \$1,000,000. Beginning in 2001, the objectives of the Forest Renewal Program were expanded to include providing funds to help match federal grants that provide financial support for the Forest Inventory and Analysis (FIA) program.

Conservation Reserve Program (CRP) - Federal

The Program began with crop year 1986 and was renewed with the passage of the 2002 Farm Bill.

Forest Land Enhancement Program (FLEP) – Federal

The Forest Land Enhancement Program (FLEP) was authorized in the 2002 Farm Security and Rural Investment Act of 2002 (Public Law 107-171). Through FLEP, State forestry agencies can provide a wide array of services to ensure that our nation's non-industrial private forests (NIPF) and related resources continue to provide forest products and safeguard the health of our water, air, and wildlife.

Southern Pine Beetle (SPB) – Federal

The SPB Prevention and Restoration Cost-Share Program (SPB Program) was created in 2006 for non-industrial private forest landowners. It seeks to mitigate future loss from SPB by managing pine density through prevention and restoration practices. These practices ensure that a pine stand will be of merchantable size before the stress of being overly dense develops. Receiving income and maintaining vigorous growth are usually enough incentives for landowners to thin merchantable sized pine stands and, in return, reduce the potential loss from SPB.

Statewide Accomplishments for All Cost-Share Programs

Reforestation and Timber Stand Improvement

Program	Number of Landowners	Acres Planted	Natural Regeneration	TSI Acres	Precommercial Thinning	Cost Share Payments
FRP	321	8,797	0	1,482	0	\$748,886
FLEP	21	393	0	359	0	\$40,940
SPB	125	3,761	0	79	1,726	\$552,552
CRP	115	2,769	0	0	0	\$143,902
Totals	582	15,720	0	1,920	1,726	\$1,486,280

SEEDLING SURVIVAL

Survival checks were made on 10 percent of plantings using a row count or tenth acre plot method for determining survival. An average of all survival checks was used to determine the statewide survival of 80% for loblolly pine plantings. Survival rates for longleaf pine plantings were tabulated separately. Plantings with longleaf seedlings had a survival rate of 59% when bare root stock was used and 77% when containerized stock was used.

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 \$140 for the 1st hour and \$85 for each additional hour. In FY 2006, a separate rate was established for firebreaks constructed with a heavy tractor. For FY 2008-09, these rates were set at \$160 for the 1st hour and \$100 for each additional hour.
- **Prescribed Burning** - performed by Forestry Commission employees using agency equipment for \$17 per acre. Firebreak plowing costs are not included. The minimum charge for this service was \$400.00.
- **Prescribed Burning Standby** - an agency tractor and employee on standby at burning site for \$80 for the 1st hour and 305 for each additional hour while landowner performs burning under an approved plan. The minimum charge for this service was \$110.00.
- **Equipment Rental Program** - agency owned tree planters and drum choppers made available to private landowners at rates of \$5 and \$20 per acre respectively. The minimum charges were \$25 and \$100.
- **Timber Marking** - performed by Forestry Commission employees at the rate of \$10 per thousand board feet and \$5 per cord.

Service	Number of Tracts	Units of Measure	Receipts FY 06-07
Firebreak Plowing	454	1,287 miles	\$169,048
Prescribed Burning	171	16,862 acres	\$293,906
Prescribed Burning Standby	39	3,970 acres	\$12,260
Equipment Rental	7	52 acres	\$275
Water Bar Construction	6	62 bars	\$4,915
Timber Marking	0	0 cords 0 board feet.	\$0
Totals	677		\$480,404

Beginning in July of 1999, a customer satisfaction survey was sent to all landowners that received forestry services. In FY 09, 53% of the surveys were returned and 94% of these landowners indicated that they were satisfied with the services they had received.

Forest Management Assistance 2008-2009

County	Non Cost-Share		Cost-Share		Forest Stewardship	
	Exams	Acres	Exams	Acres	Plans	Acres
Abbeville	11	1,202	10	494	3	527
Aiken	13	632	14	637	3	690
Allendale	12	477	12	900	0	0
Anderson	35	1,001	7	367	3	283
Bamberg	14	557	17	724	0	0
Barnwell	8	209	18	632	3	2,376
Beaufort	4	386	3	96	1	125
Berkeley	23	1,832	2	40	0	0
Calhoun	2	101	16	861	1	61
Charleston	17	3,026	0	0	0	0
Cherokee	14	509	8	345	2	486
Chester	13	1,562	12	575	4	722
Chesterfield	4	77	12	485	7	1,358
Clarendon	5	356	12	627	2	190
Colleton	25	2,900	12	711	4	882
Darlington	3	59	19	771	5	561
Dillon	2	13	7	246	2	188
Dorchester	15	970	4	196	0	0
Edgefield	8	189	8	461	2	129
Fairfield	8	1,010	14	556	1	81
Florence	15	589	11	329	2	290
Georgetown	7	299	7	394	1	88
Greenville	44	2,062	10	276	1	230
Greenwood	22	1,636	13	583	2	222
Hampton	20	2,322	18	833	5	1,290
Horry	8	532	10	1,114	2	164
Jasper	5	204	4	366	0	0
Kershaw	11	839	19	961	3	171
Lancaster	7	152	4	279	5	2,409
Laurens	13	604	14	932	2	433
Lee	2	67	7	320	3	819
Lexington	10	357	19	548	4	1,235
Marion	8	370	2	86	3	231
Marlboro	2	22	11	663	0	0
McCormick	3	516	5	214	1	71
Newberry	5	179	28	994	6	456
Oconee	4	186	2	48	1	68
Orangeburg	19	1,226	37	1,051	3	280
Pickens	6	477	3	24	1	28
Richland	35	1,263	10	276	6	1,939
Saluda	13	643	20	676	5	231
Spartanburg	2	19	5	230	2	117
Sumter	13	823	13	847	4	313
Union	1	9	12	831	1	330
Williamsburg	15	793	58	2,485	7	597
York	15	880	7	266	3	260
State Totals:	541	34,136	556	25,350	116	20,931

FOREST STEWARDSHIP: FY09

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 forest lands. Landowners are provided technical assistance by having a multiple resource management plan developed for their property addressing their management objectives.

During FY 09, 188 Stewardship Plans were written in South Carolina on 45,949 acres. South Carolina Forestry Commission foresters authored 116 plans. Private Forestry Consultants authored 72 plans.

Five landowners (comprising 1,934 acres) were recognized as Forest Stewards for FY09.

COMMUNITY FORESTRY

The Community Forestry program exists to provide technical, financial and educational assistance to municipal and county governments and others for the purpose of creating, maintaining, and enhancing community forest conservation and management within their jurisdictions; to provide for, coordinate and/or conduct information, education and training regarding community forestry, wildland-urban interface issues, and arboricultural best management practices; to provide grants to local governments, non-profit organizations, and educational institutions of higher learning to create, enhance and support long-term local and regional community forestry programs. This assistance is accomplished through a variety of ways: direct contact, diverse and cooperative partnerships, and the financial assistance grant program.

Expected results include but are not limited to: improved air quality, energy conservation through reduced heat island effect in downtown areas, local government recognition and management of the community tree resource, sustained financial support on the local level for community tree management, more professional public tree managers to provide safe walkways, streets and parks, and more public trees planted and maintained to beautify, cool, and clean South Carolina communities. These results occur when a community or county government works towards accomplishing a natural resource inventory and management plan, employ professional urban forest staffing, adopt and implement natural resource policy, and work in partnership with local advocacy organizations.

Community Forestry Financial Assistance Program

The Community Forestry Financial Assistance and Partnership Program is a state program funded with federal-level monies appropriated each year by Congress. These funds are funneled through the U. S. Forest Service to the SC Forestry Commission to administer. For 2009, pass-through funds in the amount of \$140,000 were awarded to 20 different municipal and county governments, non-profit conservation organizations, and educational institutions to assist in the creation, enhancement and support of long-term local, regional and statewide community forestry programs. Specific project types include but are not limited to: public tree ordinance development, community forest management plans, community forestry staffing, educational tree planting, and training and continuing education.

Tree City/Tree Line USA

Sponsored on the national level by the Arbor Day Foundation and others, the Tree City USA program is administered in South Carolina by the Forestry Commission. This program seeks to stimulate and promote the management of community trees by recognizing towns and cities which meet the following criteria: (1) establishment of a municipal tree care ordinance, (2) expenditure of at least two dollars per capita on their community forestry program, (3) establishment of a legally constituted tree board or permanent staff to address tree issues, and (4) observance of Arbor Day by a mayoral proclamation and official ceremony. The SC Forestry Commission has recognized and awarded 37 municipalities, 1 county and 3 military bases under the Tree City USA program during fiscal year 2009.

The Tree Line USA program, also sponsored by the National Arbor Day Foundation, seeks to stimulate and promote proper utility 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. The Forestry Commission recognized the Gaffney Board of Public Works as South Carolina's only Tree Line USA utility for the *ninth* consecutive year.

Partnership Development and Educational Programs

Through the direct technical assistance of the community forestry staff and implementation of the financial assistance projects, the program strives to develop partnerships with a variety of organizations and units of local government. Often these partnerships result in educational programs regarding the economic, ecological and social value of community forest resources. During *FY 09*, 5 partnerships were developed and 52 different educational sessions were presented to approximately 2,314 South Carolinians, both youth and adults.

<i>Types of Technical Assistance</i>	<i>Program Accomplishments Community Forestry Staff</i>	<i>Program Accomplishments Financial Assist. Grants</i>
Program Development/Expansion	# of Assists	# of grants awarded
Municipal Government	92	8
Non-profit / trade organizations	40	8
Educational Institutions	18	0
County Government	16	2
State Government	7	2
Others	<u>73</u>	<u>NA</u>
TOTAL	246	20
Public Tree Ordinances Developed	1	2

Urban Forestry Cultural Practices Commercial/Business Residential Public Agency Total # of Assists	24 35 <u>19</u> 78	NA NA NA				
Public Trees Inventoried	NA	12,458				
Public Tree Management Plans	NA	4				
Public Trees Planted	NA	727				
Tree City USA's	41	NA				
Partnership Development	5	23				
Volunteers	NA	365				
Public Information/Education	<u>Adults</u>	<u>Youth</u>	<u>Totals</u>	<u>Adults</u>	<u>Youth</u>	<u>Totals</u>
# Programs	32	20	52	15	8	23
# People	1,070	640	1,710	564	475	1,039
# Seat hours	1,580	734	2,314	4,932	3,657	8,589

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 2008-2009, the state lands coordinator provided assistance to six state agencies. The agencies and facilities were as follows:

SC Department of Corrections

Tyger River Correctional Institution

SC Department of Natural Resources

Lewis Ocean Bay Heritage Preserve
Webb Wildlife Center
Mason Wildlife Preserve
Stevens Creek Heritage Preserve
Congaree Bluffs Heritage Preserve
Congaree River Heritage Preserve
Aiken Gopher Tortoise Heritage Preserve
Janet Harrison High Pond Heritage Preserve
Landsford Forest Legacy
Bellfast Plantation
Woodbury
McBee WMA

SC State Park Service

Cheraw State Park
Redcliffe plantation

SC Department of Transportation

I-95 median

University of South Carolina

The Wedge Plantation

John Da La Howe School

Timber Revenue

There was direct involvement consisting of cruising, marking, and administering timber of sales on five state-owned tracts. These sales generated approximately \$280,000 for their respective agencies.

Two these sales consisting of approximately 1,851 acres were harvested as a means of salvaging fire-damaged and storm-damaged wood. These sales recouped a small portion of the pre-damaged timber values represented.

Fees collected for timber marking and cruising conducted on state-owned lands totaled \$18,152 with a total of \$11,200 being allocated to the regions and \$6,952 being retained in the state lands program budget.

HARBISON STATE FOREST

Harbison State Forest, located approximately 9 miles from downtown Columbia, encompasses 2,176 acres. The Forest was purchased in 1945 and became the site of the agency headquarters in 1963. Following the adoption of a Master Plan in 1981, the Forest began to be developed as an Educational State Forest. Recreational use grew dramatically in the early 90's with Harbison soon gaining the reputation as a mountain biking mecca for the area.

Receipts

Parking fees were initiated in March 2004 to provide more equity with regard to user fees. Since 1997, bicyclists have been required to purchase daily or annual permits while hikers, runners, picnickers, and other Forest users were not required to pay fees. Fee boxes were installed at all trailheads in February 2004 to allow visitors to purchase parking permits without assistance.

<u>Activity</u>	<u>Receipts</u>
Timber Sales	\$0.00
Shelter Rentals	\$1,685.00
Conference Room Rentals	\$13,655.00
Annual Bike Permits	\$26,900.00
Daily Bike Permits	\$6,286.16
Annual Parking Permits	\$6,150.00
Daily Parking Permits	\$10,016.00
Special Use Permits	\$1,100.00
Trail Donations	\$608.48
<hr/>	
Total	\$66,400.64

Note: 25% of all receipts are paid to Richland and Lexington County School Systems. This amounted to \$12,613.04 for the 2008-2009 fiscal year. (Donations and rental income are not included when calculating the total to be dispersed to the school systems.)

Silvicultural Practices

Recovery of the Forest following the 2002 southern pine beetle outbreak continues to take place at a satisfactory rate. Most of the areas that were understocked followed salvage operations now contain an adequate number of natural seedlings, most of which are loblolly pine. A per unit timber sale consisting of approximately 63 acres was put under contract which expired October 2009.

Seven prescribed burns were conducted in this year for a total of approximately 61 acres. A 13-acre prescribed burn was conducted behind the South Carolina Forestry Commission Headquarters and a 4-acre prescribed burn was conducted beside the Educational center. These burns will serve as demonstration areas.

Forest Protection

No wildfires occurred on Harbison State Forest during this fiscal year. Individual tree mortality returned to a normal level following the 2002 southern pine beetle outbreak. Trees that were considered hazardous to forest visitors and/or to buildings were felled as workload allowed. (Many of these trees were removed during chainsaw training conducted by the Forestry Commission's Training Section.)

Recreation/Education

Several events were held on the trails at Harbison during the 2008-2009 fiscal year. The Friends of Harbison State Forest hosted a foot and bike race with an estimated 50 participants. The Friends of Harbison State Forest also held their third annual "Take a Kid Mountain Biking" day. This event helped raise awareness of the sport to the younger generation and increased awareness of the state forest. Harbison was also the site for an Adventure Race. In addition to these events, numerous trail work days were conducted during the 2008-2009 fiscal year. These events included improving the trails by pruning of overhanging branches and brush and the rehabilitation of wet areas and closed trails. Friends of the Forest members continue to provide leadership for these work days, enabling Harbison staff to perform other functions during these weekend events. The Friends of the Forest have continued, with the help of a Richland County Recreation Grant, their work to improve Harbison's trails by rerouting a section of the Midlands Mountain Trail around a badly eroding section of trail.

The Friends of Harbison State Forest meet on a monthly basis to plan events and promote the Forest. They have received recognition from the Secretary of State as a non-profit group and have achieved 501(c)3 status from the IRS. The mission of the Friends group is to "preserve and promote the recreational and educational aspects of this urban forest resource." Current membership of this group is about 75 individuals.

Boy Scouts continue to provide assistance to Harbison through Eagle Scout projects and Cub Scout activities. One Eagle Scout project was completed this fiscal year which consisted of upgrading trail blazes to reflective makers. Numerous educational programs were conducted for Scouts and others at Harbison State Forest. (See the Environmental Education section of this report for details.)

Scouts and other organized groups continue to use the four primitive camping facilities at Harbison. These facilities were used by 77 groups this fiscal year for a total of 970 users.

The canoe landing at Harbison State Forest provides access to the Broad River. During the 2008-2009 fiscal year, 43 groups used this facility for a total of 134 paddlers. Usage of the Canoe Landing appears to be recovering from the diminished use due to the closing of the take out facility located downriver at the Riverside Golf Center.

Wildlife Management

Five wildlife viewing areas totaling 2 ½ acres are maintained each year. These areas are planted in cover crops such as wheat, rye, and clover to facilitate the viewing of wildlife by Forest visitors.

Rare, Threatened, and Endangered Species Management

No threatened or endangered species are known to occur on Harbison State Forest. The two vernal ponds that were established in May 2004 have become well-established. These ½-acre wetlands provide habitat for amphibians, reptiles, and many species of insects and are favorite stops on nature hikes by educational groups and other Forest visitors.

Research

No research projects were conducted this year on Harbison State Forest.

MANCHESTER STATE FOREST

Manchester State Forest, located in Sumter County and Clarendon County, is currently comprised of approximately 29,070 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:	
Activity	
Timber Sales	1,234,979.29
Pine Straw Sales	94,843.00
Land Lease Payments	46,449.30
Wildlife Management Area	59,238.95
Trail and Special Use Permits	40,608.50
Total	\$ 1,476,119.04

Note: 25% of all forest receipts are paid to Sumter and Clarendon Counties for a total of \$369,029.76.

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

Sales of pinestraw covered four hundred sixty-five (465) acres

Silvicultural Practices

Nine hundred ninety-seven and eight tenths (997.8) acres were prescribed burned during the fiscal year for wildlife, hazard reduction, hardwood control, aesthetic, and site preparation purposes.

Nine hundred seventy-six (976) acres were sold for final harvest cuts and four hundred forty-one (441) acres were sold for improvement cuts (thinnings).

The following species and number of seedlings were planted during FY08:

	<u>Acres</u>
Containerized longleaf pine	950
Arbor Gen loblolly pine	20

Forest Protection

No wildfires occurred. Manchester personnel also assisted the local fire departments with one wildfire which was adjacent to the Forest.

Recreation/Education

Hunting, fishing, horseback riding, motorcycle/ATV riding, mountain biking, and use of the rifle/pistol range continue to be favorite activities. Manchester personnel also participated in all three sessions of Wood Magic, one school career day and hosted a silvicultural tour with approximately 12 participants.

Six (6) special-use permits were issued for organized events with approximately 1,256 paid participants.

An organized clean-up comprised of 17 volunteers was held on Manchester which resulted in 13 tons of trash being picked up. These volunteers were hunters from various parts of the state who not only gave of their time, but also provided equipment to help with the cleanup effort. Also joining in this project were personnel from the City of Hartsville, Sumter County Public Works, and Manchester State Forest.

Wildlife Management

Approximately 26,000 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 and dove fields. They also agreed to plant the 150-acre dove field on the Oak Lea Tract. The draw hunts at Oak Lea also increased in popularity as evidenced by the increased number of applications. Game harvests increased significantly from the previous year with 89 deer being harvested.

Five (5) public dove fields were opened on Manchester and Oak Lea with an opening day participation of five hundred forty (540) hunters. Two thousand two hundred forty-eight (2,248) doves were harvested on opening day with a total of 12,060 shots being fired.

Manchester also hosted its annual youth dove hunt on the Bland Tract, which was limited to 30 youths accompanied by 24 adults who were required to register in advance. Two hundred forty-eight (248) doves were harvested during this event with 1,946 shots being fired.

During the year DNR also provided technical assistance with deer herd dynamics, tracking various game and non-game species including quail, turkey, and fox squirrels and pond management. DNR also assisted in law enforcement on the Forest through interagency cooperation.

Planting and maintenance was conducted on 587 acres of wildlife areas. Corn, popcorn, Egyptian wheat, sunflowers, sorghum-brown top-millet-benne 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 Woodpeckers. 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 allows them to monitor and work on the colony sites only with prior agreement with the Manchester State Forest Director. A meeting with DNR, Poinsett Weapons Range, and USF&W Service personnel resulting in an emergency recovery plan for the RCW.

Research

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

Infrastructure

Maintenance continued on approximately 100 miles of unimproved dirt roads on Manchester including grading and mowing.

WEE TEE STATE FOREST

Wee Tee State Forest, located on the Santee River in lower Williamsburg and Georgetown Counties, was acquired by the South Carolina Forestry Commission in November of 2003 through the partnership of eight

participants. These partners included the South Carolina Forestry Commission, South Carolina Department of Natural Resources, The Conservation Fund, US Forest Service, Forest Legacy Program, US Fish and Wildlife Service, North American Wetlands Conservation Act Grant, Ducks Unlimited, National Wild Turkey Federation, and Anheuser-Bush. Wee Tee contains 12,394 acres of which 770 acres is comprised of planted loblolly pine plantations and upland pine-hardwood types and the remaining 11,624 acres is comprised of bottomland hardwood types with the associated oxbow lakes and creeks. Being in the Santee River Focus Area of Ducks Unlimited's Lowcountry Initiative, it is a very significant, unfragmented bottomland hardwood forest. Its significance lies in its watershed and water supply protection, habitat for wildlife and a number of threatened and endangered species as well as the opportunities it provides for recreation, forest practices, and education.

Receipts

For fiscal year 2008-09, \$35,358.23 was collected on Wee Tee State Forest as payment for SCDNR's WMA program and five timber sales for a total of \$232,710.66 from which \$67,017.40 was paid to Williamsburg and Georgetown counties.

Silvicultural Practices

Three hundred one and one half (301.5) acres of bottomland hardwood were sold for silvicultural harvest for regeneration purposes.

One hundred eighty-six (186) acres were thinned for fuel chips and pulpwood.

Recreation/Education

Fishing in the Wee Tee Lakes was opened in April, 2004 on Wednesdays and Saturdays from sunup to sundown.

A hunting season was planned with SCDNR and was implemented starting in September 2004. Harvest data was not collected, nor required; however, hunters indicate successful seasons for both deer and turkey.

Plans have been initiated in cooperation with Palmetto Conservation Foundation to allow canoeing and kayaking in the Wee Tee Lakes in conjunction with the Berkeley County Blueways with an information center being opened in nearby St. Stephens.

Forest Protection

Gates have been constructed and placed on all known entrances into Wee Tee to control access for the protection of the property and infrastructure.

Wildlife Management

An agreement has been reached in 2004-05 with SCDNR to place Wee Tee under the WMA program according to a pre-closing cooperative arrangement. Hunting and fishing schedules were agreed upon and implemented.

Infrastructure

Manchester State Forest personnel made improvements to approximately 45 miles of roads on Wee Tee during FY2009. Improvements included grading, mowing, and drainage improvements by removing beaver dams and replacing culverts.

Wee Tee State Forest has one permanent employee with primary responsibilities to the wildfire efforts mainly in Williamsburg and Georgetown Counties, and secondary maintenance responsibilities to roads, buildings and other infrastructure at Wee Tee.

POE CREEK STATE FOREST

Poe Creek State Forest is located in Pickens County adjacent to SC Highway 11 and contains 1,806 acres. The property was purchased from Crescent Resources, Inc. on April 6, 1999. Approximately 800 acres is under forest management with 610 acres of planted pine and 190 acres that have been clearcut and allowed to regenerate naturally to native hardwood species. The remaining 1,006 acres are in natural upland hardwood type and a mixture of white pine and hardwoods. The steep terrain in this area limits the forest management activities that can be implemented.

The Piedmont Forestry Center, located 5 miles north of Salem in Oconee County, encompasses 705 acres. It includes a conference center, picnic shelter, and two houses that are available for rental groups. The timber on this property is managed along with that on Poe Creek.

Receipts

<u>Activity</u>	<u>Receipts</u>
Timber Sales	\$0.00
Wildlife Management Area	\$16,748.00
Rental state property	\$3,505.00
Cabin / conference center rentals	\$1,680.00
Total	\$ 21,933.00

Note: 25% of all forest receipts are paid to Pickens and Oconee Counties for a total of \$4,187.00.

Silvicultural Practices

No timber harvesting occurred on Poe Creek State Forest or on the Piedmont Forestry Center during FY09. Two prescribed burns were conducted during the past year on the Piedmont Forestry Center property for a total of 12 acres. These burns were designed to control hardwoods, reduce the risk of wildfire, and improve the aesthetics of three loblolly pine plantations and one white pine plantation. Possible harvests are being considered for the FY 10.

Recreation/Education

Use during FY09 was heavy, with numerous individuals and groups taking advantage of this beautiful facility; with over 270 scouts, 700 high school and middle school students, and more than 100 local educators utilizing the facilities in various capacities.

A fishing rodeo was held at the Piedmont Forestry Center during June 2009. This event, designed primarily for youth, was attended by 1,400 individuals and was sponsored by the Forestry Commission, SC DNR, and numerous partners. During September 2009, SC's Wood Magic Forest Fair was held at the Piedmont Forestry Center with numerous local schools participating.

Forest Protection

Harvesting on Poe Creek and on the Piedmont Forestry Center has reduced density in overstocked loblolly pine plantations. This harvesting has improved forest health and reduced the hazard of wildfire and infestation by bark beetles.

Wildlife Management

The SC Forestry Commission and the Department of Natural Resources cooperate on the planting and management of a 40-acre dove field at the Piedmont Forestry Center. During FY09, three wildlife food plots were expanded and 14 other food plots were maintained to improve the wildlife habitat on Poe Creek. Poe Creek State Forest and the Piedmont Forestry Center are both in DNR's Wildlife Management Area program and are open to public hunting.

Rare, Threatened, and Endangered Species Management

Poe Creek State Forest continues to provide habitat for several populations of federally endangered plants. These areas are being protected from human encroachment.

Preliminary studies are being conducted on the Cheohee Valley stream reclamation project.

Infrastructure

Road access at both the Piedmont Forestry Center and at Poe Creek State Forest was maintained during FY09 through mowing of road shoulders and grading where needed. The south end of the pole barn was renovated and how houses a new Type 6 Pumper.

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.

RECEIPTS FOR SAND HILLS OPERATING BUDGET

Activity		FY 09
Timber & Stump Sales	\$	671,246.85
Pinestraw Sales	\$	996,544.74
WMA Payment	\$	23,125.57
Rent State Owned Property	\$	3,386.25
CRP Payment	\$	390.00
Rent Equipment	\$	350.00
User Fees	\$	7,022.50
Prior Year Refund	\$	2,643.50
Donation	\$	4.00
	\$	1,704,713.41

Note: 25% of \$1,698,329.66 was paid to Chesterfield and Darlington County School Systems. Donations, prior year refunds, and rental income categories are not included when calculating the total to be dispersed to the school systems.

COUNTY PAYMENT

County	FY 09
Chesterfield	\$414,392.44
Darlington	\$10,189.98
Total	\$424,582.42

Silvicultural Practices

No seedlings were planted on Sand Hills State Forest during the 2008-09 fiscal year.

In 1999 Sand Hills started a pinestraw enhancement program. Under this program, an individual from the public can enter into a multi-year contract with the Forestry Commission to rid longleaf pine stands of scrub oaks for pine straw production. The individual agrees to eradicate 90% of all hardwoods on a tract of land using herbicides. In exchange, that person may harvest all of the pinestraw that falls during the contract period. When the contract 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. Currently there are 13 individuals working on approximately 8,957 acres of land.

To date, 17,637 acres of longleaf stands have been cleaned up in the enhancement program and have reverted to SHSF to sell during bid sales.

In FY 09 Sand Hills State Forest sold approximately 7,067 acres of pine straw for \$996,544.74.

Pinestraw Enhancement Program

Fiscal Year	Contracts	Acres
2000	29	5,635
2001	25	6,922
2002	5	1,104
2003	3	467
2004	15	2,147
2005	2	421
2006	26	1,784
2007	7	918
2008	56	4,644
2009	46	2,552
TOTAL	214	26,594

FY 2009 saw an increase in timber sales over previous years with 1,433 acres involved for a total of \$670,996.87. Product volumes and dollar amount by product are:

Product	Volume	Dollar Amount
• Pine Pulpwood	• 12,507 tons	• \$120,304.96
• Pine CNS	• 1117 MBF	• \$139,094.79
• Pine Sawlogs	• 2192 MBF	• \$406,918.36
• Hardwood Pulpwood	• 99 tons	• \$723.86
• Hardwood Sawlogs	• 32 MBF	• \$3,954.90

As a result of community meetings and increased pinestraw activity at Sand Hills State Forest, a vehicle registration system was implemented to ensure that licensed, insured vehicles were operating on the Forest. The registration stickers provide a visible means to those patrolling the Forest that the participant has complied with the program. Red registration stickers are used for a 2-week or 60-day pinestraw sale, yellow registration stickers are used for the pinestraw enhancement program and the green registration stickers are used for state forest users that want to access the "authorized vehicles only" truck trails. The majority of the green registration stickers were issued to hunters.

VEHICLE REGISTRATION STICKERS

Fiscal Year	Restricted Trails	Pinestraw Sale	Enhancement
	Green Stickers	Red Stickers	Yellow Stickers
2006	228	93	68
2007	237	134	73
2008	226	127	83
2009	284	209	264
TOTAL	975	563	488

Forest Protection

A total of 2,744 acres were prescribed burned for wildlife habitat enhancement, hardwood control and fuel reduction.

Sand Hills State Forest had one wildfire that burned 5 acres in FY 09.

Recreation

Recreational use of the Forest continues to increase. Hunting, fishing, hiking, bird watching, and camping continue to be favorite activities. Equestrian use on SHSF remains low due to the free riding that is offered at H. Cooper Black Recreational Area under the management of SCPRT.

Geo-caching is a new activity that is becoming popular at Sand Hills. Geo-caching is a game of hiding and seeking treasures by entering the location using a GPS system and then putting the location online for individuals to find the geo-cache. There are 5 geo-caches on Sand Hills, 130 within 25 miles of Sand Hills and over 845,000 geo-caches worldwide.

During FY 09 SHSF personnel built a wooden fishing pier, which is one hundred feet in length, on Mountain Pond as well as a 16' by 16' wooden fishing pier on Flory Pond.

SHSF personnel built a new retaining wall atop Sugarloaf Mountain to replace the one that was consumed by a wildfire. The new wall was constructed of concrete cinder blocks. One hundred bales of wheat straw were placed and staked on the mountainside in an effort to help prevent erosion.

At Sugarloaf Mountain, there are 6 primitive camping sites for family camping and 8 primitive equestrian campsites. Sand Hills personnel booked 119 reservations for these sites this year. An estimated 2,426 visitors used the campsites and trails. FY 09 fees are from \$15 per site for sites with shelters and \$10 per site without shelters.

**SUMMARY OF SAND HILLS STATE FOREST RECREATION
AREA**

Fiscal Year	Reservations	Visitors
2000	316	3,674
2001	307	3,456
2002	283	4,200
2003	228	2,776
2004	268	4,986
2005	172	5,582
2006	167	3,738
2007	132	3,196
2008	150	3,122
2009	119	2,426
TOTAL	2,142	37,156

***Number of Visitors does not include day users nor does it include visitors from other user groups (i.e. hunters, fisherman, birdwatchers, pinestraw workers, etc.).**

Trail use permits for horse back riding increased from 358 in FY 2008 to 393 permits in FY 2009. Three hundred fifteen annual/daily permits were sold online. Seventy-eight daily permits were purchase through the drop box outside the SHSF office. Revenue from trail use permits totaled \$7,022.50. The permit holders came from South Carolina, North Carolina, Georgia, Virginia, Ohio and Florida.

Free-use permits are issued for any activity at Sand Hills State Forest that does not have a fee. SHSF personnel issued 49 this year. Twenty-four (24) of the permits were for raking pinestraw for personal use and twenty-five (25) for gathering firewood.

Summary of Sand Hills Permits

Year	Trail-Use Permits	Free-Use Permits
FY 2000	573	412
FY 2001	839	299
FY 2002	932	335
FY 2003	1,240	255
FY 2004	1,246	192
FY 2005	1,314	78
FY 2006	1,147	43
FY 2007	504	39
FY 2008	358	28
FY 2009	393	49
Total	8546	1730

Nineteen scout groups used Sugarloaf Mountain Recreation Area for their weekend campouts. Sugarloaf Mountain shelters accommodated seven church events and thirteen family reunions/birthdays for picnics and retreats. Sugarloaf Mountain camping areas accommodated a large number of hunters that hunt on SHSF and Carolina Sand Hills National Wildlife Refuge.

Three special-use permits were issued for organized events.

1. Endure for the Cure Endurance Ride on November 8, 2008: 70 Riders, 10 Volunteers and \$350 permit fees
2. Sand Blast Rally on February 7, 2009: 58 Competitive entries with 76 people racing 18 cars and 41 motorcycle teams, 90 Volunteers and \$380 permit fees
3. Sand Hills Stampede Endurance Ride on March 21-22, 2009: 119 Riders, 10 Volunteers and \$595 permit fees

These events bring many visitors to Sand Hills State Forest and surrounding areas. This year's events brought in an estimated \$100,000 for the area. The local involvement and sponsorship have increased each year that these events have been held.

The SHSF Recreational Advisory Committee meets quarterly to discuss plans and projects that are taking place within the different areas of recreation that are offered on SHSF.

Education

SHSF had classes from the following schools visit for educational purposes: Governor's School of Science and Mathematics and Francis Marion University. SHSF personnel visited and presented programs to the following schools: Pageland Elementary (3rd Grade) – 150 students, Spalding Middle School (6th-8th Grade) - 75 students. In addition to visiting classrooms, SHSF personnel also spoke to several civic clubs as well as participated in the Wood Magic Forest Fair.

Wildlife Management

Approximately 40,000 acres of the Forest is included in the Wildlife Management Area Program. This is a cooperative agreement between the Department of Natural Resources (DNR) and the S.C. Forestry Commission. SHSF has two public dove fields. The Wilkes Chapel field is 57 acres in size and planted in corn, sunflowers, and lespedeza. The Davis field is 40 acres in size and is also planted in corn, sunflowers, and lespedeza.

Eighty one acres (110 plots) were planted as wildlife food plots. These plots were planted in wheat, 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 13, 14, 15, 16, 17 and 21 were bush hogged, fertilized, and limed. Three local volunteers worked approximately 400 man hours with the Sand Hills staff planting and maintaining wildlife food plots.

SHSF continues to conduct surveys for DNR. Furbearers, fox squirrel, turkey and quail were surveyed to track population trends.

Rare, Threatened and Endangered Species Management

Population Trends: There are currently 75 managed Red-cockaded Woodpecker clusters on SHSF. During FY 09, 66 of the 75 clusters were active clusters, and there were 64 potential breeding groups.

Sixty-three nesting attempts were made by 52 groups in 2009; 45 of these attempts produced viable offspring.

Management Implications: The initiation of a vigorous recruitment program will likely result in greater increases over the next few years. Recruitment clusters are to be provided at a rate of 10% of the active number of clusters. A single bird has occupied a new recruitment cluster that was installed in

Compartment 11. There are plans to install 19 new cavities in existing clusters in FY 2010 to bring those clusters up to standard. Placing new recruitment clusters in strategic locations based on the RCW management plan in concert with translocation of individuals to recruitment sites will likely result in the highest rate of population growth.

Law Enforcement

In FY 09 law enforcement personnel at Sand Hills opened 41 cases with a total of 108 separate charges. These totals show a dramatic increase over FY 08. Of these charges, 60% were either Rules & Regulations of the Commission or Wildlife Management Area abuse. Included in the case totals are 5 felony charges 2 of which are still pending General Sessions Court. Game cameras continue to play a vital role in assisting in prosecution of several cases. FY 09 also saw the addition of 2 Class I officers at the state forest. While these officers primarily have non-law enforcement duties, their assistance has allowed a more effective enforcement and a more visible presence in the surrounding community. The highlight of FY 09 was the investigation of the largest pinestraw theft operation in the state forest's history. This investigation resulted in the prosecution of 6 individuals for various charges paying over \$15,000 in fines and receiving over 16 months in state prison.

Research

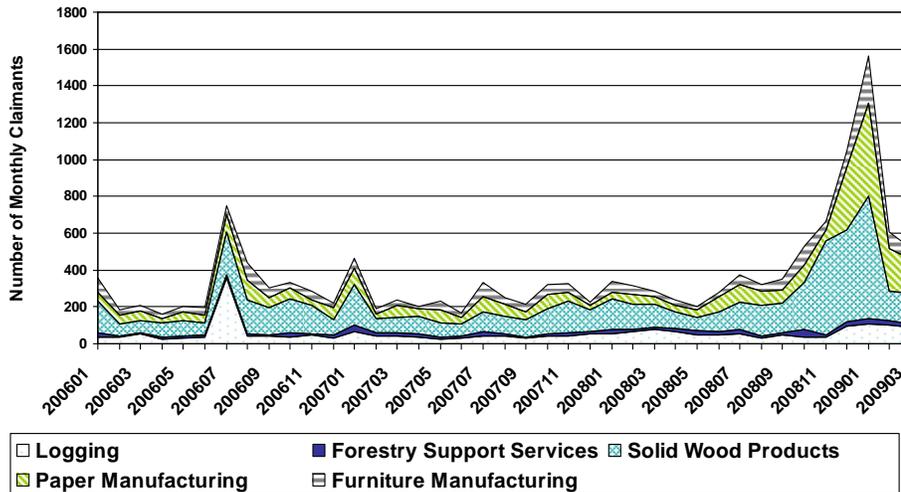
A longleaf pine natural regeneration research project in conjunction with the US Forest Service is ongoing and has been in effect for 25 years.

Resource Development

BUSINESS DEVELOPMENT

The national recession that began in December 2007, and continued through June 2009, is the longest recession on record since the Great Depression. The housing crisis that contributed in leading the country into recession appears to have bottomed out by the end of the 2nd quarter, 2009. However, over FY 09, housing starts were down 36.6% in the US South and 52% nationally. Other signs of recovery include the sharp decline in new unemployment insurance claims in the state's forestry sector. Although the recession has been severe, South Carolina's forest industry appears to have weathered the storm.

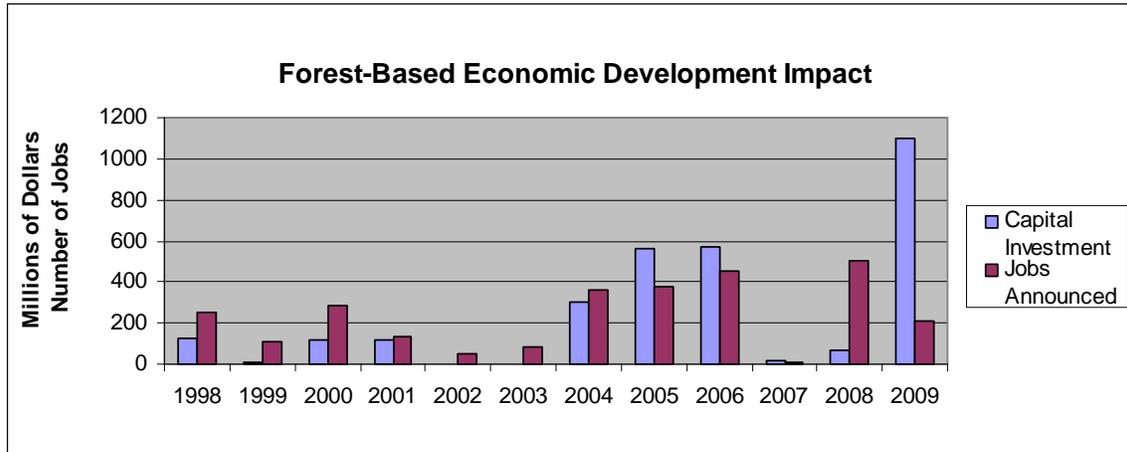
Comparison of UI Claims by Forestry Sector
January, 2006 through March, 2009



Despite the recession, interest in new renewable energy projects remained strong in FY 09. Federal legislative bills that encouraged renewable energy development through mandatory renewable electricity standards were largely responsible for the continued interest in woody biomass projects. To promote growth in renewable energy, the SC Forestry Commission updated official estimates of biomass availability in South Carolina. The new biomass data was presented to members of the SC Biomass Council in March 2009. A total of 16.1 million tons of biomass from multiple sources is available for renewable energy project in the state.

During FY 2008-2009, five forest industry announcements were made that will involve \$1.1 billion in new capital investment and 207 new jobs in South Carolina. In June 2009, the Department of Energy awarded a \$795 million contract to Ameresco, an independent energy service provider, to construct three new biomass energy plants at Savannah River Site. In October 2008, Rollcast Energy announced plans to construct a \$170 million 50 MW biomass power plant in Newberry County. Sonoco announced plans to invest \$135 million in a 50 MW biomass power plant at its Hartsville plant. Creation of Palmetto Renewable Energy, a pellet plant, in Allendale County and

Denmark Lumber Company in Bamberg County round out a record year in forest products investment in South Carolina.



During the 2009 fiscal year, the SCFC Resource Development Division actively participated in 16 economic development projects. 12 of the 16 projects involved utilization of biomass in the manufacture of pellets (4 projects), biofuels (3 projects), electric power generation (3 projects), and steam generation (2 projects). The SCFC represented the agency and forestry community through 25 statewide and regional economic development organizations. Finally, 214 individual business assists were made to address single-issue requests.

FOREST INVENTORY & ANALYSIS

The Forest Inventory and Analysis (FIA) program is a cooperative program with the US Forest Service – Southern Research Station to collect forest inventory and forest health monitoring data from a network of permanent sample plots. Funding for the program is provided through a 75% federal grant and a 25% state match of the federal grant funds. Additional funding is supplied by state funds. There are 3,452 total forest inventory plots located in South Carolina. Plots are sampled in 20% increments of the total, referred to as panels. Plots are measured for growth projections, mortality and harvest assessments, and land-use classification. In addition, FIA provides information about South Carolina’s forest resources including forest acreage, timber quality, timber volume, timber growth, forage, water, and recreation. This network of plot data collection is referred to as the Phase 2 portion of FIA field data collection. The information provided by FIA Phase 2 allows the evaluation of both quantity and quality of these important resources. The US Forest Service furnishes data analysis and reporting for this program.

A subset of the FIA plots are selected to provide data on forest health, referred to as the Phase 3 portion of FIA field data collection. A total of 204 sample plots are located in South Carolina. Each year, during the summer, 20% of these plots, referred to as panels, are measured to provide forest health data, such as, soil chemistry, tree health, tree carbon fixation, tree nutrient storage, and potential for tree survival and reproduction. Phase 3 data provides a quantitative assessment of current tree conditions and provides an integrated measure of site conditions, stand density and influence of external stresses. In addition, bioindicator sample plots are taken to detect the presence of ozone pollution. Ozone detection sample plots are not a part of the Phase 2 and Phase 3 sample grid, but are on a separate polygon grid system across the state.

Currently, three full-time inventory crews, consisting of two employees each, are stationed throughout the state with field offices in Newberry, Florence, and Walterboro. The program

coordinator is stationed in Columbia. All crewmembers are required to exceed a minimal accuracy average of 87% for all inventory plots. US Forest Service personnel conduct quality assurance and quality control checks to insure the accuracy of the data collected by Forestry Commission field crews. During FY 2008-2009, the average accuracy for all crewmembers was 93.35% with each crewmember exceeding the 87% yearly average required by the US Forest Service – Southern Research Station.

During FY 2008-2009, field crews completed one panel of plots that began in FY 2007-2008 and began the next panel. For the fiscal year a total of 541 Phase 2 and Phase 3 sample plots were completed. The Forestry Commission FIA program is currently 50% complete with the 10th inventory of the state and is on schedule to complete the 10th inventory measurements in five years, with December 2011 as a target date for completion. In addition to data collected on FIA plots, the FIA program completed 4 product utilization studies on active logging operations in the piedmont region of the state to develop factors for logging residues, logging damage, and utilization of the non-merchantable portion of trees.

NURSERY AND TREE IMPROVEMENT

The South Carolina Forestry Commission operates two Nursery and Tree Improvement (N&TI) facilities: Taylor Nursery in Edgefield County and Niederhof Forestry Center in Jasper County. The goal of the N&TI Program is to provide landowners with the highest-quality seed and seedlings available for timber production, wildlife habitat improvement, Christmas tree production, and restoration of valuable forested ecosystems.

TAYLOR NURSERY

Taylor Nursery, located one mile east of Trenton, SC in Edgefield County, produces bare-root and containerized seedlings for South Carolina landowners. Originally named Ridge Nursery when built in 1958, the facility was renamed Taylor Nursery in 1981 when the main office complex was rebuilt following a fire. The new name was in honor of A. Brandon Taylor Jr., an Upstate industrial leader in wood treatment, who served as a Commissioner from 1961-1982 and Commission Chairman from 1975-1981. The nursery property, including office complex, roads, & irrigation pond, consists of 345 acres. 106 acres are under irrigation and used for seedling production.

The SCFC conducts a nursery survey annually to determine the number of seedlings planted in South Carolina. During FY 2008-2009, 42,791,994 softwoods and 900,320 hardwood seedlings were planted in South Carolina for a total of 43,692,314 seedlings from all nursery sources. This number is 11% lower than the 49,320,517 seedlings reported planted in FY 2007-2008. The number of seedlings planted in South Carolina has declined 58% since FY 1999-2000 due to fewer acres of final harvest, lower timber stumpage prices and a slowdown in government cost-share funding.

Taylor Nursery distributed 5,000,671 softwood and 292,610 hardwood seedlings in FY 2008-2009 for a total of 5,293,281 seedlings total. Of this total, 553,498 seedlings were sold out of state. The total amount distributed represents 86% of the total number of bareroot and containerized seedlings grown at Taylor Nursery. The SCFC sold 10.8% of the seedlings distributed in South Carolina this year from all public and private sources. Taylor Nursery is one of the primary producers of hardwood and longleaf pine seedlings in the state. High demand for containerized

longleaf led nursery staff to expand capacity to grow 1,200,000 seedlings. Additional expansions are planned over the next few years.

Each year the SCFC surveys at least a 10% sample of seedling customers to determine general satisfaction with our seedlings and to target areas for improvement. Since beginning the survey, customer satisfaction has averaged 94% overall. The 2009 survey indicated that 88% of our customers were satisfied with our seedling quality and service. Of the customer comments on returned survey forms, over half of the comments were complimentary of the nursery program. Of the comments that suggested areas for improvement, the primary issue was the small size of some bareroot longleaf seedlings. All comments are being evaluated and addressed as possible.

Taylor Nursery keeps up-to-date with technology through association with the Auburn University Forest Nursery Management Cooperative, the Southern Forest Nursery Association and the Longleaf Alliance. Recent research studies conducted at Taylor Nursery include: (1) a herbicide toleration study to improve chemical control of hard-to-control weeds such as spurge, nut sedge and Poor-Joe, (2) a study to find an alternative to methyl bromide for nematode control, and (3) a broad fumigation + fungicide study installed in April 2008 and continued in 2009.

NIEDERHOF FORESTRY CENTER

Niederhof Forestry Center (NFC) is located on a 1,593-acre tract of land that the SCFC purchased on December 1, 1983. Originally part of the Hoover Plantation, a 3,950-acre plantation north of Tillman, SC, Niederhof was acquired to establish second-generation seed orchards and to provide areas for future advanced-generation orchards. NFC was located in an area of the state that is well known for good seed production and minimal frost and ice damage. The facility was named for Cam Niederhof, a Westvaco executive, who served as a SCFC Commissioner for 24 years.

Second-generation loblolly pine orchards were established from 1985-1989, totaling 322 acres. NFC's orchards came into production in 1993 with some 4,542 bushels collected from both Coastal and Piedmont province orchards; to date some 53,000+ bushels have been collected.

The recent addition of a Forestry Technician I position in March 2008 continued to serve the Commission well over the past fiscal year. All initial technician training classes were completed as well as the hour-specific requirements for field work. Stationing of the technician at Niederhof has permitted prompt response to 10 wildfire dispatches; additionally, the technician has assisted Edisto Unit personnel in conducting controlled burns. The technician likewise has continued to contribute greatly to facility and equipment maintenance, orchard management practices, and seed processing.

Third-cycle orchard establishment continues in earnest with 231 grafts added to the Coastal province and 216 added to the Piedmont province in 2008. Orchard establishment is at roughly 70%, with approximately 11 acres of Coastal province and 10 acres of Piedmont province orchards in place. 2009 grafting has yielded an additional 250 Coastal grafts and 140 Piedmont grafts to be deployed.

Cone collection for 2008 yielded 2,248 bushels. Seed processing generated 1,866.9 pounds of seed. Utilizing new data from the NCSUCTIP, selected family lots collected are being grown at Taylor Nursery to enhance the potential revenue a landowner may expect from reforestation with these seedlings. NFC's annual sale of seed and pine cones generated \$125,638.30 in revenue: to date, Niederhof's 2nd-generation orchards have created additional revenue in the amount of \$1,461,931.53 from cone and seed sales.

Our relationship with Cellfor continues to provide the Forestry Commission with additional revenue opportunities while promoting valuable research through tree breeding activities. Cellfor is a full member of the NCSUCTIP and continues Cooperative breeding and testing at NFC. The

Forestry Commission continues as a Contributing Member of the NCSUCTIP. The public/private applied research agreement between the Forestry Commission and ArborGen was terminated this year as the need for seed from our 2nd Generation Coastal loblolly pine orchard declined. As funding for the Commission's Tree Improvement facility remains tenuous, our research agreement with Cellfor is a vital component of funding operations.

Tree Seedling Distribution by Landowner Classification 2008-2009

Land Ownership	Softwoods Planted	Hardwoods Planted	Total Number of Trees Planted	Percent of Total
Non-Industrial Private Landowners	28,767,275	813,080	29,580,355	67.7%
Forest Industry	12,342,950	17,075	12,360,025	28.3%
Corporate	200,975	50,525	251,500	0.6%
Government	1,480,794	19,640	1,500,434	3.4%
Total	42,791,994	900,320	43,692,314	

Source of Seedlings Planted in South Carolina

Nurseries in South Carolina	Softwoods Distributed	Hardwoods Distributed	Total Number of Trees Distributed	Percent of Grand Total
ArborGen (Bleinham, SC)	16,042,400	155,350	16,197,750	37.1%
Weyerhaeuser	9,732,200	2,600	9,734,800	22.3%
MeadWestvaco (closed)	0	0	0	0.0%
South Carolina Forestry Commission	4,484,013	255,770	4,739,783	10.8%
Oak Grove Nursery (closed)	0	0	0	0.0%
Total	30,258,613	413,720	30,672,333	70.2%

Nurseries Outside of South Carolina

ArborGen (Belleville, GA)	6,447,681	10,000	6,457,681	14.8%
Plum Creek	3,776,000	0	3,776,000	8.6%
International Forest Company	548,700	327,000	875,700	2.0%
Meeks	1,160,000	0	1,160,000	2.7%
North Carolina Forest Service	600,000	19,100	619,100	1.4%
Georgia Forestry Commission	1,000	130,500	131,500	0.3%
Total	12,533,381	486,600	13,019,981	29.8%

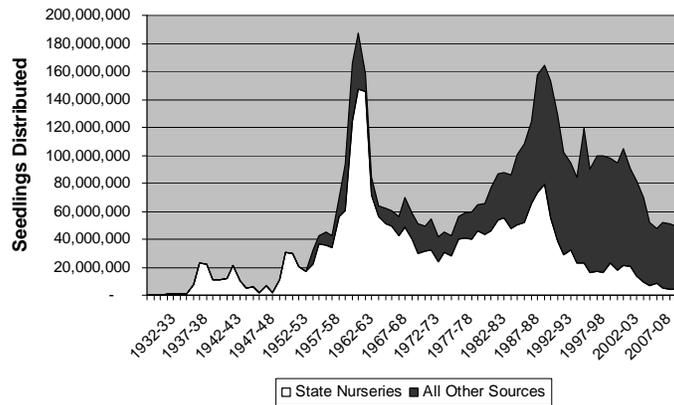
Grand Total	42,791,994	900,320	43,692,314	100%
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State Nursery Seedling Production & Sales for FY 2008-2009

<u>Species</u>	<u>Seedlings Produced</u>	<u>Seedlings Sold</u>	<u>% Sold</u>
Ash, Green	3,680	3,680	100%
Atlantic White Cedar CTR	1,000	1,000	100%
Baldcypress	3,160	3,160	100%
Carolina Sapphire CTR	414	414	100%
Cedar, Eastern Red	31,100	28,710	92%
Cherry, Black	470	470	100%
Clemson Greenspire CTR	630	630	100%
Crabapple	5,090	5,090	100%
Dogwood	4,850	2,030	42%
Hickory, Pignut	700	700	100%
Lespedeza, Attaway	164,340	164,340	100%
Leyland Cypress CTR	16,560	16,560	100%
Loblolly Pine, CTR	5,600	5,600	100%
Loblolly Pine, Coastal 2nd gen.	500,000	293,360	59%
Loblolly Pine, Coastal 2nd gen. SRS	240,000	240,000	100%
Loblolly Pine, C Fast Growth Best Family	400,000	125,070	31%
Loblolly Pine, C Rust Resistant Best Family	69,910	69,910	100%
Loblolly Pine, Piedmont 2nd gen.	741,550	741,550	100%
Loblolly Pine, P Fast Growth Best Family	500,000	312,245	62%
Loblolly Pine, P Rust Resistant Best Family	224,750	224,750	100%
Loblolly Pine, Cellfor Q3802 & L3791	61,500	61,500	100%
Longleaf Pine	1,640,000	1,575,000	96%
Longleaf Pine, SRS	268,000	268,000	100%
Longleaf Pine CTR	919,910	919,910	100%
Maple, Red	2,675	2,675	100%
Oak, Bur	800	800	100%
Oak, Cherrybark	35,000	3,150	9%
Oak, Gobbler	11,400	6,660	58%
Oak, Laurel	9,000	260	3%
Oak, Live	2,185	2,185	100%
Oak, Northern Red	9,000	3,710	41%
Oak, Pin	4,000	1,610	40%
Oak, Post	5,000	440	9%
Oak, Sawtooth	40,000	10,450	26%
Oak, Shumard	10,000	780	8%
Oak, Swamp Chestnut	2,930	2,930	100%
Oak, White	7,260	6,310	87%
Oak, Willow	20,000	2,730	14%
Palmetto, Cabbage	2,000	1,330	67%
Pear	2,000	2,000	100%
Pecan	2,340	2,340	100%
Persimmon	4,250	3,510	83%
Plum	3,310	3,310	100%
Redbud	2,215	2,215	100%
Shortleaf Pine	100	100	100%
Slash Pine, Rust Resistant	3,000	1,000	33%
Sweetgum	12,000	2,720	23%
Sycamore	21,000	3,140	15%
Virginia Pine	48,220	45,220	94%
Walnut, Black	3,500	2,590	74%
Wax Myrtle	4,750	3,850	81%
White Pine	71,984	66,982	93%
Wiregrass, CTR	36,000	36,000	100%
Yellow Poplar	<u>8,605</u>	<u>8,605</u>	<u>100%</u>
Totals	6,187,738	5,293,281	86%

Seedling Distribution 1928-2009

Year	Total State Nurseries	Total All Sources	Year	Total State Nurseries	Total All Sources
1928-29	142,000	142,000	1968-69	29,529,000	51,453,000
1929-30	148,000	148,000	1969-70	31,415,000	49,203,000
1930-31	986,000	986,000	1970-71	31,940,000	54,541,000
1931-32	976,000	976,000	1971-72	23,678,000	41,357,000
1932-33	996,000	996,000	1972-73	30,978,000	45,239,000
1933-34	1,031,000	1,031,000	1973-74	28,443,000	42,306,000
1934-35	7,529,000	7,529,000	1974-75	40,082,000	55,997,000
1935-36	23,000,000	23,000,000	1975-76	40,664,000	59,063,000
1936-37	22,000,000	22,000,000	1976-77	39,795,000	59,238,000
1937-38	11,192,000	11,192,000	1977-78	45,735,000	64,380,000
1938-39	10,854,000	10,854,000	1978-79	43,010,000	65,937,000
1939-40	12,244,000	12,244,000	1979-80	46,375,000	76,207,000
1940-41	21,165,000	21,165,000	1980-81	53,513,000	86,420,000
1941-42	10,275,000	10,275,000	1981-82	55,728,000	87,793,000
1942-43	4,742,000	4,742,000	1982-83	47,799,000	86,265,000
1943-44	5,663,000	5,663,000	1983-84	50,170,000	100,394,000
1944-45	1,963,000	1,963,000	1984-85	51,636,000	107,718,000
1945-46	6,402,000	6,402,000	1985-86	65,465,000	124,381,000
1946-47	1,963,000	1,963,000	1986-87	73,555,000	157,523,000
1947-48	11,357,000	11,357,000	1987-88	78,788,000	164,095,000
1948-49	30,389,000	30,339,000	1988-89	55,052,000	153,450,000
1949-50	29,502,000	29,502,000	1989-90	38,356,000	128,475,000
1950-51	20,615,000	20,615,000	1990-91	29,297,000	102,384,000
1951-52	16,619,000	16,619,000	1991-92	31,984,000	94,710,000
1952-53	22,036,000	32,246,000	1992-93	22,665,000	84,287,000
1953-54	36,210,000	42,852,000	1993-94	23,286,000	119,311,000
1954-55	35,373,000	45,182,000	1994-95	16,154,000	90,336,000
1955-56	34,414,000	42,932,000	1995-96	16,841,000	99,549,000
1956-57	55,754,000	69,659,000	1996-97	16,058,000	99,439,000
1957-58	60,846,000	93,369,000	1997-98	23,278,000	97,963,000
1958-59	123,985,000	166,351,000	1998-99	17,955,000	94,539,000
1959-60	147,146,000	187,516,000	1999-00	21,524,000	104,594,000
1960-61	145,609,000	158,331,000	2000-01	20,095,000	90,346,000
1961-62	71,892,000	83,844,000	2001-02	13,500,000	81,431,000
1962-63	56,191,000	64,202,000	2002-03	9,376,000	69,989,000
1963-64	51,446,000	62,424,000	2003-04	7,202,000	51,823,000
1964-65	49,010,000	60,683,000	2004-05	8,563,000	47,243,000
1965-66	42,311,000	56,529,000	2005-06	5,437,000	52,165,000
1966-67	48,575,000	69,598,000	2006-07	4,206,000	50,900,000
1967-68	39,970,000	58,812,000	2007-08	4,539,842	49,320,517
			2008-09	4,739,783	43,692,314
Total State Nurseries		2,570,877,625			
Total All Sources		4,931,689,831			



SCFC Active Seed Orchards

Orchard Type	Years Established	Acres
Creech Seed Orchard/Manchester State Forest		
Genetic Diversity Archives (Clone Banks)	1977-1983	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)	1986	2
Sawtooth Oak 1.0 Seedling	1990	2
Total		47
Niederhof Seed Orchard		
Coastal Loblolly Pine 2.0	1985-1988	68.3
Piedmont Loblolly Pine 2.0	1985-1988	63.1
Longleaf Pine 1.0	1988-1990	30
Loblolly Pine Breeding Orchard 3.0	1997-2003	10
Longleaf Pine Seedling Seed Orchard	1998	8
Coastal Loblolly Pine 3.0	2005-2008	11
Piedmont Loblolly Pine 3.0	2005-2008	10
Total		200.4
Coastal Seed Orchard		
Sycamore 2.0	1992-1995	4
Sweetgum 2.0	1992-1995	6
Willow Oak Seedling Seed Orchard	1992-1995	1
Swamp Chestnut Oak Seedling Seed Orchard	1992-1995	1
Green Ash Seedling Seed Orchard	1992-1995	3
Red Maple Seedling Seed Orchard	1992-1995	1
Southern Red Oak Seedling Seed Orchard	1992-1995	2
White Oak Seedling Seed Orchard	1992-1995	2
Total		20
Piedmont Seed Orchard		
White Pine 1.5	1991-1993	12
Virginia Pine 1.0	1993	3
Northern Red Oak Seedling Seed Orchard	1993-1995	2
Total		17
Grand Total		284.4

ENVIRONMENTAL MANAGEMENT

The Environmental Management Section is responsible for the development and implementation of South Carolina Forestry Commission programs 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 Best Management Practices (BMPs) related to timber harvesting was 99.6% for 2007-2008, demonstrating continual improvement since monitoring began in 1990. Compliance for harvesting BMPs was 84.5% in 1990, 84.7% in 1991, 89.5% in 1994, 91.5% in 1999, 94% in 2001, and 98% in 2005. Evaluation of difficult and borderline sites by a review team of outside experts resulted in 91.3% agreement, showing strong consensus on BMP implementation and identification of potential water quality impacts.

BMP Education/Training Program

BMP training and education are essential to the success of the Forestry Commission's non-regulatory BMP program. During this fiscal year, 3,953 contact hours of training were held across the state for loggers, landowners, contractors, and forest resource professionals. Included in these meetings were ten workshops for the Timber Operations Professional (TOP) logger training and education program. BMP Foresters participated in 28 programs reaching 672 individuals.

Courtesy Exam Program

The S.C. 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 2008-2009 fiscal year, the BMP Foresters provided assistance on 573 sites and completed 347 courtesy exams. BMP Foresters also conducted 92 hours of aerial observation for active forestry operations and responded to 44 complaints.

Endangered Species

The Environmental Management Section monitored endangered species developments with an emphasis on those species that may impact forestry operations. Species of interest include the Red-cockaded Woodpecker, Flatwoods Salamander, and Carolina Heelsplitter. 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 S.C. Department of Natural Resources, and assisting State Forests and other state-owned properties upon request.

Cooperation with Other Agencies

Programs related to environmental protection of forest resources require close cooperation with other agencies. S.C. Forestry Commission has a Memorandum of Understanding with S.C. Department of Health and Environmental Control (DHEC) addressing cooperation on water quality issues. The Environmental Management Section serves as technical authority on silvicultural activities, and cooperates with DHEC on evaluation and remediation of possible impacts. BMP Foresters often work with DHEC and the U.S. Army Corps of Engineers when those agencies have regulatory authority over issues which may effect forestry operations, such as wetlands and navigable waterways. BMP Foresters also provide assistance with planning and implementation of Best Management Practices on public lands managed by other agencies.

TECHNOLOGY DIVISION

An internal reorganization in FY07 established the Technology Division. This Division comprises of the Information Technology Section, Geographic Information Systems (GIS) Section, Communications Section and Dispatch Operations Section.

INFORMATION TECHNOLOGY

The Information Technology Section is responsible directly and indirectly for the maintenance and support of the agency's local and wide area network; nine (9) Windows Server 2003 Servers; one (1) Windows NT Server; network storage devices; computers, laptops and peripherals for over 150 computer users; software applications; and implementation of various initiatives to support agency operations and programs.

Upgrading of all in-house developed Microsoft Access 97 applications to Access 2003 was completed by the end of 2008. This will eliminate the need to install older versions of Microsoft Access on computers and simplify future support of these applications. Fourteen (14) out-of-warranty Dispatch Center workstations were replaced this year. The agency was seeing a higher than normal failure rate with these heavily used workstations that were initially purchased in 2004.

The State's data network backbone was upgraded from frame relay and ATM circuits to Multiprotocol Level Switching (MPLS). MPLS offers a higher level of reliability and ability to prioritize various types of network traffic. Upgrading to MPLS better aligns the state and agencies with current and future technology needs such as Voice over IP telephony and Radio over IP. Technical issues were finally resolved with the installation of a more stable fiber optic connection at the Coastal Region Office and Dispatch complex to complete the agency's migration to MPLS in August, 2008.

GIS

The Forestry Commission continued development of an Enterprise GIS System to support USDA Forest Service Spatial Accomplishment Reporting requirements and BMP program. The system will focus around a spatial database and mobile GIS application for field personnel to capture forest management activities and to develop management plans and maps. The BMP program mobile GIS and reporting application was beta tested and implemented by field personnel this year. As time and funding permits, this Enterprise GIS System will also be utilized for agency property management; wildland and urban interface planning; fire management applications; state forest and state lands management; natural disaster survey and recovery work; and other program areas.

The Southern Group of State Foresters is updating the GIS model that analyzes the risk of wildfires in the southern region of the US to make it more interactive and timely. The Southern Fire Risk Assessment System identified using pre-2005 data the potential for serious fires and prioritizes areas where mitigation options may be desirable. The updated model would allow state forestry agencies the ability to utilize more current data in the model. The GIS analyst has been assisting in updating data layers used in the model to better represent local South Carolina conditions for further use by agency's Fire Managers.

The GIS Manager was heavily involved in producing special and daily map products associated with the Hwy 31 wildfire. This work greatly improved the flow of information from the Incident Management Team to field firefighters, Fire Staff members, assisting agencies, media, and other decision makers.

A graduate level GIS internship program with the University of South Carolina was established in 2006. This program provides an opportunity for students to be exposed to state government activities and utilize GIS technology in a real world setting. In FY09, the intern assisted in updating the communities at risk layer and generating county wildfire risk maps from the Southern Fire Risk Assessment System; cleaning up spatial layers for the Enterprise GIS System; entering stewardship plan data into the agency's geodatabase; projects involving the creation of mosaics of historical aerial photographs; updated map layers including the 911 address and centerline layer for the agency's computer aided dispatch system. He also assisted users of **ArcGIS™** with application problems or questions.

COMMUNICATIONS

Using National Fire Plan grants, the Forestry Commission continued updating its two-way radio system to narrowband technology as mandated by Federal Communications Commission regulations. Federal agencies were mandated to migrate to narrowband by 2006 and all other users by January 1, 2013. Replacement of all agency's mobile radios (555), base stations (7), repeaters (26), and portable radios (300) with narrowband capable equipment was completed in FY09. With all equipment in the field narrowband capable, the next phase will be to re-license and move all the agency's VHF radio frequencies to narrowband spacing to meet the 2013 deadline.

Other major projects completed in FY09 included the addition of a repeater at the Draytonville Fire Tower site to fill in a communications hole north of Hwy 11 in Cherokee and Spartanburg counties. The Newberry Radio Tower was upgraded with the addition of guide cables, new antennas and coaxial cables. Radio over IP links were installed to replace dedicated phone lines between the Cottageville, Lodge and Coastal Dispatch Center. The agency will see \$3,000/month in savings utilize Radio over IP technology and DSL lines instead of dedicated telephone lines between these locations.

The agency maintains 44 Palmetto 800MHz radios for Law Enforcement Officers and Incident Management Teams for better interoperability with other Federal, State, and local agencies. One radio is being used as a base station that is incorporated with the agency's dispatch centers. It provide an alternative access to the agency's dispatch centers by these individuals and other agencies on the Palmetto 800Mhz system.

The Communications Section began preparing a "solutions based procurement" for a Radio over IP and Voice over IP dispatch consoles to replace the agency's "end-of-life", analog radio dispatch consoles and phone systems installed in 1995-96. Products in this area have matured over the past few years and became less proprietary – important features for reliability and interoperability for mission critical communications. It is anticipated that a contract will be awarded in 2009 and equipment installed in 2010.

DISPATCH OPERATIONS

The Forestry Commission operates three (3) dispatch centers that handles over 60,000 phone calls annually for burn notifications for the purpose of forestry, wildlife or agricultural and reporting of wildfires. On July 1, 2005, the agency went "live" with a new computer aided dispatch and records management systems. These systems replaced a custom developed application written in 1996. Federal funds from the National Fire Plan and other grants were used to fund this new system.

Utilizing commercial, "off-the-shelf" dispatching software from Logistic Systems, Inc., the system incorporates many of the features and functionality of 911 dispatch systems. The new system determines the closest available unit based on road mileage and travel speeds; automates the

notification of personnel of wildfires; alerts dispatchers when certain dispatching timeframes are exceeded; allows for the utilization of automated vehicle location (AVL) technology; and automates the compliance issues with smoke management regulations on forestry, wildlife and agricultural burn notifications. The software was upgraded to version 4.4 in July, 2008 which met the final requirements needed for system acceptance.

As a performance measure in the Forestry Commission's Accountability Report, the average time from receiving the wildfire call and assigning a firefighter (i.e. Dispatching) was reduced by 2.15 minutes with the new software. This improved by another 0.20+ minutes in FY 2007 and FY 2008; and by another 0.31 minutes in FY 2009. Processing of smoke management notifications also decreased with the new software by 1.4 minutes on average (see tables below).

**SUMMARY AND COMPARISON OF DISPATCH TIMES
FOR FISCAL YEAR 2002 through 2009**

TIMES	FY 2002 Average (Minutes)	FY 2003 Average (Minutes)	FY 2004 Average (Minutes)	FY 2005 Average (Minutes)	FY 2006 Average (Minutes)	FY 2007 Average (Minutes)	FY 2008 Average (Minutes)	FY 2009 Average (Minutes)
Dispatching	6.27	5.12	5.10	6.33	4.18	3.56	3.53	3.22

**SUMMARY AND COMPARISON OF SMOKE MANAGEMENT NOTIFICATIONS
PROCESSING TIMES
FOR FISCAL YEAR 2004 through 2009**

TIMES	FY 2004 Average (Minutes)	FY 2005 Average (Minutes)	FY 2006 Average (Minutes)	FY 2007 Average (Minutes)	FY 2008 Average (Minutes)	FY 2009 Average (Minutes)
Processing Time	4.16	4.61	3.49	2.81	3.00	3.13

The new dispatching software includes applications that allow for remote, real-time access to wildfire, prescribed fires, and resource activity. Fire Managers and Fire Information Officers have access to current information for command and control functions and media requests. Using virtual private network (VPN) connections through the Internet or cellular wireless broadband services, agency personnel in the field have real-time access to dispatching activity throughout most of the state or nation. Efforts are underway to have smoke management notifications and wildfire information available to other users on the Internet with a web mapping application that will be automatically updated every 30 minutes.

SCFC Financial Statement FY 2008-2009

REVENUES

State Appropriations \$ 14,034,768

Federal Grants \$ 5,011,992

Earmarked Funds

Hunting & Fishing License \$ 134,471

Refund of Prior Year Expenditure 55,499

Burning Assistance Fee 259,558

Fire Lane Fee 172,561

Timber Marking Fee 6,892

Training Conference - Registration Fee 1,050

User Fee - State Park & Forest 98,083

Forest Product Assessment 750,150

Construction of Water Bar 5,015

Stand By for Prescribed Burning 8,773

Sale of Seedlings 635,091

Sale of Timber 3,270,825

Conviction Surcharge 20,749

Miscellaneous Revenue 33

Rent - Residence 19,896

Rent - Farm Land 63,587

Rent - State Owned Property 53,978

Rent - Equipment 4,695

Contributions & Donations 150,612

Insurance Claims 17,890

Sale of Services 46,622

Sale of Recycling Material 1,053

Sale of Vehicles (Capitalized) 49,917

Sale of Machinery and Equipment (Capitalized) 13,114

Sale of Buildings (Non-Capitalized) 225

Sale of Machinery and Equipment (Non-Capitalized) 716

Sale Other Equipment 15

Total Earmarked \$ 5,841,070

Total Revenue \$ 24,887,830

EXPENDITURES

State \$ 14,034,747

Federal \$ 4,829,062

Other \$ 5,710,180

Total Expenditures \$ 24,573,989

EXCESS OF REVENUES O/(U) EXPENDITURES \$ 313,841

South Carolina Forestry Commission Organization Chart

