

Senate Fish, Game and Forestry Oversight Subcommittee

Summary Report on the South Carolina Forestry Commission

March 2016



The South Carolina Forestry Commission protects, promotes, enhances, and nurtures all forest lands, both rural and urban, and all associated forest values and amenities including timber, wildlife, water quality, air quality, soil protection, recreation, and aesthetics. The commission provides forest management, forest protection, resource development, and environmental education through over 300 employees located throughout the state. For the 13 million acres of forested land in the state, the commission provides fire protection, assists with detection and treatment of forest pests, and helps landowners with management and development of forest land. The five state forests total over 92,000 acres and are managed for timber and public recreation activities.

Agency at a Glance

The South Carolina Forestry Commission's mission is to "protect, promote, enhance and nurture the forest lands of South Carolina in a manner consistent with achieving the greatest good for her citizens." The Forestry Commission has four programs: forest management, forest protection, resource development, and public information and environmental education. The commission manages five state forests, assists landowners with the management of 13 million acres of forested land in the state, and provides firefighting and fire prevention for forest land. For FY 14-15, the agency had appropriations of \$28.5 million and expenditures of \$22.8 million with a staff of about 300 employees located across the state.

Issues

UNAUTHORIZED FUND TRANSFERS

SCFC did not have authority to transfer funds from the Forest Renewal Program to fund other agency operations. The commission transferred \$150,000 per year from the forest renewal program for other areas that had lost funding due to budget cuts.

- **Agency Recommendation:** The SC Forestry Commission should not transfer funds from earmarked or restricted accounts without authority.

INADEQUATE MONITORING OF FRP COMPLIANCE

SC Code §48-28-80 requires landowners receiving payments from the Forest Renewal Program to maintain their land in accordance with the forest renewal plan or they will have to repay the funds received. In 2013, the agency adopted a new procedure to formalize the monitoring of compliance with forest renewal plans but had not implemented it. According to the commission, foresters began implementing the procedure in the late summer of 2015 and will seek reimbursement from landowners not in compliance with the FRP.

- **Agency Recommendation:** The SC Forestry Commission should continue to implement its procedure to formally monitor whether landowners maintain their lands in accordance with the forest renewal plan and seek reimbursement of the cost share payments if the landowners do not follow the plan.

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Members of Subcommittee:

Senator Chauncey K. Gregory, Chair

Senator Sean Bennett

Senator Creighton B. Coleman

Senator J. Thomas McElveen, III

Senator Katrina Frye Shealy

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I. Agency at a Glance

A. Mission

The South Carolina Forestry Commission’s mission is to “protect, promote, enhance and nurture the forest lands of South Carolina in a manner consistent with achieving the greatest good for her citizens.” These duties “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.” While this mission statement is not explicitly codified, it encompasses authorizing legislation spanning eight chapters in Title 48 of the SC Code of Laws. The agency accomplishes their mission through various programs, including forest management, forest protection, environmental education, and resource development.

B. Governing Authority

Pursuant to S.C. Code Ann. §48-23-10, the State Commission of Forestry is composed of nine members who are appointed for six-year terms. All members must reside in South Carolina and be appointed by the Governor. The members of the board shall be appointed as follows:

- (1) two members must be practical lumbermen;
- (2) one must be a farmer who is a landowner;
- (3) three members must be selected and appointed from the public at large;
- (4) two members must be appointed by the Governor from the public at large upon the advice and consent of the Senate; and
- (5) one member must be the President of Clemson University or the Dean of the School of Forestry to serve as his designee.

The Commission is responsible for appointing and employing a State Forester. If the Commission is of the opinion that the State Forester becomes unsuitable or incompetent, the Commission may remove the State Forester.

Position	Position Title	Current Members	Appointed By	Appointed Date	Expiration Date
At Large, Public	Member	Scott, Mitchell S.	Governor Nikki R. Haley	4/6/2012	6/30/2018
At Large, Public	Member	Muckenfuss, George Edward Jr.	Governor Marshall C. Sanford, Jr.	10/22/2010	6/30/2016
At Large, Public	Member (Chairman)	McPhail, Water A. Jr.	Governor Nikki R. Haley	7/1/2014	6/30/2020
At Large, Public-confirmed by Senate	Member	Morrison, Harry S. III	Governor Marshall C. Sanford, Jr.	5/28/2010	6/30/2016
At Large, Public-confirmed by Senate	Member	Thompson, James Bradford	Governor Nikki R. Haley	3/22/2013	6/30/2018
Landowner Farmer	Member	Burris, A. G.	Governor Nikki R. Haley	5/3/2012	6/30/2018
Practical Lumberman	Member	Coker, Sam R.	Governor Marshall C. Sanford, Jr.	8/25/2009	6/30/2015
Practical Lumberman	Member	Neville, Jesse C.	Governor Nikki R. Haley	3/5/2015	6/30/2020
President of Clemson University	Ex Officio Member				

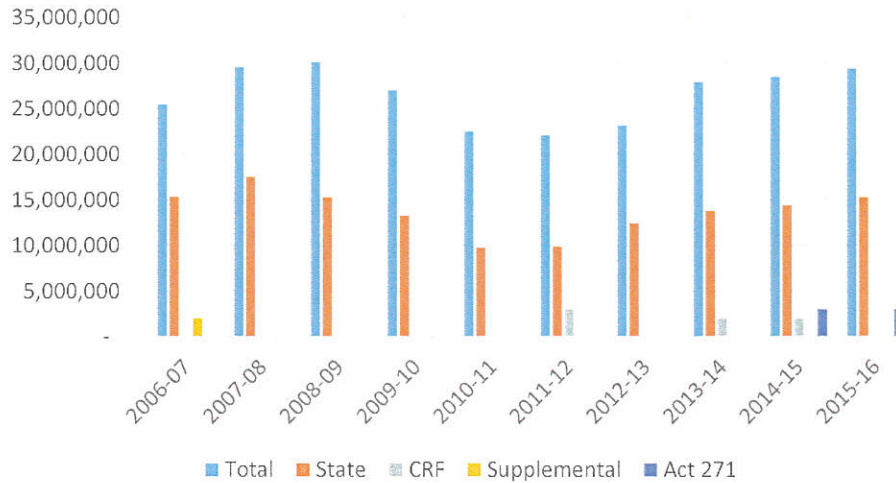
C. Finances: Revenues and Expenditures

Revenue: Appropriations, State Forests, Land Owner Assistance/User Fees

Appropriations

The agency's combined recurring and non-recurring funding of \$29.4 million for FY 15-16 has returned to its highest levels since FY 07-08. The following year, the agency received a slight increase in the recurring general fund budget in addition to the first of several non-recurring appropriations. For FY 11-12, the agency received \$3 million from the CRF. They also received \$2 million in both FY 13-14 and FY 14-15. In addition to direct appropriations, Act 271 of 2012 transfers 2.25% of the annual revenue from the insurance premium tax to the Forestry Commission until 2017. This has generated approximately \$3 million dollars per year for FY 13-14 and FY 14-15. All of these non-recurring appropriations were designated for firefighting. The agency is using these funds to purchase firefighting equipment, primarily bulldozers and associated plows, and transportation vehicles.

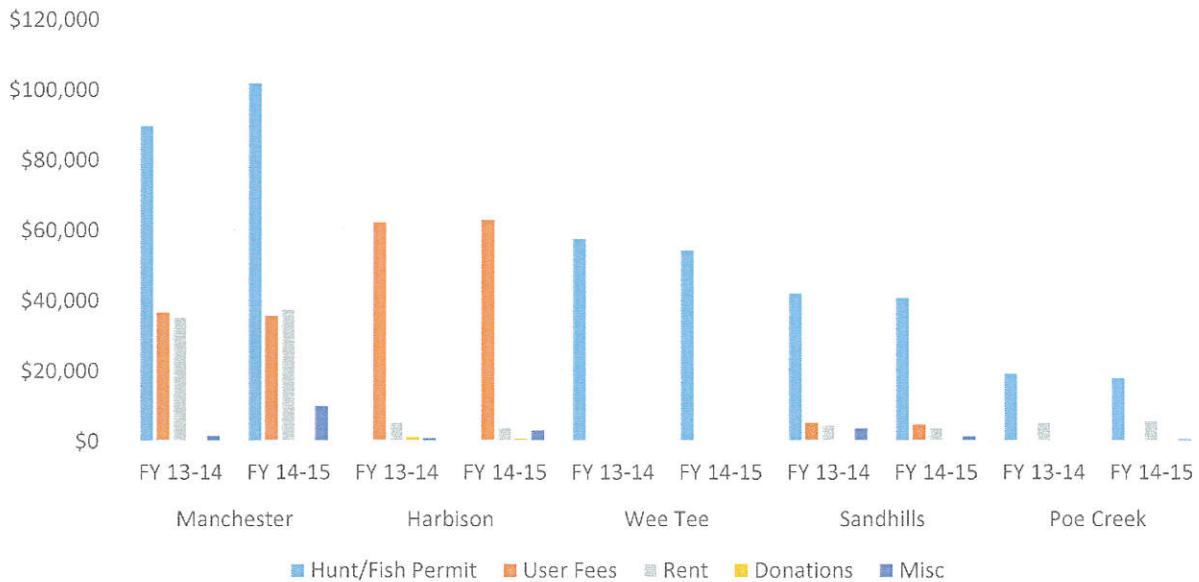
Appropriations



State Forests

The SCFC earned annually about \$2 million from the five state forests and one seedling orchard during FY 13-14 and FY 14-15. The revenue was earned from hunting and fishing permits, user fees, sale of timber and pine straw, rentals, donations, and easements or rights-of-way. Over the last two fiscal years, the sale of timber raised \$2.5 million from the Sand Hills State Forest, approximately \$800,000 in Manchester, and almost \$140,000 in the Niederhof seedling orchard. The remaining revenue was mostly from hunting and fishing permits, user fees, and rentals as shown in the chart below.

Revenue from State Forests



Revenue from state forests has been declining and, for FY 13-14 and FY 14-15, did not cover the expenses of operating the forests. From FY 10-11 to FY 14-15, the revenues have declined 37%. The commission

attributes this decrease to depressed market prices for timber and pine straw, and a lower volume of products for sale, due to endangered species requirements.

	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15
Revenue	\$3,126,490	\$3,072,999	2,146,257	\$2,363,876	\$1,979,540
Expenses	1,905,164	1,813,109	1,296,900	2,084,033	1,848,539
25% to Schools	750,485	747,630	699,817	581,427	477,609
Back to SCFC	837,065	0	149,540	53,385	0

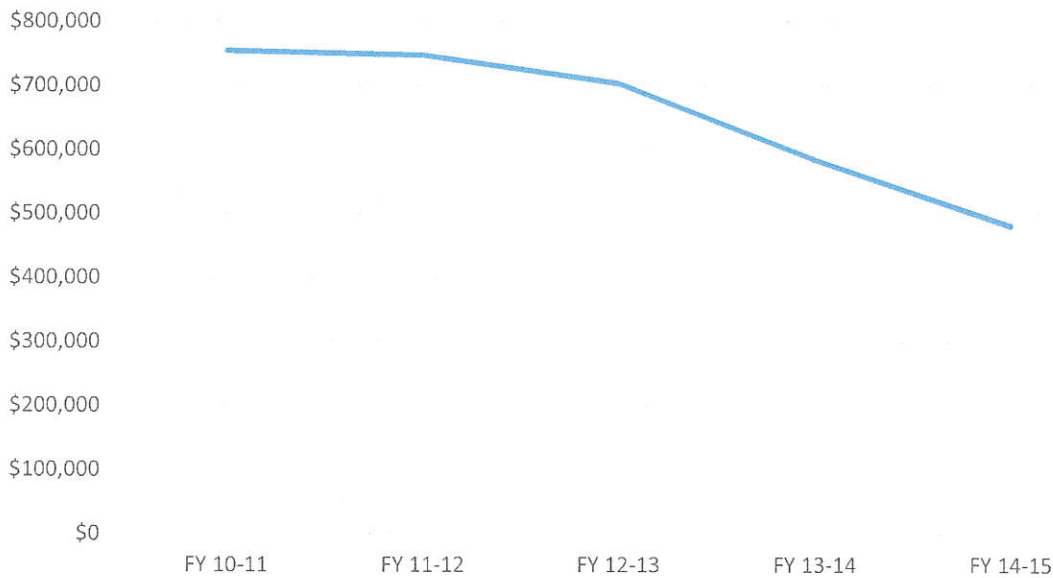
The commission has also used revenues from the state forests for other operations. As shown in the table, over this five-year period, approximately \$1 million was transferred for other expenses.

Counties in South Carolina received roughly \$1 million in revenue over the last two fiscal years from the commission’s management of the state forests. State law requires that counties containing state forests be paid 25% of the proceeds from the sale of timber, pulpwood, poles, gravel, land rentals and other privileges. The funds must be spent for general school purposes upon the approval of a majority of the county legislative delegation, including the senator.

	FY 13-14	FY 14-15	Total
Chesterfield	\$378,823	\$263,204	\$642,026
Sumter	145,854	130,224	\$276,078
Jasper	991	35,966	\$36,958
Richland	15,806	15,700	\$31,506
Williamsburg	14,160	13,376	\$27,536
Clarendon	10,067	8,832	\$18,899
Darlington	9,752	6,821	\$16,573
Pickens	3,451	3,219	\$6,669
Kershaw	3,870	2,689	\$6,558
Oconee	1,340	1,250	\$2,589
Orangeburg	1,113	0	\$1,113
Georgetown	194	183	\$377
Total	\$585,420	\$481,464	\$1,066,884

The amount of revenue distributed to the counties has also been decreasing over the five-year period.

Revenue Distributed to Counties



Landowner Assistance/User Fees

The commission has several activities for which it is authorized to charge a fee. SC Code Section 48-23-295 requires the commission to charge an adequate amount to cover the cost of the forestry services provided to landowners. Funds derived from these fees are retained by the agency to be utilized for these same purposes. While these services are available to all landowners, they are particularly beneficial to individuals and families with smaller privately-owned holdings that may otherwise not have access to the services provided. Typically, owners of larger tracts of forest land find it financially viable to own the equipment needed and perform these activities themselves or contract with a private provider. Provision of these services encourages individuals and families to continue to retain forest land and engage in silviculture, which is defined as "...the art and science of controlling the establishment, growth, composition, health and quality of forests and woodlands...". Additionally, the user fees for the state forests allow the commission to maintain this resource for people to utilize for recreation. The table below depicts some of the primary fees levied by the commission.

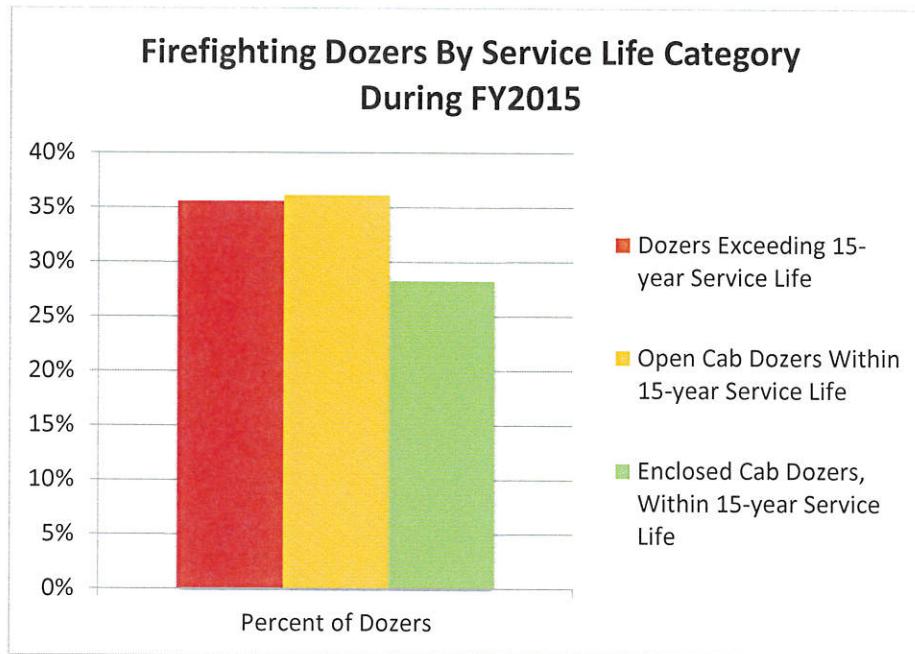
Activity	Statute	2015 Annual Revenue
Sale of Seedlings	§ 48-23-100	\$298,510
Burning Assistance Fee	§ 48-23-295	\$211,039
Fire Lane Fee	§ 48-23-295	\$130,322
User Fee - State Forests	§§ 48-23-132 & 290	\$102,959
Standby for Pre Burn	§ 48-23-295	\$6,250
Construction of Water Bars	§ 48-23-295	\$2,910

Expenditures: Fire Protection

Fire Protection & Act 271

One of the primary activities of the commission is wildland fire protection. Approximately 65% of the agency's total expenditures are for this purpose. Because the commission cross-trains other staff in firefighting and moves resources during times of need, the actual expenditures are probably higher. The primary method the agency uses

for fire protection is to isolate fires using bulldozers and plows. Currently, the cost of a new bulldozer, plow, trailer, and truck for transporting the equipment costs between \$255,000 and \$280,000, depending upon the specific equipment configuration. The agency is seeking to replace all of the bulldozer fleet that has exceeded 15 years of age or that does not have an enclosed cab. Out of the total fleet of 191, 54 will be enclosed cab units with less than 15 years of service, 69 are open cabs with less than 15 years of service and 68 have exceeded 15 years of service life.



Due to the relocation of Caterpillar’s manufacturing and assembly operations, there has been a delay in receipt of the 18 units currently on order. It is anticipated that they will arrive by the end of 2015. At that time, the agency plans to sell 15 older units. This, along with another 16 units that will be retired, but retained as spares, will leave an operational fleet of 176. The stated goal is to have a fleet of 160 manned enclosed cab units. It would require approximately \$6 million annually to reach this goal in five years.

Act 271 of 2012 transferred 2.25% of the revenue from the Insurance Premium Tax from July of 2013 through June of 2017 to the Forestry Commission for firefighting and firefighting equipment. This has provided approximately \$3 million per year for the first two years. This should allow the agency to purchase 11 enclosed units annually. The \$6 million received thus far from the Insurance Premium Tax coupled with approximately \$10 million in non-recurring funding provided directly in the appropriations act over the past few years has allowed the agency to purchase 54 enclosed cab bulldozers. The distribution of the thirty-six units received thus far is shown below. The remaining eighteen units on order will be distributed equally with six units deployed to each of the three regions. The enclosed cab units already in service are distributed equally between the three regions with at least one in each of the 24 sectors (8 per region). Once this was achieved, fire load was considered in placing additional units in sectors.

Coastal	Units	Pee Dee	Units	Piedmont	Units
Aiken	1	Kershaw	2	Anderson	1
Allendale	1	Florence	1	Cherokee	1
Barnwell	1	Horry	1	Greenville	1
Beaufort	1	Marion	1	Greenwood	1
Berkeley	2	Georgetown	2	Newberry	1
Charleston	1	Clarendon	1	Pickens	1
Colleton	1	Darlington	2	Richland	1
Dorchester	1	Sumter	1	Saluda	2
Hampton	1	Williamsburg	1	Union	1
Orangeburg	2		12	York	2
	12				12

This year, the Commission has provided firefighters on more than one occasion to several western states (primarily California) to assist in combatting the numerous forest fires that they have experienced this summer. Should a major forest fire in South Carolina exceed the scope of the Commission’s resources, it is anticipated that other states would provide assistance to handle these fires.

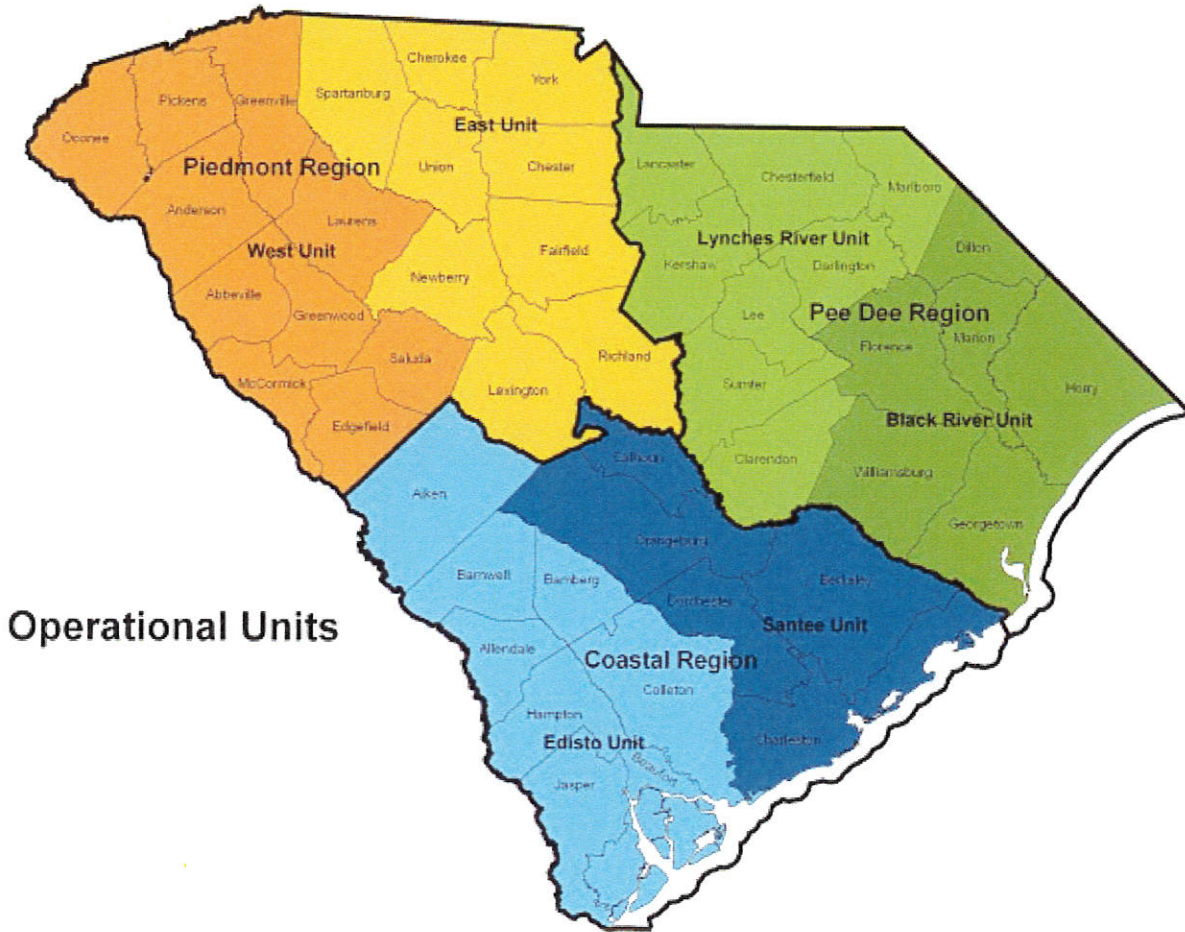
D. Staffing

At the beginning of 2015, the Forestry Commission had 328.55 filled FTEs, an increase from previous years. They have a vacancy rate of 5.7%. One hundred fifty-five (44%) of the employees are in front line firefighting positions with a goal of 160 positions. The workforce at the Forestry Commission is stable with relatively little turnover.

E. Operations, Coordination with Other State Agencies, and Programs

Operations

The Forestry Commission divides the state into three regional operations: Coastal, Piedmont, and Pee Dee. Each region is overseen by a regional forester. Each region is divided into two units, and within the units, areas are broken into zones. Zones are divided according to fire fuel types, weather patterns, and fire loads to manage resources. During major events, personnel and equipment will be moved around the regions as needed. A statewide computer dispatch system utilizing three call centers around the state manages resources for fire events for all regions.



Operational Units

Coordination with Other State Agencies

The State Lands Forest Management Program was created to provide professional forest management assistance to South Carolina state agencies that own timberlands. This assistance consists of cruising, marking, management assistance, and administering timber sales. In FY 14-15, the agencies and facilities assisted were as follows:

DNR Timber Sales	Acres
	2387
PRT Timber Sales	Acres
Aiken (Mgt)	450
Hampton Plantation (Mgt)	100
Other State Lands Timber Sales	Acres
Abbeville County (Mgt.only)	100
Richland County (Mgt Only)	100

The Forestry Commission also works with other agencies for fire prevention and law enforcement.

Programs

The Forestry Commission has four programs: forest management, forest protection, resource development, and public information and environmental education.

Forest Management: Urban and Community Forestry, Stewardship and Reforestation, State Forests

Urban and Community Forestry. Urban and Community Forests are all vegetation and green spaces within communities. Community forestry is the combination of planning, establishment, management, and research of trees and associated plants within cities, suburbs, and towns. The Forestry Commission provides technical and/or educational assistance regarding community forest inventories and management plans, community and county tree ordinances, grant project implementation, how to become a Tree City USA, proper tree selection, installation, care and maintenance. They also organize the distribution of educational information, coordinate and conduct training workshops, and promote SC’s Arbor Day. Primary assistance is provided to personnel working for towns, cities and counties. Secondary assistance is provided to professional associations, civic and volunteer organizations, state agencies, educational institutions, and businesses. This program would be considered fully staffed with five FTEs, but is currently operating with three.

Stewardship and Reforestation. The Forest Stewardship program is designed to assist private landowners to become forest caretakers to benefit future generations. Any landowner who owns at least ten acres of forestland can qualify for the program. The Forestry Commission will put together a multiple-resource Stewardship Management Plan (SMP) for the landowner detailing recommendations for timber management activities that are designed to help prevent soil erosion and protect water quality. The SMP may also provide optional details on wildlife habitat improvement, recreational opportunities and ways to enhance the natural beauty of the forest. Several cost-share programs are also available to qualifying landowners. To encourage landowners to plant trees, the SC Forestry Commission operates a Forest Renewal Program (FRP), established by SC Code §48-28-10 *et seq.*, which provides financial assistance to private landowners to increase productivity through the use of forest renewal practices. Eligible landowners can receive funding for up to 40% of their costs for tree planting, site preparation and timber stand improvement. The commission must approve the practices used by the landowner and the forest management plan developed for the land.

The program is funded by a \$200,000 appropriation of state funds and an assessment on primary forest products which totals \$800,000. The agency retained funds for their costs associated with the program as well as to make up for budget cuts. The Department of Revenue (DOR) also retained funds for their costs associated with the program. For FY 15-16, the costs were 6% of the funds, but, in the prior three fiscal years, the costs were 26%. The following table shows the fund distribution prior to initial allocation.

	FY 12-13	FY 13-14	FY 14-15	FY 15-16
FRP Funds	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Budget Cut	(150,000)	(150,000)	(150,000)	0
SCFC Costs	(55,000)	(50,000)	(50,000)	(40,000)
DOR Costs	(10,000)	(10,000)	(10,000)	(10,000)
5% Hardwood	(39,250)	(39,484)	(39,500)	(47,500)
Carry-Forward	128	22,869	16,312	10,730
Total	\$745,878	\$773,385	\$766,812	\$913,230

- FRP Funds – Total available for the Forest Renewal Fund.
- Budget Cut – SCFC had budget cuts beginning in 2002. In response to those cuts, the agency transferred funds from the FRP to fund other agency operations.
- SCFC Costs – Amount retained by the SCFC for costs associated with the FRP program.
- DOR Costs – Amount set aside to cover DOR collection costs. DOR’s actual costs had been about \$7,000 and dropped to about \$4,000 in FY 14-15.

- 5% Hardwood – Five percent of the funds are designated for hardwood plantings. At the option of the State Forester, funds not used for hardwoods are spent for the replanting of trees on sites where a lot of seedlings have died.
- Carry-Forward – Carry-forward of funds from the previous fiscal year that had not yet been allocated.
- Total – Amount of funding available for initial allocation.

These funds are then allocated to every county based on two factors: need and potential.

- Need is the reforestation need in each county which is estimated based on harvest levels from the Timber Product Output (TPO) surveys.
- Potential is the acres of non-industrial private forest timberland in a county which is determined from Forest Inventory Analysis data.

The county allocations are calculated periodically as TPO reports are released. The following table shows the allocations and funding of applications by county for FY 15-16.

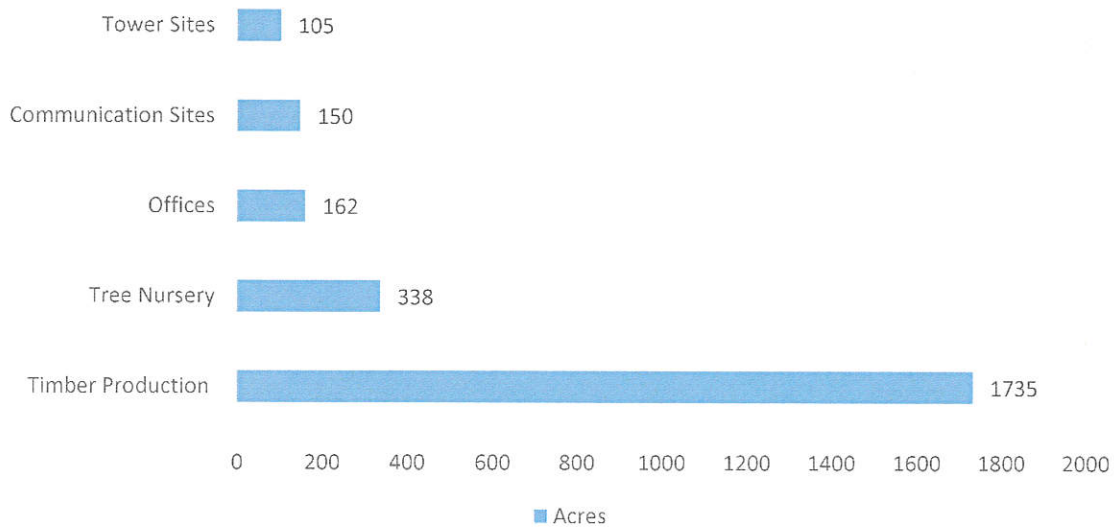
County	Allocation	# Apps Funded	\$ Funded	Balance	# Apps Not Funded	\$ Needed
Abbeville	\$15,298	4	\$21,996	(\$6,698)	9	\$23,868
Aiken	21,896	6	20,132	1,764	2	17,300
Allendale	21,564	4	16,224	5,340	1	6,084
Anderson	11,228	5	13,848	(2,620)	0	0
Bamberg	16,453	5	21,815	(5,362)	4	29,632
Barnwell	22,175	6	29,225	(7,050)	13	59,810
Beaufort	13,994	2	11,862	2,132	0	0
Berkeley	26,360	2	22,540	3,820	3	26,544
Calhoun	17,578	9	24,700	(7,122)	15	71,844
Charleston	16,313	3	13,890	2,423	1	7,800
Cherokee	9,754	4	7,410	2,344	1	5,226
Chester	20,556	6	21,372	(816)	2	6,240
Chesterfield	21,444	3	16,356	5,088	18	76,338
Clarendon	19,308	3	17,410	1,898	1	14,800
Colleton	29,493	4	22,764	6,729	15	80,559
Darlington	13,171	6	21,534	(8,363)	13	55,184
Dillon	17,786	3	15,396	2,390	2	16,800
Dorchester	23,397	4	25,802	(2,405)	4	20,840
Edgefield	27,601	6	23,868	3,733	6	43,330
Fairfield	28,219	7	27,906	313	10	46,956
Florence	20,100	4	28,343	(8,243)	12	61,759
Georgetown	24,940	2	29,250	(4,310)	5	11,919
Greenville	11,151	2	13,104	(1,953)	0	0
Greenwood	19,328	2	12,246	7,082	12	51,978
Hampton	32,757	11	28,026	4,731	2	11,934
Horry	24,015	4	14,274	9,741	0	0
Jasper	23,013	11	28,740	(5,727)	0	0
Kershaw	22,976	3	18,642	4,334	8	59,202
Lancaster	19,749	4	23,010	(3,261)	11	40,512
Laurens	17,700	6	22,950	(5,250)	10	34,086
Lee	15,200	2	9,358	5,842	8	56,023
Lexington	16,030	6	22,062	(6,032)	12	37,768
McCormick	17,159	4	15,600	1,559	6	33,312
Marion	17,477	3	14,430	3,047	0	0
Marlboro	16,337	3	15,768	569	13	73,094
Newberry	26,976	12	30,774	(3,798)	4	9,984
Oconee	12,362	3	4,368	7,994	0	0
Orangeburg	26,464	4	25,258	1,206	31	154,100
Pickens	9,538	2	3,890	5,648	0	0
Richland	18,055	3	11,462	6,593	4	15,126
Saluda	23,520	10	28,782	(5,262)	10	25,240
Spartanburg	12,740	3	15,116	(2,376)	10	22,252
Sumter	19,840	5	33,297	(13,457)	3	6,588
Union	27,676	6	22,794	4,882	1	6,240
Williamsburg	29,391	7	27,881	1,510	7	53,476
York	15,150	4	16,662	(1,512)	6	32,274
Total	\$913,232	218	\$912,137	\$1,095	295	\$1,406,022

The average amount of reimbursement received by a landowner is about \$4,000. Since the FRP program began in 1983, it has been used to reforest 280,167 acres, about 2% of SC’s forestland.

State Forests and Property Holdings. The South Carolina Forestry Commission currently manages the state's five state forests: Sand Hills, Manchester, Harbison, Poe Creek, and Wee Tee. Various public recreation activities are available at each state forest, including hunting, fishing, hiking, picnicking, camping, biking, and horseback riding.

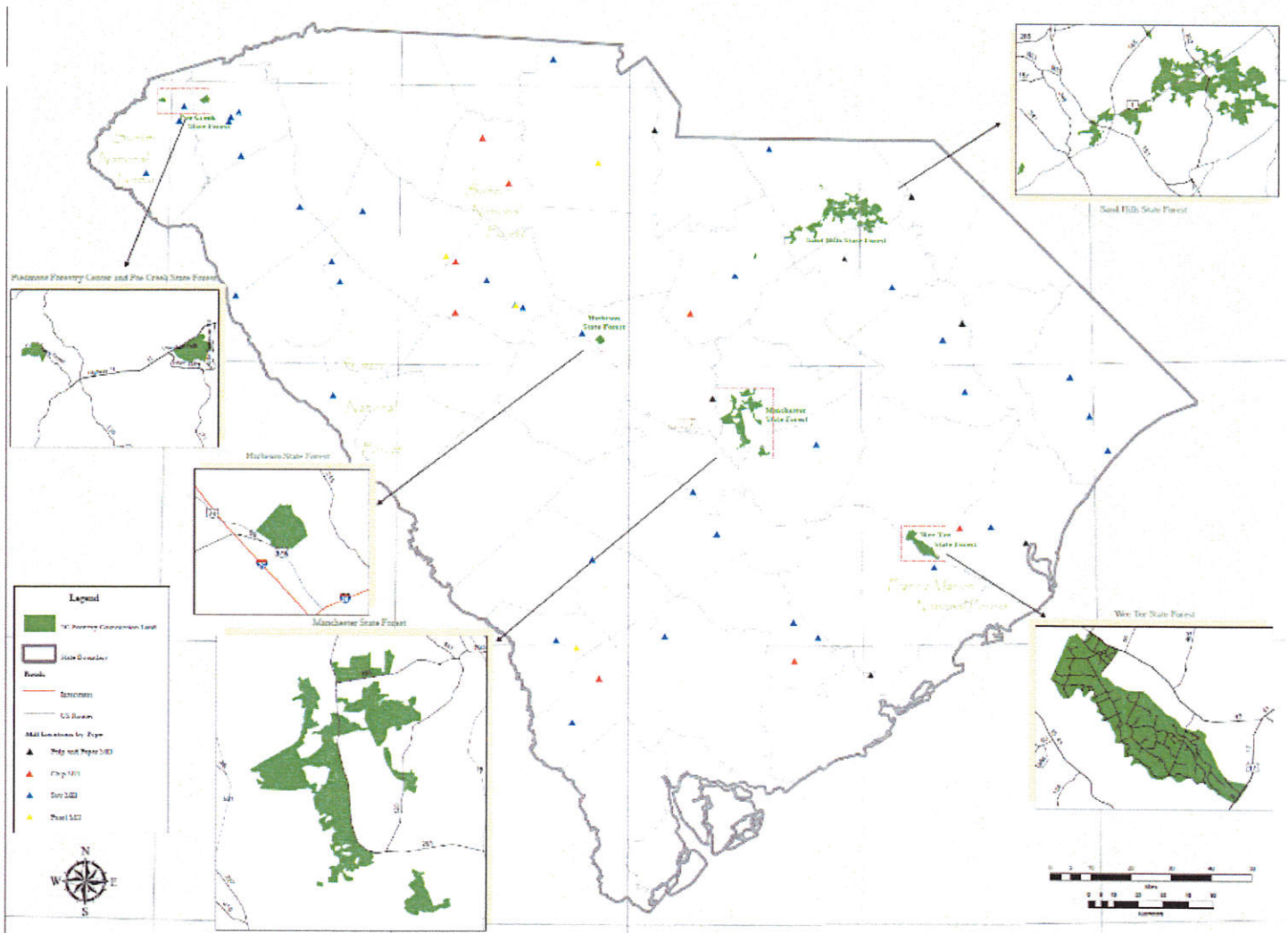
The SC Forestry Commission owns over 95,000 acres of land located in almost every county of the state. Only the Department of Natural Resources holds more property among state agencies. Almost 97% of the land owned by the agency is in state forests. The remaining land includes offices, communication and tower sites, and land used for timber production. The commission has approximately 135 acres marked as surplus in 14 counties.

SCFC Land Not in State Forests



The SCFC strategic plan states that it will seek out income sources to expand the state forest system with the primary goal of acquiring tracts contiguous to existing properties. According to commission staff, it is not the goal of the commission to replace private ownership of forest land. The commission also does not sell portions of a state forest without a compelling reason. Surplus property is listed for sale with the Division of General Services in the Department of Administration.

South Carolina State Forests



Forest Protection: Fire Control, Law Enforcement, Training & Safety, State Fleet & Airplanes, Insect & Disease

Fire Control. Fire prevention and firefighting are essential functions of the Forestry Commission. Forestry Commission firefighters respond to more than 3,000 wildland fires burning about 20,000 acres per year. Fire departments respond to more than 20,000 grass, brush, woods, or rubbish fires per year. Local fire departments and the Forestry Commission work together to control wildland fires.

Law Enforcement. The Forestry Commission employs four investigators who investigate complex arson cases, assist with determining the origin & cause of wildfires, and investigate timber fraud and theft. All Forestry Commission officers are trained and certified by the SC Criminal Justice Academy. After graduation, officers receive additional training on forestry law, wildland fire behavior, forest fire investigation, and incident management.

Training & Safety. All Forestry Commission firefighters (including all agency law enforcement officers, forestry technicians, and foresters) receive wildland firefighting training, including fire behavior, wildfire suppression techniques, equipment operation and maintenance, fire behavior, and incident management. Until they are fully trained, new firefighters are not allowed to respond to wildfires without an experienced firefighter

onsite. Forestry Commission firefighters are also trained to provide assistance during other emergency events, including hurricanes, ice storms, and flood events.

State Fleet and Airplanes. The Forestry Commission maintains a fleet of transports, truck tractors (pulls a low-boy trailer), low-boy trailers, engines with water handling tanks (types 3, 6, and 7), pickup trucks, sport utility vehicles, and cars.

The Forestry Commission also operates 12 fixed-wing aircraft that are on loan to the agency from the USDA Forest Service through the Federal Excess Personal Property Program. These are separate from the state fleet. The Forestry Commission is responsible for operating and maintenance costs. These planes provide a critical aerial viewpoint on wildfires when they occur, allowing pilots to warn ground forces about potential hazards that they cannot see, changes in fire behavior, identifying homes that are threatened by the wildfire, and detecting wildfires in rural areas that may otherwise go unreported for days. The SCFC employs two full-time pilots, salaried at roughly \$32,000 a year, and 10 temp-pilots. These pilots are paid \$25 per hour.

SC Forestry Commission Aircraft Annual Costs				
Fiscal Year	2013	2014	2015	3-year Average
Fuel Costs	\$53,944.91	\$57,932.82	\$46,922.18	\$52,933.30
Hangar Rental	\$14,560.00	\$15,120.00	\$15,916.00	\$15,198.67
Maintenance	\$46,876.78	\$35,646.78	\$66,385.41	\$49,636.32
Insurance	\$15,950.00	\$15,950.00	\$15,950.00	\$15,950.00
Average Annual Cost				\$133,718.29*

* The average annual cost does not include engine replacement costs. Per FAA regulations, aircraft engines must be replaced at every 500 hours of flight time. During FY 14-15, two engines were replaced at a cost of \$72,288.77.

Insect & Disease. The Insect & Disease Section is responsible for monitoring, reporting, and coordinating suppression of endemic pests affecting forest trees in South Carolina. Insect & Disease also works closely with Christmas tree growers, nurseries growing forest tree seedlings, seed orchards producing tree seed and urban areas with tree pest problems. The Commission works with the U.S. Forest Service and other federal and state agencies to detect and address insect outbreak issues. The Insect & Disease Section also operates a laboratory for free diagnosis of insects and disease affecting forest resources in the State. The Forestry Commission is able to use their airplanes to detect insect outbreaks.

The Southern Pine Beetle Program cost-share program is another service available to qualifying landowners. The Southern Pine Beetle (SPB) is a native beetle that lives in the inner bark of pine trees. The beetle typically attacks weakened or stressed trees and can cause the loss of multiple acres of trees. The SPB program is funded by grants from the US Forest Service. It seeks to reduce future loss from the beetle by managing pine density through prevention and restoration practices. The cost share available for these practices differs based on the practices used:

- Prevention practices - 60% of actual costs not to exceed maximum rate of \$94 per acre. Precommercial thinning is the only prevention practice.
- Restoration practices - 50% of statewide average cost for the practice. Site preparation and tree planting are restoration practices.

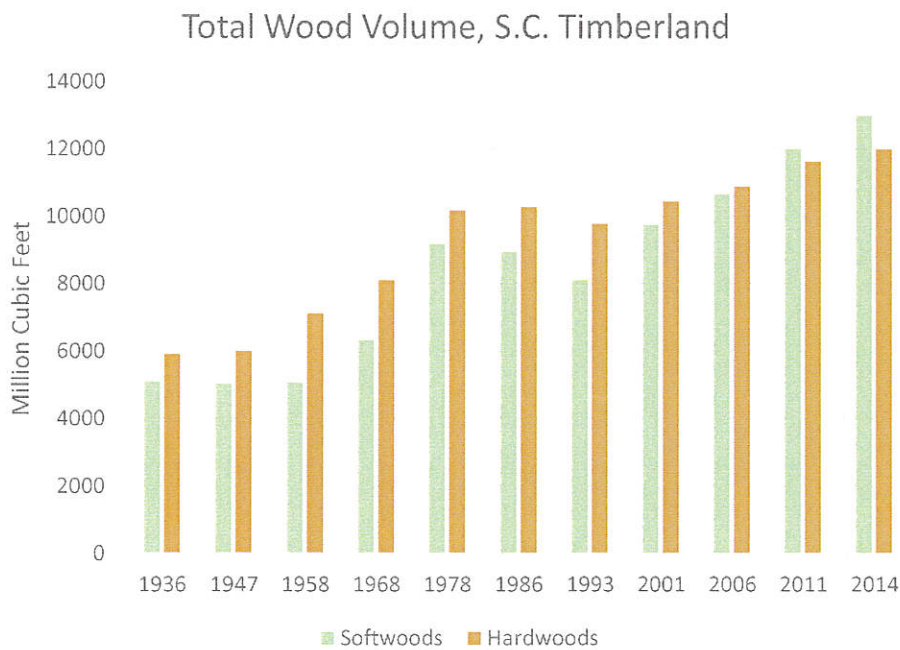
These practices ensure that a pine stand will be of marketable size before the stress of being overly dense develops. For this program, fewer than 500 trees per acre are planted.

The total amount awarded in grants depends on the federal funds appropriated. According to agency staff, prior to FFY 13-14, SPB grant funds were used to partly fund salaries for project foresters. In FFY 12-13, 75% of the grant funds were used for agency costs. As SPB funding declined, these salaries were transferred to state funding and the percentage of grant funds used for agency costs has averaged 24%.

	FFY 12-13	FFY 13-14	FFY 14-15	FFY 15-16
Total Appropriations	\$300,000	\$225,000	\$285,000	\$310,000
Agency Costs				
Salaries	143,670	41,730	41,730	41,730
Fringe	55,070	15,860	15,860	15,860
Operating	10,000	0	5,000	5,000
Indirect Costs	16,360	4,377	4,377	3,484
Cost Share	\$74,900	\$163,033	\$218,033	\$243,926

Resource Development: Forest Inventory & Analysis, Environmental Management, Nursery and Tree Improvement Operations, Cooperative Associations, Forestry Certification, Economic Development

Forest Inventory & Analysis. The Forestry Commission maintains an inventory of the quantity and type of timber in South Carolina. The total land area of South Carolina is 19.4 million acres. Of this, roughly 13 million acres (67%) are forested. Approximately 88% of this land is privately owned. The Forestry Commission provided staff with a U.S. Forest Service annual resource update that includes this information. Overall, the area of forest land declined slightly between 2011 and 2014. The number of live trees on forest land decreased by 4.1% between 2011 and 2014, but volume increased by 5.6%.



Environmental Management. The Forestry Commission administers the silvicultural Best Management Practices (BMP) program to minimize water quality impacts from forestry operations. They provide access to information on BMPs to private landowners and forestry professionals. The courtesy examination program which

promotes voluntary compliance by logging operation in meeting water quality guidelines and other environmental standards. BMPs are scientifically-based guidelines for protecting water quality and maintaining site productivity. Proper use of BMPs will prevent erosion, sedimentation, and soil compaction. Although non-regulatory, BMPs can also prevent violations of the US Clean Water Act, the SC Pollution Control Act, and other laws and regulations that apply to forestry operations. The Forestry Commission conducts regular monitoring of BMP implementation and compliance to ensure effectiveness and seek further improvement in the program. The Forestry Commission provides BMP training for landowners, loggers, foresters, and other forestry professionals, and cooperates with the SC Forestry Association and Clemson University in the Timber Operations Professional (TOP) Program. Currently, 98.6% of timber harvests in SC are in compliance with BMPs. Violations of BMPs are referred to DHEC for enforcement.

Nursery Operations. The agency considers its nursery operation to be integral to maintaining healthy forests and promoting forestry as an industry. The Forestry Commission had four nurseries but now has only the Taylors Nursery located in Trenton, SC. It produces bareroot and containerized seedlings. Selections include both softwood and hardwood species. Seedlings are produced for timber production, the Christmas tree industry, and habitat improvement. The majority of the seedlings sold are loblolly and longleaf pines since this is the most common tree produced by private landowners for commercial sales. The advantages of loblolly pine include rapid growth, low cost of seedlings, relative imperviousness to disease and pests, suitability for the climate and soil conditions in much of the state and because it has a multitude of commercial uses. For 2016 the price of bareroot pine seedlings from Taylors Nursery range from a low of \$10 for 10 to a high of \$110 for 1,000. Prices vary based on type of seedlings and quality.

There are two primary private nurseries in SC that sell seedlings: Arborgen and Weyerhaeuser. Arborgen has a nursery in Blenheim, SC, a seedling sales office in Lexington, SC, and its US headquarters is located in Ridgeville, SC. Weyerhaeuser has a corporate office located in Aiken, SC. While prices for open pollinated trees are similar between Taylors and Arborgen, Arborgen also sells mass control pollinated seedlings. These range in price from \$152 to \$215 per thousand with varieties costing \$320 per thousand.

Hardwoods: Although there is overlap in some species offered, many of the hardwood seedlings available from the Taylors nursery are not sold by the major seedling providers. All of the hardwood seedlings sold by the Taylors nursery cost \$300 per 1,000. In most instances, these prices are comparable or exceed the cost at the private providers.

The commission states that it fills a specific need by producing and selling seedlings. It helps protect the continued health of the forests, make seedlings available to smaller private landowners who might not otherwise have access to reasonably priced seedlings and ensure that commercial nurseries do not have a monopoly to set artificially high prices. The representative from Arborgen also indicated that he believes that the Taylors nursery fills a niche and, unlike public nurseries in other states, does not seek to directly compete with the private market.

By maintaining the Taylors Nursery, the Forestry Commission helps protect the silviculture industry in South Carolina during times of stress due to market fluctuations and natural disasters. One of the means by which this is accomplished is by maintaining a healthy stock of seedlings for reforestation even during times when this might not be economically beneficial for a private nursery.

Cooperative Associations. The SCFC maintains membership in two cooperatives: the Southern Forest Nursery Management Cooperative located at Auburn University and the North Carolina State University Cooperative Tree Improvement Program. Membership in the Southern Forest Nursery Management Cooperative allows the commission access to state of the art research in forest nursery practices without the cost of maintaining a research facility.

Although the commission had been an early member of the NC State University Cooperative Tree Improvement Program for many decades, it changed the member status from full member to contributing member due to budget reductions in FY 03-04. While this status still allows access to information, it does not provide access to the genetically improved tree stock. Unlike many agricultural products, the slow growth of trees means that they have only completed the third cycle and are beginning the fourth since the inception of the program in the 1950s. These improved trees typically have a faster growth rate, improved wood qualities and better resistance to diseases. The commission has expressed a desire to return to full membership status if they are able to obtain funding to pay the required dues. Because of their long term status as members, they anticipate a reduced rate to rejoin the association.

Forestry Certification. There are several organizations which can confer various certifications to landowners and/or businesses for sustainable forestry practices. The Forestry Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI) are two prominent organizations that bestow certification. Certification requires meeting various criteria including a chain of custody standard to demonstrate that a product has been produced from forests deemed to be sustainably managed. It also requires independent audits to ensure that foresters are utilizing practices that protect the environment and ensure that the trees are harvested sustainably. These certifications are often sought by companies that produce products from trees, such as various paper products, to ensure that they have access to markets which give preference to products that bear these certifications. The Forestry Commission assists with this certification process in several ways. They provide access to information on Best Management Practices (BMPs) to private landowners and their courtesy examination program which promotes voluntary compliance by logging operation in meeting water quality guidelines and other environmental standards. Forest dependent industries have acknowledged that the commission is an important partner in obtaining these certifications.

20 by 15 Initiative & Economic Development. In an effort to address the economic downturn, the Forestry Commission launched its 20 by 15 Initiative. The goal was to grow the forest industry's economic impact from \$17 billion to \$20 billion by 2015. The agency proposed doing this by increasing production from 23 million to 27 million tons of forest products and/or increase the value of the product from \$744 to \$855 per ton. The SCFC estimates the result to be an increase in total jobs related to the forest industry of 90,000 to 104,000. In an effort to expand the industry despite a decline in pulpwood-sized pine, the SCFC increased efforts to expand sawmilling, retain pulp and paper manufacturing, increase exports, increase secondary manufacturing, increase active forest management, and encourage landowners to plant more trees. This has had an effect on the industry's economic impact on the state.

The forest product industry's economic impact on South Carolina's economy is \$18.6 billion annually and has experienced sustained growth in the last 8 years (\$17.4 billion in 2006 to \$18.6 billion in 2013). During this period, roughly 80% of forest products exported from South Carolina left via the Port of Charleston. Roughly 18% moved by truck or rail, and the remaining 1% moved via air.

Public Information & Environmental Education

Public Information. The Forestry Commission maintains a website with extensive information about their activities, programming, and events. It also provides important information about fire conditions, timber sales, and forestry management. Information is disseminated via the website, through press releases, and through social media. Forestry Commission staff has stated that additional money for marketing and promotion of the need for small diameter pine would be beneficial.

Environmental Education. The Forestry Commission has a variety of educational resources available for students and the general public. They host education workshops and programs. They also have an education facility at the Harbison State Forest that is available to environmental education groups and programs free of

charge, and is available to other groups on a rental basis. Up-to-date materials are available on the Forestry Commission's website (www.sc.state.us/forest/edu.htm).

II. Issues

Unauthorized Fund Transfers

SCFC did not have specific authority to transfer funds from the FRP to fund other agency operations. The commission transferred \$150,000 per year from the forest renewal program for other areas that had lost funding due to budget cuts. Prior to FY 12-13, the appropriations act included a flexibility proviso which allowed agencies to spend funds from these accounts to make up for reductions in state funds. This proviso was deleted from the FY 12-13 appropriations act and all subsequent acts. The commission did not transfer these funds in FY 15-16. By using these funds for agency expenses, fewer funds were available for landowners.

- **Agency Recommendation:** The SC Forestry Commission should not transfer funds from earmarked or restricted accounts without authority.

Inadequate Monitoring of FRP Compliance

SC Code §48-28-80 requires landowners receiving payments from the FRP to maintain their land in accordance with the forest renewal plan or they will have to repay the funds received. According to agency staff, the SCFC would, through its routine business activities and knowledge of landowners' ongoing management, determine whether or not FRP practices were being maintained. Incidences of conversion to non-forested conditions would be documented in a memo and an invoice generated to recover the cost share. As staffing levels decreased and the geographic area of responsibility increased, this methodology became less effective. In 2013, the agency adopted a new procedure to formalize the monitoring of FRP but had not implemented it. According to the commission, foresters began implementing the procedure in the late summer of 2015 and will seek reimbursement from landowners not in compliance with the FRP.

- **Agency Recommendation:** The SC Forestry Commission should continue to implement its procedure to formally monitor whether landowners maintain their lands in accordance with the forest renewal plan and seek reimbursement of the cost share payments if the landowners do not follow the plan.