

# **South Carolina Forestry Commission**

## **FY 2019-2020 ANNUAL REPORT**



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# STATE COMMISSION OF FORESTRY

## **Members of the Commission**

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Sam R. Coker, Leesville

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Eric Smith, Summerville

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## **Administration**

Scott L. Phillips, State Forester

Tom Patton, Deputy State Forester

Cathy Nordeen, Director of Administration

## **Mission**

Protect, promote, and enhance South Carolina's forests for the benefit of all.

## **Vision**

Healthy forests, resilient communities, impeccable service

# FOREST PROTECTION

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

## Fire Management

The South Carolina Forestry Commission (SCFC) 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 1,089 wildfires that burned 6,231.5 acres of forestland and grassland during the fiscal year.

In FY2019-20 wildfires destroyed 6 homes and damaged 5 others. In addition, 33 other buildings were destroyed and 10 buildings were damaged. Agency firefighters saved 413 structures that were directly threatened by wildfires.

### **Fire Protection Cooperatives**

The Forestry Commission has cooperative arrangements with 12 fire and emergency management entities. Activities for each cooperative agreement during FY2019-20 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, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia, and West Virginia. During this fiscal year, SCFC resources were mobilized to assist Texas under the Compact. No resources were dispatched in FY 20 under the Compact.

#### **SC EMERGENCY MANAGEMENT DIVISION**

SCFC personnel, including incident management teams, participated in several emergency response training sessions throughout the year. In response to Hurricane Dorian, the IMT was pre-positioned in Charleston in preparation of the storm in case evacuation assistance was needed, and personnel provided staffing at the State Emergency Operation Center. Members of the IMT assisted the SC Department of Social Services in the distribution of PPE and cleaning supplies to daycare facilities throughout the State in response to the Covid-19 pandemic.

#### **SC ARMY NATIONAL GUARD**

Under an agreement with the SC National Guard (SCNG), 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 and coordination meetings between the SCNG and the SCFC are held annually to ensure

mission readiness. In the spring of 2020, 8 Bambi Buckets owned by the Forestry Commission were transported to the manufacturer for repairs and inspection to ensure readiness for wildfire use.

#### **VOLUNTEER FIRE ASSISTANCE PROGRAM**

Pass-through funds from the National Fire Plan, Volunteer Fire Assistance funds through the USDA Forest Service were distributed as follows:

National Fire Plan grant funds are for firefighting needs: 76 Fire Departments requested \$271,976 worth of firefighting equipment of which 76 fire departments were funded for \$268,368.

#### **FEDERAL EXCESS PERSONAL PROPERTY PROGRAM (FEPP) AND THE FIREFIGHTERS PROGRAM (FFP)**

The amount of equipment available for screening is limited but with the SCFC enrolled in both programs, we continue to screen items that fire departments and SCFC personnel have requested. The total value of inventoried federal excess property (including both FEPP and FFP) now stands at \$22,906,319.75 for 751 items (FEPP 559, FFP 192), most of which are assigned to Volunteer Fire Departments. There were several large quantity items received that had low acquisition values for each item. During the fiscal year there were 2 FEPP Auctions/GSA Sales. A total of 95 items were sold for a purchased value of \$62,382. In an effort to improve the program and bring all departments into compliance, SCFC field personnel and the FEPP program manager encouraged fire departments to turn in any equipment that was not being properly maintained or actively in operation.

#### **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 SCFC did not request any spot weather forecasts this fiscal year for wildfires, but did participate in coordination meetings with the NWS.

#### **USDA FOREST SERVICE**

A mutual aid agreement between the US Forest Service (USFS) and SCFC allows both parties to provide initial attack firefighting within one-quarter mile of National Forest boundaries. This 5 year agreement was renewed in November, 2018. 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. This year the SCFC responded to no fires on lands owned by the Corps of Engineers.

#### **USDI FISH AND WILDLIFE SERVICE**

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

#### **USDI NATIONAL PARK SERVICE**

Agreements were maintained to provide initial attack wildfire suppression on National Park Service lands; no reportable activity occurred during this fiscal year. The SCFC provided a Type 6 engine and 4 personnel to assist with a prescribed burn at Congaree National Park in June of 2020.

#### **WILDLAND FIRE PROTECTION PARTNERSHIP**

Organized in 1991, the Partnership seeks solutions to wildfire management problems in the wildland-urban interface. Membership includes the SCFC, USFS, SC Firemen's Association, Department of Health and Environmental Control, SC Emergency Management Division (SCEMD), 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, and provided support for the Council, as well as presentations, for the annual meeting in Newberry in September, 2019.

#### **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 task books 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 three multi-disciplinary (non-SCFC) Type 3 IMTs located in 3 SLED regions of the State. The IMT acted as evaluators with the State Law Enforcement Division in a week long large scale bomb exercise at 3 locations throughout the State. The SCFC IMT deployed to N. Charleston in preparation for the arrival of Hurricane Dorain. As part of the Covid -19 pandemic, the IMT assisted with DHEC in the distribution of PPE and cleaning supplies to daycares throughout the State.

### **Fire Weather**

#### **WEATHER STATIONS**

The SCFC, USFS, USDI National Park Service, Department of Defense (Ft. Jackson), and USDI Fish and Wildlife Service share a network of 22 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. During this fiscal year, the SCFC acquired and tested a portable fire weather station that can be set up and used on wildfires, all-hazard events, and large prescribed burns where frequent weather observations are necessary.

<b>Inches of precipitation, FY2019-20 (GHCN-D 5km data)</b>		
<b>Month</b>	<b>Precipitation (inches)</b>	<b>Departure from normal</b>
July	3.91	1.13
August	4.81	-0.92
September	2.19	1.82
October	3.96	0.75
November	3.48	2.61
December	6.94	4.07
January, 2020	4.12	0.32
February	7.17	3.66
March	4.26	0.34
April	5.18	1.8
May	6.73	3.18
June	4.27	-0.55
<b>Total</b>	<b>57.02</b>	<b>9.08</b>

Source: National Climate Data Center

<b>Inches of precipitation, last five years (GHCN-D 5km data)</b>		
<b>Fiscal year</b>	<b>Precipitation (inches)</b>	<b>Departure from normal**</b>
2015-16	60.93	13.97
2016-17	48.65	1.09
2017-18	45.44	-1.98
2018-19	55.42	7.78
2019-20	57.02	9.08
Source: National Climate Data Center		
**Statewide normal, based on previous 30 years		

**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 FY2019-2020 are as follows:

<b>Readiness levels, by region</b>			
<b>Readiness level/Region</b>	<b>Coastal</b>	<b>Pee Dee</b>	<b>Piedmont</b>
Readiness 1 (no wildfire danger)	0 days	0 days	0 days
Readiness 2 (no wildfire danger)	206 days	124 days	271 days
Readiness 3 (no wildfire danger)	156 days	234 days	91 days
Readiness 4 (no wildfire danger)	3days	7 days	3 days
Readiness 5 (no wildfire danger)	0 days	0 days	0 days

**BURNING BANS AND RED FLAG FIRE ALERTS**

Two State Forester’s Burning Bans were issued during this fiscal year. A State Forester’s Burning Ban for the entire state was in place from September 4-7, 2019 as Hurricane Dorian approached and passed through the state. The burning ban was issued due to elevated fire danger and to reduce new wildfire ignitions for SCFC and other firefighters that were already committed to preparing for and responding to the hurricane. The ban was lifted on September 7, once the storm impacts were reduced. A second State Forester’s Burning Ban was issued on April 7 to minimize the impact of wildfires and other unmanaged smoke on residents during the acceleration phase of COVID-19 in the state. After consultation with DHEC, the Burning Ban was lifted on April 21, 2020.

**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.

**AVIATION**

During the year, SCFC pilots flew 11 different Federal Excess Property aircraft for a total of 279 missions for 787 hours. Reduced aviation budgets have curtailed aerial detection flights and have limited flights to moderate to high fire danger days when aircraft are needed for wildfire suppression, evacuation, or other emergency response assistance. This year, SCFC pilots flew a total of 787 hours (Coastal- 107 hours, Pee Dee-211 hours, Piedmont- 340 hours).

**Prescribed Fire**

**CERTIFIED PRESCRIBED FIRE MANAGER PROGRAM**

Four Certified Prescribed Fire Manager Programs were conducted during the year with 130 participants. This course focuses of planning prescribed burns to comply with mandated air quality standards.



**Prescribed burning for forestry, wildlife and agriculture, FY2019-20**

Region	Forest understory		Forestry site prep		Wildlife		Agriculture	
	Number	Acres	Number	Acres	Number	Acres	Number	Acres
Coastal	1,268	107,055	944	9,771	948	75,689	743	12,4786
Pee Dee	753	39,279	797	4,197	628	37,981	780	10,142
Piedmont	465	34,072	1,121	3,793	,170	6,480	278	2,008
<b>State Total</b>	<b>2,486</b>	<b>180,407</b>	<b>2,862</b>	<b>17,760</b>	<b>1,746</b>	<b>119,850</b>	<b>1,801</b>	<b>24,627</b>
<b>Total forestry, wildlife &amp; agriculture burns: 8,895 for 342,644.3 acres</b>								

## **Fire Prevention Information**

### **WILDLAND-URBAN INTERFACE (WUI)**

Work continued on assessing wildland-urban interface communities' risks to wildfire throughout the state. Primary areas of concern involve communities in Horry, Georgetown and Charleston Counties with increased interest in Oconee, Spartanburg, York and Chester Counties. There are a few large-scale Community Wildfire Protection Plans (CWPP) that have been initiated. Preliminary meetings and discussions have been conducted for potential CWPP creation for the Indian Creek area as well as the Paris Mountain area. These "landscape" plans will involve multiple counties, and municipalities, and cooperation between multiple agencies. The goal of the Firewise program is to increase the awareness of homeowners to their responsibility in helping to reduce the risk of their homes from burning in a wildland fire. This is accomplished by conducting Firewise workshops such as 'How to Have a Firewise Home.' This year, 10 Firewise presentations, community and homeowner workshops with 500 in attendance were made at various venues, including community events, fire department open houses, and other venues. Presentations included information about Firewise and the Ready, Set, Go! Program. Efforts have primarily been concentrated in Oconee County, Charleston County and in Horry/Georgetown Counties where interest has been greatest. The Firewise mobile exhibit (and the Firewise Table Top exhibit) was not used this year during the COVID-19 pandemic. Prior to the pandemic, it was reserved for 4 different events, however those were canceled. Fuels mitigation plans, workdays and assessments were conducted throughout the state. The SCFC has conducted a total of 1,385 community assessments to date with 1,300 of those rating at moderate to extreme in regards to wildfire risk. 30 new assessments of communities were completed across the state. There continue to be discussions and progress in finalizing large scale Community Wildfire Protections Plans for Charleston and Berkeley counties. Oconee county and the city of Seneca are also showing interest in the CWPP as well. To date 230 Community Wildfire Protection Plans have been written in which 770 communities have benefitted.

Cooperative Firewise efforts are also occurring within communities around the Sumter and Francis Marion National Forests with Forest Service personnel. Work continued on Community Wildfire Protection Plans for communities around USFS land in Berkeley, Charleston, Newberry, Union, Jasper and Oconee Counties in cooperation with USFS and US Fish and Wildlife personnel. The Nature Conservancy has also participated in CWPP development.

National Fire Plan grant funds were awarded to 28 communities in the amount of \$151,520 for various projects including installation of a leaf disposal site, underbrushing of undeveloped lots and common areas such as entrance roads, and assistance with community chipping days to reduce the fuel buildups within their communities. Additional funds were used for fuels reduction and mitigation projects involving prescribed burning, underbrushing and fuelbreak installation on 29 tracts for \$47,641.50. Again many of these planned projects for communities for landowner mitigation projects were not able to be completed due to the pandemic and social distancing guidelines.

### **WILDFIRE PREVENTION**

A statewide wildfire prevention awareness effort was made across the state prior to the spring 2020 wildfire season to promote safe debris burning; escaped debris burns are the number one cause of wildfires in the state. Most of our prevention efforts, especially in the spring, were virtual. Our focus was to get our message out on Facebook and other social media platforms, especially during the burning ban that was issued due to the pandemic. Also, these types of wildfires are commonly found near communities putting them at risk (i.e. wildland urban interface). In cooperation with local fire departments, SCFC field personnel throughout the state distributed "Think Before You

Burn" (TBYB) promotional materials to businesses and public buildings. The primary field personnel involved were agency sector Fire Management Officers responding to debris burns during the burning ban. The distribution of materials included TBYB brochures, various other items, i.e. cups, koozies, slap bracelets, pencils and magnets with the county 1-800 burn numbers. Burning notification magnets were placed on the store counters for customers to pick up so they would have the appropriate county outdoor burning notification phone number handy. Some phone interviews were conducted with local media to increase public awareness.

<b>Fires by cause, FY2019-20</b>				
<b>Cause</b>	<b>Fires</b>	<b>Acres Burned</b>	<b>Average Acres per Fire</b>	<b>Percent of Total Fires FY2019-20</b>
LIGHTNING	50	1,010.7	20.2	4.59%
CAMPFIRE	14	51.1	3.7	1.29%
SMOKING	26	183.5	7.1	2.39%
DEBRIS BURNING	596	2,764.4	4.6	54.73%
INCENDIARY	153	966.0	6.3	14.05%
EQUIPMENT USE	69	661.0	9.6	6.34%
RAILROAD	16	24.9	1.6	1.47%
CHILDREN	21	43.7	2.1	1.93%
MISCELLANEOUS	87	357.9	4.1	7.99%
FIREWORKS	4	20.3	5.1	0.37%
POWER LINE	28	90.0	3.2	2.57%
STRUCTURE	25	58.0	2.3	2.30%
Totals	1,089	6,231.5	5.7	100.00%

<b>Five-year summary: all fires FY2019-20</b>					
<b>Fiscal Year</b>	<b>Acres Protected</b>	<b># Fires</b>	<b>Acres Burned</b>	<b>Avg. Acres/Fire</b>	<b>% Area Burned</b>
<b>2015-16</b>	13,657,033	989	5,445.7	5.5	0.04%
<b>2016-17</b>	13,657,033	2,062	25,709.5	12.5	0.19%
<b>2017-18</b>	13,657,033	1,616	10,363.3	6.4	0.08%
<b>2018-19</b>	13,657,033	995	4,836.8	4.9	0.04%
<b>2019-20</b>	13,657,033	1,089	6,231.5	5.7	0.05%
<b>Five Year Averages</b>		1,350	10,517.4	7.0	0.08%

**Total fires by cause, by county - FY2019-20**

COUNTY	LIGHTNING		CAMPFIRE		SMOKING		DEBRIS BURNING		INCENDIARY		EQUIPMENT		RAILROAD		CHILDREN		MISC		FIREWORKS		POWER LINE		STRUCTURE		Total	Total		
	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres		
ABBEVILLE	1	1.1	2	2.1	1	1.0	10	9.2									1	1.0	1	2.8	1	0.4			17	17.6		
AIKEN	6	122.0			4	63.0	42	334.2	8	14.2	7	9.1	1	2.5	4	7.1					2	3.0	9	18.4	83	573.5		
ALLENDALE	1	4.0					8	20.5			1	2.0			1	15.0					1	30.0			12	71.5		
ANDERSON	1	1.5	1	1.0			7	7.8	3	2.5							4	9.1							16	21.9		
BAMBERG	2	60.0					7	40.1	1	1.0	1	3.0			1	0.5							1	2.0	13	106.6		
BARNWELL					1	0.1	14	52.0	2	6.0	1	1.5			1	1.0					1	4.0			20	64.6		
BEAUFORT							10	24.7	1	1.0																11	25.7	
BERKELEY					2	2.0	30	154.0	4	43.5	1	1.5					1	5.0					1	5.0	39	211.0		
CALHOUN	1	4.0					6	11.5	8	8.4	3	32.0														18	55.9	
CHARLESTON			1	1.0			6	112.4							1	3.0	1	0.5								9	116.9	
CHEROKEE					1	0.3	5	14.5	7	16.5	1	0.2					2	3.3					1	0.1	17	34.9		
CHESTER					1	3.0	1	1.0					5	9.6	1	1.5	1	7.0								9	22.1	
CHESTERFIELD	6	178.1			2	12.0	22	70.7	6	124.8	3	15.6			1	0.6	3	7.9	1	4.0	2	19.0	2	3.0	48	435.7		
CLARENDON	3	18.1					38	261.2	10	22.6	2	15.2	1	0.1			4	4.9								58	322.1	
COLLETON	1	4.0			1	0.5	24	197.5	8	20.7	6	9.3					1	4.0			1	0.6				42	236.6	
DARLINGTON	2	3.2	2	3.5			18	46.0	4	32.5	2	10.4					3	8.3					1	1.0	32	104.9		
DILLON					1	7.0	8	10.9	2	2.6	2	51.1	1	0.5	1	0.5	6	13.4								21	86.0	
DORCHESTER					2	3.0	20	231.5	3	33.1	2	19.0			1	4.0					1	0.5				29	291.1	
EDGEFIELD	1	13.0					5	13.7													1	2.0				7	28.7	
FAIRFIELD	1	28.5	1	1.5									1	1.0			4	10.5			1	0.1	1	1.6	9	43.2		
FLORENCE	1	2.0			1	70.0	18	81.9	9	21.6	1	5.0					3	16.6								33	197.1	
GEORGETOWN							10	44.9	7	125.2							3	6.0								20	176.1	
GREENVILLE	1	15.0			1	0.1	2	6.3	1	0.3	2	6.5			1	2.0										8	30.2	
GREENWOOD							3	0.5	1	0.5																4	1.0	
HAMPTON	1	3.0					15	52.5	5	31.1	1	0.1											1	0.5	23	87.2		
HORRY	4	17.1					7	11.5	7	13.7					2	3.1	3	23.5								23	68.9	
JASPER			1	1.0	2	2.0	23	60.7	3	43.5	4	4.2									1	0.5	2	5.1	36	117.0		
KERSHAW							20	136.7			2	8.0					11	37.8					2	15.1	35	197.6		
LANCASTER					1	1.0	7	23.1							1	0.3	2	1.6								11	26.0	
LAURENS	2	2.5					15	45.6	4	3.8	1	5.0			1	2.0					3	3.1				26	62.0	
LEE			1	0.5			12	41.6	3	10.0	2	6.5					1	30.0			1	0.5				20	89.1	
LEXINGTON	3	33.3	3	7.5			12	19.5	3	6.5	1	0.1	1	5.0	2	2.5	7	78.7			4	6.8				36	159.9	
MARION	1	0.2			1	3.0	1	4.0	3	5.7	1	380.0					2	5.0	1	1.5						10	399.4	
MARLBORO	1	235.0					11	65.9	3	200.9	3	4.0	1	1.5			4	17.3								23	524.6	
MCCORMICK	1	97.0			1	3.5	5	52.3	1	4.0																8	156.8	
NEWBERRY							2	10.2			2	1.2					2	9.6			1	1.5	1	0.2	8	22.7		
OCONEE					1	0.5	4	5.1	2	1.0							5	13.0			1	7.0	1	0.5	14	27.1		
ORANGEBURG	3	32.0	1	3.0	1	0.5	43	231.2	2	3.0	6	18.5	2	3.6	1	0.5			1	12.0	2	1.5	1	3.5	63	309.3		
PICKENS			1	30.0			9	17.1			2	2.0			1	0.1							1	2.0	14	51.2		
RICHLAND	2	56.6					11	31.5			1	40.0	1	0.1			7	22.3			2	8.0				24	158.5	
SALUDA							2	1.5			3	7.1														5	8.6	
SPARTANBURG	1	27.0					5	9.1	1	1.0	1	1.0					1	10.0								9	48.1	
SUMTER	1	2.0			1	11.0	28	61.2	6	72.1	1	0.5					2	10.5			1	1.0				40	158.3	
UNION	1	0.5					2	4.0			1	1.0					1	0.5			1	0.5				6	6.5	
WILLIAMSBURG	1	50.0					48	133.1	25	92.7	2	0.4	2	1.0			2	0.6								80	277.8	
YORK																											0	0.0
<b>State Total</b>	<b>50</b>	<b>1,010.7</b>	<b>14</b>	<b>51.1</b>	<b>26</b>	<b>183.5</b>	<b>596</b>	<b>2,764.4</b>	<b>153</b>	<b>966.0</b>	<b>69</b>	<b>661.0</b>	<b>16</b>	<b>24.9</b>	<b>21</b>	<b>43.7</b>	<b>87</b>	<b>357.9</b>	<b>4</b>	<b>20.3</b>	<b>28</b>	<b>90.0</b>	<b>25</b>	<b>58.0</b>	<b>1,089</b>	<b>6,231.5</b>		



<b>Total Burning Notifications by County -- Fiscal Year 2020</b>			
	<b>Acres</b>	<b>Smoke Mgt.</b>	<b>Other</b>
<b>County</b>	<b>Protected</b>	<b>Notifications</b>	<b>Notifications</b>
Abbeville County	248,551	101	2,719
Aiken County	524,743	372	21,701
Allendale County	199,005	256	745
Anderson County	216,023	107	15,639
Bamberg County	202,862	215	1,661
Barnwell County	266,959	178	3,102
Beaufort County	130,448	156	8,547
Berkeley County	595,291	381	17,134
Calhoun County	151,294	160	3,707
Charleston County	318,526	194	7,455
Cherokee County	168,077	39	4,086
Chester County	315,565	88	2,880
Chesterfield County	416,239	305	5,895
Clarendon County	238,952	305	5,527
Colleton County	560,896	521	10,492
Darlington County	176,333	166	8,467
Dillon County	163,935	83	2,357
Dorchester County	272,524	178	10,363
Edgefield County	279,433	186	3,052
Fairfield County	408,433	164	2,490
Florence County	308,707	195	9,989
Georgetown County	400,136	307	9,372
Greenville County	296,082	100	14,965
Greenwood County	205,593	65	3,930
Hampton County	303,663	390	2,380
Horry County	493,012	244	20,881
Jasper County	341,036	399	2,846
Kershaw County	376,376	156	14,331
Lancaster County	291,845	191	4,819
Laurens County	337,499	77	5,023
Lee County	121,735	169	1,588
Lexington County	256,939	219	30,474
Marion County	226,896	69	5,497
Marlboro County	226,676	59	3,271
McCormick County	223,394	95	1,081
Newberry County	334,566	120	3,555
Oconee County	292,590	85	13,445
Orangeburg County	446,887	503	12,724
Pickens County	236,029	49	13,392
Richland County	352,904	118	7,723
Saluda County	196,376	187	1,912
Spartanburg County	286,496	92	10,134
Sumter County	268,338	161	11,121
Union County	277,640	40	465
Williamsburg County	407,761	548	6,898
York County	293,768	102	12,802
<b>Total</b>	<b>13,657,033</b>	<b>8,895</b>	<b>362,637</b>
<b>Total Smoke Mgt. &amp; Other Notifications</b>			<b>371,532</b>

## Forest Health

The Forest Health Program, in cooperation with the state Department of Plant Industry, and the US Forest Service (USFS), maintains a program to detect, evaluate, and suppress forest pests. Through cooperative agreements, these agencies make their technical assistance and advice available to the SC Forestry Commission (SCFC).

The current forest pest detection and reporting system involves the reporting by field foresters of forest pests that are causing abnormal losses, that 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 AND BARK BEETLES**

In FY2019-2020, losses due to the Southern Pine Beetle (SPB) were minimal. Due to the COVID 19 pandemic, no aerial survey flights were conducted, nor was southern pine beetle trapping effectively deployed. However, field checks by the forest health staff, project foresters and calls from landowners have not turned up southern pine beetle outbreaks.

The SCFC continued to participate in the SPB Prevention and Restoration Program funded by the USFS. This program's objective is to prevent or reduce the potential damage by SPB. SCFC personnel make forest management recommendations known to minimize future beetle damage. These include thinning, prescribed burning, planting at low density, matching planted species to site, and other mitigation measures. This program is managed by a coordinator whose salary is funded by the program. In 2019-2020, 2,047 acres of pine planting at a reduced tree density was completed and 225 acres were pre-commercially thinned.

#### **ASIAN LONGHORNED BEETLE**

On May 29<sup>th</sup> of this year a homeowner in Hollywood, SC, discovered a beetle that was confirmed to be *Anoplophora glabripennis*, the Asian longhorned beetle. This beetle is an invasive destroyer of hardwoods that has been reported in New York, New Jersey, Massachusetts, Illinois, and Ohio, as well as Canada. It has been eradicated from Canada, Illinois, New Jersey, large parts of Massachusetts and New York, so eradication is feasible. USDA-APHIS and Clemson DPI are leading surveys to map the infestation and coordinate the eradication. Quarantines restricting the movement of hardwood will be imposed, but likely will be restricted to a very small part of the state. So far, 8,209 host trees have been surveyed on 370 acres, of which 2,591 host trees have been confirmed positive for infestation. By imposing a mile-and-a-half buffer around infested trees, 51.62 square miles are deemed infested.

#### **EMERALD ASH BORER**

As of July 2020 emerald ash borer was found in Oconee, Spartanburg, Pickens, Anderson, Cherokee, York and Greenville counties. Emerald ash borer is found in Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New York, North Carolina, Ohio, Ontario, Pennsylvania, Tennessee, Quebec, Virginia, West Virginia, Wisconsin and Georgia. We continue to monitor stressed, dying, or dead ash trees in South Carolina brought to our attention by the public. So far, infested trees have only been detected in Greenville County.

#### **WALNUT TWIG BORER/THOUSAND CANKER DISEASE**

Currently this beetle and the fungus it vectors has not been detected in South Carolina. On the east coast, they have been found in Tennessee, North Carolina, Virginia, Ohio, and Pennsylvania, but is has

been five years since a walnut tree in these states has tested positive for the fungus. Clemson's Cooperative Agricultural Pest Survey (CAPS) has placed early detection traps in 12 counties and have not detected the walnut twig beetle.

#### **EUROPEAN (SIREX NOCTILIO) WOODWASP**

This woodwasp is currently found in several counties in New York, Pennsylvania, Michigan, Connecticut, Ohio and Vermont. The spread of the European woodwasp has been slow in these regions, but movement of firewood and other solid wood could bring this insect to the southeast sooner than expected. This invasive species has not been found outside the above-mentioned states. Trapping has been discontinued but Southern State Forest agencies have developed recommendations in an action plan in the event it arrives in the southeast.

#### **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 have been found in twenty (20) South Carolina counties: Dillon, Lee, Jasper, Beaufort, Hampton, Colleton, Charleston, Bamberg, Barnwell, Allendale, Dorchester, Marion, Orangeburg, Horry, Georgetown, Berkeley, Lexington, Aiken, Newberry, and Sumter. The beetle and fungus have also been found in Georgia, Florida, Mississippi, Tennessee, Kentucky and Alabama. Unfortunately, in the areas where the beetle has been found, there is a large loss of redbay (up to 90% in some locations). Most infestations are now in sassafras.

### **Major Disease Problems**

#### **OAK WILT**

Oak wilt disease has been identified in Aiken, Barnwell, Chesterfield, Kershaw, Lancaster, Lee, Lexington, Richland, and Darlington counties. 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 the past 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. This disease has not been detected in South Carolina for many years and may be on the decline due to loss of susceptible cultivars and planting of resistant hosts.

#### **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. Dogwoods in those counties are monitored periodically to determine the rate of spread of this potentially devastating disease.

#### **SUDDEN OAK DEATH (CAUSED BY PHYTOPHTHORA RAMORUM)**

Sudden oak death is a disease caused by an oomycete 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 in 2004



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 with Clemson University 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 2020. The pathogen has not been detected in SC since 2004.

#### **COGONGRASS**

Cogongrass, a non-native federally regulated noxious weed, has been detected in 13 South Carolina counties: Anderson, Pickens, Greenville, York, Aiken, Allendale, Hampton, Beaufort, Colleton, Dorchester, Charleston, Williamsburg and Florence. Most infestations are small, comprising a total of less than 2 acres, and all acres have been treated by Clemson University Department of Plant Industry. Seven (7) counties (York, Charleston, Allendale, Hampton, Beaufort, Williamsburg, and Florence) have active cogongrass sites while the sites in the remaining six counties are considered inactive. All sites (both active and inactive) will continue to be monitored to detect re-sprouting in the future.

#### **INSECT AND DISEASE LABORATORY**

Commission foresters and Insect and Disease staff made more than 200 field checks of insect and disease problems and made recommendations for prevention and control. Other inquiries were handled by telephone, mail, and personal contact.

#### **FOREST HEALTH SURVEYS**

The SCFC entered into agreement with the USFS to evaluate permanent Forest Health plots throughout South Carolina. This was done by the Resource Development 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.

Unfortunately, COVID 19 did not allow aerial survey or predictive spring trapping.

# Equipment

ACT 273 Budget					Capital Reserve Fund	TOTAL
Number	Item	Per Unit	Extended			
8	Cat D4K2 Dozers w/ Winch	\$160,572.00	\$284,576.00	+	\$100,000.00	\$1,284,576.00
4	Cat D4K2 Dozers w/ Lift Plow	\$162,920.00	\$651,680.00			
2	Optional Front Winch Mount	\$13,600.00	\$27,200.00			
2.36	Western Star 4700SF Transports	\$115,843.00	\$274,273.00			
1	Western Star 4700SF Truck Trac.	\$117,719.00	\$117,719.00			

Equipment Budget					Sand Hills	Manchester
Number	Item	Per Unit	Extended			
8.64	Western Star 4700SF Transports	\$115,843.00	\$100,000.00			
3	Western Star 4700SF Transports	\$115,843.00	\$347,529.00			
1	John Deere 650K Dozer w/ Winch	\$166,020.00	\$166,020.00			
1	John Deere 650K Dozer w/ Winch	\$166,020.00	\$166,020.00		\$87,618.50	\$87,618.50
1	Optional Front Winch Mount	\$9,217.00	\$9,217.00			
1	F-450 Service Truck w/ Body	\$61,353.00	\$61,353.00		Not Delivered FY20	
11	Truck Bodies	\$28,325.00	\$311,575.00			
8	Fire Plows	\$20,215.00	\$161,720.00			
1	Chrysler Voyager Minivan	\$26,934.00	\$26,934.00			
4	Ram 2500 Cab/Chassis	\$33,026.00	\$132,104.00		Not Delivered FY20	
4	Service Bodies for Ram 2500s	\$6,875.00	\$27,500.00		Not Delivered FY20	
1	Dodge Durango (Libby)	\$26,189.00	\$26,189.00		Not Delivered FY20	

Auction Budget					FFP Budget	
Number	Item	Per Unit	Extended			
1	Ford F-250 (Rufus)	\$33,606.00	\$33,606.00		Not Delivered FY20	
1	10-ton Gooseneck	\$11,905.00	\$5,962.50			\$5,962.50
1	Air Pak Welder	\$8,391.00	\$8,391.00			

Economic Development Budget					
Number	Item	Per Unit	Extended		
1	Ford Edge (BMP)	\$29,240.00	\$29,240.00		Not Delivered FY20
1	Dodge Durango (FIA)	\$28,484.00	\$28,484.00		Not Delivered FY20

The Forestry Commission prepared and organized equipment for auction. The auction process now takes place exclusively online at [www.govdeals.com](http://www.govdeals.com). The sale of equipment netted the Forestry Commission approximately \$62,285.40.

## Law Enforcement

During FY 2020 the Forestry Commission had 39 sworn Law Enforcement Officers statewide. Four of these were investigators that focused primarily on complex timber theft, timber fraud and woods arson cases. Officers prosecuted 74 fire cases, 11 violations of state forest regulations, 5 pine straw theft cases, 10 miscellaneous cases and 14 game and fish case. Total fines collected were \$11,543.50. Fines collected from these cases are retained in the county where the offense occurred. There are 42 additional cases that are still pending court due to Covid-19 restrictions.

Forestry Commission Law Enforcement Investigators investigated 122 timber theft/ fraud cases which represented a loss of \$495,793 to the victims. Investigators collected and returned 48% or \$239,215 to the affected landowners. Several timber cases are pending court due to Covid-19 which accounts for the low percentage. Forestry Commission officers arrested 4 individuals for woods arson who were responsible for 15 fires. During the year there were 381 fire investigations conducted with 111 of them escaped debris burns. There were 49 Burn Site Inspections and 43 Smoke Management Investigations.

# FOREST MANAGEMENT

There are 12.9 million acres of commercial forestland in South Carolina. According to 2018 National Woodlands Owner data (<https://www.fia.fs.fed.us/nwos/results/>) , 87% of South Carolina's forests are privately owned, 60% of private forests are family-owned, and 47% of these owners live on the land. Forest industry has sold much of its forestland during the last 20 years and now owns only 329,600 acres (2.6%), which is a 38% increase from 2013 but down 85% since 2000. Public agencies (municipal, county, and federal) control 13% 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 forestland 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. The State Lands Coordinator also assists other state agencies in the management of their forest resources.

## 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, 1,264 management plans were prepared for 69,386 acres. Beginning in July of 1999, customer satisfaction surveys were sent to every landowner that received a forest management plan. In FY20, 98.5% of the landowners that responded to the survey indicated that they were satisfied with the management plan they received. Of these landowners, 100% 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 for assistance in carrying out management recommendations. This year 72 cases were referred to consulting foresters and 17 were referred to industrial foresters.

**Forest management assistance, FY2019-20**

County	Non Cost-Share		Cost-Share		Forest Stewardship	
	Exams	Acres	Exams	Acres	Plans	Acres
Abbeville	6	293	20	1,015	0	0
Aiken	2	23	20	1,013	0	0
Allendale	1	38	10	1,068	0	0
Anderson	10	350	7	332	3	265
Bamberg	4	231	15	670	0	0
Barnwell	4	274	9	592	1	63
Beaufort	1	17	4	116	0	0
Berkeley	7	327	6	301	0	0
Calhoun	0	0	9	489	0	0
Charleston	9	604	3	120	2	1,892
Cherokee	3	88	10	387	0	0
Chester	2	35	16	668	0	0
Chesterfield	4	214	117	5,081	2	87
Clarendon	1	14	16	598	0	0
Colleton	18	937	38	1,649	2	152
Darlington	3	91	27	1,295	1	125
Dillon	7	287	12	802	1	186
Dorchester	1	27	13	647	1	64
Edgefield	5	454	10	766	2	250
Fairfield	4	489	22	1,210	1	129
Florence	17	1,036	51	2,420	1	93
Georgetown	3	144	20	1,208	1	416
Greenville	11	361	3	162	0	0
Greenwood	12	739	34	2,098	3	742
Hampton	2	238	31	1,326	0	0
Horry	20	661	20	989	0	0
Jasper	2	109	5	373	2	87
Kershaw	4	306	45	1,878	0	0
Lancaster	6	361	18	903	0	0
Laurens	15	454	25	1,255	1	121
Lee	1	26	7	202	0	0
Lexington	14	1,182	14	447	0	0
Marion	9	399	23	820	1	12
Marlboro	1	20	21	1,114	0	0
McCormick	6	212	12	637	2	224
Newberry	6	512	35	1,411	0	0
Oconee	5	297	13	1,505	2	272
Orangeburg	20	951	34	1,609	8	178
Pickens	6	139	5	149	0	0
Richland	3	204	9	478	2	96
Saluda	9	607	22	798	1	97
Spartanburg	6	294	4	140	2	291
Sumter	2	310	19	960	0	0
Union	4	275	5	292	3	321
Williamsburg	12	1,682	54	2,929	4	1,263
Y+2:49ork	1	35	12	629	1	62
<b>State Totals:</b>	<b>289</b>	<b>16,347</b>	<b>925</b>	<b>45,551</b>	<b>50</b>	<b>7,488</b>

## 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.

### **Conservation Reserve Program (CRP) - Federal**

The Conservation Reserve Program (CRP) began with crop year 1986 and was renewed with the passage of the 2014 Farm Bill. This program provides technical and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. CRP reduces soil erosion, protects the Nation's ability to produce food and fiber, reduces sedimentation in streams and lakes, improves water quality, establishes wildlife habitat, and enhances forest and wetland resources. It encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter strips, or riparian buffers. CRP is administered by the USDA Farm Service Agency, with the SC Forestry Commission providing technical assistance for forestry practices. During FY20, SCFC foresters wrote 49 forest management plans for CRP encompassing 1,279 acres.

### **Environmental Quality Incentives Program (EQIP) – Federal**

The Environmental Quality Incentives Program (EQIP) was created by the 1996 Farm Bill. EQIP provides financial assistance to help plan and implement conservation practices that address natural resource concerns and help improve soil, water, plant, animal, air and related resources on agricultural land and non-industrial private forestland. An additional purpose of EQIP is to help landowners meet Federal, State, Tribal and local environmental regulations. EQIP is administered by the USDA Natural Resources Conservation Service, with the SC Forestry Commission providing technical assistance for forestry practices. During FY20, SCFC foresters wrote 208 forest management plans for EQIP encompassing 10,130 acres.

### **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. This program is funded by the USDA Forest Service and is administered in South Carolina by the SC Forestry Commission.

## **Statewide accomplishments for SCFC-administered cost-share programs, FY2019-20**

### **–Reforestation and timber stand improvement**

<b>Program</b>	<b>Number of Landowners</b>	<b>Acres Planted</b>	<b>Prescribed Burning</b>	<b>TSI Acres</b>	<b>Commercial Thinning</b>	<b>Precommercial Thinning</b>	<b>Cost Share Payments</b>
FRP	267	12,733	0	269	0	0	\$971,762
SPB	43	1,807	0	0	0	225	\$197,612
<b>Totals</b>	<b>310</b>	<b>14,540</b>	<b>0</b>	<b>269</b>	<b>0</b>	<b>225</b>	<b>\$1,169,374</b>

*\*data not available*

The SC Forestry Commission surveyed landowners who received cost-share assistance both at the beginning of the process and at the end. This survey indicated that 96.4% of customers were satisfied with the assistance they received initially and the follow-up survey indicated that 90.5% were satisfied with the assistance received at the end of the process.

### FRP Monitoring

The purpose of monitoring FRP applications is to fulfill the agency's regulatory responsibility regarding maintenance of FRP practices. SC Code of Laws 48-28-80 requires that landowners who receive FRP cost share assistance maintain the land in a forested condition for 10 years or until a commercial harvest. SC Code of Laws 48-28-50 requires the SCFC to initiate recollection of FRP cost-share funds if a landowner does not meet the requirements of SC Code of Laws 48-28-80. SCFC Procedure 3214.17 was established to provide guidance regarding the monitoring of FRP practices.

During FY20 the Forestry Commission completed monitoring of 292 sites for compliance with FRP maintenance requirements. Three sites, comprising 27 acres, were found to be out of compliance and recollection of the cost-share funds was initiated.

### 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 81% for loblolly pine plantings. Survival rates for longleaf pine plantings were tabulated separately. Plantings with longleaf seedlings had a survival rate of 84% when containerized stock was used. Due to a decline in the use of bare root longleaf stock no bare root longleaf plantings were sampled during FY20.

### Forest Stewardship

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

During the past year, 50 Stewardship Plans were written in South Carolina on 7,488 acres. South Carolina Forestry Commission foresters authored all of these plans and recognized 2 landowners as Forest Stewards during FY20.

Forest Stewardship staff also completed FSP Implementation Monitoring, conducting on the ground inspections on 24 Forest Stewardship Plans encompassing 3,771 acres. During FY20 it is estimated that 71% of all Forest Stewardship Plans are being implemented. In addition to adhering to the standard implementation monitoring protocol for FY20, the SCFC included additional evaluation of specific management outcomes that have resulted from the implementation of Forest Stewardship Plans. Results indicate that Forest Stewardship Plans are having a positive impact on specific management outcomes of interest in South Carolina (see table below). In FY20 we also evaluated whether the landowner being monitored was "highly engaged" at the time of monitoring. The Sustaining Family Forest Initiative (SFFI) classifies a landowner as "highly engaged" if they have reported doing several activities to protect and improve their woodlands. In South Carolina the SFFI classifies that 8% of all family forest landowners owning 10+ acres are highly engaged. Results from Forest Stewardship Implementation Monitoring indicate that 42% of landowners with Forest Stewardship Plans are highly engaged. Thus, landowners with Forest Stewardship Plans are significantly more likely to be engaged in the active management of their woodlands than the average landowner.

Forest stewardship monitoring evaluation results, FY2019-20	
Management Outcome	Percent Implemented as Result of Plan
Timber Harvest	50
Tree Planting	38
Prescribed Burning	13
Wildfire Prevention Activity	42
Invasive Species Control	25
Wildlife Habitat Enhancement	50
Utilized Cost Share Assistance	17
Used Stewardship Plan to Qualify for Farm Bill Program	8
Used Forest Stewardship Plan to Qualify for Third Party Certification (Tree Farm, etc.)	0

Of the landowners who returned customer surveys during FY20, 96.6% of them indicated they were satisfied with the Forest Stewardship management plan they received, and 100% of them indicated that they intended to complete most or all of the recommendations in their plan.

## Forestry Services

Through this program the SC Forestry 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 FY20:

**Firebreak Plowing** - performed by Forestry Commission employees using agency equipment for \$140 for the 1st hour and \$85 for each additional hour. In FY2006, separate rates were established for firebreaks constructed with a heavy tractor. For FY20, these rates were \$160 for the 1<sup>st</sup> hour and \$100 for each additional hour.

**Prescribed Burning** - performed by Forestry Commission employees using agency equipment for \$21 per acre for understory burns and \$30 per acre for site preparation burns and for understory burns in mountainous terrain. Firebreak plowing costs are not included. The minimum charge for this service was \$500 during FY20.

**Prescribed Burning Standby** - an agency tractor and employee on standby at burning site for \$80 for the 1st hour and \$30 for each additional hour while the landowner performs burning under an approved plan. The minimum charge for this service was \$110.

**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.



<b>Forestry services</b>			
<b>Service</b>	<b>Number of Tracts</b>	<b>Units of Measure</b>	<b>Receipts FY2017</b>
Firebreak Plowing	288	635 miles	\$113,608.00
Prescribed Burning	57	4,444 acres	\$97,343.00
Prescribed Burning Standby	11	1,309 acres	\$2,225.50
Equipment Rental	2	50 acres	\$70.00
Water Bar Construction	3	95 bars	\$7,855.00
Timber Marking	1	276 acres-	\$9,067.00
<b>Totals</b>	<b>362</b>	<b>-</b>	<b>\$230,169.00</b>

The SC Forestry Commission sends customer surveys to all landowners who receive forestry services. In FY20, 100% of our customers reported they were satisfied with our forestry services and 100% of those responding indicated they plan to use our services again.

## Urban and Community Forestry

The Urban and 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; and 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 toward accomplishing a natural resource inventory and management plan, employs professional urban forest staffing, adopts and implements natural resource policy, and works in partnership with local advocacy organizations.

### **Urban and 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. When available, these funds are funneled through the US Forest Service to the SC Forestry Commission to administer. South Carolina received \$125,000 in federal funding through the competitive grant process (Landscape Scale Restoration). The goal of the grant project is to create resilient coastal forests in the Southeastern US. The project will use GIS to map extent and intactness of current forest cover for several coastal communities, develop risk assessments and future forest cover projections and develop a coastal forest resiliency plan for each pilot community. This project will aid communities in better planning to meet these challenges by assessing the current extent and health of coastal forests, associated benefits provided (environmental, social and economic), risk factor assessment (development, pests and storm surge) and by developing plans for

meeting these challenges. This is a regional effort with South Carolina as the lead state and Georgia and Virginia as partners. The second funded LSR project is for “Healthy Trees Healthy Lives” in which all 13 southern states are participating. The purpose of the grant is to provide an outreach and awareness initiative where state forestry agencies share research that supports the message that trees have a positive impact on human health with partners in the health community. South Carolina received \$10,000 from this grant to create educational material to share with partners in human health fields. The third funded LSR project is the “Economic Impact of Urban and Community Forestry in the Southern Region”. The total amount of the federal award is \$150,000 which will fund a study for all 13 states that will gather data on the value of the resource and job creation to help solidify why investing in community forestry is essential. The region-wide analysis will coordinate with the Northeastern Area LSR grant project and help define the importance of the industry on a broader scale.

The Urban and Community Forestry program also partnered with Trees SC (urban and community forestry council) to assist with urban forestry and arboricultural training and continuing education for public tree managers and other professionals. SCFC provided a speaker for the Trees SC annual conference and partnered with Trees SC to provide two SC Arborist Workshops.

The U&CF program has six grant agreements with communities: North Augusta, Camden, Greenville, Bennettsville, Florence, and Myrtle Beach. These communities applied for assistance with projects that help maintain and care for their urban forests. Five grantees applied for assistance with conducting tree inventories; one grantee applied for assistance with attending a course to prepare two employees for taking the certified arborist exam. North Augusta completed their tree inventory and the remaining communities are continuing to work on their 2018 projects. In 2019, the U&CF program made six new agreements with communities: North Charleston, North Myrtle Beach, Camden, Trees SC, Trees Greenville, and Myrtle Beach. Two communities applied for assistance with accomplishing tree inventories. The remaining funded projects were: educational training for urban and community forestry staff and community tree planting.

The U&CF program is partnering with Green Infrastructure Center (GIC), a non-profit organization, on a Community Tree Planning and Planting Campaign. The project entails partnering with Greenville, Irmo, and Summerville to assist communities with strategic tree planning and planting to demonstrate the use of data in planning where, when and how to plant trees, as well as where to retain canopy and how to motivate planning across both public and private sectors. GIC will work with communities to make land cover maps and planting strategy maps. Then, a strategic planting map will be developed in collaboration with municipalities, local agencies and non-profit groups.

U&CF program is also partnering with GIC to develop a Planners Forest Toolkit to provide planners with a suite of policy tools and practices to expand and/or conserve forests. The Toolkit will include examples of successful forest conservation policies from across SC and best policy practices.

The U&CF program is working on a project called Canopy Coaching in partnership with GIC to assist communities with technical support to map their urban canopy, plantable areas and set urban canopy goals. Participating communities receiving assistance are Richland County, Mt. Pleasant, Santee-Lynches COG, Beaufort County and Simpsonville.

### **Tree City/Tree Line USA/Tree Campus**

Sponsored on the national level by the Arbor Day Foundation and others, the Tree City USA program is administered in South Carolina by the SC 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 recognized 40 municipalities under the Tree City USA program during FY20.

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 and the Arbor Foundation recognized 3 municipally-owned utilities as Tree Line USA certified in FY20.

The Tree Campus USA program, sponsored by the National Arbor Day Foundation, encourages institutions of higher learning to promote proper management of campus trees. South Carolina maintained 7 Tree Campus USA institutions in FY20.

**Technical Assistance and Educational Program**

The South Carolina General Assembly provided state funding for an Urban Coordinator position and three Regional Urban Forester positions beginning in July 2019 which increases our program exposure and assistance to customers across the state of South Carolina. Through the direct technical assistance of the community forestry staff to municipalities, schools and partner organizations, the urban and community forestry program accomplished the following in FY20:

Types of technical assistance	Program accomplishments	
Program Development/Expansion	# of Entities	# of Assists
Municipal Government	43	128
Non-profit/trade organizations	18	67
Educational Institutions	8	16
County Government	16	34
State Government	3	12
Others	15	32
<b>TOTAL</b>	<b>103</b>	<b>289</b>

Tree City USA	40
Tree Campus USA	7
Tree Line USA	3

Public Information/Education	Adults	Youth	Total
<b># Programs</b>	12	3	15
<b># People</b>	428	43	471
<b># Seat Hours</b>	1,129	65	1,194

## State Forest / State Lands

### **Harbison State Forest**

Harbison State Forest (HSF), located approximately 9 miles from downtown Columbia, encompasses 2,176 acres. The Forest was purchased in 1951 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 '90s with Harbison soon gaining the reputation as a mountain biking mecca for the area. A yearlong vehicle survey was conducted during FY17 which estimated 132,000 user visits during that time.

<b>Receipts for operating budget, FY2019-20</b>	
<b>Activity</b>	<b>Receipts</b>
Timber Sales	\$0.00
Conference Room Rentals	\$701.25
Trail Permits	\$64,902.97
Campsite Rentals	\$1,520.00
Trail Donations	\$1,538.70
Other	\$0.00
<b>Total</b>	<b>\$68,662.92</b>
<i>Note: 25% of all receipts are paid to the Richland County School System. This amounted to \$16,225.74 for the fiscal year (donations and rental income are not included when calculating the total to be dispersed to the school system).</i>	

### SILVICULTURAL PRACTICES

No timber sales took place in FY 20. No prescribed burns took place in FY20. Two acres were planted with 600 containerized longleaf seedlings. A three year forest inventory rotation was completed in FY20

### FOREST PROTECTION

No wildfires occurred during this fiscal year. Trees that were considered hazardous to forest visitors and/or to buildings were felled.

### RECREATION/EDUCATION

The COVID-19 pandemic greatly affected the operations of Harbison State Forest. As people sought out safer recreational opportunities Harbison State Forest saw a noticeable increase of use by the public. These same conditions also halted group gathering in the latter half of this fiscal year. All events took place in the first half of FY20. The Friends of Harbison State Forest held its 14th annual "Take a Kid Mountain Biking" day. This event helped raise awareness of the sport to a younger generation and increased awareness of the state forest. HSF was also the site for five races: one 5k race, one 10K race, and one half marathon foot race, and two mountain biking races.

In addition to these events, several trail work days were conducted during FY20. These events included improving the trails by pruning of overhanging branches and brush and the rehabilitation of wet areas and closed trails. Friends of Harbison State Forest (FoHSF) members have taken on more responsibility in the care of the trail system with reduced SCFC staffing. This group continues to meet monthly to plan events and promote the Forest. The mission of the Friends group is to "preserve and promote the

recreational and educational aspects of this urban forest resource.” The current membership of this group is estimated at 130 individuals.

Scouts and other organized groups continue to use the four primitive camping facilities at Harbison. Harbison’s camping facilities were used by 32 groups this fiscal year for a total of 440 users. The canoe landing at Harbison State Forest provides access to the Broad River. During the 2019-2020 fiscal year, 1919 groups used this facility for a total of 34 paddlers.

**WILDLIFE MANAGEMENT**

Five wildlife viewing areas totaling 2 ½ acres are maintained each year.

**RARE, THREATENED AND ENDANGERED SPECIES MANAGEMENT**

No threatened or endangered species have currently been found on Harbison State Forest.

**RESEARCH**

DNR continued collecting samples for the North American Bat Monitoring Program.

**Manchester State Forest**

Manchester State Forest, located in Sumter County and Clarendon County, is currently comprised of approximately 28,764 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.

<b>Receipts for operating budget, FY2019-20</b>	
<b>Activity</b>	<b>Receipts</b>
Timber Sales	\$822,771.47
Pine Straw Sales	\$109,748.01
Land Lease Payments	\$67,589.10
Wildlife Management Area	\$148,492.87
Recreation and Special Use Permits	\$17,979.00
Year End Refund	\$646.45
<b>Total</b>	<b>\$1,167,230.90</b>
<i>Note: 25% of all forest receipts are paid to Sumter and Clarendon County School Systems for a total of \$294,328.52 (donations, prior year refunds, and rental income categories are not included when calculating the total to be dispersed to the school systems).</i>	

**SILVICULTURAL PRACTICES**

A total of 361 acres were prescribed burned for wildlife habitat enhancement, hazard reduction, hardwood control, aesthetic, and site preparation purposes. 486 acres were sold for final harvest cuts and 84 acres were sold for improvement cuts (thinning). 944 acres were sold for pine straw raking. Inventory data was collected on 292 plots which covered 899 acres on 52 different stands.

The following species and number of seedlings were planted:

<u>Species</u>	<u>Acres</u>	<u>Seedlings</u>
Containerized longleaf pine	250	155,500
Bareroot loblolly pine	133	72,485

#### **FOREST PROTECTION**

MSF had no wildfires during FY20. Manchester personnel assisted regional personnel as well as the local fire departments with several fires which were adjacent to the State Forest as well as in and out of state assignments.

#### **RECREATION**

Recreational use continues to be heavy. Hunting, fishing, horseback riding, motorcycle/ATV riding, and use of the rifle/pistol range continue to be favorite activities. Mountain bike riding has all but ceased due to the increase of free mountain bike riding offered at Poinsett State Park which is managed by SCPRT.

Recreational permit sales consisted of 1,106 daily permits and 283283 annual permits. This does not include hunting or fishing users.

Four special use permits were issued for organized events.

- Manchester Trail Riders Fall Ride on October 26, 2019; 141 riders
- SERMA AMA East Hare Scramble Championship on January 26, 2019; 188 riders
- SERMA 47th Annual Sumter National Enduro on February 2, 2019; 791791 riders
- Manchester Trail Riders Spring Ride on March 21, 2020; canceled due to Covid 19 restrictions

#### **EDUCATION**

The Manchester State Forest director is a member of the Central Carolina Technical College's Natural Resource Management Committee. The committee makes curriculum suggestions and works with school administration to improve the NRM program. Manchester also host some of the classes for field training labs (timber cruising, seedling planting density and survival, ecology, etc.)

#### **WILDLIFE MANAGEMENT**

Approximately 28,000 acres of the forest are presently included in the Wildlife Management Area Program through a cooperative agreement between the SC Department of Natural Resources (SCDNR), and the South Carolina Forestry Commission.

MSF had 4 public dove fields consisting of 271 acres planted in sunflowers, corn, and wheat. 640 acres are maintained as wildlife openings. MSF also has a category II duck impoundment that consists of 297 acres.

Wildlife surveys are conducted in conjunction with SCDNR for fox squirrels, turkey, deer, quail, etc.

#### **RARE, THREATENED, AND ENDANGERED SPECIES MANAGEMENT**

Manchester currently maintains 5 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 Weapons Range (US Air Force).

**RESEARCH**

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

During this past year Manchester issued 1 research special use permit related to do river and stream conditions monitoring.

**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, U. S. Forest Service, Forest Legacy Program, U. S. Fish and Wildlife, 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 and the opportunities it provides for recreation, forest practices and education.

<b>Receipts for operating budget, FY2019-20</b>	
<b>Activity</b>	<b>Receipts</b>
WMA Payments	\$51769.59
<b>Total</b>	<b>\$51,769.59</b>
<i>Note: 25% of all forest receipts were paid to Williamsburg and Georgetown counties for a total of \$12,942.40 (donations, prior year refunds, and rental income categories are not included when calculating the total to be dispersed to the school systems).</i>	

**SILVICULTURAL PRACTICES**

No timber sales occurred on Wee Tee State Forest during FY20. No prescribed burns were conducted this year.

**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.

**RECREATION**

Hunting, fishing, canoeing, and kayaking continue to be the main recreational activities at Wee Tee.

**WILDLIFE MANAGEMENT**

All of Wee Tee State Forest is included in the Wildlife Management Area Program through a cooperative agreement between the SC Department of Natural Resources (SCDNR), and the South Carolina Forestry Commission.

**RESEARCH**

No research special use permits were issued.

## Sand Hills State Forest

Sand Hills State Forest (SHSF) encompasses 46,838 acres, with 45,338 acres in Chesterfield County, 1,000 acres in Darlington County and 500 acres in Kershaw 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 for operating budget, FY2019-20	
Activity	Receipts
Timber & Stump Sales	\$304,230.84
Pinestraw Sales	\$2,040,866.06
WMA Payment	\$88,915.38
Rent State Owned Property	\$2,820.00
Rent Farmland (CPR)	\$ -
Fees & Fines	\$ -
User Fees	\$3,971.00
Prior Year Refund	\$2,236.89
Insurance Claims	\$0
Donations	\$17.00
<b>Total</b>	<b>\$2,443,057.17</b>
<i>Note: 25% of receipts were paid to Chesterfield, Darlington and Kershaw 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. Sand Hills has been totally self-sufficient since 1967.</i>	

County payments	
County	FY 20
Chesterfield	\$588,529.16
Darlington	\$14,932.65
Kershaw	\$6,034.01
<b>Total</b>	<b>\$609,495.82</b>

### SILVICULTURAL PRACTICES

No areas were planted with longleaf pine seedlings in FY20. A total of 458 acres were prescribed burned for wildlife habitat enhancement, hardwood control, and fuel reduction.



## FOREST PROTECTION

Sand Hills State Forest had two wildfires in FY 20 totaling 30 acres.

## PINESTRAW AND TIMBER

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 pinestraw production. The individual agrees to eradicate 90% of all hardwoods on a tract of land using herbicides. In exchange, they may harvest all 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 typically offered for sale on a lump sum, sealed bid basis.

In FY20 Sand Hills had a total of 7 timber sales. These sales consisted of approximately 654 acres for the amount of \$426,281.98.00.

During FY20 Sand Hills issued 16 enhancement contracts which consisted of 61 pine stands for a total of 2,302.5 acres totaling \$172,687.50. At the end of FY 20 there were a total of 14 active enhancement contracts which consisted of 79 pine stands that totaled 3,554.6 acres.

Sand Hills State Forest sells pinestraw through bid sales and negotiated sales. In FY 20 there were 6,089.2 acres sold on bid sales for \$998,462.66 and 7,168.4 acres sold on negotiated sales for \$1,076,438.00.

As a result of increased pine straw activity on 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. The registration stickers are used for pinestraw sales and for state forest users that want to access the "authorized vehicles only" truck trails. In FY20 Sand Hills State Forest issued 245 stickers.

## RECREATION

Recreational use of the Forest continues to be fairly heavy. 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.

Sugarloaf Mountain provides seven primitive camping sites for family camping and eight primitive equestrian campsites. Sand Hills personnel booked 92 reservations for these sites this year. An estimated 1,656 visitors\* used the campsites and trails. The number of visitors does not include day users nor does it include any visitors from any other user group (i.e. hunters, fishermen, birdwatchers, pinestraw workers, etc.). Campsites rental rates are \$15 per site for sites with shelters and \$10 per site for those without shelters. Sand Hills received \$2,595.00 in revenue from camping in FY 20.

One hundred forty trail use permits were issued for horseback riding in FY 20. Revenue from trail use permits totaled \$4,116.00.

*\*Number of visitors does not include day users nor does it include any visitors from any other user group (i.e. hunters, fishermen, birdwatchers, pinestraw workers, etc.).*

Free-use permits are issued for any activity at Sand Hills State Forest that does not have a fee. SHSF personnel issued 23 free-use permits this year. Three (3) of the permits were for raking pinestraw for personal use and twenty (20) were for gathering firewood.

Three special-use permits were issued for organized events.

- Sand Hills Stampede Endurance Ride on November 2, 2019 -- 24 riders, volunteers and received \$360.00 in fees.
- Rally Racing Clinic on February 27, 2020 -- 13 participants and received \$80.00 in fees.

- Sand Blast Rally on February 29 2020 -- 84 competitors' entries with 29 cars, 40 motorcycles and received \$1,880.00 in fees

These events bring many visitors to Sand Hills State Forest and surrounding areas and have a positive economic impact on the area. The local involvement and sponsorship have increased each year that these events are held.

#### **EDUCATION**

SHSF personnel visited and presented programs to the Darlington County Institute for Technology (9th-12th Grade) and the Palmetto Learning Center.

#### **WILDLIFE MANAGEMENT**

Approximately 47,174 acres of the Forest is included in the Wildlife Management Area Program. This is a cooperative agreement between the SC Department of Natural Resources (DNR) and the SC Forestry Commission. SHSF has two public dove fields. The Wilkes Chapel field is 57 acres and planted in corn, sunflowers, and bicolor. The Davis Field is 40 acres and is planted in corn, sunflowers, and bicolor.

Sixty acres (30 plots) were planted as wildlife food plots. These plots were planted in winter peas and oats. No bicolor patches were bush hogged.

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

#### **RARE, THREATENED AND ENDANGERED SPECIES MANAGEMENT**

Population Trends: There are currently 96 managed Red-cockaded Woodpecker clusters on SHSF. During FY20, 90 clusters were active and 6 clusters were inactive. FY 20 saw an increase in activity with 1 inactive cluster turning active and 1 relic cluster turning active from 2019.

#### **LAW ENFORCEMENT**

Officers issued 2 citations in FY20.

#### **RESEARCH**

A longleaf pine natural regeneration research project in conjunction with the US Forest Service is still ongoing and has been in effect since 1978.

### **Poe Creek State Forest**

Poe Creek State Forest (PCSF) is composed of two tracts of land totaling 2,511 acres. The Poe Creek tract is located in Pickens County adjacent to SC Highway 11 and contains 1,806 acres. This 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 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 (PFC) tract, 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 PCSF.

Receipts for operating budget, FY2019-20	
Activity	Receipts
Timber Sales	\$0
WMA Payment	\$17,059.68
Rentals	\$5,570
<b>Total</b>	<b>\$22,629.68</b>
<i>Note: 25% of all forest receipts were paid to Pickens and Oconee county schools for a total of \$4,264.92 (donations, prior year refunds, and rental income categories are not included when calculating the total to be dispersed to the school systems).</i>	

**SILVICULTURAL PRACTICES**

No timber sales occurred on PCSF Forest during FY 20. A 4 acre prescribed burn was conducted to facilitate the military helicopter training on the Piedmont Forestry Center tract in a Loblolly pine stand. White pine and Virginia pine cones were collected from the orchards for SC Forestry Commission and NC Forest Service nurseries.

**RECREATIONAL/EDUCATION**

Use of the PCSF during FY20 was light, with numerous groups and outreach programs canceled due to COVID-19 pandemic.

Poe Creek State Forest use, FY2019-20		
Use	Days	# of People
Gatehouse Rental	10	26
Cabin Rental	49	276
Conference Room	0	0
Scouts	0	0
Wood Magic Forest Fair	0	0
Dove Shoots	4	45
Other & Fishing Rodeo	10	~20
<b>Totals</b>	<b>73</b>	<b>367</b>

**FOREST PROTECTION**

No wildfires occurred on PCSF this fiscal year.

**WILDLIFE MANAGEMENT**

The SC Forestry Commission and the Department of Natural Resources cooperated on the planting and management of a 12-acre dove field at the Piedmont Forestry Center, as well as multiple wildlife openings & cool season plantings throughout both properties. The PFC and PCSF are both in DNR's

Wildlife Management Area program and are open to public hunting. DNR fisheries also stocks one mile of Cheohee Valley Creek that runs through the Piedmont Forestry Center property.

Feral hog trapping was also conducted at the Piedmont Training Center.

#### **RARE, THREATENED, AND ENDANGERED SPECIES MANAGEMENT**

Poe Creek State Forest continues to provide habitat for several populations of federally endangered plants.

#### **INFRASTRUCTURE**

Road access at the Piedmont Forestry Center was maintained by mowing of road shoulders and grading where needed. The main road entering the Piedmont Training Center was re-paved. The office building was painted and the roof resealed; the cooler, shop, and storage building were also painted.

#### **RESEARCH**

Dr. Patrick McMillan, professor at Clemson University, continues to conduct research on Poe Creek.

SC Army National Guard based out of Donaldson Center uses the landing zones at Piedmont Forestry Center for military training. They operate a company each of Lakota, Blackhawk, and Chinook helicopters.

### **Niederhof Forestry Center**

Niederhof Forestry Center (NFC) is located just north of the town of Tillman and approximately 9 miles northwest of Ridgeland in Jasper County and encompasses 1,594 acres. The SCFC Nurseries Section manages some of the property for tree improvement and as a production seed orchard. The remaining acreage is managed as multiple use demonstration forest and for outreach activities that include specialized hunts.

#### **RECEIPTS**

No revenue was generated this year.

#### **SILVICULTURAL PRACTICES**

Personnel prescribed-burned 285 acres and planted 22 acres of loblolly pine.

#### **FOREST PROTECTION**

No wildfires occurred on NFC this fiscal year.

#### **WILDLIFE MANAGEMENT**

Fifteen acres of wildlife food plots were maintained with funding provided by Quality Deer Management Association (QDMA), National Wild Turkey Federation (NWTf), and Lowcountry RC&D.

#### **RARE, THREATENED, AND ENDANGERED SPECIES MANAGEMENT**

No rare, threatened, or endangered species are known to occur on Niederhof Forestry Center.

#### **INFRASTRUCTURE**

Personnel improved road system at Niederhof and installed three new culverts on the property.

## Outreach

<b>Niederhof hunts FY 2019-20</b>				
	<b>Number of Hunt Participants</b>	<b>Other Attending</b>	<b>SCFC</b>	<b>Total</b>
<b>Deer Hunts (2 hunts)</b>				
December Rack Pack	11	26	11	48
Oct.-Nov QDMA Mil	10	10	11	31
<b>Total</b>	<b>21</b>	<b>36</b>	<b>22</b>	<b>79</b>
<b>Turkey Hunts (4 hunts)</b>				
WITO NWTF April				0
April Military NWTF				0
March Mil NWTF				0
March Youth	3	3	4	10
<b>Total</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>10</b>
<b>Coon Hunt (1 hunt)</b>	<b>7</b>	<b>7</b>	<b>3</b>	<b>20</b>
<b>Total: 5 Hunts</b>	<b>31</b>	<b>46</b>	<b>29</b>	<b>109</b>

<b>State forest revenue</b>							
		<b>FY 08</b>	<b>FY 09</b>	<b>FY 10</b>	<b>FY 11</b>	<b>FY 12</b>	<b>FY 13</b>
<b>Gross Revenue</b>		\$2,700,045	\$3,542,463	\$4,077,269	\$3,126,490	\$3,072,999	\$2,846,075
<b>Operating Expenses</b>		(\$2,017,499)	(\$1,984,055)	(\$2,053,605)	(\$1,905,164)	(\$1,813,109)	(\$1,996,717)
<b>Payment to County Schools</b>		(\$668,182)	(\$877,430)	(\$980,462)	(\$750,485)	(\$747,630)	(\$699,817)
<b>Back to SCFC</b>			(\$409,493)		(\$837,065)		
<b>Annual Carry Over</b>		\$14,365	\$271,485	\$1,043,203	(\$366,224)	\$512,260	\$149,540
	<b>FY 14</b>	<b>FY 15</b>	<b>FY 16</b>	<b>FY 17</b>	<b>FY 18</b>	<b>FY 19</b>	<b>FY 20</b>
<b>Gross Revenue</b>	\$2,363,876	\$1,979,540	\$2,972,549	\$2,956,143	\$3,016,529	\$3,799,215	\$3,780,727
<b>Operating Expenses</b>	(\$2,084,033)	(\$1,848,539)	(\$1,921,155)	(\$1,879,296)	(\$1,953,005)	(\$1,954,788)	(\$1,720,946)
<b>Payment to County Schools</b>	(\$581,427)	(\$477,609)	(\$734,796)	(\$731,757)	(\$743,762)	(\$939,931)	(\$917,677)
<b>Back to SCFC</b>	(\$53,385)						
<b>Annual Carry Over</b>	(\$354,970)	(\$346,608)	\$316,599	\$345,090	\$319,762	\$904,496	\$1,142,104

**Total Current Carry Over: \$2,942,890**

State forest general accounting summary								
		FY07	FY08	FY09	FY10	FY11	FY12	FY13
Gross Revenue			\$2,700,045	\$3,542,463	\$4,077,269	\$3,126,490	\$3,072,999	\$2,846,075
Operating Expenses			(\$2,017,499)	(\$1,984,055)	(\$2,053,605)	(\$1,905,164)	(\$1,813,109)	(\$1,996,717)
Payment to County Schools			(\$668,182)	(\$877,430)	(\$980,462)	(\$750,485)	(\$747,630)	(\$699,817)
Back to SCFC				(\$409,493)		(\$837,065)		
Annual Carry Over		\$219,226.58	\$14,365	\$271,485	\$1,043,203	(\$366,224)	\$512,260	\$149,540
	FY14	FY15	FY16	FY17	FY18	FY18 NSO out of system	FY19	FY20
Gross Revenue	\$2,363,876	\$1,979,540	\$2,972,549	\$2,956,143	\$3,016,529		\$3,799,215	\$3,780,727
Operating Expenses	(\$2,084,033)	(\$1,848,539)	(\$1,921,155)	(\$1,879,296)	(\$1,953,005)		(\$1,954,788)	(\$1,720,946)
Payment to County Schools	(\$581,427)	(\$477,609)	(\$734,796)	(\$731,757)	(\$743,762)		(\$939,931)	(\$917,677)
Back to SCFC	(\$53,385)							
Annual Carry Over	(\$354,970)	(\$346,608)	\$316,599	\$345,090	\$319,762	(\$85,334)	\$904,496	\$1,142,104
Payroll FY 14 Tree Improvement								Carry over includes From State Funds (2) doozers \$375,698 salary \$200,000 total \$575,698
<b>Total Current Carry Over: \$2,942,890</b>								

### State Lands Management Program

The State Lands Forest Management Program was created to provide professional forest management assistance to South Carolina state agencies, as well as the U.S. Forest Service through the Good Neighbor Authority program that own timberlands. This assistance consisted of cruising, marking, management assistance, and administering timber sales. The agencies and facilities assisted were as follows:

State lands forest management assistance		
Agency	Acres	Tons
DNR		

Jocassee	350	
<b>PRT</b>		
Cheraw	286	10,995
Givhans Ferry	868	30,263
<b>Other</b>		
John De La Howe	~300	
<b>Totals</b>	<b>1,804</b>	<b>41,258</b>

<b>FY 20 State lands forest management assistance</b>		
<b>Agency</b>	<b>Acres</b>	<b>Tons</b>
<b>DNR</b>		
Draper	117	3800
Jocassee		
Thurmond	116	4652
Mason	408	16236
McBee	626	24050
Palachucola	418	11899
South Heritage	276	5197
<b>PRT</b>		
Cheraw ( <i>IPS salvage</i> )	19	
<b>USFS (G.N.A.)</b>		
Burned Shed ( <i>Planting LL</i> )	143	
<b>Burned Shed (<i>Harvest</i>)</b>	496	25671
<b>Other</b>		
John De La Howe	106	6681
John De La Howe ( <i>fuel Chips</i> )	1,000	
<b>Totals</b>	<b>3,725</b>	<b>98,186</b>

### **Other Activities**

In addition, the five state forests (Manchester, Sand Hills, Wee Tee, Harbison, and Poe Creek) maintained dual certification under the Sustainable Forestry Initiative (SFI) and the American Forest Foundation (AFF) standards of sustainability. The U.S. Forest Service and the SCFC entered into a Good Neighbor Agreement where-by the U.S. Forest Service contracts with the SCFC to have the SCFC perform / administer agreed upon forest management activities under the SCFC procedures. During FY20 a reforestation and timber sale administration project were conducted on the Francis Marion National Forest under this agreement.

The State Lands Coordinator:

- Serves as primary contact and coordinator for all state forest certification activities
- Adheres to applicable reporting and data management requirements
- Serves as the primary contact and coordinator for State Forest harvest scheduling, modeling, mapping, and inventory collection
- Serves on the State Trails Committee
- Serves on SC Sustainable Forestry Teachers Tour advisory committee
- Serves on the SFI State Implementation Committee (S.I.C.)
- Facilitates timber marking with regions where possible
- Serves as the agency G.N.A primary contact
- Serves as a forest management / timber sale resource for all other agencies as well as counties and municipalities as requested
- Began working on a state lands SFI group certification project
- Developed new forest products sales policy & procedure



# RESOURCE DEVELOPMENT DIVISION

## Business Development

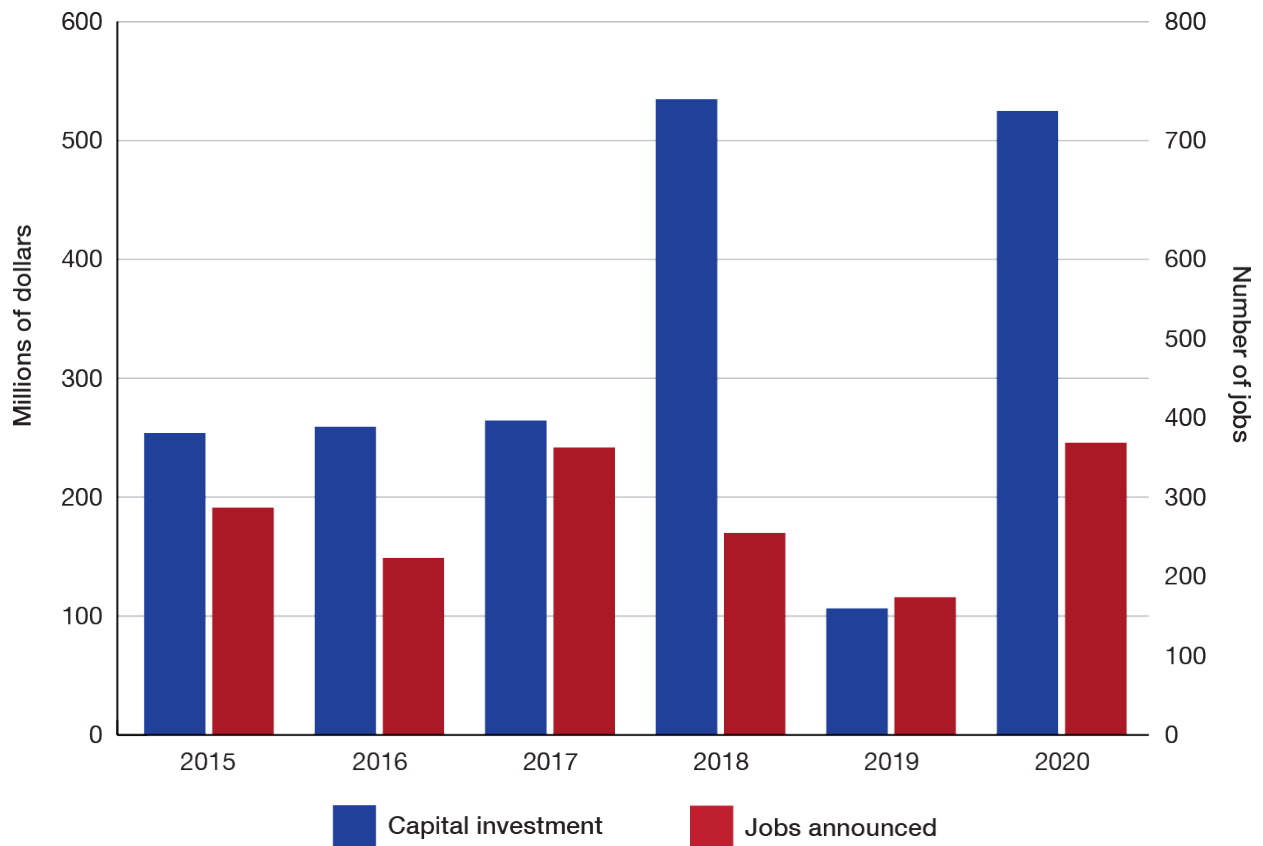
The goal of the Forestry Commission's Business Development Program is to enhance the contribution of South Carolina's forest resources and forest product-related businesses to the state's economy. We accomplish this goal by: 1) producing current forest resource information, 2) describing the health of the existing forest industry, 3) promoting South Carolina forest products to global markets, and 4) assisting as needed in the expansion of forest product manufacturing. The Business Development Group has three positions that work as a team, including a forest resource analyst, forest products marketing specialist, and industry recruitment lead.

The agency maintains directories of all primary and secondary forest product mills in South Carolina. Primary mills, such as sawmills, plywood plants or paper mills convert logs into commodity forest products such as lumber, panels and paper. Secondary plants produce value-added forest products like furniture, trusses and prefabricated structures. By the end of June 2019, there were 96 primary and 784 secondary forest product mills in South Carolina. Division personnel met with a sample of 44 primary mills as a part of the national Timber Products Output Program to estimate production levels in 2018. Early estimates indicate a 5% increase in production for solid wood products mills from 2017 to 2018.

Forest products marketing was a major emphasis in FY'19 with active participation in domestic and international trade programs. In August, the agency took the lead in exhibiting for the Southern Group of State Foresters at the International Woodworking Fair in Atlanta, Georgia. In October, the Forestry Commission used a federal grant to exhibit and sponsor South Carolina companies to attend the Southern Forest Products Export Conference in Memphis. Finally, the agency conducted a trade mission to Costa Rica Feb. 11-15 to develop new markets for wood products from the state. Two South Carolina business participated: Cameron Lumber and Green Link Industries. They met with a group of seven buyers and returned to SC with a series of trade leads for new business opportunities.

Finally, the agency cooperates with the SC Department of Commerce as well as regional and local economic developers to help grow the economic contribution of forestry to South Carolina's economy. During FY '19, there were nine announcements totaling \$103.9 million in capital investments that resulted in 185 new jobs created by the forest products industry in South Carolina. The nine announcements included three primary forest product companies that manufacture lumber, plywood and oriented-strand board and six secondary forest product companies that manufacture a wide range of value-added products. Eight of the nine announcements involved the expansion of existing manufacturing plants to eliminate bottlenecks and allow for expansion. Ridgeland Pellet Company in Jasper County was the sole manufacturing startup in FY'19. Ingevity established a new global headquarters for the company in North Charleston.

## Forest-based economic development impact



### Forest Inventory & Analysis

The Forest Inventory and Analysis (FIA) program is a cooperative program with the US Forest Service – Southern Research Station (SRS) 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. There are 3,452 total forest inventory plots located in South Carolina. In addition, there are 224 intensification plots that are located on the Sumter and Francis Marion National Forests. 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 U.S. Forest Service furnishes data analysis and reporting for this program.

Each year, during the summer growing season, a subset of the standard FIA plot grid is selected to collect forest health attributes. This part of the program is referred to as Phase 2+. Phase 2+ plots were set at one-sixteenth intensity of the standard FIA plot grid for the summer of 2018 and 2019. Phase 2+ plots include additional measurements that are collected to provide data on forest vegetative structure, down woody material, and tree crowns.

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. U.S. Forest Service personnel conduct quality assurance and quality control checks, on a sample of

plots, to insure the accuracy of the data collected by Forestry Commission field crews. During FY 2018-19, the average accuracy for all crewmembers was 96.23% with each crewmember exceeding the 87% yearly average required by SRS.

During FY 2018-2019, field crews completed one panel of plots that began in FY 2017-2018 and began the next subsequent panel. For the fiscal year, a total of 576 Phase 2 sample plots were completed by Forestry Commission crews with 59 Phase 2+ plots being a subset of these plots. SRS completed 110 plots, consisting of 1 forest plot, 75 nonforest plots, and 34 plots classified as census water. Nonforest and census water plots were identified in the SRS office and not sent to the Forestry Commission field crews. The FIA program completed data collection on the second panel of the Cycle 12 inventory and began the third panel of data collection. The FIA program has completed 33% of the third panel of the Cycle 12 inventory of data collection. The FIA program completed 30 product utilization studies on active logging operations across the state to develop factors for logging residues, logging damage, and utilization of the unmerchantable portion of harvested trees. In addition to the standard FIA plot grid, 30 FIA plots were collected on the Sumter and Francis Marion National Forests as intensification plots.

Of the 13 southern states, South Carolina was the first state to complete the 8th inventory (2001), the 9th inventory (2006), the 10th inventory (2011), and the 11th inventory (2017). Subsequently, South Carolina is the first state in the nation to initiate the 12th inventory. The SCFC FIA program is slightly behind schedule to complete the 12th inventory measurements in five years, with December 2022 as a target date for completion.

## Nursery and Tree Improvement

The South Carolina Forestry Commission owns 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. The agency actively operates Niederhof Forestry Center, but on April 2, 2018, ArborGen took over the management and operation of Taylor Nursery under a 10-year contract with the South Carolina Forestry Commission.

### **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.

During FY2017-18, the agency put out a Request for Proposals (RFP) for the management and operation of Taylor Nursery. As a result of this RFP, on April 2, 2018, ArborGen was awarded a 10-year contract for oversight of Taylor Nursery. The South Carolina Forestry Commission has retained the right to have up to five million seedlings grown annually by ArborGen for South Carolina landowners at agency-approved pricing. For the 2019-2020 planting season, ArborGen produced and marketed 3,223,774 seedlings under the terms of the contract.

The SCFC conducts a nursery survey annually to determine the number of seedlings planted in South Carolina. During FY2019-20, 84,117,543 pines and 392,476 hardwood and other seedlings were planted in South Carolina for a total of 84,510,019 seedlings from all nursery sources. This number is 5.8% lower than the number of seedlings planted the previous year. This is the first decline in the total number of trees planted in South Carolina in nine years.

ArborGen distributed 2,543,352 pines and 78,196 hardwood and other seedlings to Forestry Commission customers from Taylor Nursery in FY2019-2020 for a total of 2,621,548 seedlings. The total amount distributed represents 81% of the total number of bareroot and containerized seedlings grown at Taylor Nursery for SCFC customers. The seedlings sold under the ArborGen contract amounted to 3.1% of the seedlings distributed in South Carolina from all public and private sources.

In past years, the SCFC has surveyed at least a 10% sample of seedling customers to determine general satisfaction with our seedlings and to target areas for improvement. This year the survey was e-mailed to all customers who supplied ArborGen with an e-mail address. Of the 306 surveys e-mailed out, 133 (43%) customers responded. The 2020 survey indicated that 95.4% of our customers were satisfied with Taylor Nursery's seedling quality and service. Of the 30 customers who had a problem with their seedling order, 80% of the customers were satisfied with Taylor Nursery's response. The courtesy and professionalism of Taylor Nursery employees earned the highest rating of this survey (96.2% satisfied). Of the 48 customer comments on returned survey forms, 46% of the comments were very complimentary of the nursery program. The main concern expressed involved poor seedling survival due to perceived seedling quality issues by 5 customers.

### **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.

NFC is staffed by a full-time Seed Orchard Manager with assistance as needed by Coastal Region staff. A Forestry Technician I is assigned to NFC as part of his work duties when scheduled on-call on normal workdays. Additional personnel from the Edisto Unit assist as needed with seed orchard establishment and management. NFC attempts to operate solely based upon revenues generated through cone/seed sales and funding from research agreements.

Second-generation loblolly pine orchards were established from 1985-1989, totaling 322 acres; 30 acres of 1.5-generation longleaf pine were established from 1988-1992. NFC's loblolly orchards came into production in 1993 with some 4,542 bushels collected from both Coastal and Piedmont province orchards and the longleaf orchard has been in production since 2008. To date, some 77,989.5+ bushels have been collected. In 2004, as a result of budget cuts, a strategic change in goals for NFC resulted in the reduction of 2<sup>nd</sup>-generation orchards to 131.4 acres. It is worthy to note that during the years 1993-2005, NFC orchards consistently produced 25% of all second generation seed within the cooperative. In 2016, a 15 acre block of 2<sup>nd</sup> Generation Coastal loblolly pine orchard was harvested to provide some buffer area and expansion for 3<sup>rd</sup> Cycle Coastal loblolly pine seed orchard elite selections. Current 2<sup>nd</sup> Generation loblolly pine seed orchard acreage stands at 116.4 acres, which permits continuing interest in premier selections to be harvested for internal use and seed/cone sale revenue.

Third-cycle orchard establishment occurred between 2005-2011. These new orchards represent the culmination of over 40 years' breeding and testing work by our agency as part of the NCSU Cooperative Tree Improvement Program (NCSUCTIP) and will provide landowners in South Carolina with very high-quality genetically-improved seedlings that are specifically adapted to our state. There are 17.6 acres of coastal 3<sup>rd</sup> cycle loblolly pine orchard and 12.4 acres of piedmont 3<sup>rd</sup> cycle loblolly pine orchard. Initial rogueing was performed across 25% of the 3<sup>rd</sup>-Cycle Coastal loblolly pine seed orchard this year to remove poorer performing selections while opening up vital space for nutrient uptake and crown establishment of selections having greater genetic value.

Cone collection for 2019 yielded 910 bushels 2<sup>nd</sup>-Generation Coastal loblolly pine, 770 bushels 3<sup>rd</sup>-Cycle Coastal loblolly pine, 487 bushels 3<sup>rd</sup>-Cycle Piedmont loblolly pine and 870 bushels 1.5 generation longleaf pine. Of the 1,134 bushels of cones processed by the Forestry Commission, seed yields were as follows: 270 bushels 1.5 Generation Longleaf pine cones yielded 234.85 pounds seed, 488 bushels of 3<sup>rd</sup>-Cycle Coastal loblolly selections yielded 215.30 pounds seed, and 226 bushels of 3<sup>rd</sup>-Cycle Piedmont loblolly selections yielded 156.60 pounds seed. 150 bushels of 2<sup>nd</sup> Gen Coastal loblolly yielded 112.40 pounds.

NFC's annual sale of seed and pine cones generated \$112,220.35 in revenue: since 1993, Niederhof Forestry Center's advanced generation seed orchards have created additional revenue in the amount of \$2,605,808.37 from green and empty cone sales, seed sales, and sale of pine pollen. The value of this revenue does not account for the value of pine seed delivered to Taylor Nursery for internal seedling production during our operation of the nursery.

COVID-19 has brought new challenges to how we operate the tree improvement facility to keep Commission personnel and visitors safe while performing daily duties. Cone and seed processing was temporarily delayed due to health concerns about the virus earlier this year, and while we all hope for solutions via the development of antivirals and vaccines, this challenge will test our ability to successfully perform various tasks while staying safe when social distancing is not possible during the pandemic.

<b>Source of seedlings distributed in South Carolina, FY2019-20</b>				
<b>Seedling Provider</b>	<b>Pines Distributed</b>	<b>Hardwoods &amp; Others Distributed</b>	<b>Total Number of Trees Distributed</b>	<b>Percent of Grand Total</b>
ArborGen (Blenheim & Taylor Nurseries in SC + others)	52,577,042	373,446	52,950,488	62.7%
International Forest Company (2 GA & 1 NC nursery)	16,448,749	0	16,448,749	19.5%
Weyerhaeuser (Quail Ridge)	11,246,000	0	11,246,000	13.3%
Meeks Farm & Nursery	1,663,702	0	1,663,702	2.0%
Bodenhamer Farms & Nursery	1,500,000	0	1,500,000	1.7%
Georgia Forestry Commission	507,000	3,400	510,400	0.6%
North Carolina Forest Service (Claridge Nursery)	175,050	15,630	190,680	0.2%
<b>Total</b>	<b>84,117,543</b>	<b>392,476</b>	<b>84,510,019</b>	<b>100%</b>

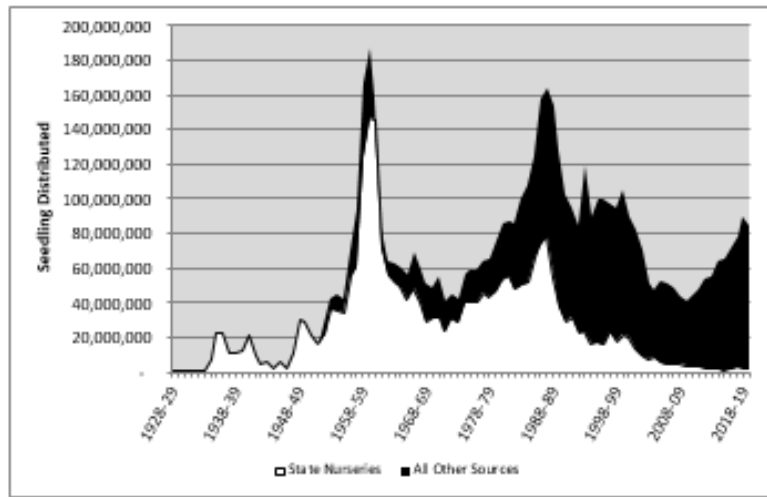
<b>Tree seedlings planted by landowner classification, FY2019-20</b>				
<b>Land Ownership</b>	<b>Pines Planted</b>	<b>Hardwoods &amp; Others Planted</b>	<b>Total Number of Trees Planted</b>	<b>Percent of Total</b>
Private Forestlands	83,031,087	392,476	83,423,563	98.7%
Public Forestlands	1,086,456	0	1,086,456	1.3%
<b>Total</b>	<b>84,117,543</b>	<b>392,476</b>	<b>84,510,019</b>	<b>100%</b>

**State nursery seedling production & sales, FY2019-20**

<b>Species</b>	<b>Seedlings Produced</b>	<b>Seedlings Sold</b>	<b>% Sold</b>
Baldcypress	9,090	9,090	100%
Carolina Sapphire CTR	1,248	1,248	100%
Cedar, Eastern Red	12,000	9,920	83%
Clemson Greenspire CTR	1,200	1,024	85%
Crabapple, Southern	4,000	2,640	66%
Dogwood	4,000	2,170	54%
Leyland Cypress CTR	6,000	4,928	82%
Loblolly Pine, OP Elite	1,400,000	1,053,862	75%
Loblolly Pine, OP Select	800,000	585,565	73%
Longleaf Pine Improved CTR	900,000	873,250	97%
Murray Cypress CTR	6,016	6,016	100%
Oak, Cherrybark	5,010	5,010	100%
Oak, Live	3,000	2,780	93%
Oak, Northern Red	2,000	1,940	97%
Oak, Pin	2,000	2,000	100%
Oak, Sawtooth	6,000	5,340	89%
Oak, Shumard	3,070	3,070	100%
Oak, Swamp Chestnut	4,040	4,040	100%
Oak, White	3,000	2,180	73%
Oak, Willow	4,000	3,690	92%
Persimmon	4,000	3,810	95%
Redbud, Eastern	2,080	2,080	100%
Shortleaf Pine	10,000	8,975	90%
Sycamore	1,000	990	99%
Virginia Pine Christmas Tree Stock	18,000	13,680	76%
Walnut, Black	1,000	900	90%
White Pine	8,020	8,020	100%
Yellow Poplar	4,000	3,330	83%
<b>Totals</b>	<b>3,223,774</b>	<b>2,621,548</b>	<b>81%</b>

### Seedling Distribution 1928-2020

Year	Total State Nurseries	Total All Sources	Year	Total State Nurseries	Total All Sources
1928-29	142,000	142,000	1974-75	40,082,000	55,997,000
1929-30	148,000	148,000	1975-76	40,664,000	59,063,000
1930-31	986,000	986,000	1976-77	39,795,000	59,238,000
1931-32	976,000	976,000	1977-78	45,735,000	64,380,000
1932-33	996,000	996,000	1978-79	43,010,000	65,937,000
1933-34	1,031,000	1,031,000	1979-80	46,375,000	76,207,000
1934-35	7,529,000	7,529,000	1980-81	53,513,000	86,420,000
1935-36	23,000,000	23,000,000	1981-82	55,728,000	87,793,000
1936-37	22,000,000	22,000,000	1982-83	47,799,000	86,265,000
1937-38	11,192,000	11,192,000	1983-84	50,170,000	100,394,000
1938-39	10,854,000	10,854,000	1984-85	51,636,000	107,718,000
1939-40	12,244,000	12,244,000	1985-86	65,465,000	124,381,000
1940-41	21,165,000	21,165,000	1986-87	73,555,000	157,523,000
1941-42	10,275,000	10,275,000	1987-88	78,788,000	164,095,000
1942-43	4,742,000	4,742,000	1988-89	55,052,000	153,450,000
1943-44	5,663,000	5,663,000	1989-90	38,356,000	128,475,000
1944-45	1,963,000	1,963,000	1990-91	29,297,000	102,384,000
1945-46	6,402,000	6,402,000	1991-92	31,984,000	94,710,000
1946-47	1,963,000	1,963,000	1992-93	22,665,000	84,287,000
1947-48	11,357,000	11,357,000	1993-94	23,286,000	119,311,000
1948-49	30,389,000	30,339,000	1994-95	16,154,000	90,336,000
1949-50	29,502,000	29,502,000	1995-96	16,841,000	99,549,000
1950-51	20,615,000	20,615,000	1996-97	16,058,000	99,439,000
1951-52	16,619,000	16,619,000	1997-98	23,278,000	97,963,000
1952-53	22,036,000	32,246,000	1998-99	17,955,000	94,539,000
1953-54	36,210,000	42,852,000	1999-00	21,524,000	104,594,000
1954-55	35,373,000	45,182,000	2000-01	20,095,000	90,346,000
1955-56	34,414,000	42,932,000	2001-02	13,500,000	81,431,000
1956-57	55,754,000	69,659,000	2002-03	9,376,000	69,989,000
1957-58	60,846,000	93,369,000	2003-04	7,202,000	51,823,000
1958-59	123,985,000	166,351,000	2004-05	8,563,000	47,243,000
1959-60	147,146,000	187,516,000	2005-06	5,437,000	52,165,000
1960-61	145,609,000	158,331,000	2006-07	4,206,000	50,900,000
1961-62	71,892,000	83,844,000	2007-08	4,533,842	49,320,517
1962-63	56,191,000	64,202,000	2008-09	4,739,783	43,692,314
1963-64	51,446,000	62,424,000	2009-10	3,762,989	41,549,345
1964-65	49,010,000	60,683,000	2010-11	3,629,610	44,374,915
1965-66	42,311,000	56,529,000	2011-12	2,922,880	47,468,239
1966-67	48,575,000	69,598,000	2012-13	2,091,256	53,342,588
1967-68	39,970,000	58,812,000	2013-14	2,125,576	54,971,881
1968-69	29,529,000	51,453,000	2014-15	1,473,558	64,582,487
1969-70	31,415,000	49,203,000	2015-16	1,146,389	64,998,195
1970-71	31,940,000	54,541,000	2016-17	1,902,620	71,971,811
1971-72	23,678,000	41,357,000	2017-18	3,265,745	78,495,405
1972-73	30,978,000	45,239,000	2018-19	2,284,917	89,767,176
1973-74	28,443,000	42,306,000	2019-20	2,621,548	84,510,019
<b>Total State Nurseries</b>	<b>2,598,104,713</b>				
<b>Total All Sources</b>		<b>5,627,721,892</b>			



<b>SCFC active seed orchards</b>		
<b>Orchard Type</b>	<b>Years Established</b>	<b>Acres</b>
<b>Creech Seed Orchard/Manchester State Forest</b>		
Genetic Diversity Archives (Clone Banks)	1977-1983	25
Virginia Pine 1.0 (Creech)	1980	1
Virginia Pine 1.0 (Manchester)	1986	2
Sawtooth Oak 1.0 Seedling	1990	2
<b>Total</b>		<b>30</b>
<b>Niederhof Seed Orchard</b>		
Genetic Archives, 3rd Cycle	2008-2009	4.2
Coastal Loblolly Pine 2.0	1985-1988	53.3
Piedmont Loblolly Pine 2.0	1985-1988	63.1
Longleaf Pine 1.5	1988-1990	30
Longleaf Pine 1.5 Expansion	2010-2011	1.6
Loblolly Pine Breeding Orchard 3.0	1997-2003	7.2
Longleaf Pine Seedling Seed Orchard	1998	8
Coastal Loblolly Pine 3.0	2005-2011	17.6
Piedmont Loblolly Pine 3.0	2005-2011	12.4
<b>Total</b>		<b>197.4</b>
<b>Coastal Seed Orchard</b>		
Sweetgum 2.0	1992-1995	6
Swamp Chestnut Oak Seedling Seed Orchard	1992-1995	1
Southern Red Oak Seedling Seed Orchard	1992-1995	2
White Oak Seedling Seed Orchard	1992-1995	2
<b>Total</b>		<b>11</b>
<b>Piedmont Seed Orchard</b>		
Virginia Pine 1.0	1993	3
Northern Red Oak Seedling Seed Orchard	1993-1995	2
<b>Total</b>		<b>5</b>
<b>Grand Total</b>		<b>243.4</b>



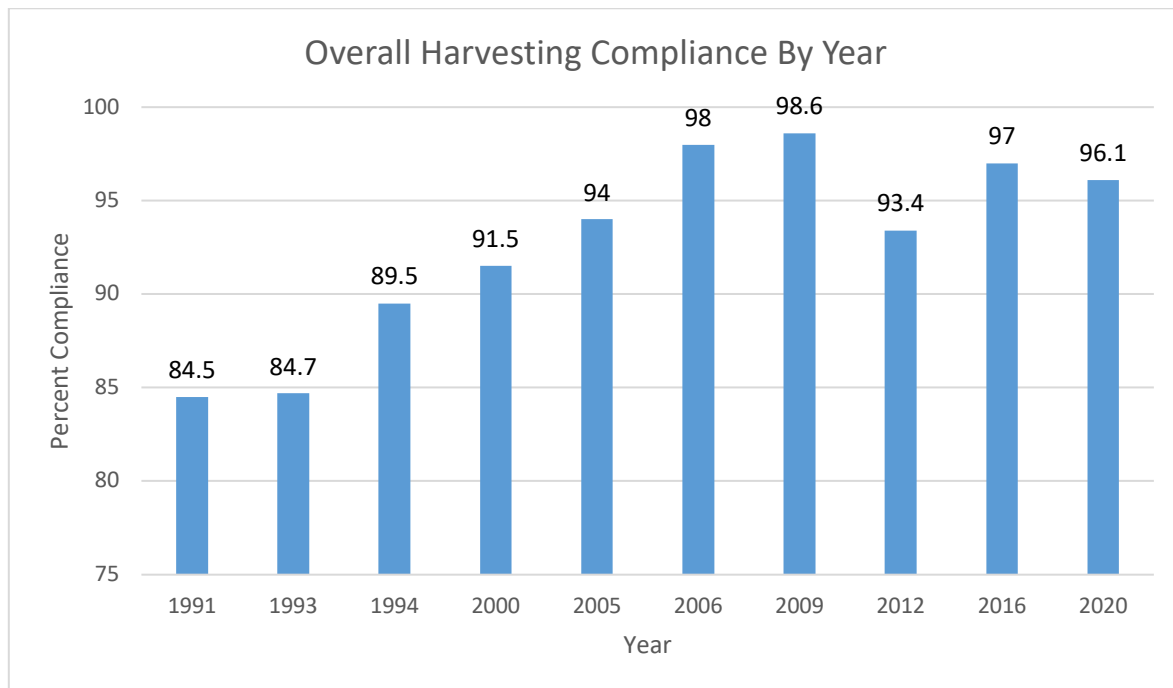
## Environmental Management

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 Compliance and Implementation Monitoring**

BMP monitoring in South Carolina is conducted in accordance with the Southern Group of State Foresters Water Resource Committee's *Silviculture Best Management Practices Implementation Monitoring – A Framework for State Forestry Agencies* published in 1997 and revised in 2002. This ensures consistency among the thirteen states in the southeastern United States.

Sites for the 2019/2020 monitoring study were located in November 2019 using SouthFACT, a forest cover change detection tool developed by the North Carolina Forest Service. BMP compliance and implementation was evaluated on 179 tracts that had been harvested within the prior year. Overall BMP compliance for timber harvesting was found to be 96.1% which is a slight decrease from 97% compliance in 2016. Site evaluation, data collection and data analysis was completed during this fiscal year. The final monitoring report will be compiled, printed and distributed in the first quarter of the next fiscal year.



### **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, 10 training programs were held across the state reaching 332 loggers, landowners, contractors, forest resource professionals, and the general public. This number is significantly lower than normal due to COVID-19 restrictions.

### **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 this

fiscal year, the BMP Foresters provided assistance during 568 visits to 360 sites and completed 127 courtesy exams. BMP Foresters also conducted 16.2 hours of aerial observation for active forestry operations and responded to 40 complaints.

### **Metal Bridge Program**

Historically, stream crossings have been the area with the lowest BMP compliance across the state. Stream crossings are critical for water quality protection since they often involve use of heavy equipment and soil disturbance near water bodies. Temporary bridges can significantly improve BMP compliance if installed and utilized correctly, however, they are cost prohibitive for many logging crews. This year, four metal section bridges were purchased by the Environmental Management Section to start a bridge loan program. These bridges will be housed at the Walterboro Forestry Commission office and are available to any logging contractor that needs them.

### **Environmental Issues and Ecosystem Services**

The Environmental Management Section monitored issues related to endangered species, wetlands, ecosystem services, EPA's proposed waters of the U.S. (WOTUS) rule and biomass harvesting. The Forestry Commission, through an MOA with the SC Rural Water Association and the Long Leaf Alliance, worked to promote source water protection in priority watersheds throughout South Carolina with a focus on the Lake Wateree, Lake Greenwood and the Savannah River watersheds. Work was focused on building a case and demonstrating that forestland is beneficial for water quality and may reduce water treatment costs. Emphasis was also placed on encouraging collaboration with forest landowners, residents, drinking water utilities and the industries that use these watersheds as a drinking water source. The Environmental Management Section is also involved in several other initiatives and collaborations including but not limited to, the newly formed South Carolina Forests and Water Initiative, the Edisto River Basin Council and the Keeping Forests initiative. BMP Foresters are available to provide information and assistance to SCFC personnel, forestry professionals, and landowners. This assistance may include site visits, cooperation with other agencies, and assistance on state lands. BMP Foresters also provide forestry expertise to organizations and agencies addressing policy and regulation related to these issues.

### **Cooperation with Other Agencies**

Programs related to environmental protection of forest resources require close cooperation with other agencies. The 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. In March 2010 SCFC entered a Memorandum of Understanding with the US Army Corps of Engineers to better serve forest landowners and jointly address silvicultural issues in jurisdictional wetlands. BMP Foresters often work with DHEC and the U.S. Army Corps of Engineers when those agencies have regulatory authority over issues which may affect 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.

# COMMUNICATIONS & PUBLIC INFORMATION

The Communication & Public Information (CPI) Division plans and implements communication strategies and long-range public information, marketing, and educational programs for the South Carolina Forestry Commission. These activities are designed to enhance the agency's and forestry's image while promoting the agency's mission and goals. Playing the lead role in communication and public information for the agency, CPI staff coordinate media interest in and public relations for the agency; prepare appropriate responses to media requests; coordinate FOIA requests/responses; prepare news releases, articles, scripts, speeches, letters and reports; support agency departments, programs and personnel with forestry-related promotional items and information; and design original publications, fact sheets and other collateral material for agency personnel, programs and departments.

## Public Relations & Information

### **Information services**

#### **MEDIA RELEASES**

The Communications & Public Information Division wrote and distributed 18 press releases and/or media advisories on a wide range of topics, including fire danger announcements, a burning ban declaration and subsequent lifting, browning pine needles, law enforcement arrests, SC Environmental Awareness Award winner Gloria McCutcheon, a tractor-plow unit being stolen, April tornado damage, State Forest office closures (coronavirus), the agency's mobile wildfire app, Prescribed Fire Awareness Month, Volunteer Fire Assistance (VFA) grants, Incident Management Team (IMT) deployments and exercises, State Forests Checkoff Fund, BMP compliance, payments to county school districts, SC/National Forest Products Week, Wood Magic dates and media/VIP days, and seedling sales and availability.

#### **PRESCRIBED FIRE AWARENESS MONTH**

The March was Prescribed Fire Awareness Month, and Forestry Commission employees answered the call to help raise awareness of the practice by inviting media to their burns. From the mountains to the coast, ample coverage of prescribed burns could be found in newspapers and on radio and television, thanks in large part to ambitious foresters, fire management officers and other agency personnel who took the time and went to great effort to coordinate their schedules with reporters. No fewer than 20 newspaper articles highlighted various prescribed burns around the state, and at least a dozen TV news stories resulted from the agency's campaign to promote prescribed burning.

#### **SOCIAL MEDIA**

The Forestry Commission's Facebook page has 20,792 followers, including 5,087 new followers, and the agency's Twitter account has 1,958 followers, including 246 new followers. CPI staff published 360 posts on Facebook and 299 posts on Twitter, exceeding the target of one social media message/post each business day promoting the agency, forestry and industry news, events and people.

#### **FREEDOM OF INFORMATION ACT REQUESTS**

The Director of Communications & Public Information responded to, gathered agency information and data related to (with the assistance of various division directors and program managers) and resolved seven FOIA requests.

## **Creative services**

CPI staff produced a combination of 13 radio and TV public service announcements that aired on most stations across the state from March to June. Voiced by retired Urban Forestry Coordinator Lowe Sharpe and Piedmont Region BMP Forester Holly Welch, the commercials range in topics from the agency's multifaceted mission and our wildfire suppression responsibilities to forest management assistance for landowners as well as the overall economic impact of forestry in the state.

While commercial advertising is very expensive and not usually in reach of our small agency's budget, the Communications & Public Information staff was able to take advantage of a non-profit program offered by the South Carolina Broadcasters Association. Called PEP, for Public Education Program, the SCBA initiative allows government agencies and non-profits to buy its member stations' unused airtime at significantly reduced rates.

In addition to airing on 110 radio stations and 37 TV outlets for three months, the spots were used as recruitment tools at career fairs and other expositions.

## **Publications**

The Communications & Public Information Division produced a variety of publications for nearly every department and purpose this fiscal year. In addition to the ad hoc and periodic publications the division produces, which include monthly installments of the *Tree Country* employee newsletter, quarterly installments of the *Best of Tree Country* external newsletter, and annual updates of the agency's Seedling Price Guide, Project Learning Tree annual report and Wood Magic Forest Fair annual report, CPI staff completed the following:

- BMP Monitoring report
- FY2019-20 Services brochure
- FY2019-20 FRP/SPB cost-share brochure
- FY2018-19 By The Numbers agency fact sheet
- Careers brochure (updates to previous publication)
- Southeastern Partnership for Forests & Water program
- Forest Health manual update
- Agency overview/legislative budget request publication for County Board meetings

## **Other highlights**

- Upgraded select Wood Magic collateral materials, including signage for several of the learning stations.
- Developed a full-page ad about Taylor Nursery for publication in SCFA's bi-monthly journal.
- Exhibited at Forestry Association of South Carolina (FASC) annual meeting.
- Secured a proclamation from the governor designating the third week in October SC Forest Products Week, a campaign that was supported with promotion to statewide media.
- Secured a proclamation from the governor designating the month of March as Prescribed Fire Awareness Month, a campaign that was supported with promotion to statewide media.
- Updated list of local/rural/volunteer fire departments for the Red Flag Fire Alert system.
- Worked with SCFC Protection Chief and SC Prescribed Fire Council to promote March as Prescribed Fire Awareness Month by distributing a press release to media and coordinating media visits to prescribed fire sites in their areas.

- Created a special section on the agency website as a repository of general information and agency policies about COVID-19 and related messaging, including a standalone publication addressing return-to-work safety guidelines, about social distancing, operating procedures and other protocols during the pandemic. Additionally, CPI created numerous signs and flyers for various office facilities around the state related to COVID-19 safety protocols.

## Environmental Education

SCFC Environmental Education Coordinator, Matt Schnabel was awarded the national Project Learning Tree “Gold Star Award.” The Gold Star award recognizes outstanding PLT State and International Coordinators for their years of exemplary service and contributions to the mission and goals of PLT.

SCFC Harbison State Forest manager James Miller and Communications and Education staff members completed the design and installation of all new educational and informational signage at Harbison State Forest that replaced original signage when the educational infrastructure was created in the late 1990s. This multi-year project replaced over 30 signs in parking areas, trailheads and educational trails such as the Learning, Crooked Pine, and Discovery Trails.

SCFC Assistant Environmental Education Coordinator, Beth Foley, was awarded a wildlife garden grant from the Richland Soil & Water Conservation District to plant pollinator plants in the existing wildlife garden at Harbison State Forest Education Center. Students and parents from the Columbia City Homeschool organization have adopted the wildlife garden and installed the plants and soil amendments as part of their requirements for the SC Green Steps Schools program.

## **Education Highlights**

- Facilitated 45 Project Learning Tree workshops or presentations/exhibits
- Coordinated 3 Wood Magic Forest Fair events
- Conducted 29 education programs, reaching 1,535 people (not including the Wood Magic Forest Fair event, Project Learning Tree participants, or Teachers Tour participants).
- Developed a virtual model for Project Learning Tree professional development events
- Partnered with government, nonprofit, and forest industry members in Georgia and North Carolina to create an educational video about sustainable forestry and forest products for upper elementary-age students

## Project Learning Tree

In FY2019-2020, 38 professional development (PD) events reached 636 educators.

Project Learning Tree professional development events				
Workshop Type	# of PD events	% of PD events	# Of Participants	% Of Total Participants
Early Childhood	5	13%	81	13%
Pre-service Early Childhood	6	16%	99	16%
PreK-8	6	16%	114	18%
Pre-service PreK-8	16	42%	260	41%
Online Total	N/A	N/A	5	1%
K-2, 3-5, & 6-8 E-Units	3	8%	46	7%
Secondary Modules	1	3%	23	4%
Facilitator Training and Refresher	1	3%	8	1%
<b>TOTALS</b>	<b>38</b>	<b>N/A</b>	<b>636</b>	<b>N/A</b>

## Teachers' Tour

The 2020 South Carolina Teacher's Tour was canceled due to the COVID-19 pandemic.

## Wood Magic Forest Fair

The 2019 Wood Magic Forest Fair was conducted at three locations. The first event was held for 4 days at the beginning of October at the SC Botanical Garden. The second event was held at the end of October for 5 days at Harbison State Forest. The third event was held for 4 days in November at Hobcaw Barony Discovery Center. Almost 2,200 students, teachers, and chaperones attended the events. Sixty-nine SCFC employees and 94 volunteers worked at the three events.

Wood Magic Participation						
Location	Applications Received	Classes Applied	Classes Attending	Children Attending	Teachers & Other Adults	Total Participants
Piedmont	21	71	30	584	105	689
Harbison	42	154	44	749	129	878
Lynches River	21	59	31	543	79	622
<b>Totals</b>	<b>84</b>	<b>284</b>	<b>105</b>	<b>1,876</b>	<b>313</b>	<b>2,189</b>

**Students participating in SCFC educational activities at Harbison State Forest**

	<b>School/Organization</b>	<b>Grade Level/Age</b>	<b># of Children</b>	<b># of Adults</b>
1	YMCA Irmo - Summer Program	Middle & High	9	2
2	SC DHEC Take Action -iTree Activity	Adults		12
3	EEASC - Fire Ecology Seminar	Adults		24
4	Jeep Rogers YMCA - Summer Program	Elementary & Middle	32	4
5	Jeep Rogers YMCA - Summer Program	Elementary	44	6
6	Jeep Rogers YMCA - Summer Program	Elementary	45	6
7	Living Springs - Summer Program	Elementary	20	4
8	Dutch Fork Elementary - Forest Ecosystems	Elementary	42	8
9	Dutch Fork Elementary - Forest Ecosystems	Elementary	43	8
10	Irmo High - Longleaf Ecosystem Study	High	12	2
11	BSA - Forestry Merit Badge	Elementary & Middle	28	12
12	Midlands Tech - Forest Ecology Hike	College		19
13	Outdoor Afro - Forest Hike	Adults		3
14	Heyward Tech & SCWF - Arbor Day	High	14	5
15	REACH - Composting Program	Elementary	12	5
	SUBTOTALS		301	120
	<b>Totals</b>		<b>421</b>	

**Students participating in SCFC educational activities outside of Harbison State Forest**

	<b>School/Organization</b>	<b>Grade Level/Age</b>	<b># of Children</b>	<b># of Adults</b>
1	SC Ag Ed Conference - Tree ID	Adults		42
2	Take Action Conference - iTree Activity	Adults		12
3	Learn to Grow - Fire Presentation	2-12 year-olds	50	
4	Eastminister Day School - Tree Program	3-4 year-olds	50	12
5	SC State Museum - Homeschool Thursday	Elementary	20	10
6	Dutch Fork Middle - Career Day	Middle	120	
7	LW Condor Arts Magnet - Arbor Day Celebration	Elementary	60	20
8	Charles Towne Landing - Arbor Day Celebration	Families	36	71
9	Fantasy Island Child Care - Forest Animals	3-4 year-olds	14	3
10	Whiteknoll Elementary - Career Day	Elementary	300	12
11	REACH - Pollinator Program (Virtual Program)	Elementary	12	3
12	Girl Scouts - Tree Badge Workshop (Virtual Program)	Middle	135	5
13	BSA - Forestry Merit Badge Workshop (Virtual)	Middle	82	
14	Newberry Camp Conservation	Elementary/Middle	45	
	<b>SUBTOTALS</b>		924	190
	<b>Totals</b>		<b>1,114</b>	



# TECHNOLOGY DIVISION

This Division comprises 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, support, and security of the agency's local and wide area networks; twenty-one (21) Windows servers; network storage devices; over 300 computers, laptops, and tablets in use by over 200 employees; software applications; and implementation of various initiatives to support agency operations and programs.

Major accomplishments this fiscal year were the replacement of computers running the Microsoft Windows 7 operating system and servers running Microsoft Server 2008 R2 operating system that Microsoft ended support for. This involved the replacement of 5 servers used in the agency's mission critical wildfire dispatch operations, GIS server, wildfire incident qualification system (IQS) server, an applications/file server, and end user devices that included 26 desktops, 74 laptops and 6 tablets.

Work associated with the State's mandates for implementation of policies, procedures, roles and responsibilities associated with information security and data privacy continued throughout the year. In response to the hacking of the Department of Revenue computer system, thirteen (13) information security policies have been implemented by the agency as required by a Budget Proviso. This Budget Proviso also required the agency to complete an information and security technology survey to the State Division Technology Operations and Information Security by October 1, 2020. Each employee was tasked to complete an online cybersecurity awareness training course in FY 2020. To maintain employees' awareness of cybersecurity, the Technology Division sent periodic reminder emails and warnings of current cybersecurity threats especially telephone and text message scams and ransomware imbedded in emails and websites.

The COVID-19 pandemic required quickly setting up laptops for administrative and human resources employees to be able to work from home over a secure connection to the agency's network and other IT resources. This enabled the agency to carry out the majority of its operations and minimizing the number of employees having to physically report to the office.

## GIS

GIS hardware and software were upgraded this fiscal year. As mentioned earlier, the GIS server was upgraded due to Microsoft ending support for Server 2008 R2. The ArcGIS Server software was upgraded to an Enterprise version with ArcSDE for better management of spatial data sets. Additional ArcGIS Desktop licenses were purchased to extend mapping capabilities to more field users. Two web-based apps for mobile devices were developed to provide an activity dashboard for current wildfire and prescribed burning activity. Desktop users can access this information through the agency's website. Other web mapping apps developed for the agency's wildland urban interface (WUI) program included a wildfire occurrence and hotspots; WUI treatment status; and for tornado damage assessments.

With assistant from the GIS Coordinating Council, the agency is receiving updated parcel, ownership and 911 address and road data from all of the counties in the state. The GIS Section merged individual county data into administrative area layers in the agency's GIS Server and in formats to be utilized in other GIS applications. This information saves the agency time and money by allowing personnel to identify property ownership and boundary lines without having to visit individual county tax offices.

The data sets listed above were utilized in the development of maps and models used in the 2020 Forest Action Plan; updating map layers used in the agency's computer aided dispatch system; and daily forest management and protection activities. The GIS section is also assisting the GIS Coordinating Council with quality assessment/quality control (QA/QC) checks of statewide aerial imagery collected during "leaf-off" conditions in 2020. This QA/QC work will continue as more imagery is released by the vendor through December, 2020.

## Communications

The agency maintains approximately 555 mobile radios, 7 base stations, 29 repeaters, and 300 portable radios. The Communications Section also supports the 19 communications consoles and related systems in the 3 regional dispatch centers and at Columbia Headquarters.

South Carolina "opt-in" to the FirstNet public safety broadband network that was awarded to AT&T. This is the public safety broadband network recommended after the 9/11/2001 terrorist attacks to improve interoperability between first responders. AT&T is to build a nationwide 4G LTE network to provide public safety agencies and organizations with priority and pre-emption access to wireless broadband data, text, and voice network. The agency continued meeting with AT&T/FirstNet to evaluate wireless services to phase in over the next few years to improve the resiliency and redundancy of the agency's wide area network connections and communications. Areas of particular interest is Mission Critical Push-to-Talk (MCPTT) to interface with the agency's existing VHF land mobile radio and dispatch centers communications console systems and wireless backup links with the agency's 3 dispatch centers and the Columbia headquarters.

## Dispatch Operations

The Forestry Commission operates three (3) dispatch centers that handle over 22,000 phone calls annually for burn notifications and reporting of wildfires. The agency's dispatch operations utilize commercial, "off-the-shelf" dispatching software from Logistic Systems, Inc. This system incorporates many of the features and functionality of 9-1-1 dispatch systems. This system determines the closest available resource based on road mileage and travel speeds; automates the notification of personnel of wildfires; alerts dispatchers when certain dispatching timeframes are exceeded; and automates the compliance issues with smoke management regulations on forestry, wildlife and agricultural burn notifications. All other burn notifications are handled by an automated system that takes an additional 350,000 to 450,000 notifications each year.

As mentioned under the Information Technology section, five (5) servers running Microsoft Server 2008 R2 associated with the agency's dispatch operations were replaced with new servers running Microsoft Server 2016 this fiscal year. During this process, the most current version of Logistic Systems, Inc. dispatching software being used by the agency was installed and implemented.

The automated fire page (i.e. text message) that the computer-aided dispatch system sends was enhanced in FY 2018 to include a hyperlink of the incident location. Employees with smartphones can click on this hyperlink that will open Google maps through their Internet browser with a marker at the incident location. The individual than can turn on aerial imagery, get directions or use other features of this website.

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) has been cut in half compared to the old software average -- prior to FY 2006 (see table below). The processing of smoke management notifications has also decreased by 40% compared to the FY 2005 average. These time savings can be

attributed to the new dispatch software’s automation of dispatching and compliance with smoke management guidelines.

<b>Summary and comparison of dispatch and smoke management notification processing times, 2004-2020</b>			
<b>Fiscal Year</b>	<b>Call Volume</b>	<b>Average Dispatching Times (Minutes)</b>	<b>Average Notification Processing Times (Minutes)</b>
2004	81,835	5.10	4.16
2005	66,576	6.33	4.61
2006*	65,502	4.18	3.49
2007	63,633	3.56	2.81
2008	60,077	3.53	3.00
2009	50,689	3.22	3.13
2010	43,344	3.13	3.21
2011	49,859	3.39	2.97
2012	44,564	3.28	2.94
2013	36,091	3.57	2.99
2014	33,562	3.38	2.70
2015	30,103	3.23	2.98
2016	25,638	2.37	3.06
2017	32,148	2.10	2.96
2018	26,618	1.96	3.10
2019	22,767	2.43	3.11
2020	23,048	2.30	3.15
<i>*New software implemented in FY 2006</i>			

The computer-aided dispatch system (CADS) also allows for real-time access to wildfire, prescribed fires, and resource activity by Fire Managers and Fire Information Officers for command and control functions and media requests. Current smoke management burn notifications and wildfires were available to the public on the agency’s website and with a smartphone mapping application. This information is updated every 10 minutes.

# ADMINISTRATION DIVISION

Financial statement FY 2019-20			
<b>Carry Forward - July 1, 2019</b>			<b>\$11,610,857</b>
<b>Revenues</b>			
State Appropriations	\$22,004,592	Reimbursement of PY Disaster Expenditures - Retention	\$16,695
Federal Grants	\$3,528,512	Rent - Residence	\$15,850
Earmarked Funds	-	Rent - Farm Land	\$74,429
Hunting & Fishing License	\$306,238	Rent - State Owned Property	\$174,931
Refund of Prior Year Expenditure	\$81,443	Rent - Equipment	\$3,740
Burning Assistance Fee	\$117,582	Contribution & Donations	\$22,600
Fire Lane Fee	\$113,519	Insurance Claims	\$103,656
Timber Marking Fee	\$9,068	Sale of Services	\$60,074
Training Conference - Registration Fee	\$5,150	Sale of Publications & Brochures	\$6,405
User Fee - State Park & Forest	\$86,853	Sale of Recycling Material	\$1,613
Forest Product Assessment	\$879,135	Sale of Vehicles (Capitalized)	\$56,498
Construction of Water Bar	\$7,855	Sale of Machinery and Equipment (Capitalized)	\$7,287
Stand By for Prescribed Burning	\$2,163	Sale of Buildings (Non-Capitalized)	
Sale of Seedlings	\$149,536	Sale of Land (Capitalized)	\$339,144
Sale of Timber	\$3,583,975	Sale of Other Assets	\$1,710
Conviction Surcharge	\$11,782	State Operating Grants - Restricted	\$17,626
Other Penalties, Cost & Settlements	\$746	Insurance Premium Taxes - Firefighting Equipment	\$1,945,139
SCANA Settlement	\$2,256	Capital Reserve Funds - Firefighting Equipment	\$1,000,000
<b>Total Earmarked</b>			<b>\$9,204,698</b>
<b>Total Revenue</b>			<b>\$34,737,802</b>
<b>Expenditures</b>			
State	\$23,398,432		
Federal	\$3,546,680		
Other	\$8,500,009		
<b>Total Expenditures</b>			<b>\$35,445,121</b>
<b>Balance as of June 30, 2020</b>			<b>\$10,903,538</b>



# South Carolina Forestry Commission

## Organizational Chart

