

GEORGIA FORESTRY
COMMISSION



2016 Annual Report



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Forest Management

Forestry-related technical information and assistance is provided to Georgia's private forest landowners by the Forest Management Department to enhance their woodlands for economic, social, and environmental benefits. This system is delivered to private landowners through professional foresters, some of whom are assigned counties and deal directly with the public. Other foresters help implement and deliver regional and/or statewide programs, including water quality, forest stewardship and legacy, urban and wildland-urban interface, forest health, cost share programs, and forest inventory and analysis. By statute, the GFC is authorized to take action pertaining to the nurture and culture of Georgia's forests, to monitor and suppress forest insect and disease outbreaks, and by authority granted by the Georgia Environmental Protection Division, to monitor and investigate water quality issues pertaining to any type of silvicultural activities.

The Georgia Forestry Commission also manages several state forests for multiple objectives, including traditional forest products, clean water, wildlife habitat, and recreational opportunities. Assistance is also given to other state agencies with the management of forest lands they own, and these include the Georgia Department of Natural Resources, Georgia Department of Transportation, University of Georgia, and Georgia Department of Corrections. Assistance to these other agencies vary from developing management plans to helping the owner-agency meet their objectives for a variety of silvicultural treatments (timber sales, site preparation, tree planting, prescribed burning, and planning and implementing road improvements). Additionally, the GFC entered into a "Good Neighbor Authority" agreement with the US Forest Service to use state resources to manage Forest Service land.

GFC foresters and technicians handled 9,130 field visits with landowners involving 351,714 acres. Almost half of these visits were cost share visits (4,308), with the remainder involving technical advice to landowners in forest health, water quality, forest stewardship and invasive plants. Georgia's forests remain overall healthy and 91% are privately owned. The services GFC foresters provide, along with private consultants and industry foresters, are vital to keep our resource healthy and productive.

COST SHARE INCENTIVE PROGRAMS

Cost share incentive programs play an important role in assisting Georgia landowners with properly managing their forests. GFC partners with the Farm Service Agency (FSA), Natural Resources Conservation Service (NRCS), US Forest Service (USFS), US Fish & Wildlife Service (USFWS) and the Georgia Department of Natural Resources (DNR) to deliver these programs. GFC takes the lead role on some programs and serves as the technical agency responsible for determining specifications necessary for landowners to install a range of forestry practices. GFC efforts in FY 2016 have resulted in a total of \$8.8 million going to landowners to help fund completed practices. See *Table 1* for a breakdown of the dollars by incentive program.

The following is an overview of GFC accomplishments within each incentive program:

Conservation Reserve Program (CRP) – CRP was primarily created to provide soil erosion protection and crop base reduction but was expanded to improve wildlife habitat. GFC provided assistance on 1,890 CRP cases covering 67,644 acres. As a result of this work, approximately \$1.3 million went to GA landowners to help fund forest management practices. Also, these participants will receive rental payments for a total \$1.5 million annually for the next 10-15 years, depending on the contract length. The total dollar impact for the year is \$2.8 million.

Emergency Forest Restoration Program (EFRP) – During FY 2016, GFC worked to complete EFRP contracts funded to restore forests destroyed by recent tornadoes and ice storms. GFC certified the performance of 143 practices, covering 9028 acres, resulting in cost share payments to landowners totaling \$1.7 million.

Environmental Quality Incentives Program (EQIP) – The Georgia Forestry Commission assisted the NRCS in implementing EQIP forestry practices. Assistance was provided on initial prescription plans for 872 practices covering 47,162 acres. The performance of 755 practices

was also certified covering 38,807 acres. As a result of these services landowners received approximately \$3.6 million in cost share payments.

Wildlife Habitat Incentives Program (WHIP) - This program has been consolidated with EQIP but GFC continues to service any remaining contracts. There were 89 practice performance inspections completed covering 6,116 acres. As a result of these services landowners received approximately \$222,524 in cost share payments.

Southern Pine Beetle Prevention & Restoration Program (SPBPR) – In cooperation with the USFS, GFC offers cost share to help minimize the impacts of the southern pine beetle. The grant is primarily utilized for direct cost share payments to landowners to implement several prevention practices to treat high risk stands and for several restoration practices. Landowners deal directly with their county GFC forester for all phases of the program (application, needs determination, practice supervision, performance check, final reporting and payment requests) and payments are made directly from the GFC Administration Department in Macon.

Assistance was provided on initial prescription plans for 114 practices covering 6,355 acres. There were 167 practice performance certifications completed covering 15,086 acres. As a result of these services, landowners received \$368,126 in cost share payments.

Invasive Species Plant Control Program (ISPC) - The USFS has provided federal grants in this program area to help control invasive plants in Georgia. These grants were primarily utilized for direct cost-share payments to Georgia landowners to help control privet, Japanese climbing fern, tallow tree, multiflora rose and olive spp.

Assistance was provided on 43 initial prescription plans covering 1123 acres. GFC personnel went on to certify the performance of 48 plans covering 1947 acres. As a result of these services, landowners received \$67,825 in cost share payments

Partners for Fish & Wildlife Program – The GFC assists the USFWS with the technical side of this program. The focus of the program is the restoration of longleaf pine ecosystems, riparian/stream habitat & endangered species habitat.

Assistance was provided on five initial prescription plans covering 219 acres. GFC personnel went on to certify the performance of two plans covering 91.5 acres. As a result of these services landowners received approximately \$32,925 in cost share payments.

Table 1: Incentive payments to GA landowners related to GFC services in FY 2016

Program 2016	
EFRP	\$ 1,693,667
WHIP	\$ 222,524
EQIP	\$ 3,586,497
SPB	\$ 368,126
CRP	\$ 2,854,848
Invasive Plant	\$ 67,825
Partners - USFWS	\$ 32,925
TOTALS	\$ 8,826,412

WATER QUALITY PROGRAM

For Fiscal Year 2016 (July 1, 2015 – June 30, 2016) GFC has completed the items that follow. Funded largely through the EPA Section 319 grant program, the GFC Water Quality program is staffed with one state coordinator, four Regional Specialist Positions, and seven district/area water quality foresters.

During FY16, GFC water quality foresters provided 119 BMP talks to 5,144 people. In addition, GFC water quality foresters put on four BMP field demonstrations with 75 in attendance. GFC investigated 49 separate water quality complaints requiring 108 site visits to mediate. GFC completed a total of 180 BMP Assurance Exams on harvests and other management activities. Water quality/BMP advice was given during the course of 173 general advice site visits for landowners on a total of 20,289 acres. GFC water quality foresters completed 271 state level firebreak BMP inspections on GFC firebreaks. GFC water quality foresters finished field-work on the 10th Statewide Silvicultural BMP Survey during FY16, completing the last 96 of the 213 total randomly selected sites to be finished prior to the end of calendar year 2015. Also, in December of 2015, a detailed 42 page report was written, describing the results found during the BMP Survey. With funding provided by EPD, the GFC water quality foresters continued a portable bridge cost share project, resulting in 20 steel portable bridges being built to high specifications for 12 separate entities. These bridges will be used by multiple loggers, on multiple sites throughout many areas of Georgia and possibly border areas of neighboring states. The bridges provide improved means for crossing streams during logging operations to help further protect water quality. As part of that project, 35 more inspections on sites using bridges were completed during FY16 to show the effectiveness of using bridges for stream crossings.

The GFC continues to be involved in the Governor's Comprehensive Water Plan study committee. As required by state law, the regional councils have continued to meet periodically with GFC foresters attending as needed.

URBAN AND COMMUNITY FORESTRY

In FY16, Georgia had 135 Tree City USA communities, 14 Tree Campus USA schools and one Tree Line USA utility.

Funds from the Urban & Community Forestry Assistance program were used to contract with the Georgia Urban Forest Council to utilize circuit-rider arborists to make personal visits and assist communities to develop community forestry programs. Services provided included revising tree ordinances, conducting hazardous tree assessments, preparing storm mitigation plans, conducting tree inventories, training municipal tree care workers and assisting with Tree City USA certifications. Additional services provided by the circuit riders included conducting four Certified Arborist Review classes. These classes were held over two days and trained 68 tree care workers and potential arborists. As a result of this training, approximately 28 people passed the exam and became ISA Certified Arborists. U&CF funding was also used to complete making the Shade projects which planted 149 trees around four schools to shade playground equipment and provide a healthier play environment. Funding was also used to provide 10,000 seedlings to Keep Georgia Beautiful affiliates to distribute at their Bring One for the Chipper events.

The SCFP also continued to provide technical advice through the Ask the Arborist (ATA) project to communicate more effectively with homeowners across the state and to provide citizens with timely, unbiased information from a GFC-certified arborist. GFC received funding to help create and expand the American Grove, www.AmericanGrove.org, a social networking website that reaches consumers with tree benefits messages and encourages them to take action and plant trees.

Rapid growth, development and conversion of Georgia's lowland natural areas continues to threaten these unique environments. Currently a web based Green Infrastructure Mapping ToolKit is being utilized with the Green Infrastructure (GI) Management System Guidebook to identify, link and help local jurisdictions collectively manage these diverse ecosystems. This effort was a partnership with the Coastal Regional Commission. Workshops were held with city planners, government entities and natural resource managers to promote and demonstrate the use of the Guidebook and Mapping ToolKit.

SCFP continues to support local grass roots community forest groups and programs through Arbor Day, Tree City

and other educational programs and technical transfer efforts expanding community capacity for developing sustainable community forests.

Small Landowner forest management programs continue to be developed to assist landowners to take personal ownership of managing their forest lands in a sustainable fashion. Additionally the SCFP program continues to assess statewide forest using current technology and satellite imagery of tree canopy cover to develop a baseline for assessment of forest canopy change, parcelization and land use change.

In 2015, the Urban Forest Strike Team deployed to multiple communities across Georgia to identify and assess storm damaged trees aiding localities in their efforts to minimize risk, manage tree damage, and interface and coordinate with FEMA and GEMA. More than 20 GFC and local government employees were trained to conduct UFST assessments and function as UFST members.

SCFP staff members also continued to work with staff from GFC's Utilization program to conduct workshops discuss how urban wood waste is being utilized by municipal and private tree care workers in Georgia. Also, in conjunction with the Forest Health program, SCFP assisted with a workshop for metro Atlanta tree care workers and landfill facilities to better inform them about the increasing quarantine and regulations associated with Emerald Ash Borer infestation.

GEORGIA'S FOREST INVENTORY/ FIA

Federal Allocation for FY 2014: \$487,985

Federal Allocation for FY 2015: \$467,307

Federal Allocation for FY 2016: \$548,285

During State Fiscal Year 2016, the Forest Inventory and Analysis Program (FIA) in Georgia collected data on 889 plots. These plots were collected by six certified full time crews strategically located across the state. Each crew is ideally (during years with full funding) made up of two FIA Foresters.

Of the 889 FIA plots, 64 were P3 or Forest Health Monitoring Plots and 70 were new install USFS Intensified Plots, which fall on the most rugged and inaccessible land in the state. P3 and National Forest Intensification plots take approximately twice as long as regular plots to complete because there is more data to collect. More crown/tree health information and "Downed Woody Material" data is recorded than on a regular plot, and the P3 plots are widely dispersed across the state. This increases driving time, which makes completing more than one of these plots a day nearly impossible

Our production is lower this year due to working on another federal project to make up for the reduced funding for FIA (shifted some of our payroll onto the Longleaf Ecosystem Grant). Also, we held positions open during this time, due to the very low grant amount in FY14 and FY15, which slowed our progress. Note that we didn't receive the increased FY16 funds until May or June of 2016, so we were still operating under the reduced budget for the vast majority of state Fiscal Year 2016, keeping positions open until things improved.

A certain percentage of FIA plots completed are checked by USFS personnel for accuracy of data collection. A percentage score is given to the person responsible for the data collected on that plot. Georgia had a consistently excellent check score average for FY 2016 of 96% for all of the plots checked. A minimum average of 87% is required for a FIA cruiser to remain certified. If their average drops below 87% they will be decertified and will be unable to collect plots in their name (may assist only). No Georgia cruiser has ever been decertified.

FIA data collection is broken up into cycles and subcycles. A cycle includes data collection on all of the FIA plots in Georgia and should take approximately five years. Each cycle is broken up into five subcycles. Each subcycle consists of approximately 20% of the total number of plots. Each subcycle should take about one year to complete with full federal funding and fully staffed crews (which wasn't the case).

- Data collection of Cycle 10, Subcycle 5 (Inventory Year 2014) was mostly completed by end of December 2014 (with a few plots we had to wait to collect). All 1,195 plots in Inventory Year 2014 have been completed and transmitted. All Felled Tree plots in Cycle 10 have been completed and transmitted.
- Georgia began data collection of Cycle 11, Subcycle 1 (Inventory Year 2015) in January 2015. All 1,164 Plots have were transmitted by end of June 2016. This was the Subcycle most negatively impacted by the reduced budget we were allocated.
- Georgia began data collection of Cycle 11, Subcycle 2 (Inventory Year 2016) in June of 2016. We hope to have it completed in a year or probably longer if much employee turnover occurs.

The FIA Federal Grant has finally increased up to close to full funding (Full Funding = \$582,564). We hired people to fill the open positions (up to 11 people plus the coordinator). The FIA Foresters are still finishing up the Longleaf Ecosystem Study Plots but should be able to focus the vast majority of their time on FIA once again, making finishing Inventory 2016 plots top priority.

FOREST HEALTH

The Forest Health Management Group provides statewide leadership and guidance to consulting firms, industry, natural resource managers, landowners, and GFC foresters on a wide range of forest health related issues. Georgia Forestry Commission foresters incorporated insect, disease, or invasive species advise into 361 management cases involving 9,012 acres for the year.

Each stewardship and tree farm plan written in the State of Georgia incorporates advice to landowners concerning forest health issues, and insect and disease advice is incorporated in each plan; 178 plans were presented to landowners with a total acreage of 55,143 acres. Additionally 270 acres of cogongrass have been treated with all known sites being sprayed at least once, and approximately 81% of all known sites are being reported as negative for cogongrass. There are 114 sites in Georgia that have shown one year of negative post inspection, 100 sites that have shown two years of negative post inspection and 637 sites have been declared eradicated. Statewide, forest health training was provided to foresters, resource managers, loggers, public works departments (state and county), nurserymen, regulatory agencies, and landowners on 124 occasions with 5,586 attendees being reached. Additional surveys are conducted by the Forest Health staff to identify non-native pests seen as a potential threat to native species. These include: emerald ash borer, Sirex noctillio woodwasp, non-native bark beetles, gypsy moth, Heterobasidion root disease, thousand canker disease, hemlock woolly adelgid, and the pathogen (*Phytophthora ramorum*), which is responsible for substantial west coast tree mortality. Our forest health staff conducted 38 multimedia interviews with an estimated audience of 250,000.

STATE LANDS FOREST MANAGEMENT

The Georgia Forestry Commission's State Lands Forest Management program is in place to assist our sister agencies with management of their forest lands. Over the past six years our program responsibilities have grown and we now have three full time employees, a staff forester, a specialist forester and a state lands technician. State of Georgia owned lands we help manage reach to all four corners of the state and everywhere in between. Sister agencies with which we have entered interagency governmental agreements and are receiving our management assistance on a regular basis include the Department of Natural Resources, the UGA College of Agricultural and Environmental Sciences and the Department of Transportation. Other agencies receive assistance when requested.

Georgia Department of Natural Resources

The Department of Natural Resources (DNR) owns the majority of state owned land, including wildlife management areas, public fishing areas, state parks and historic sites and natural areas. Our fiscal year 2016 DNR responsibilities have primarily been conducting timber sales. This included assisting DNR foresters in the field with marking and cruising timber, marking sale area and streamside management zone boundaries, GPS work, BMP inspections, preparing timber sale bid packet information, advertising timber sales, and other aspects of timber sale administration. Fourteen timber sales occurred during FY2016. Assistance was also given with site preparation and prescribed burns.

University of Georgia - College of Agricultural and Environmental Sciences

The University of Georgia's College of Agricultural and Environmental Sciences' (UGA CAES) forestlands are located on their experiment stations. Fiscal year 2016 involved all aspects of timber sale preparation, including marking and cruising timber, marking sale area and streamside management zone boundaries, GPS work, BMP inspections, contract compliance inspections, preparing timber sale bid packet information, advertising timber sales, and other administrative duties. Five timber sales occurred during FY2016. Prescribed burns and reforestation planning occurred, as well.

Georgia Department of Transportation

The GFC helps manage mitigation forestland properties owned by the Department of Transportation (GDOT). As with the UGA CAES, GFC handled all aspects of GDOT timber sale administration during fiscal year 2016. The Long County timber harvest was completed in early FY2016. Reforestation of longleaf pine on 250 acres was completed during FY2016. More work on one of the main creek crossings was completed in early FY2016. Two DOT timber sales are planned for 2017.

US Forest Service

A 239 acre timber sale under the "Good Neighbor Authority" on the Oconee Ranger district is being planned with a sale date of spring 2017 anticipated.

Timber Transaction Complaints

The Georgia Forestry Commission assumed the new role of investigating timber transaction complaints on July 1, 2015. State Lands Forest Management assists with investigations by performing stump cruises. Eleven stump cruises were performed in FY 2016.

Looking forward to FY-2017

FY2017 will be busy for GFC's State Lands Forest Management, as we continue to assist our sister agencies in the management of State of Georgia forestlands and assist our investigators by performing stump cruises. We will add two State Lands technicians that will be funded by "Good Neighbor Authority" revenue from timber sales on USFS lands on the Oconee Ranger District.



Forest Protection

WILDFIRE ACTIVITY

Wildfire occurrence for fiscal year 2016 was the lowest ever recorded since 1957 (59 years) as well as the lowest when considering total acres burned by wildfires. We experienced 2,415 wildfires in FY16 that burned 9,970 acres in Georgia. The average size of each wildfire was 4.1 acres. We recognize that the increased amount of rainfall and subdued weather patterns contributed to this reduction however we contribute parts of the reduction to our increased fire prevention efforts, LE enforcement program, public awareness efforts, and our burning permitting processes

COUNTY AND DISTRICT OFFICE OPERATIONS

The GFC provided 1,825 burn assists for landowners in Georgia totaling about 171,627 acres or about 8.4% of the total acres prescribed burned which includes assistance to landowners for agriculture, silviculture and land clearing types of burns . When compared to the five year average the numbers of burn assist were below average in 2016 with the total acres burned near the five year average.

Year	2012	2013	2014	2015	2016
Total Burn Assist Number	1,666	1,954	2,002	2,936	1,825
Total Burn Assist Acre	146,572	195,751	169,939	201,036	171,627

Pre-suppression plowing and harrowing services in FY16 increased in the number of landowners serviced as well as the total hours/miles of firebreaks installed when compared to the previous fiscal year. In FY16, the GFC performed a total of 5,143 plowing/harrowing services for landowners for a total of 15,232 hours of firebreaks installed by GFC professionals using tractor/plow/harrow equipment.

GFC Plowing and Harrowing Services					
Year	2012	2013	2014	2015	2016
Total Plowing Serviced	3,172	2,979	2,353	2,574	2,632
Total Plowing Hours	8,761	8,592	7,576	8,531	8,464
Total Harrowing Serviced	3,090	3,148	2,633	2,483	2,511
Total Harrowing Hours	7,383	7,340	6,615	6,482	6,767

WILDFIRE PREVENTION

GFC again provided fire prevention efforts through large events across the state including: The Georgia Mountain Fair, Moultrie Sunbelt Expo, the Buck-a-Rama, Fish-a-Rama, Turkey-a-Rama, Georgia National Fair in Perry, and Georgia Outdoor Expo in Gwinnett.

The GFC took advantage of social media outlets to assist in fire prevention messaging. Facebook and Twitter were used primarily to convey information especially during wildfire incidents to take advantage of a captive audience to provide fire prevention campaign messages and the importance of preventing wildfires.

The GFC continued to provide programs where wildfire prevention was the primary theme that included appearances by Smokey Bear to promote fire prevention in Georgia. In FY16, there were 615 fire prevention programs conducted by the GFC professionals who invested 3,360 hours which reached over a 2.6 million citizens in Georgia.

Fire Prevention Programs conducted:	Total Audience size for all Programs	GFC Hours Invested
615	2,613,064	3,630

COMMUNITY WILDFIRE PROTECTION PLANS (CWPP)

As of June 30th, 2016 there has been 141 county-wide Community Wildfire Protection Plans (CWPP) in Georgia completed with another seven initiated. Through partnership with the Georgia Emergency Management and Homeland Security Agency it has now been made

mandatory for all counties to complete or renew their CWPP as part of the county's Hazard Mitigation Plan.

A CWPP provides a community or county road map to reduce its risk from wildfire. A CWPP is designed through collaboration between state, local, and federal fire agencies, homeowners, adjacent landowners, and other interested parties. This planning enables counties in Georgia to address their development patterns in the Wildland Urban Interface (WUI) and determine how they can begin to reduce their risk.

Based on accomplishments during the previous years' work in completing CWPPs, a focus was implemented in FY16 to continue to update County wide CWPP's that are over five years old. Forest Protection staff members and our field personnel have begun to examine CWPP's completed in 2010 and 2011 continuing to make contact with local county officials to begin the updating processes. In FY16, five CWPP's updates were initiated.

FIREWISE & FIRE ADAPTED COMMUNITIES PROGRAMS

The Firewise, USA Recognition Program is a process that empowers neighbors to work together in reducing their wildfire risk. The GFC continued with a contract with Georgia's Rural Conservation and Development Councils (RC&D) in an effort to engage more local participation. Georgia currently has 91 Firewise, USA communities as of June, 2016 with several current communities in the recertification process

A fire adapted community incorporates people, buildings, businesses, infrastructure, cultural resources, and natural areas into the effort to prepare for the effects of wildland fire. Community leaders and residents accept responsibility for living in an area with wildfire hazards. They have the knowledge and skills and have adopted tools and behaviors to prepare in advance for their community's resilience in a wildfire prone environment.

Georgia's Towns County continues to serve as one of nine model and pilot communities nationwide. With the help of the Georgia Forestry Commission and the US Forest Service this new concept model has really enjoyed great success in becoming "Fire Adapted".

Mechanical Fuel Treatment Program

GFC's mechanical fuel treatment offers safe and effective control of understory vegetation that can where wildfire mitigation and control a struggle due to locations and heavy fuel types. These powerful tools churn through places unsuited for traditional methods such as prescribed burning and chemical treatment. Mechanical fuel treatment

is ideal for areas in the wildland-urban interface, land near gas lines, power lines, rights of way and other smoke-sensitive areas.

The GFC has six District CDI Coordinators throughout the state to help manage and operate five rotary blade type masticators and one flail type/drum cutter machine. In FY16, these coordinators along with county rangers across the state invested 456 hours of mastication services assisting 73 landowners in Georgia.

Our current fleet of masticators are beginning to mechanically fail and require major maintenance and repair to keep them operational. This program is being evaluated for its usefulness and successes to determine if our current investment is returning desired results.

Type II Incident Management Team

Over 100 professional participate in and are on the roster for GFC's Incident Management Team. Many of the Team's members are within the Trainee and Apprentice phases of qualification development. This is an important aspect of IMT management to ensure Team sustainability and succession training for the future. 36 GFC Type 2 IMT members participated in 17 separate out of state wildfire assignments to gain experience, maintain NWCG qualifications and/or function as trainees

The GFC IMT continues to hold national status however no Team assignments were made in FY16 on a state or federal level.

Law Enforcement

From July 1, 2015 through June 30, 2016, (FY 2016) GFC Investigators opened a total of 167 new cases. There were 70 fire investigations which resulted in 61 arson cases. Ten criminal charges were filed as a result of these investigations. During the same period GFC investigators received 97 timber security complaints which lead to six charges being filed along with \$91,881 recovered for landowners in Georgia.

Regional Response Centers

The GFC operates two regional Dispatch/Response Centers. One located in Macon, GA at the GFC HQ complex referred to Central Response Center (CRC) operates 24 hours per day, 7 days a week. The other located in Tifton, GA adjacent to our Tift Co. Forestry Unit known as Southern Response Center (SRC) operates from 7 AM until 7 PM each day with capabilities to continue beyond normal hours as wildfire situations require. During FY16, the GFC Response Centers issued 22,702 burning permits for agriculture, silviculture and

land clearing in the state; accounting for 29.3% of the total burning permits issued. This is an approximately 1% decrease over last year.

The Response Centers primary objective is to receive reports of wildfires and dispatch GFC personnel and equipment to those locations. In FY16 the Response Centers communicated with and tracked resources on 2,415 wildfires, documenting important information. Another 1,927 calls were received and personnel dispatched that were determined to be false alarms or illegal burning operations.

The Response Centers continue to use Spider-Tracks and the GFC Flight Following and Tracking system where each aircraft is tracking and dispatched to locations for smoke investigations or wildfire support operations. In addition, the Response Centers has begun working with a new software program called FiResponse and its real time resource tracking capability. This software, developed by TECHNOSYLVA, was demonstrated and had application as a wildland fire dispatching tool. Our GFC dispatch functions have moved into conducting BETA testing of the software to determine its usefulness within the GFC.

Statewide Air Operations

While maintaining our overall mission of detecting wildfires and supporting suppression efforts, the Air Operations Unit has continued to focus on the overall goal of being a safer, more efficient, and more effective aviation program within the GFC.

In FY16 the unit participated in over 227 total hours of training this past year. Some examples of training include RT-130, interagency aviation courses (IAT), certified flight instructor refresher courses, and many others.

Air Operations pilots flew 4366 hours on patrol flights, reported 312 wildfires and provided support on 336 wildfires, reported 1,216 controlled burns and checked over 23,532 controlled burns. The Air Operations Maintenance Team performed 110 aircraft maintenance and repair projects on GFC aircraft in FY16.

Prescribed Fire

Prescribed Fire continues to be the best, most cost efficient forest management tool for wildlife management, protection of the forest from wildfires, restoration of fire dependent forest ecosystems, forest regeneration, and control of certain unwanted plant species. In FY16 there 783,594 burning permits issued for 1,438,171 acres of prescribed burning in Georgia reported within our burning permit information system. Silviculture burning accounted for the majority of those acres at about 1,141,030 acres.

The Georgia Forestry Commission continues to give on-the-ground assistance while also providing technical advice, weather forecasts, assistance in writing plans, and prescribed fire workshops for landowners across the state.

This year four certification courses were held across the state with 180 students attending. To date, there are 3,097 Certified Burners in Georgia.

The Georgia Prescribed Fire Council held its annual meeting in September, 2015 at the UGA Conference Center in Tifton with over 200 burn practitioners in attendance. Visit the Councils website at www.garxfire.com for more information about the Prescribed Fire Council's activities and annual meeting.

Fire Weather Forecasting

Wildfire behavior is determined by forest fuels, surrounding topography, and weather conditions such as wind and relative humidity. Daily readiness for fire suppression is usually expressed in terms of fire weather and fire danger

GFC Fire Weather Website averaged about 70,000 visitors and 360,000 hits per month in FY16

Georgia uses a sophisticated National Fire Danger Rating System in which weather data is measured at 19 GFC weather station and interpolated into levels of readiness understood by forest rangers and fire cooperators. The fire danger ratings with fire weather forecasting are produced daily by the Forest Protection Meteorologist and are posted on GaTrees.org.

Valuable tools and information for forest managers intending to conduct prescribed burning are available on the fire weather website. These tools include weather maps, rainfall maps, drought maps, lightning maps, point-forecast system, a prescribed fire climatology system, prescribed weather notification system, and Web-based V-smoke application.

The GFC continues to utilize two weather station coordinator positions to help the GFC meteorologist monitor data quality from our weather stations. The coordinators assisted the meteorologist to make sure all hourly data are collected from all our weather stations.

Rural Fire Defense (RFD) Program

The GFC's Rural Fire Defense Program continues to assist local county and municipal fire departments through acquisition, fabrication and repairs/modification of fire apparatus. In addition, funding to support fire departments, within communities with less than 10,000 population,

provides opportunities for training, personal protective equipment as well as water handling supplies. The RFD program administers the Volunteer Fire Assistance Program funding through federal grants provided by the US Forest Service.

The RFD program supports 425 fire departments in Georgia with over 1,673 pieces of fire suppression equipment in 124 counties in Georgia. This equipment is in the form of vehicles, fire pumps, water tanks and various other type of fire protection apparatus. Through cooperation and partnerships Georgia's local fire service agencies supported the GFC in its mission of protecting the forest resources of Georgia by responding to and assisting to suppress 2,857 wildland fires in FY16. In addition, the training and equipment provide through the RFD program supports local fire department in their response to local emergencies such as motor vehicle accidents and fires, structures fires and other miscellaneous emergency responses. In many locations and communities throughout Georgia the vehicles and equipment provided by the GFC is the only emergency response apparatus available to the citizens.

The GFC works closely with the Rural Fire Defense Council in Georgia to ensure that the programs and projects being offered add value and are best utilized for their intended purposes. There were four regularly scheduled quarterly meetings held with the Rural Fire Defense Council in FY16.

vehicle and equipment configurations are introduced that require modifications to designs and fabrication phases. GFC fabrication welders and mechanics strive to provide high quality and timely products that keeps the GFC's fire suppression fleet in a constant state of readiness. Fabrication staff works closely with the RFD program coordinator and the GFC's District and County Units to support local fire departments in fabricating and repairing fire apparatus to support their mission and efforts. In FY16, the Fabrication shop performed a total of 335 work projects.

Fabrication Shop Project Completion FY16					
Equipment Classification	New	Repair	Paint	Other	Total # of Projects
Electrical	12	2	3	0	17
Fire Knocker	1	3	0	0	4
Fire Knocker (Super)	0	0	0	0	0
Harrow	4	40	0	0	44
Motor Vehicle	3	1	1	0	5
Others	26	28	11	0	65
Plow	3	20	4	0	27
Tank	5	2	5	0	12
Tractor	28	19	7	0	54
Trailer	0	11	2	0	13
Truck Bed	23	8	10	0	41
Type 6 Engine	3	6	0	0	9
Type 7 Engine	12	8	0	0	20
V-Blade	3	18	3	0	24
Total	123	166	46	0	335

RFD Fiscal Year Fire Summary					
Cooperating Fire Departments	Statewide Report				
Fiscal Year	2016		Level of Damage		
Type Fire	Number	Acres	Light	Moderate	Extensive
Wildland (or the old Forest Land)	2,857	8,755.10			
Open Land	0	0.00			
Motorized Equipment	1,274	0.00	439	344	491
Structural	2,044	0.00	820	560	663
Miscellaneous	17,901	0.00	0	0	0
Grand Total	24,076	8,755.10	1,259	904	1,154
Total Number Pieces Of Equipment	1,673				
Number Counties Utilizing RFD Equipment	124				
Number Departments Utilizing RFD Equipment	425				
Number of Fire Department Meetings Attended by GFC Personnel	2,383				

Equipment and RFD Fabrication Shop

The GFC's fabrication shop continues to provide construction, repairs and oversight of both GFC's and Fire Department vehicles and equipment. The majority of the activities carried out in the fabrication shop are performed to support fire suppression equipment being provided to GFC county units as well as Rural Fire Departments throughout the state. Continuous process improvements occur frequently as new



Communications

Communications staff for fiscal year 2016 consisted of a director, an administrative assistant, a conservation education coordinator, a communications specialist and a contracted writer.

Internal communications within the agency continues to improve. GFC Headline News continues to be well-received. Based on feedback from an internal communications survey, the internal newsletter was modified slightly to make it more relevant for employees.

During the year 23, press releases were produced and hundreds of news articles appeared in print. In addition, various magazine articles appeared in publications as diverse as Georgia Forestry Today, Out of the Woods, and Georgia Trend, among others. Many radio and television appearances were made, with topics ranging from fire prevention and fire activity to Arbor Day. Our external eNewsletter, the GFC eUpdate, continues to expand to new audiences and garner the attention of new subscribers.

GFC continued to strengthen its presence on Facebook and twitter in fiscal year 2016. All agency press releases were shared on the sites, as were photos of GFC events and professionals. GFC also launched an Instagram page to share photos representing forestry in Georgia.

GFC professionals tied in with First Lady Sandra Deal's Read Across Georgia month. Throughout the month of March, GFC representatives read Chuck Leavell's The Tree Farmer to elementary schools across the state. Readings were documented on social media with the established hashtag #ReadAcrossGA, and photos were shared by the Department of Education and other educational groups.

Our communications specialist has continued to focus attention on relationships with county commissioners throughout the state. The primary goal of our communications specialist is to educate commissioners about Georgia's Forest Action Plan and ensure they understand the role they and their counties play in ensuring the sustainability and productivity of Georgia's forest resources. This position is funded with a U.S. Forest Service grant and will continue to work with county governments for two years.



Forest Products Utilization, Marketing & Development

DEPARTMENT OVERVIEW

Georgia's forest industry would not exist without the state's highly productive and sustainable forests. Georgia's forests are growing 45% more wood each year than is being harvested; therefore, the state's forests have excess utilization capacity for existing industry expansion or for new forest industries. For these reasons, the Marketing and Utilization department is working to strengthen and expand markets for Georgia forest products.

The mission of GFC's Marketing & Utilization department is to add value to Georgia's largest industry – the forest products industry. The department has statewide responsibilities in three major areas: economic development, marketing and technical assistance, and establishing new forest products and values.

ECONOMIC DEVELOPMENT

A 2015 economic impact report for the state's forestry industry shows that the industry contributes \$32 billion in output and more than 133,000 jobs in Georgia. The department takes an active leadership role in the development and growth of Georgia's biomass energy sector, resulting in a huge success story for the state. Georgia's wood pellet industry portfolio has grown from 0 to 10 wood pellet mills from 2007 to 2016, and the largest wood pellet plant in the world (Georgia Biomass) is located in Waycross. Georgia's three biomass electricity generation plants provide a total of 114 MW of clean, renewable energy to Georgia citizens. With output (sales) of \$439 million, the biomass energy sector provides more than \$49 million in wages and salaries to nearly 700 workers. Furthermore, the use of previously under-utilized forest biomass creates additional values for forest owners and encourages the continued maintenance and growing of trees. In addition, several other companies have announced intentions to build wood pellet and biomass electricity plants in Georgia. The department continues to assist prospective companies with locating sites and analyzing forest resources in a cooperative manner with local and state economic development agencies. Staff provided assistance to 46 potential projects: 21 projects were bioenergy related, and 25 projects were traditional industry related.

MARKETING & TECHNICAL ASSISTANCE

We cooperate with other state and local agencies in recruiting new forest product and biomass facilities. An important marketing project that has a global reach, was the development of a Georgia-based wood-using industry directory, in online and hardcopy formats. We also participate in state, regional and national projects to expand Georgia forest products in global markets through domestic and international trade events. Staff manned a bioenergy exhibit at a domestic trade show (bioenergy fuels and products conference) and participated, in association with the Southern Group of State Foresters (SGSF), in a tour showcasing Georgia wood pellet manufacturing and forest stewardship to 30 members of the Dutch wood pellet industry. Staff also organized and hosted the annual meeting of the SGSF's Services, Utilization and Marketing Committee. Staff conducted the bi-annual Timber Product Output (TPO) survey in cooperation with the project lead, US Forest Service Southern Research Station.

Staff provides technical assistance, such as forest resource analyses, for existing industry expansions or new industrial prospects. We utilize resources from the USDA Forest Service and from internal forest industry surveys to assist with planning the best locations for new forest product and biomass facilities. Resource reports regarding timber and biomass availability were provided to 13 companies as part of their feasibility analyses. Technical advice and marketing services totaled 543, including assistance with certified wood products and exporting, and disseminating domestic and international trade leads to potential buyers and exporters. Formal presentations were provided to 22 groups, with a total audience of 614 participants, and 2,078 marketing materials were distributed to customers. The department continued to provide assistance to the Georgia Department of Agriculture's Georgia Grown marketing campaign.

ESTABLISHING NEW FOREST PRODUCTS & VALUES

We work to establish new forest products and values that will encourage forest owners to keep their lands in forests. We maintain and promote the Georgia Carbon

Sequestration Registry – this tool is available to assist Georgia forest owners in quantifying their carbon that is sequestered in their growing trees and forests. Staff provided technical advice to three landowners. The registry may also play a part in the development of the state’s carbon reduction plan under the proposed US Clean Power Plan. Staff members also cooperate with regional partners in developing standardized ecosystem services evaluation tools which may lead to new values realized from forests. We partner with other state agencies and regional and national organizations in the development of new forest products such as cross-laminated timber (CLT). Staff attended several continuing education sessions on timber supply, and new and emerging markets and forest products. Staying current with technical information is critical to our mission’s success and for providing quality services to our customers.

GRANTS OVERVIEW

US Forest Service funds impact the GFC Utilization department through federal redesign grants received from The Southern Group of State Foresters via the Services, Utilization and Marketing (SUM) Committee, of which GFC’s Utilization department is an integral member and partner. Several recently completed and ongoing multi-state, federal redesign grant projects have resulted in positive contributions to the department’s mission to provide utilization and marketing services to Georgia’s forest industries and forest landowners. Following is a synopsis of these grants:

COMPLETED GRANT PROJECTS

Wood-Using Industry Marketing Directories – www.forestproductslocator.org

The thirteen southeast US states cooperated on a multi-year project to create an online, GIS-based, searchable platform with all of the primary and secondary wood-using industries in each state. The purpose of the directories is to increase market share of southern wood products, both domestically and globally. Each state is responsible for continuous updates to their respective mills’ data.

FOREST CERTIFICATION & OUTREACH

A white paper on forest certification in the southern US was completed, and several technology transfer workshops were provided across the state to a diverse group of stakeholders on the merits and pitfalls of forest certification. A second edition of the white paper is being revised and will be completed by September 30, 2016.

BIOMASS DEMONSTRATION PLANTINGS

Field test plots were established on two state forests to study various planting regimes that incorporated

traditional reforestation methods and products along with high-density plantings of dedicated forest biomass tree crops. This project will be a decades-long study.

ON-GOING GRANT PROJECTS

Regional Ecosystem Services Evaluation Project

With input from the states, the USFS will publish a technical report in 2016/2017 on their findings to create a template for states developing ecosystem services evaluations.

Urban Wood Utilization

A significant amount of urban forest biomass is largely unutilized and often creates problems for urban cities and counties with the disposal of such debris. This grant provided funding for staff to organize several workshops to inform government officials and the urban tree care industry on methods to improve the use of urban wood waste, and to explore barriers in expanding the use of this important biomass waste stream.

SOFAC Membership & SRTS Training

Sub-Regional Timber Simulation (SRTS) modeling training, based on FIA data and proprietary data from North Carolina State University, is being provided to train staff in analyzing forest data projections for the future, as opposed to FIA data which only reports on historical data. Staff has attended two training sessions to date.

NEW GRANT PROJECTS

We are partnering with several states for the following five projects:

Southern Forest Products Export Conference – Charleston, SC, October 17-18, 2016.

Biomass Energy Outreach – partnership with Southern Regional Forestry for training.

Southern Timber Supply Model – expanding the reach of the Texas timber analysis program south-wide.

Advanced Woodbasket Analysis – timber analysis training, Huntsville, AL, January 11-12, 2017.

Mapping Path to Growth for SE Forest Products – international marketing of southern forest products.

FUTURE GRANT PROJECTS – PENDING APPROVAL FROM U.S. FOREST SERVICE

We will partner with several states on the following two projects, if approved:

A Baseline Assessment of Timber Product Output (TPO) in the South
Assessment of (Wood Products) Procurement Decision Practices in the (U.S. South) Construction Sector



Reforestation

Our department has had a very successful year in seedling sales, seed collection, and keeping the genetic testing program strong. Even with aging equipment and infrastructure, this small department of eight full time employees manages to support three large program areas. These programs are Tree Improvement, Seed Orchards (to include our seed processing facility), and our nursery. Most organizations run their nursery alone with this size staff. It's absolutely astounding that we are able to accomplish this, and serve thousands of customers a year. There were many positives this past fiscal year. Following are program area highlights:

TREE IMPROVEMENT

- There were 19 crosses made toward 4th cycle selections at Arrowhead Seed Orchard, and at Flint River Seed Orchard.
- There were two progeny test measured, and the data was uploaded into the NCSU Tree Improvement Co-ops data base, along with the slash test data sent to the CFGRP for assessment.
- Two progeny tests were installed; both approximately two acres in size.
- Maintenance of these test sites was performed during the growing season.
- The Annual NCSU and CFGRP contact meetings were attended by Jeff Fields.
- Jeff Fields continued to serve on the advisory committees for the GFGRP (Slash Co-op), and the NCSU (Loblolly Co-op).
- The GFC continues to play a vital role in the development of pine genotypes, not only for Georgia landowners, but for landowners across the Southeast. This is made possible by a continuing agreement between the GFC and the NCSU Tree Improvement Cooperative at the GFC's Arrowhead Seed Orchard.
- This program continues to be a success and an asset to the GFC and landowners across the Southeast. The latest figures supported by the NCSU Co-op continue to show the present value of the Arrowhead Breeding Center to be \$483,000,000 South-wide and \$113,000,000 in Georgia.

SEED ORCHARDS

The Seed Orchard program continues to be a successfully run segment of the Reforestation Department. With superior pine genotypes being supplied by the Tree Improvement program and continually going into our Orchard program, the landowners of Georgia benefit greatly.

The following accomplishments in seed collection were made by our professionals in the Seed Orchard program and by GFC professionals in the field, who are a very important part of our efforts.

The following numbers of bushels of cones were collected from GFC orchards and were cleaned in our seed extractory to supply the nursery program with genetically elite seed for many more years.

Species	Bushels Collected	LBS
Loblolly GA. Giants	228.00	244.00
Loblolly P3	90.00	116.00
Loblolly P3 Select	310.00	396.00
Loblolly RR3	110.00	105.00
Elite Straight Loblolly	94.00	138.00
Premium Slash	1202.00	968.00
Select Premium Slash	650.00	537.00
PCR Slash	650.00	524.00

Species	Bushels Collected	LBS Cleaned Seed
N/A	N/A	N/A
N/A	N/A	N/A

Seed that was processed for another company

Species	Bushels Collected	LBS Cleaned Seed
N/A	N/A	N/A

In addition to these elite pine species that were collected and processed, there were also 15,771.45 pounds and/or gallons of hardwood seeds collected, processed, and planted!

We also are excited about our new opportunities in the Seed Orchard program area. We were awarded a Landscape Redesign Grant from the federal government totaling \$121,384.00. With this grant we are establishing a longleaf pine genetic preservation bank/seed orchard.

NURSERY

The nursery program continues to be the financial engine that drives the Tree Improvement and Orchard programs. For fiscal year 2016, there were 10,622,290 seedlings sold. This was down from the previous year, but seed sales and timber sales made up the difference.

The nursery served 1,423 customers, with orders tallying 2,549. The current in sales results in our department reaching out to more tree planters and consultants, who are seeing the benefit in planting the Georgia Forestry Commission's elite genetics.

The Longleaf Understory Species area is continuing to be a success.

One of the most successful stories coming out of our department is that our seedlings reforested around 20,000 acres this past year, and benefited the landowners of Georgia and the Southeast, both economically and environmentally.



Administration

INCOME AND EXPENDITURES			
	FY2014	FY2015	FY2016
FUNDING SOURCE			
FEDERAL FUNDS	6,652,525	9,306,162	12,396,615
FEDERAL STIMULUS			
OTHER FUNDS	7,266,675	8,168,043	10,365,388
STATE GENERAL FUNDS	30,456,519	32,958,632	35,318,388
GOVERNOR'S EMERGENCY FUNDS	0	0	0
FEMA-FIRE MANAGEMENT GRANT	4,646	0	0
PRIOR YEAR INVENTORY	0	0	0
TOTAL FUNDS	44,380,365	50,432,837	58,080,391
EXPENDITURES BY OBJECT CLASS			
TOTAL PERSONAL SERVICES	30,619,711	32,937,813	36,228,012
TOTAL REGULAR OPERATING EXPENSES	8,687,455	8,840,852	7,525,726
TRAVEL	310,013	252,193	415,812
MOTOR VEHICLE EQUIPMENT PURCHASES	402,285	885,041	789,983
EQUIPMENT PURCHASES	469,427	317,264	2,107,625
COMPUTER CHARGES	1,329,409	1,433,907	1,532,394
REAL ESTATE RENTALS	32,668	30,781	27,060
TELECOMMUNICATIONS	691,432	708,902	609,227
CAPITAL OUTLAY	45,888	19,518	262,609
PER DIEM & FEES	0	0	
CONTRACTS	1,523,218	4,943,224	8,477,624
WARE COUNTY TAX - RD. MAINT.	60,000	60,000	60,000
WARE COUNTY TAX - S. FOREST	0	0	0
TOTAL EXPENDITURES	44,171,506	50,429,495	58,036,071
EXPENDITURES BY PROGRAM			
REFORESTATION	1,227,022	1,202,326	1,250,936
PROTECTION	32,381,568	35,242,389	38,488,594
MANAGEMENT	7,122,100	10,301,619	14,510,549
GENERAL ADMINISTRATION AND SUPPORT	3,440,816	3,683,161	3,785,992
BONDS			
EQUIPMENT BONDS	3,712,729	6,302,840	4,000,000
CAPITAL OUTLAY BONDS	1,012,545	472,028	1,080,973
NUMBER OF EMPLOYEES	678	652	581

**GEORGIA FORESTRY
COMMISSION**



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GaTrees.org