

# Tennessee Forestry Commission FY 2012 Annual Report



TENNESSEE DEPARTMENT OF AGRICULTURE  
DIVISION OF FORESTRY

## Members

### **Bill Williams, Chair**

Newport, TN  
Represents hardwood  
manufacturers

### **John Ross, Vice-Chair**

Savannah, TN  
Represents owners of greater  
than 500 acres

### **Paul Trianosky, Secretary**

Mountain City, TN  
Represents owners of less  
than 500 acres

### **Jack Holder**

Counce, TN  
Represents pulp and paper  
manufacturers

### **Bob Qualman**

Brentwood, TN  
Represents owners of less  
than 500 acres

### **Dottie Mann**

Clarksville, TN  
Represents conservation  
organizations

### **James W. Reeves**

Stanton, TN  
Represents public at large

### **Julius Johnson, Ex-Officio**

Commissioner - Tennessee  
Department of Agriculture

### **Ed Carter, Ex-Officio**

Director - Tennessee Wildlife  
Resources Agency

### **Robert Martineau, Jr., Ex-Officio**

Commissioner - Tennessee  
Department of Environment  
and Conservation

## Actions and Activities for FY2012

The Tennessee Forestry Commission met three times during the 2012 fiscal year. The Commission received reports from citizens, staff, and subject matter experts on various forestry topics and issues affecting forest landowners and citizens of Tennessee during the year. The Commission discussed and took action on the following matters:

- Reviewed and approved the Division of Forestry operating budget for FY 2013.
- Reviewed and approved the Division of Forestry forest seedling price schedule for 2012-13.
- Reviewed and approved the Division of Forestry annual activities report for 2011.
- Presented the Forestry Commission's 2011 Annual Report to the House Conservation and Environment Committee and the Senate Environment, Conservation and Tourism Committee.
- Discussed and received comments on the next steps of the implementation process of the Tennessee Forest Resource Assessment and Strategy (Forest Action Plan).
- Formed a Green Building Committee to examine the State Building Commission's regulations governing the construction of Tennessee's state buildings, and to develop recommendations to the Forestry Commission as to how this issue should be addressed to provide Tennessee forest owners the opportunity for their sustainable products to be used in the construction of state-owned buildings.
- Discussed and received comments from the state architect regarding assistance with the revision of the State Building Commission's guidelines.
- Discussed and received comments on state forest salvage sales.
- Discussed and received comments on the status of forest health pests including Emerald Ash Borer, Thousand Canker's Disease, Hemlock Woolly Adelgid, and Gypsy Moth.
- Discussed and received comments on damage to forest lands caused by hunters, horseback riders and off road vehicle use.
- Discussed and received comments on state forest certification.
- Discussed and received comments on applicability of personal property tax on logging equipment.
- Discussed and received comments on the Agriculture & Forestry Economic Development Task Force.



Forest Resource  
Protection



Forest Resource  
Management



Urban Forest  
Resource Management



State Forest Management



Reforestation



Forest Data & Technology



Forest Businesses



Environmental Affairs &  
Public Outreach

## FEATURED PROGRAM

### Urban Riparian Buffer Program Takes Off



Core Businesses  
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Healthy creeks, streams and rivers are dependent on healthy forested stream banks, often referred to as riparian buffers. These forested riparian buffers offer many benefits not only to the landowner, but also to the watershed and everyone living downstream. They can help stabilize eroding stream banks, filter out sediments and chemicals before they reach the waterway, help recharge groundwater, preserve or improve wildlife and aquatic habitat, and add scenic and economic value to your land. Buffers also help to reduce flooding and erosion by stabilizing shorelines and absorbing high velocity flows.

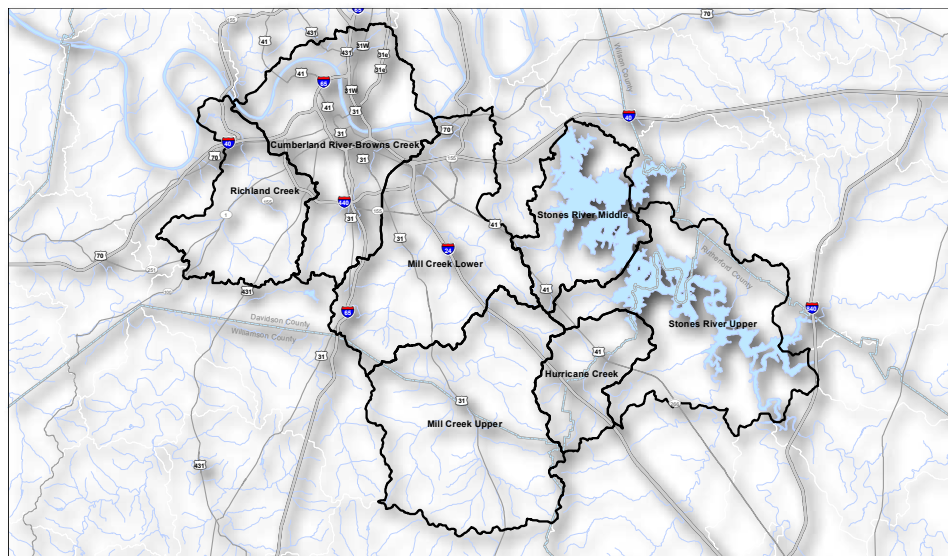
In 2010 the Tennessee Department of Agriculture Division of Forestry (TDF) received a grant from the USDA Forest Service to help fund the planting of trees to restore riparian buffers along streams and waterways in priority watersheds in Davidson County, Tennessee (Mill Creek Lower, Richland Creek, Browns Creek, Hurricane Creek, Stone’s River Middle, and Stone’s River Upper). Those watersheds were identified in TDF’s 2010 Forest Action Plan as not having adequate riparian forest cover. The Mill

Creek Lower watershed was selected from that group of priority watersheds as an initial demonstration project for the Clean Water from Urban Forest Riparian Buffer Program.

#### What the Program Provides to the Landowner

The Clean Water from Urban Forest Riparian Buffer Program provides native trees to public and private landowners, at no cost to the landowner, to be planted along streams and waterways in 7 watersheds of Davidson County (see map). They include the priority watersheds plus the Mill Creek Upper watershed since it provides substantial flow into Mill Creek Lower. The Program’s Riparian Buffer Coordinator can assist with plant selection, designing a planting plan, and other technical information. In many cases, volunteer assistance may be available to assist the landowner with the planting of the trees. The Riparian Buffer Program Coordinator may also be on-site during the planting process.

*continued on page 20...*



Tennessee Division of Forestry: Watersheds





# Forest Resource Protection

## Wildland Fire Protection

*Mission: Minimize damage caused by wildfire to forest resources and personal property while giving priority to firefighter safety.*

The Division protects forest resources from destructive fire so that the intrinsic benefits of the state's forests can be realized. It does this by preventing and suppressing wildfires, promoting hazard reduction activities, and supporting wildland fire training for volunteer fire departments and other wildland firefighters. The highest priority of this program is firefighter and public safety.

### Objectives for Year

- Update District and State Fire Prevention strategies.
- Acquire fire suppression equipment.
- Develop burn permit rules.
- Initiate web based burn permitting.
- Develop Community Wildfire Protection Plan (CWPP) and Firewise communities.
- Conduct fire suppression training.

### Major accomplishments for July 1, 2011 – June 30, 2012

- Suppressed 1,178 forest fires that burned 12,636 acres.
- Issued 375,352 burn permits across the state.
- Broadcasted fire prevention Public Service Announcements across the state with emphasis on obtaining a burn permit and awareness of weather conditions.
- Completed the first-ever county wide CWPP within the State (see sidebar).
- Held fire prevention planning workshop with Assistant District Foresters.
- Updated and distributed brochures including: Firewise Home Assessment, Firewise Landscaping, Outdoor Fire Safety, Fireworks Safety, Homeowner Fire Guide, and Quick Reference Fire Safety Plant Guide.
- Produced the 2012 pocket and wall calendars that promoted fire prevention.
- Deployed 54 out-of-state resource assignments: 3 federal fire details; 51 compact fire assignments to North Carolina and Georgia.
- Completed 4 Hazard Mitigation Projects in 3 communities (Shagbark, Laurel Mtn. Lake, and Cobby Nob).
- Conducted 1 Firewise Community Leader workshop in Gatlinburg.
- Facilitated two communities becoming members of the national Firewise Communities/USA program.
- Held Firewise meetings with Bristol, Lone Mountain Shores, Long Branch Lakes, Oak Ridge and English Mountain.
- Conducted wildfire prevention projects with the Smoky Mountain Lookouts and University of Tennessee Chattanooga Mocs.

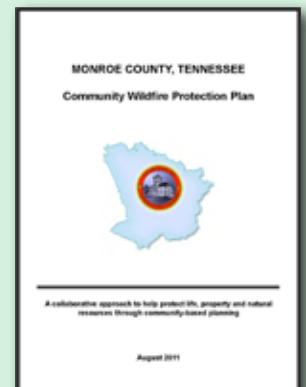
## Unit Mission

*The mission of the Forest Resource Protection Unit is to reduce losses from wildfires and forest pests, and to prevent water quality degradation from forestry sources. The Forest Resource Protection Unit administers the Division's Wildland Fire Protection, Forest Health, and Water Quality programs.*

## Monroe County Community Wildfire Protection Plan

Community Wildfire Protection Plans (CWPPs) emphasize the need for agencies to work collaboratively with communities in developing hazardous fuel reduction projects, and places priority on treatment areas identified by the communities themselves.

This CWPP was a collaborative effort between Monroe County, Monroe County Fire Chief's Association, Cherokee National Forest (CNF), and the Tennessee Division of Forestry (TDF).





# Forest Resource Protection

## Forest Health

*Mission: Minimize forest resource losses caused by forest pests through effective prevention, detection, evaluation, suppression, and technical assistance measures.*

The Division is endeavoring to meet the constant challenges in the forest health arena. The difficulty of managing forest pests has been made more complicated by the ever-increasing number of native and non-native pests encroaching on Tennessee's forests. Coordination with other agencies and interest groups is becoming a critical part of the Division's response.

### Objectives for Year



- Manage grants and contracts associated with the detection and control of gypsy moth, hemlock woolly adelgid, and exotic plants.
- Hire, equip, train Forest Health Specialist and Forest Health Forester. Transition both positions into leadership roles.
- Conduct gypsy moth eradication treatment.
- Conduct thousand cankers disease surveying and sampling.

### Major accomplishments for July 1, 2011 – June 30, 2012

- Conducted southern pine beetle (SPB) trapping in Chester, Marion, Rhea, and Wayne Counties where pine was a major component of several forest types. Surveys indicated low and stable SPB populations.
- Conducted gypsy moth egg mass survey in Roane County in the Pattie Gap community. One egg mass was found. This location was to be delimited during trapping season with eradication plans made once the extent of the infestation was determined.
- Ground spray treatment for gypsy moth was conducted in early spring. Preliminary indications were that the treatment was successful in eradicating the infestation.
- Placed over 14,000 traps in 95 counties for the 2012 gypsy moth detection and delimiting trapping programs.
- Completed hemlock woolly adelgid (HWA) surveys in East Tennessee. There were 6 new counties discovered to have HWA within the state during the winter/spring 2012. A total of thirty-five counties were known to have HWA.
- Provided funding along with the Tennessee Department of Environment and Conservation and the Tennessee Wildlife Resources Agency in hiring additional personnel at the University of Tennessee beneficial insects laboratory to increase production of biological control agents to reduce HWA populations on state lands.
- Grants were provided to eradicate exotic invasive plants at Radnor State Natural Area and Beaman Park.
- Filled Forest Health Specialist and Forest Health Forester positions on March 1, 2012.
- Confirmed 2 more counties with TCD following surveying and sampling for a total of 6 (see sidebar).
- Conducted aerial surveillance on spring tornado damage across 6 counties in the Cumberland District.
- Monitored and documented increasing populations of ips and black turpentine beetle throughout several counties in the West Tennessee District.

## Thousand Canker Disease Regulated Counties



	<b>Thousand Cankers Disease Quarantined Areas</b> <b>Anderson, Blount, Knox, Loudon, Sevier and Union Counties.</b> Citizens in these counties cannot move walnut tree products and hardwood firewood outside the quarantined counties.
	<b>Thousand Cankers Disease Buffer Regulated Areas</b> <b>Campbell, Claiborne, Cocke, Grainger, Jefferson, McMinn, Monroe, Morgan, Roane, and Scott counties.</b> Citizens in buffer counties/areas can move walnut tree products and hardwood firewood within buffer counties, but not outside. Product can also be moved into a quarantine county, but not taken back out.

August 29, 2011

<http://tn.gov/agriculture/regulatory/tcd.html>




# Forest Resource Protection

## Water Quality

*Mission: Protect waters of Tennessee from degradation attributable to forestry practices.*

The Division of Forestry works to ensure that forestry practices are performed in a manner that does not result in the degradation of the State's water resources. The Water Quality program involves prevention, education, training, monitoring, complaint resolution, and assistance to Tennessee Department of Environment and Conservation (TDEC) Division of Water Pollution Control (WPC) with complaint resolution.

### Objectives for Year

- Fill Water Quality Program Specialist position.
- Complete Best Management Practices (BMP) implementation survey.
- Amend and reprint BMP manual.
- Increase number of courtesy checks and logger contacts.
- Provide Master Logger and Continuing Education Units with emphasis on stream crossings.

### Major accomplishments for July 1, 2011 – June 30, 2012

- Conducted 709 site visits with landowners and loggers, providing technical assistance concerning application of BMPs (528 of which were courtesy checks).
- Prepared 1,631 written BMP recommendations for forest landowners in forest management plans and timber sale assistance.
- Investigated 18 complaints arising from forestry operations in cooperation with TDEC WPC.
- Investigated and made recommendations on 93 complaints from other sources.
- Assisted with 6 Notices of Violation issued by TDEC WPC. There were no Directors orders or other orders for corrective action.
- Presented 29 BMP sessions in cooperation with the Tennessee Forestry Association (TFA) for the Tennessee Master Logger Program, training 588 loggers (see sidebar).
- Conducted 70 water quality and BMP familiarization and training workshops for 2,572 resource managers, forest landowners, and loggers.
- Provided Master Logger scholarship funding through the Tennessee Agricultural Enhancement Program, in partnership with TFA, to train 588 loggers in BMP's.

## Training Sessions Illustrate Examples of Best Management Practices



Truck crossing stream in Perry County utilizing a crossing structure and armoring.



Runoff from haul road being filtered by hay bales and mats prevent rutting in Shelby County.



Skid trail in Monroe County before treatment.



Logging site following mitigation of stream crossing.



# Forest Resource Management

## Forest Landowner Assistance

*Mission: Encourage and assist landowners to implement forest management practices that yield healthy, productive forests.*

The Forest Landowner Assistance Program provides technical assistance, forest planning assistance, cost-share assistance, forest health assessments and forestry information to private, non-industrial forest landowners. The Division assists landowners in achieving forest resource conservation and forest management objectives on their land.

### Objectives for Year

- Add all Stewardship Plans from the past 10 years to a spatial database to allow tracking of forest practices.
- Identify and contact landowners with unmanaged forests and unprotected riparian areas in high priority areas.
- Facilitate 3rd party certification of private forest landowners by enrolling them in the Tree Farm program.
- Leverage funding for forest landowners from other natural resource conservation organizations.
- Increase the quality of Stewardship Plans by monitoring all plans based on National Standards and Guidelines developed by the U.S. Forest Service.

### Major accomplishments for July 1, 2011 – June 30, 2012

#### Forest Management Planning

- Provided 1,911 forestland inspections to landowners (1,216 were first time assists).
- Added 1,744 tracts to the Stewardship Spatial Database
- Wrote 72 Forest Stewardship plans addressing 14,030 acres.
- Recognized implementation of 7 Forest Stewardship plans improving 705 acres.
- Wrote 1,238 other forest management plans addressing 97,958 acres.

#### Forest Stand Prescription Planning

- Wrote 371 prescription plans improving 18,536 acres.

#### Forest Stand Prescriptions Implemented

- Assisted 54 landowners in planting 521 acres of hardwood trees.
- Assisted 144 landowners in planting 6,315 acres of pine trees.
- Assisted 93 landowners in other forest improvement activities on 8,531 acres of forestland.

#### Other Forestry Technical Assistance

- Assisted 10,140 landowners by phone, pre-prepared information, follow up-checks, individual consultations or e-mail.
- Trained area foresters in GIS applications as a means to improve mapping and locate endangered species, protect unique habitats and cultural and archaeological sites on private forest properties enrolled in forest management programs.
- Identified 12,794 priority landowners in high priority watersheds and 271 landowners with unprotected stream banks in high priority watersheds for focused outreach efforts..
- Continued a contribution agreement with the NRCS to share resources for the promotion of forestry programs to Tennessee forest landowners.
- Held training for 205 forest landowners attending the Tennessee Healthy Hardwoods Field Days in Unicoi, Oak Ridge, Henderson and Hohenwald.

## Unit Mission

*The mission of the Forest Resource Management Unit is to promote and advance sustainable forest management on non-industrial private forestlands for the multiple uses and benefits provided by forested landscapes. The Forest Resource Management Unit administers the Division's Landowner Assistance and Forest Legacy programs.*

- Reviewed and approved 8 EQIP Forest Management Plans on 95 acres.
- Continued a contribution agreement with the NRCS to share resources for promoting forestry programs to Tennessee forest landowners.
- Trained NRCS conservation planners in basic forestry terminology, stand measurement and inventory techniques, and silvicultural treatments applicable to NRCS forestry practices.
- Assisted TDF Area Foresters in obtaining their Technical Service Provider recertification for working on NRCS forestry practice implementation.
- Assisted 2 consulting foresters in obtaining their Technical Service Provider certification to write EQIP forest management plans for NRCS.
- Prepared an implementation status report on Tennessee's Forest Action Plan.



## Forest Resource Management

### Forest Legacy

*Mission: Protect environmentally important private forestlands threatened with conversion to non-forest uses.*

The Forest Legacy Program identifies and protects environmentally important private forestlands that are threatened by conversion to non-forest uses. Program emphasis is to maintain well-managed, working forests on the landscape. Since initial involvement in 2000, fee simple and permanent conservation easement purchases now total 44,973 acres valued at \$48.4 million. Tennessee utilized \$28.3 million of federal Forest Legacy grant money in reaching that total. A new project (Fiery Gizzard) currently on progress toward closing will protect an additional 3,282 acres.

#### Objectives for Year

- Compete for Forest Legacy funding for a conservation easement on the Carter Mountain Working Forest in Franklin County.
- Close on the Fiery Gizzard Conservation Easement Forest Legacy Tract.

#### Major accomplishments for July 1, 2011 – June 30, 2012

- Closed on the Emory River Forest Legacy tract.
- Brought under Forest Legacy protection a 906 acre tract acquired by the State adjacent to the South Cumberland State Park as part of the non-federal match for the Emory River Tract.
- Received Forest Legacy funding for the Fiery Gizzard Tract conservation easement totalling 3,283 acres.

### Emory River Forest Legacy Tract

The Emory River Tract is at the heart of a larger conservation effort at the landscape scale. It contributes to public recreation opportunities, a corridor of hardwood habitat large enough to support reintroduced elk herds, a significant portion of the world's population of cerulean warblers, and the federally endangered Indiana bat, plus many other plant and animal species. This tract contains 49,100 linear feet of riparian corridor, including the headwaters of the Emory River watershed, which effectively protects the water supply for more than 30,000 Tennesseans.

This acquisition allowed the relocation of 4 miles of the scenically, historically and culturally important Cumberland trail to the northern boundary of the Emory River Tract. Total value of the Emory River Tract was \$8.7 million. A \$7.16 million USDA Forest Service Forest Legacy grant was secured to fund the acquisition.



Sandy Gap overlook of the Emory River Tract



# Urban Forest Resource Management

Urban forestry emphasizes the important role trees play in communities: from the many intangible benefits to the economic benefits of air pollution abatement, heat island mitigation, and storm water runoff reduction. To attain these benefits, the urban forestry program strives to provide assistance to Tennessee's cities and towns, where the majority of the population lives. Urban Forestry impacts people where they live.

## Objectives for Year

- Provide urban and community forestry assistance to cities and towns across Tennessee and to green industries (arborists, grounds managers, landscape architects, others) that impact the management of the urban forest resources.
- Administer grants, Tree City USA, Tree Line USA, Tree Campus USA, Champion Tree and related program and project administration.
- Complete canopy cover analyses for Tennessee communities.

## Major accomplishments for July 1, 2011 – June 30, 2012

- Completed 25 FY 2011 Tennessee Agriculture Enhancement Program (TAEP) community tree planting grants in cities and towns across Tennessee. Approximately 2,025 trees were planted by these projects.
- Made 106 assists to 60 cities and towns, and 92 secondary assists to arborists, nurseries, landscape architects, schools, grounds managers and other related entities who have an impact on urban forests. Assists included technical information on planting care and maintenance of trees and information to tree boards, ordinance reviews, tree city information, planting recommendations, etc.
- Partnered with the Tennessee Urban Forestry Council to host a statewide Urban Forestry Conference and State Tree Climbing Championship for arborists.
- Provided assistance to the Tennessee Urban Forestry Council to support and continue their programs through a transition period of changing officers and their executive director.
- Completed canopy cover analysis to Lakeland, Signal Mountain, Cleveland and Johnson City (see picture). The canopy cover/impervious surface analysis report for Cleveland found that the same areas showing a significant increase in impervious surface corresponded with the areas of the community that were having increased storm water problems.
- Re-certified 15 Tree Line USA's (Tennessee is Number One in the country in recognized Tree Line USA's).
- Recognized 40 cities and towns as Tree City USA.
- Re-certified Cleveland State Community College as a Tree Campus USA.
- Conducted 1,102 hours of instruction at 33 training sessions.
- Helped coach the Shelby Co. 4-H Forestry Team to First Place in the State and National 4-H Forestry contests.



An analysis of aerial photos of Signal Mountain shows the town has a significant tree canopy. As a result, community residents reap the benefit of reduced utility bills for cooling.

## Unit Mission

*The mission of the Urban Forest Resource Management Unit is to assist and encourage municipalities and private urban landowners to establish, improve, and maintain urban forest resources.*





## State Forest Management

The Tennessee Department of Agriculture Division of Forestry manages 15 state forests totaling 166,897 acres based upon multiple-use and sustainable forest principals. The forests are quite varied, ranging from mountain coves to cedar glades to bottomlands along the Mississippi river.

### Objectives for Year

- Complete West Tennessee District salvage operations.
- Complete and begin implementation of 2020 harvest plan.
- Approve 8 compartment plans.
- Achieve Forest Stewardship Council (FSC) third-party certification.
- Conduct 2 forestry field days.
- Complete the preparation for re-measuring the state forest inventory plots.

### Major accomplishments for July 1, 2011 – June 30, 2012

- Completed the West Tennessee District storm damage salvage operation – 620+ acres.
- Conducted 13 scheduled timber sale and 5 salvage sale contracts totaling 1,185 acres that generated revenues of \$1,961,670.
- Completed, published and began implementation of Plan 2020: Harvest Plan for Sustainable State Forest (see sidebar).
- Completed State Forest personnel training and orientation of new State Forest Foresters.
- Completed review of FSC certification and developed strategy and recommendation to pursue American Tree Farm System (ATFS) certification.
- Requested and received waiver from ATFS to exceed acreage limit for ATFS certification on two forests.
- Completed 4 pesticide use and application plans.
- Completed 2 Compartment plans.
- Completed the Bledsoe State Forest – Sequatchie LLC acquisition and road access project.
- Held Tennessee Healthy Hardwoods Field Day events on Chickasaw and Lewis State Forests.
- Conducted a tour of Natchez Trace State Forest with area Legislators to view and discuss salvage operations and state forest management.
- Co-hosted the Central States Forest Soils Workshop at Natchez Trace State Forest.
- Upgraded state forest GIS and users to ArcView version 10.
- Completed state forest inventory preparation for the 2nd cycle of re-measurement.

### Unit Mission

***The mission of the State Forest Management Unit is to provide for the multiple use management of all resources on State Forest lands such that those resources are protected and utilized in the combination that best meets the long-term needs of the people of Tennessee.***

### Plan 2020: Harvest Plan for Sustainable State Forests



After more than a year in planning, the Division developed and adopted a new forest regeneration plan that was designed to over time create healthier individual forests as well as a healthier system of forests.

The foundation of this new plan was to regenerate hardwoods at 80 years and pine at 60 years. Another guiding principle incorporated into this new plan dealt with the impact on volume of annual growth.



## Reforestation

### Seedling Nursery

*Mission: To provide high quality conifer and hardwood seedlings to the state's landowners at a competitive price.*

The Division of Forestry's seedling nursery, located in Delano, TN, produces forest seedlings that are available for sale to landowners. These seedlings are adapted to growing conditions found in Tennessee and are used primarily for reforestation and forest conservation projects. Approximately one-half of the 80 acres available for seedling production at the nursery are used for this purpose each year. The remaining seedbed area is planted in cover crops each year to ensure the long-term productivity of the nursery soil.

#### Objectives for Year

- Build new seedling cooler at Chickasaw SF.
- Increase seedling sales revenue.
- Complete and refine web-based nursery management/seedling sales software.
- Attend training session given by Auburn University and prepare a fumigation management plan and comply with all applicable regulations prior to Fall 2011 soil fumigation.
- Add pictures and written information to TDF website to provide information about the species of seedlings we sell.
- Investigate the feasibility of selling seedlings through an e-commerce system.

#### Major accomplishments for July 1, 2011 – June 30, 2012

- Signed a Memorandum of Understanding with the Tennessee Wildlife Resources Agency to produce 195,000 hardwood seedlings for their use at various locations in the state during the winter 2013 planting season.
- Produced 5.6 million pine seedlings and 1.5 million hardwood seedlings for sale and distribution during the 2011-2012 field planting season.
- Continued to refine and develop the online seedling sales computer program. Additional improvements were made to several reports.
- Achieved a customer satisfaction rating of greater than 95%, based on the results of our annual customer survey.
- Fumigant Management Plan was prepared prior to fall 2011 soil fumigation at the East Tennessee Nursery. Compliance with all pertinent regulations was achieved during application of soil fumigant (see picture).
- Updated specifications and rough drawings for new seedling cooler to be built at Chickasaw State Forest.
- Revised price structure and increased proposed seedling production for the 2012-2013 season as part of our effort to increase seedling sales revenue.
- Increased advertising presence as part of our effort to increase seedling sales revenue. Had ads published in TWRA Annual Waterfowl Hunting Guide and the TFA Membership Directory and Annual Meeting program.

### Unit Mission

*The mission of the Reforestation Unit is to provide quality, affordable seedlings (genetically improved where feasible) to Tennessee landowners and to optimize genetic improvements to increase the productivity of the state's forest resource.*



Soil fumigation at the East Tennessee Nursery



# Reforestation

## Tree Improvement

*Mission: To genetically improve the forest plantations of Tennessee through a program of breeding, testing, selection, and orchard management for important tree species; and to provide the state nursery with genetically improved seed from these orchards.*

The Division manages over 300 acres of seed orchards and more than 225 acres of progeny tests at various locations around the state. Currently, the Division is actively working with 7 hardwood and 4 conifer tree species. Tennessee is also a member of the North Carolina State University – Cooperative Tree Improvement Program. Membership allows accelerated breeding and establishment of genetically superior seed orchards. Seed produced from these orchards is used to grow seedlings tailored for survival and fast growth on Tennessee's landscape.

### Objectives for Year

- Construct orchard facilities at the West Tennessee Tree Improvement Center (WTTIC).
- Update and revise preliminary work plan for the WTTIC as needed to reflect changes in plans and work completed.
- Produce and harvest seed to create an elite sawtimber seed source of loblolly pine. Sow seed to grow sawtimber elite loblolly pine seedlings if cones are harvested in the fall of 2011.
- Install white pine half-sib progeny test emphasizing sawtimber potential and site adaptability.
- Install loblolly pine half-sib progeny test emphasizing sawtimber potential, cold hardiness and site adaptability.
- Install black walnut half-sib/open pollinated archive/test for the purposes of thousand cankers disease screening and germplasm conservation.
- Expand the American chestnut archive at Scott State Forest. Establish an American chestnut archive at the WTTIC.
- Expand the loblolly pine Sawtimber Elite seed production orchard at the WTTIC with appropriate selections.
- Expand shortleaf pine seed production orchard at the WTTIC with existing selections.
- Expand black walnut seed production orchard at the WTTIC and the East Tennessee Nursery with new sources.

### Major accomplishments for July 1, 2011 – June 30, 2012

- Hired Tree Improvement Technician for West Tennessee.
- Harvested 798 pounds of Hybrid Chestnut seed from the seed production area at the East Tennessee Nursery.
- Harvested 2,304 pounds of acorns from the Sawtooth Oak seed orchard at the East Tennessee Nursery.
- Harvested 82 pounds of cleaned/de-winged seed from the 2nd generation Yellow-Poplar orchard at the East Tennessee Nursery.
- Harvested 10.5 pounds of seed from the Virginia Pine Christmas Tree seed orchard at the East Tennessee Nursery.
- Expanded the Loblolly Sawtimber Elite seed orchard at the West Tennessee Tree Improvement Center to 8 acres.
- Produced containerized seedlings and planted cold hardiness loblolly pine progeny tests (49 open pollinated families) at two locations; the West Tennessee Tree Improvement Center and Scott State Forest.
- Produced containerized seedlings and planted white pine progeny test (49 open pollinated families) at Scott State Forest (see picture).
- Fertilized seed orchards at the East Tennessee Nursery and the Pinson Reforestation Complex based on recommendations from North Carolina State University.
- Located and tagged loblolly pine sawtimber elite selections in existing orchards.



Containerized white pine for Scott State Forest Progeny Test



## Forest Data and Technology

The Forest Data and Technology Unit is charged with the task of seeking out and implementing relevant technology. The Unit is also responsible for maintaining relevant databases and presenting data in a format for further analysis. Critical work areas include updating information systems and getting new mapping and remote sensing technology into the hands of field personnel. Adopting such technology will lead to better communications, increased efficiency, and strengthened credibility.

### Objectives for Year

- Build Online Burn Permit System for Permit Writers.
- Purchase Hardware for the Online Burn Permit System for Permit Writers.
- Upgrade internet speeds to Forestry locations.
- Develop central database site for Geographic Information System (GIS) files.

### Major accomplishments for July 1, 2011 – June 30, 2012

- Inventoried all work sites for internet connectivity (found most sites were working at 0.5 Mbps downloads).
- Purchased a new server to house GIS data and internal storage.
- Implemented Online Burn Permit system for public use (issued 10% of permits through this new system).
- Purchased 75 laptops, monitors and headset telephones for Permit Writers to use in capturing burn permit data from callers.
- Developed and implemented Online Burn Permit Data Collection System for Permit Writers, including YouTube based training videos.
- Upgraded 70 – 3G internet cards to 4G wireless routers (3.0 Mbps to 10.0 Mbps downloads).
- Upgraded IQS server software to version-3 and moved to new forestry server.

### Unit Mission

*The mission of the Forest Data and Technology Unit is to facilitate the development and utilization of technology to meet the needs of the Division's core businesses. The Forest Data and Technology Unit has the responsibility to implement state of the art technology, manage and compile data, and administer the Division's Forest Inventory and Analysis, and Geographic Information Systems programs.*

**Online Outdoor Burning Permit Application**  
for the State of Tennessee  
Department of Agriculture  
Division of Forestry

Select What / When you will be burning:  
Type: Brush Pile (approximately 8 feet by 8 feet or smaller in size) Start Date / Time: 10/4/2011 4:00:00 PM

Select Where you will be burning:  
If you plan to burn at a location other than your contact address, click "Add New Address" and supply the required information. Be sure to select the correct town address if multiple addresses are entered.

- 123 Home Address Nashville [Edit Address](#)
- 123 Burn Address Lawrenceburg [Edit Address](#)

or

- [Add New Address](#) [View Past Permits](#)

Before completing, you must agree to ALL of the following. That you will:

- only burn the materials you selected above
- burn in compliance with all local ordinances and Departments of Agriculture and Environment & Conservation Air Pollution Control rules and regulations
- accept liability for any and all damages caused by the burning.
- acknowledge that the Permit Expires at midnight.

I Understand and Agree

[Continue](#) [Exit](#)

An online outdoor burning permit application system was developed for public use. The system accounted for 10% of permits issued compared to phone permits. That percentage is expected to increase in FY13.



# Forest Data and Technology

## Geographic Information Systems

The Geographic Information Systems (GIS) section supports program managers decision making by analyzing data and presenting it in map or tabular form.

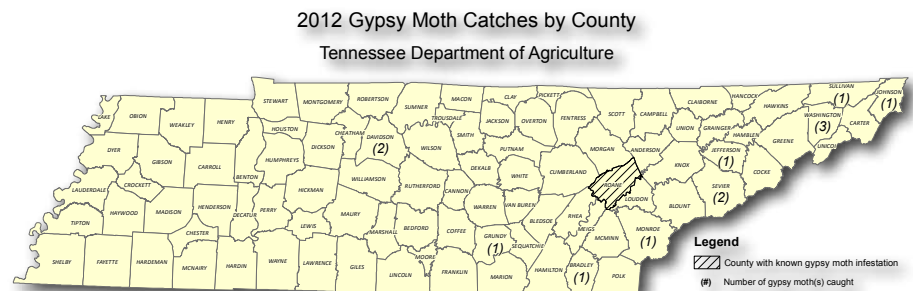
### Objectives for Year

- Provide GIS support for Division projects - Gypsy Moth, Hemlock Woolly Adelgid, Sudden Oak Death, Emerald Ash Borer, Forest Legacy, Statewide Forest Resource Assessment, Water Quality, Urban Forestry.
- Direct and conduct training of seasonal personnel in the use of new GPS technology.

### Major accomplishments for July 1, 2011 – June 30, 2012

#### Gypsy Moth

- Managed the property inventory of global positioning system (GPS) units issued annually to the seasonal and full-time employees, and laptop computers issued annually to the lead trappers used in gypsy moth trapping.
- Conducted technology training and refresher training of 67 full-time and 31 seasonal employees in the use of GPS units and/or laptop computers and downloading software in the execution of the gypsy moth trapping program.
- Downloaded GPS trap placement data from 28 full-time employees.
- Provided support to lead trappers for assigned GPS units, laptop computers and associated software used in gypsy moth trapping.
- Received and processed 143 GPS data downloads from full-time employees and seasonal employees.
- Facilitated more than 12,826 trap placement data records from field employees in the production of gypsy moth occurrence/spread maps.
- Produced small scale 33 delimiting grid maps for gypsy moth trap placement.
- Produced numerous large scale (statewide) gypsy moth trap placement maps.
- Produced large scale (statewide and district) gypsy moth catch location maps (see map).
- Produced small scale maps of gypsy moth proposed and final eradication and control projects.
- Produced maps illustrating the current statewide status of gypsy moth occurrences and infestations over the past year.
- Produced maps illustrating the spread of gypsy moth regionally over the past year.



#### Forest Health

- Produced pest occurrence, spread & quarantine maps from current field survey data for Emerald Ash Borer and Thousand Canker Disease.

#### Forest Management

- Produced district level priority watershed maps to aid in directing outreach to landowners in priority watersheds.



## Forest Data and Technology

### Forest Inventory Analysis

*Mission: Characterize changes in Tennessee's forest resource through data collection and analysis*

The Division works with the USDA Forest Service to produce periodic reports of the condition and extent of Tennessee's forest. Some 4,600 plots statewide are accurately measured at regular intervals to provide the data needed, with 20% of the plots scheduled for measurement each year. Information from this data is used to qualify and quantify Tennessee's forest resource.

#### Objectives for Year

- Measure 924 plots.
- Train and certify crews.

#### Major accomplishments for July 1, 2011 – June 30, 2012

- Measured 927 Forest Inventory plots.
- Hired and trained 2 FIA Foresters (Certification scheduled for late October).
- Facilitated production of state level Urban FIA publication (see picture).



According to the Urban FIA report, the 284.1 million urban trees in Tennessee have an estimated structural value of \$79 billion, provide an annual energy saving to residents of \$66 million, remove \$204 million worth of pollution from the air annually, and store 16.9 million tons of carbon valued at \$350 million.

### Radio Communications

#### Objectives for Year

- Reprogram radios and tower sites to receive narrowband signals all Districts.
- Purchase new microwave equipment.
- Implement quarterly inspection of all radio sites.
- Hire Radio Technician.
- Work with Department of Safety on their new 800/VHF Radio System.

#### Major accomplishments for July 1, 2011 – June 30, 2012

- Reprogrammed radios and tower sites to receive narrowband signals in East TN District (see picture).
- Purchased and received 31 paths of new microwave equipment.
- Hired Highland Rim Radio Technician and purchased supplies for position.
- Developed plans for replacement equipment to maintain current repeaters and voter systems.
- Secured federal funding to purchase supplies and materials for radio system upgrades and maintenance.



The Division's East Tennessee District was the first to receive narrowband signal reprogramming of all radios and towers. This is part of a nationwide mandate by the Federal Communications Commission. All districts' radios and towers will be reprogrammed by January 1, 2013.



## Forest Businesses

The goal of the Forest Businesses Unit is to improve Tennessee's forest resources by facilitating linkages between sellers and buyers and promoting value-adding industry. The Division's Forest Businesses program provides descriptive data about, and for, the forest products industry in Tennessee, technical assistance to forest products businesses or forest landowners, assistance in recruiting or establishment of forest products businesses in the state, and analysis to aid understanding of the forest resource.

### Objectives for Year

- Publish the Forest Products Bulletin quarterly and the Forest Industry Directory.
- Conduct biennial survey of all primary and secondary wood-using industries in Tennessee.
- Maintain Tennessee Forest Products database.
- Assist Tennessee Forest Products companies and citizens with information regarding forest products marketing/utilization.
- Serve as Forestry representative on the Agriculture/Forestry Rural Development Task Force.

### Major accomplishments for July 1, 2011 – June 30, 2012

- Completed the 2011 Tennessee Forest Industry Survey of all primary and secondary wood using industries in the state through a coordinated effort of forestry field personnel (see picture).
- Updated the Tennessee Forest Products database, from which the "Directory of Tennessee's Forest Industries" will be published later this year.
- Published the Tennessee Forest Products Bulletin Quarterly.
- Served as the Division of Forestry representative on the Agriculture/Forestry Rural Development Task Force.
- Advised Tennessee citizens with their forest products questions and needs for help with timber sales, logging, forest inventory and other inquiries.
- Participated as a member of the Southern Group of State Foresters Utilization and Marketing Task Force and Marketing Publication committee.
- Provided prospective companies looking to relocate to Tennessee with forest resource data.
- Provided export information and resource needs from foreign companies looking to export timber products from Tennessee.

### Unit Mission

*The mission of the Forest Business Unit is to provide support for the Tennessee forest industry and forest-based businesses, and to provide data to characterize Tennessee forest products.*



The Tennessee Forest Industry Survey provides a snapshot of timber product output.



## Environmental Affairs and Public Outreach

The Environmental Affairs and Public Outreach Unit seeks creative ways to provide outreach to the various publics in the State of Tennessee. Additionally, the unit seeks to foster greater collaboration with environmental advocacy groups to produce a climate for problem solving.

### Objectives for Year

- Implement and promote the Clean Water for Urban Forests Program
- Encourage and foster partnerships with conservation organizations related to all units and programs of the Division

### Major accomplishments for July 1, 2011 – June 30, 2012

#### Clean Water for Urban Forests Program

- Hired part-time coordinator to manage activities.
- Initiated 12 projects and planted on 5 sites managed through the program.
- Planted 2,246 trees along 2,420 feet of riparian buffers in Davidson County (see sidebar).
- Involved 328 volunteers accounting for 938 volunteer hours served towards the project.
- Attracted and fostered program involvement with seven partner organizations including USDA Forest Service, Metro Nashville - Beautification, Water Works, Parks, and the Mayor's office, TDEC Division of Water Resources, and the Land Trust for Tennessee.
- Attracted and fostered volunteer services from 9 organizations including SoundForest, Tennessee Environmental Council, HandsOn Nashville, Nashville Public Library - Edmondson Pike Branch, Nipper's Corner Starbucks, Students Today Leaders Forever, Tennessee State University, Belmont Phi Delta Theta Fraternity and Girl Scout Troop 2887.

#### Forest Health

- Engaged partnerships with several conservation based organizations related to forest health issues such as Emerald Ash Borer, Thousand Cankers Disease and the detrimental effect of the movement of firewood. Partnerships included USDA Forest Service, USDA APHIS, USDI National Park Service, University of Tennessee Extension, TDEC State Parks, TWRA and TN Department of Agriculture Division of Regulatory Services.

#### Forest Policy/Business

- Engaged partnerships with several conservation based organizations including Kentucky/Tennessee Society of American Foresters, Tennessee Forestry Association and Tennessee Farmland Legacy Partnership

#### Land Use Planning

- Gave presentations, provided on-site technical assistance or attended 23 land use planning events which included 339 constituents.

### Unit Mission

*The mission of the Environmental Affairs & Public Outreach Unit is to communicate clearly and accurately to the Division's publics forestry information necessary to accomplish the Division's mission, and to optimize in-house communications. The Environmental Affairs & Public Outreach Unit also administers the Division's Information and Education program.*

### Clean Water for Urban Forests

Strong partnerships and volunteer service helped plant 2,246 trees along 2,420 feet of riparian buffers in Davidson County.







## Environmental Affairs and Public Outreach

### Information and Education

*Mission: To produce educational materials and provide forest resource information through a variety of media, and provide support to all Division programs in the dissemination of information to our publics.*

The information and education program is essential in helping the general public understand forestry as a discipline and the role that the Division plays in maintaining a healthy forest resource while providing a stream of essential ecological benefits to society. The program also helps to foster communication within the Division, a critical function of a healthy organization.

### Objectives for Year

- Raise awareness about important and timely forest resource issues.
- Incorporate social media into standard operating procedures.
- Produce informational products to raise awareness of Division activity and topical issues.
- Promote Tennessee Forestry Camp.

### Major accomplishments for July 1, 2011 – June 30, 2012

- Held 1,496 educational outreach activities reaching 283,322 children and adults statewide.
- Continued to lead statewide communications response to forest health threats related to Emerald Ash Borer, Thousand Cankers Disease, and the detrimental effect on forest health related to the movement of firewood.
  - ◊ Produced multi-media platform campaign in conjunction with UT Vol Network to promote “Don’t Move Firewood” message at UT Football games. This included a print ad in gamebook, radio spots aired during the game, and on-site booth space at tailgate for two games during the season where literature and educational materials were handed out.
  - ◊ Developed “Don’t Move Firewood” rack cards, posters and yard signs for distribution among partner organizations (see picture).
  - ◊ Provided onsite training on use of “Don’t Move Firewood” materials with TN State Park staff.
- Produced 17 news release pertaining to relevant topics including: Emerald Ash Borer, Thousand Cankers Disease, wildfire danger, burn permit requirements, UT Conference on EAB and TCD, dangers of moving firewood, employee awards, TN Urban FIA Report and Commission of Ag Burn Ban.
- Gave radio and television interviews addressing Division programs and topical issues.
- Referenced in 536 newspaper articles.
- Maintained fire prevention website - BurnSafeTN.org. The site had 134,448 page views from 64,077 visits. This marks a 300% increase in the number of visits to the site from the previous year. Much of this increase is a result of adding an online permit issuance system. The increase created an opportunity to provide greater education on safe debris burning tips and practices.
- Began development of a new forest health website - ProtectTNForests.org.
- Maintained Division’s YouTube Channel. The number of video views was 8,655, a 52% increase over last fiscal year. The most viewed video continues to be “Using Handtools to Suppress Tennessee Forest Fires” representing 39% of total views to a worldwide audience including 78 countries.
- Facilitated 63rd annual Forestry Camp for 63 Future Farmers of America high school students.



Posters (pictured), yard signs and rack cards were developed to raise awareness on the dangers posed by movement of firewood to forest health.



# Safety and Training

The Division stresses safety first in all activities and program areas by providing the tools and training necessary to enable employees to work effectively and safely. In addition, physical fitness standards help the Division maintain a physically capable and healthier work force.

## Objectives for Year

- Conduct work capacity test (WCT).
- Coordinate ongoing training program.
- Maintain training database.
- Assess training needs for each job classification.
- Maintain safety records.
- Coordinate safety inspections of facilities.
- Provide safety information (updates, messages).
- Investigate accidents/unsafe work practices.
- Administer Title VI Program.

## Major accomplishments for July 1, 2011 – June 30, 2012

- Administered the work capacity test to assess fitness among Division firefighters (see picture).
- Directed a program review of the work capacity test program (conducted by Finance & Administration's Office of Consulting Services).
- Conducted the Division's annual wildfire training academy for new employees (see picture).
- Developed materials for the Division's annual wildfire safety refresher.
- Assisted with development of an online Prescribed Fire Training Program.
- Administered web-based training database (IQSweb).
- Participated in the tenth annual Tennessee Kentucky Wildland Fire Academy, which offers advanced wildfire training for Division firefighters.
- Trained firefighters in the use of fire operations in the wildland-urban interface.
- Assisted with training and maintained records for the Divisions' Pest Management Certification Program for employees.
- Coordinated First Aid/CPR Training.
- Coordinated Defensive Driving Training.
- Administered the Division's Title VI Program.
- Compiled and submitted OSHA reports.
- Coordinated safety inspections of facilities.
- Investigated accidents/unsafe work practices.
- Chaired Safety/Training Committee meetings.

## Unit Mission

*The mission of the Safety and Training Program is to protect the lives and well-being of Division employees and the public by reducing or eliminating unsafe acts and/or conditions that may result in personal injury or loss of life and to coordinate training opportunities that will enhance employee career development and the delivery of forestry services to our constituents.*



Employees taking the Work Capacity Test in the Cumberland District.



Students conducting a live burn exercise at the Division's Wildfire Academy.



## Administration

Spread across the State and administered from four district and one reforestation offices, the 325 employees of Department of Agriculture's Forestry Division have responsibilities in nine separate programs. Effective planning, priority setting, and communication within the Division are crucial to organizational effectiveness. Assistant State Foresters and the Budget & Planning Unit Leader work with Staff to refine systems that improve customer services and operational efficiencies.

### Objectives for Year

- Plan and allocate budget (revenues, reversion and FY2013).
- Develop Customer Focused Government Plans (Top to Bottom).
- Map business process that need streamlining.
- Implement Plan writer.
- Evaluate Work capacity Test.
- Maintain TDF partnerships.

### Major accomplishments for July 1, 2011 – June 30, 2012

- Developed budget and reversion plans.
- Developed Customer Focused Government Plans.
- Began the LEAN process for TAEP procedures.
- Reviewed Work Capacity test.

### Unit Mission

*The mission of the Administration Unit is to assist the State Forester in increasing the effectiveness of management, the quality of customer services, the efficiency of operations, and the cost effectiveness of Division programs.*



# Urban Riparian Buffer Program Takes Off

...continued from page 2

All that is asked of the landowner is that the trees be taken care of to ensure that they can grow to maturity. There are no easements or other property right restrictions placed on the landowner's property. Annual visits by TDF personnel, with the landowner's permission, may be provided to assess the trees condition and to provide the landowner with technical assistance on maintaining the trees and the associated riparian buffer.

### Everyone Benefits

While forested riparian buffers add beauty and value to your property, their benefits extend far beyond a single landowner's property by contributing directly to the quality of water and of life downstream. The more forested riparian buffers there are in a watershed, the greater the overall health of the watershed and of the quality of its waters.

## Accomplishments in FY12

Individual Projects	12
Planting Sites	5
Trees Planted	2,246
Feet of Buffer Planted	2,420
Acres Planted	3.45
Seedlings Potted	1000
Volunteers	328
Volunteer Hours	938

## Partners & Volunteers

### Partners

- USDA Forest Service
- Metro Nashville
  - ◊ [Metro Beautification](#)
  - ◊ [Metro Water Works](#)
  - ◊ [Metro Parks](#)
  - ◊ [Metro Nashville Mayor's Office](#)
- TN Department of Environment and Conservation
  - ◊ [Division of Water Resources](#)
- Land Trust for Tennessee

### Volunteers

- SoundForest
- Tennessee Environmental Council
- Hands On Nashville
- Nashville Public Library
  - ◊ [Edmondson Pike Library](#)
- Nipper's Corner Starbucks
- Students Today Leaders Forever: Chicago, IL and Dearborn, MI
- TSU Service Learning Project
- Belmont Phi Delta Theta Fraternity
- Girl Scout Troop 2887

### Forestry Commission Duties and Functions

The Tennessee Forestry Commission was established by the legislature under T.C.A. 11-4-201 to:

1. Nominate candidates for State Forester.
2. Review, approve and submit the annual budget of the Forestry Division to the Commissioner of Agriculture.
3. Make an annual report to the Governor, Commissioner of the Department of Agriculture and the Senate Environment, Conservation and Tourism Committee and the House Conservation and Environment Committee.
4. Recommend to the General Assembly legislation to protect, conserve and develop the forest resources of the state.
5. Approve the Division's comprehensive long-range plan for the state's forest resources.
6. Establish state forestry policies that will enable the Division to manage its programs.
7. Include in budget recommendations those goals and objectives necessary to implement state forestry policies.

### The State of Tennessee policy of non-discrimination

Pursuant to the State of Tennessee's policy of non-discrimination, the Tennessee Department of Agriculture does not discriminate on the basis of race, sex, religion, color, national or ethnic origin, age, disability or military service in its policies or in the admission or access to treatment or employment in its programs, services, or activities.

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