



# TENNESSEE

FORESTRY COMMISSION



# 2022 ANNUAL REPORT



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**TOM MIDYETT**  
**CHAIR OF FORESTRY COMMISSION**

*I am pleased to present the 2022 Tennessee Forestry Commission Annual Report to the General Assembly and the Governor of Tennessee. The employees who comprise Tennessee's Division of Forestry are highly trained men and women who advise and support forest landowners and industries across Tennessee. They very effectively manage each of our state's vibrant and productive state forests and protect the water quality of our streams and conserve our natural resources daily. Equally as important, these same men and women also comprise one of the most efficient and proficient wildland fire organizations in the country. These individuals expertly operate the heavy, specialized equipment assisting local fire departments in controlling forest fires wherever and whenever they occur. The individuals who comprise the Tennessee Division of Forestry are truly dedicated to saving the lives and property of Tennesseans.*

**CHARLIE HATCHER, D.V.M.**  
**COMMISSIONER OF AGRICULTURE**

*In Tennessee, we are so fortunate that agriculture includes our forests. Healthy and productive woodlands benefit our environment, our economy, and every citizen who steps outside. At the Department of Agriculture, we are incredibly proud of the employees in our Division of Forestry who act as stewards and caretakers of this vital resource. I extend my sincere thanks to those employees and to the Tennessee Forestry Commission, the Tennessee Forestry Association, the Governor, the state legislature, and our partners for supporting their important work.*



**DAVID ARNOLD**  
**STATE FORESTER**

*Tennessee is fortunate to host a \$21 billion forest industry employing 85,000 people, driving our state's rural economy, and sustaining a productive and resilient forest resource. This industry's markets provide the best incentive to encourage landowners to actively manage their forestland. One of the highest priorities for the Department of Agriculture and Division of Forestry is to support forest industry through new workforce development programs, such as those described in this year's feature article. This work comes about through an assemblage of partnerships including the Governor's Office, General Assembly, Commissioner of Agriculture, Tennessee Forestry Commission, Tennessee Forestry Association, sister state agencies, sister state agencies, and others. These efforts are vital to ensure the continued protection, conservation, and enhancement of our state's forests.*







## FY2022 AT A GLANCE

The Tennessee Forestry Commission met in-person four times during the 2022 fiscal year. The Commission received reports from citizens, staff, and subject matter experts on various forestry topics and issues affecting forest landowners and the State of Tennessee. The Commission also discussed and acted on several significant matters.

The Commission continued its evaluation of the Tennessee Department of Agriculture Division of Forestry's wildland fire response and the adequacy of the Division's equipment and response personnel. As in previous years, the Commission expressed its continued concern about the retention and recruitment of qualified fire suppression and other Division personnel. State Forester David Arnold provided the Commission with headcount and retention statistics at each Commission meeting. Arnold also reported to the Commission salary and classification adjustments, which should help fill vacancies and retain employees.

During FY2022, the Division of Forestry suppressed 942 wildfires affecting 12,300 acres and safely implemented 146 beneficial prescribed fires across 8,220 acres statewide. Arnold reported how fire suppression investments, including dozers and transports, helicopter dump buckets, new technology, personnel training, and community hazard mitigation projects helped the Division. As in previous years, the Commission endorsed the Firewise USA program to lessen the likelihood and severity of wildland fires and encouraged the Division to continue promoting this program throughout the state.

Arnold reported on extensive deployments of Division personnel to assist western states and the federal government to fight wildfires in the West. The costs of these deployments are reimbursed to the state and the incidents provide valuable training to staff. These deployments are also a source of additional income to employees.

The Commission closely monitored the operations of the East Tennessee Nursery to ensure this source of high-quality seedlings operates efficiently and economically without sacrificing seedling quality or quantity. The Commission continued to recommend that the Nursery increase its marketing efforts to make Tennessee landowners aware of seedling availability and increase Nursery revenue from out-of-state sales. The Commission conducted its September 2021 meeting at the Nursery and was pleased that local members of the General Assembly attended.

The Commission continued its efforts to increase conservation awareness in the forestry industry. The Commission again endorsed the Division's 2020 Forest Action Plan, which outlines threats to Tennessee's forests and actions to address those threats during the next decade.





The Commission supports the Division's participation in the State Lands Group comprised of the Department of Agriculture, the Tennessee Department of Environment and Conservation, and the Tennessee Wildlife Resources Agency. This group collaborates in planning and sharing resources to manage state lands.

The Commission monitored timber sales from State Forests and encouraged the Division to increase sales where feasible to improve the health and quality of Tennessee's forests and to generate additional revenue for the state.

The Commission encouraged the Division to develop a more collaborative relationship with USDA's Farm Services Agency (FSA). FSA offers programs that provide financial assistance to help forest landowners recover from natural disasters. The Division and FSA need to ensure Tennessee's forest landowners are aware of these programs and have access to available assistance.

Under the leadership of Department of Agriculture Commissioner Charlie Hatcher, D.V.M., the Commission was kept abreast of the continued impact of the COVID-19 pandemic on the state's agriculture and forestry economy and on the Department's budget. Although the Department of Agriculture Division of Forestry experience a hiring freeze and budget reductions in previous years, the Division did not experience reductions that adversely impacted its mission.

At its January 2022 meeting, the Commission welcomed new Commission member Bill Legg. Mr. Legg represents landowners with fewer than 500 acres of forestland.

At its June 2022 meeting, the Commission honored outgoing Chairman Johnny Heard for 10 years on the Commission and for his service as chair. Members elected Tom Midyett as Chairman, John Charles Wilson as Vice Chairman, and Dr. Sharon Jean-Philippe as Secretary.

The Commission expects that, under the continued strong leadership of Commissioner Hatcher and State Forester David Arnold, the Division of Forestry will meet staffing and equipment needs to provide the level of excellence the citizens of Tennessee deserve and expect.



# PARTNERING TO ADDRESS WORKFORCE DEVELOPMENT



The Tennessee forest products industry represents \$22 billion and nearly 3 percent of the state's economy, employing more than 85,000 people. This industry is significant and has the potential to grow based on the abundant and sustainable raw material provided by the state's 14 million acres of forests. However, inadequate workforce development threatens this growth.

According to the U.S. Census Bureau, the forest products industry workforce is aging and numbers are declining. In 2018, forest industry workers aged 35-64 made up 66% of the industry labor force while only 8% were 19-24. Recruitment into this industry is stagnant as young people are leaving rural communities in search of other opportunities.

"Our industry, as a whole, needs to do better with making jobs more attractive," said Larry Pitts, Tennessee Forestry Association Workforce Development Coordinator. "We're losing ground to other industries in terms of exposure to opportunities, as well as competitive wages and benefits."

The workforce challenges are especially prevalent in the logging sector. Loggers are the foundational link in the forest product supply chain. They harvest and deliver the raw materials that drive the industry. Work is hard, in many cases not viewed with favor, and current generations have little interest in continuing established family logging businesses. The lack of stability in the logging workforce is causing some mills to downsize or delay expansion projects.

Trucking demand is also much greater than the supply of drivers, making shipping logs to the mill and lumber from the mill difficult. The high cost of workers compensation insurance is likely to drive some mills out of business. While this poses a significant challenge to Tennessee's forest products industry, it is not unique to the state as it is a recognized threat across the South. To create and support a vibrant, diverse forest product marketplace, a sufficient labor force must



be available. Workforce development programs are needed to provide education, training, and job placement support specific to the forest industry.

“Due to a lack of exposure, much of the younger generations are not aware that the forest industry exists,” said Pitts. “Even though they’re living in a home comprised of and containing wood, and using wood products every day, like paper, toys, musical instruments, sports equipment, and many other goods.”

To meet this challenge, the Division identified several actions steps in its 2020 Forest Action Plan to create and enhance a strong and sustainable forest industry workforce and opportunities for long-term career development. These actions include partnering with institutions, industry associations, state and federal agencies, and nonprofit organizations to leverage resources to develop programs to create jobs, and recruit, train, and retain employees for the forest products industry; working with the University of Tennessee Forest Products lab to address technical and manufacturing needs; promoting forest products utilization technology transfers to keep the industry competitive; and collaborating with the Tennessee Department of Labor and Workforce Development to establish industry-specific workforce programs.

## TENNESSEE FOREST INDUSTRY WORKFORCE DEVELOPMENT DELIVERABLES

- High School and Middle School Career Fairs: 8 events, 2,585 students (Career Fairs resumed January 2022 following COVID-19 protocols)
- FFA Breakfasts: 1,600 students in 2021 and 2022
- FFA State Convention: 1,000 students
- FFA Camp at Fall Creek Falls: 50 students
- FFA Camp and Forestry Judging at Camp Clements: 75 students
- Sustainable Forestry Initiative (SFI) Green Jobs Programs: 2 workshops, 35 4-H leaders
- 4-H County Farm Days for Elementary Students: 2 locations, 850 students
- 4-H Summer Camps: 2 locations, 250 students
- 4-H Leaders Conference: 100 attendees at Pickwick Conference
- Teachers Conservation Workshops: 3 locations, 68 attendees
- Tennessee College of Applied Technology (TCAT) Programs: 300 students at Crump, 15 students at Hohenwald
- New Social Media Campaign: Focus on economically distressed and at-risk counties, as well as counties with significant forest industry
- TFA Workforce Posts on Facebook: 651 visits, 1,277 likes, 23,517 reach, 35-44 primary age range, 45.9% women, 54.1% men
- *ForestryWorks* Tennessee Facebook and Instagram Postings: Reached 24,667 through 20 Tennessee-specific postings
- *ForestryWorks* Outreach to Schools in Economically Distressed Counties
- Forestry Worker Program Future Hiring Priority: 12 wood products businesses signed letter of support
- Forest Workforce Training Institute Coordinator Outreach: 4 TFA regional meetings, 180 industry representatives





In 2020, the Division launched a collaboration with the Alabama Forestry Commission, the Tennessee Forestry Association (TFA), and the Forest Workforce Training Institute (FWTI) to expand the *ForestryWorks* workforce training program. *ForestryWorks* is a collaborative effort of the Forest Workforce Training Institute and other partners within the forest industry. The program's goal is to develop a pipeline of qualified workers for the logging and wood product manufacturing industries. *ForestryWorks* incorporates innovation and technology to reach a broad social media audience through videos highlighting forest industry careers. The brand is consistent and recognized, leveraging non-forestry organizations for support and developing high school trade curriculum. Forestry-specific curriculum, career fairs, and training programs to fill workforce gaps are examples of innovation incorporated in this project.

The Tennessee Forestry Association (TFA) spearheaded this effort to bring *ForestryWorks* to Tennessee, elevating the initiative to a regional level through a grant from the USDA Forest Service facilitated by the Division. Other collaborators include the Tennessee Departments of Education, Labor and Workforce Development, Economic and Community Development, and the Tennessee Board of Regents. All are assisting with project planning, implementation, and/or financial resources. Industry partners WestRock, Hankins Forest Products, and Huber Packaging Corporation of America have provided financial and/or in-kind support for this initiative, including participating in or hosting forestry field and career days, providing subject matter experts in classroom and field training sessions, lending heavy equipment for training, promoting project goals and objectives, connecting project staff with local schools, and providing job shadowing and internship opportunities.

"The need for experienced heavy equipment operators, specialized mill workers, lumber graders, mill mechanics, and sawyers is greater now than ever before," said Heather Slayton, Assistant State Forester. "Our division is excited to support TFA with their *ForestryWorks* program to increase exposure of jobs within the forest industry. A healthy forest industry sustains wood products markets that, in turn, promote active forest management leading to healthy, resilient Tennessee forests."

To date, these efforts have generated numerous accomplishments including a revised forestry curriculum approved for use in high school agriculture classes, a Forestry Worker Certificate Program for the Tennessee Colleges of Applied Technology, and a simulator and equipment

**“Proud Provider of Workforce Development”**

**TENNESSEE COLLEGE OF APPLIED TECHNOLOGY - HUNTSVILLE**

YEAR 2017 AND 2018 TO: Tennessee College of Applied Technology 1250 Wood Lake Road Huntsville, TN 35892

FOR INFORMATION ON THIS PROGRAM:

- 1. Main Campus
- 2. Lincoln County Center, Leesport, TN
- 3. Maury County Center, Mt. Pleasant, TN
- 4. Wayne County Center, Warrenton, TN

CONTACT INFORMATION:

Address: \_\_\_\_\_ TN

City: \_\_\_\_\_ TN

State: \_\_\_\_\_ TN

ZIP: \_\_\_\_\_ TN

HOW TO APPLY:

- Online application(s)
- Enter in the online
- Main Campus (404) 784-8381

CONTACT 1024 PUBLISHED AVAILABLE:

- Business Tech Technician
- Business Tech Technician
- Business Tech Technician
- Business Tech Technician
- Business Tech Technician
- Business Tech Technician
- Business Tech Technician
- Business Tech Technician
- Business Tech Technician
- Business Tech Technician

**FORESTRY & AGRICULTURE TECHNOLOGY**

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[www.tcaath.edu](http://www.tcaath.edu)

**FORESTRY & AG TECHNOLOGY**

Forestry and conservation workers maintain, plan, and improve the quality of forests. Forestry workers typically work in state and local government or on privately owned forest lands or on work on a contract basis. Employment of forestry and conservation workers is projected to increase slowly or modestly until 2022 due to heightened international demand for U.S. timber and wood products and growing demand for forestry workers. Forest and conservation workers typically spend significant time in forest and woodlands. They may be required to work in hot, humid, and/or mountainous areas. They may also be required to work in areas with steep slopes, uneven terrain, and/or rough terrain. They may also be required to work in areas with rough terrain, steep slopes, and/or rough terrain. They may also be required to work in areas with rough terrain, steep slopes, and/or rough terrain.

**COURSE DESCRIPTION**

The mission of the program is to equip the student with a background of knowledge and skills in the use of equipment and maintenance procedures utilized in the forestry and agricultural industry. The student should be able to gain an entry position into the forestry and agricultural industry. The program would provide technical instruction and job development for the student to become knowledgeable as a forestry worker, agricultural technician or operator of equipment. The course is to provide training in the use of forestry and agricultural equipment. The program is to provide training in the use of forestry and agricultural equipment. The program is to provide training in the use of forestry and agricultural equipment.

**LOGGING INDUSTRY**

Logging workers harvest forests to provide the raw material for many consumer goods and industrial products. Most logging workers have a high school diploma. They are often working in a similar manner to heavy equipment operators and to learn how to operate logging machinery. The median annual wage for logging workers was \$42,350 in May 2020. Demand for logging workers is projected to increase steadily from 2019 to 2028 with a need to replace workers who retire or leave the occupation voluntarily.

**UNITS OF STUDY**

- Forestry Operators
- Harvesting Timber
- Welding
- Agriculture
- Blue Print Reading
- Agri-Business
- Soil Science
- Electricity & Electronics
- Mechanical Systems
- Machinery & Maintenance
- Heavy Equipment Operation

**FORESTRY & AG AWARDS**

Certificate(s)	Exc. Title
Forestry Worker	1 Forester
Agri-Business Forestry	3 Forester
Diploma(s)	
Forestry Technician Diploma	3 Forester

The Forestry Program will be offered on the main campus of TCAATH and at the Lincoln County Center, Maury County Center, and Wayne County Center.

for the Hands On High School Forestry Program in Wayne County. Additional successes include hosting more than 20 events reaching 7,000 students and a wide-reaching social media campaign focusing on economically distressed and at-risk counties, as well as other counties with significant forest industry presence.

## ACCOMPLISHMENTS

- Forestry Curriculum: Revised and approved for use in high school agriculture classes. Forestry Worker Certificate Program approved by the Tennessee Department of Education. Link to curriculum and testing available on the TFA website.
- Wayne County Hands on High School Forestry Program: Set to launch with simulators, portable sawmills, and other equipment for instruction.
- TCAT Forestry and Ag Technology Program: First graduate at Crump
- TCAT Outreach: Leaders contacted at Livingston and Dickson
- University Outreach: Promoted FWTI and forestry training programs to leaders at UT Knoxville and UT Martin.
- Staffed booth at the Wilson County/Tennessee State Fair: 776,195 attendees in 2022
- Adult Workforce Programs: Introduced Cul2vate to TFA members and trained 12 Cul2vate staff on chainsaw safety, tree felling, and portable sawmill operation. Participated in Tennessee Department of Labor and Workforce Development job fairs at 3 locations with 38 contacts. Explored veterans hiring initiatives.
- Partnership Growing: Tennessee Be Pro Be Proud high school hands-on simulator sponsorship with the National Hardwood Lumber Association
- National Hardwood Lumber Association Lumber Grading Short Course: 16 attendees enrolled November 2021 and 20 enrolled November 2022
- TFA Workforce Development Committee: Monthly meetings with strategic planning provided by Slingshot Professional Consulting
- Forest Workforce Training Institute Regional Collaboration: Worked with Alabama to develop social media platforms, revise curriculum, and determine best testing methodology; facilitated Kentucky forestry leadership partnership; promoted FWTI to North Carolina forestry leadership
- Other Outreach: I-Heart Radio Program, Tennessee Farm Bureau Convention, Tennessee Farm Bureau Women's Conference, Waterfest programs for Rutherford County Schools

## CHALLENGES

- Encouraging Workforce Interest in High-Intensity Level Jobs
- Improving Exposure and Outreach to the Wood Products Industry
- Attracting Young Adults to Wood Industry Jobs
- Driver Pay Competition Between the Transportation Industry and Wood Products Industry
- Overcoming Worldwide Wood Industry Market Downturn Affecting Job Markets in Tennessee
- Diminishing Logging Industry and High Start-Up Costs
- Sourcing Grant Funding to Support Workforce Initiatives and FWTI in Tennessee
- Attracting and Retaining Instructors for TCAT and High School Forestry Curriculums





# WILDLAND FIRE PROTECTION

The Division of Forestry is legally tasked to protect Tennessee's forest resources (TCA 11-4-405). Wildland fire prevention and suppression are the primary responsibilities of the Division (TCA 11-4-406), which is uniquely equipped and qualified for this role. Fire occurrence and acres burned in Tennessee have gradually decreased during the past 50 years. Forest resources have benefited, particularly with improved hardwood timber quality. As the forest landscape experiences an influx of homes in the wildland-urban Interface, the Division's fire role has remained consistent. What has changed is suppression equipment, communication, training, and emphasis on safety, prevention, and education.

## UNIT MISSION

The mission of the Fire Management Unit is to minimize damage caused by wildland fire to forest resources and personal property while giving priority to firefighter and public safety. This is accomplished through cost-effective and creative programs and collaboration, as well as safe and effective fire and fuels management operations.

## OPERATIONS AND TRAINING

### OBJECTIVES FOR YEAR

- Strengthen agency performance related to incident business process and acumen during emergency response situations.
- Coordinate and execute high-level, nationally-certified training for wildland fire, all hazard incident management, leadership, and the Incident Command System.
- Further develop the Grand Divisions Type 3 Incident Management Team through repeated drills, exercises, and out-of-state specialized training deployments.
- Implement fiResponse computer-aided dispatch program to compile and communicate all information related to the full life cycle of an incident.






## ACCOMPLISHMENTS FOR JULY 1, 2021 – JUNE 30, 2022

- Deployed 137 highly-trained personnel to support wildland fire and hurricane emergencies across 10 states resulting in transferrable skills and experience to be utilized in Tennessee, as well as generating more than \$2 million in revenue.
- Suppressed 942 wildfires affecting 12,300 acres and safely implemented 146 beneficial prescribed fires across 8,220 acres in Tennessee.
- Supported Waverly flood relief with five chainsaw teams and two wide-track bulldozer units.
- Mobilized Grand Divisions Team to assist in management of the Indigo and Seymour fires in Sevier County. The team successfully activated resource ordering processes and brought in federal aircraft, fire engines, hand crews, and personnel from USDA Forest Service, National Park Service, and Tennessee Army National Guard. The collective interagency effort saved 457 structures with an estimated value of \$201,371,566.
- Secured \$821,365 in federal grant funding to support state fire assistance surrounding remote automated weather stations, training, supplies, and personal protective equipment.
- Facilitated the 19th annual Tennessee & Kentucky Wildland Fire Academy providing 29 leadership and incident management courses to 685 students from 36 states. Tennessee's program is highly highly respected and one of the largest wildland fire academies in the nation.
- Executed 1 full-scale Type 3 Incident Management Team exercise at the Academy and sent the Command and General Staff to the *L-580 Leadership is Action* staff ride at the Chickamauga Battlefield.
- Executed 2 Tennessee Certified Prescribed Burn Manager Workshops for 61 private landowners, forest industry employees, and partner agencies. This brings the number of Certified Burn Managers in Tennessee to 576.

### Sevier County, Indigo Lane Fire Homes & Businesses Saved by Fire Suppression Actions

 Homes & Business Saved: 830

 Fire Perimeter, April 3, 2022

This map depicts the location of homes and businesses saved by the fire suppression actions of Tennessee Division of Forestry and partner agencies. These homes and businesses were located in the final fire perimeter as well as areas near the active flaming front (60-100% probability of fire spread; see legend on map) that would have likely burned in the absence of suppression actions.

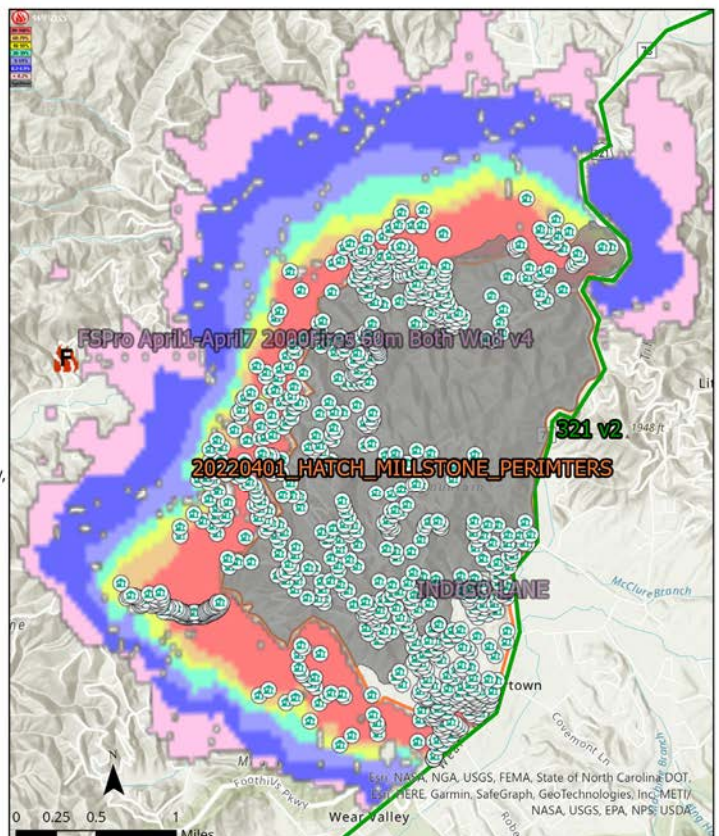
Within the fire perimeter, 373 homes and businesses were saved from experiencing any damage. In the zone of high fire spread probability, 457 homes and businesses were saved.

The zone of high fire spread probability is the area that, according to USDA Forest Service fire behavior models and analyses, would have burned with 60-100% probability. High fire spread probability model assume no suppression action. Fire behavior analyses were provided by USDA Forest Service, Rocky Mountain Research Station.

Published May 9, 2022



Spatial Reference  
Name: NAD 1983 StatePlane Tennessee FIPS 4100 Feet  
Projection: Lambert Conformal Conic





# VOLUNTEER FIRE ASSISTANCE

## OBJECTIVES FOR YEAR

- Assist local volunteer fire departments serving populations of fewer than 10,000 citizens in obtaining wildland fire equipment, personal protective equipment, tools and communication supplies, and technical assistance.
- Provide wildland fire training to volunteer fire departments across Tennessee, including incident command system, tactics, leadership, mutual aid, and wildland-urban interface.
- Prioritize and support economically distressed counties and departments within those areas.

## ACCOMPLISHMENTS FOR JULY 1, 2021 – JUNE 30, 2022

- Secured \$272,299 in federal grant funding and awarded \$222,000 in grants to 74 volunteer fire departments.
- Maintained 255 agreements with volunteer fire departments.
- Provided free wildland fire training to 200 firefighters representing 10 fire departments.
- Coordinated with the Tennessee Department of Commerce and Insurance and various media outlets promoting services and opportunities provided through the Volunteer Fire Assistance Program.
- Collaborated with the National Association of State Foresters to develop a proposal for Congress to change Volunteer Fire Assistance federal requirements to better account for population expansion and individual state needs.

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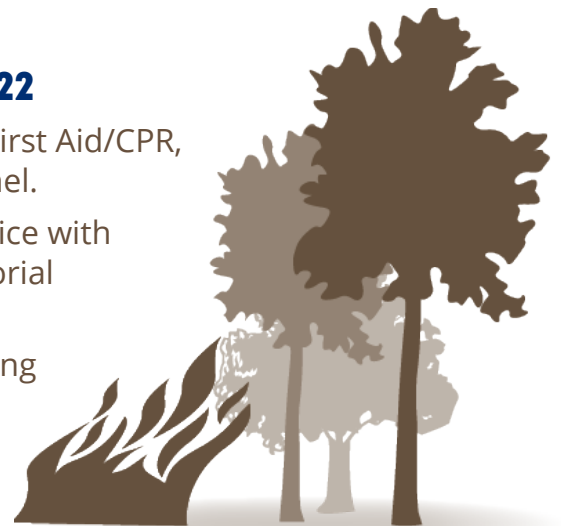
# SAFETY AND RISK MANAGEMENT

## OBJECTIVES FOR YEAR

- Provide a structured approach to control safety risks in operations and promote a culture of open dialogue and reporting of accidents and near misses.
- Provide high level of guidance and mitigation strategies commensurate with the tasks and risks associated with all disciplines within the agency.
- Implement and provide oversight to OSHA workplace and employee safety reporting requirements and timelines.

## ACCOMPLISHMENTS FOR JULY 1, 2021 – JUNE 30, 2022

- Facilitated Defensive Driving, Hazard Communication, First Aid/CPR, and Bloodborne Pathogen training for Division personnel.
- Supported Tennessee Fallen Firefighters Memorial service with committee planning and execution of the annual memorial recognizing structural and Division line-of-duty deaths.
- Revised the Division's Safety and Health Manual providing policies and procedures that create a safe work environment for all employees.







*Division staff teach safe felling technique for hazard trees damaged by wildfire.*



# HAZARD MITIGATION AND PREVENTION

## OBJECTIVES FOR YEAR

- Develop Community Wildfire Protection Plans, expand Tennessee's Fire Adapted Communities network, and increase certified Firewise USA Communities.
- Provide the public with safety information, including updates on current hazard situations and mitigation steps to prevent devastating wildland fire impacts.
- Manage the Division's safe debris burn permit program to limit the risk of a planned fire growing into a wildland fire. Since inception, the program has paralleled a significant decrease in wildland fires year-over-year.
- Pursue new and diverse revenue opportunities and effectively manage growing wildland fire mitigation needs in Tennessee.
- Serve as Tennessee's sponsor for the National Fire Protection Agency's FireWise USA program the Smokey Bear Wildfire Prevention campaign.

## ACCOMPLISHMENTS FOR JULY 1, 2021 – JUNE 30, 2022

- Secured \$365,207 in federal grant funding to implement wildland fire mitigation activities across Tennessee.
- Awarded \$140,000 in hazard mitigation grants to 17 communities for Community Wildfire Protection Plan development, outreach, education, and community mitigation action items.
- Utilized federal funding to contract with multiple hazard mitigation specialists and the Appalachian Rural Conservation District to expand capacity for hazard mitigation assessments and improvements.
- Issued 317,003 safe debris burn permits to residents, agencies, and private companies decreasing wildland fire risk on 67,474 acres.
- Facilitated Tennessee's annual Fire Adapted Communities Workshop and Awards Banquet. Two community leaders were recognized for seven years of participation in the program.
- Hosted a Community Mitigation Assistance Team (CMAT) to assist Sevier County with hazard mitigation planning, strategies, and actions, building partnerships, engaging communities, and obtaining sources of funding. A CMAT is comprised of public and private wildland-urban interface mitigation professionals from across the country.

### Sevier County, Tennessee

*Actions Speak Louder Than Words*



Prepared by the Community Mitigation Assistance Team  
May 18, 2022





# FLEET MANAGEMENT

## OBJECTIVES FOR YEAR

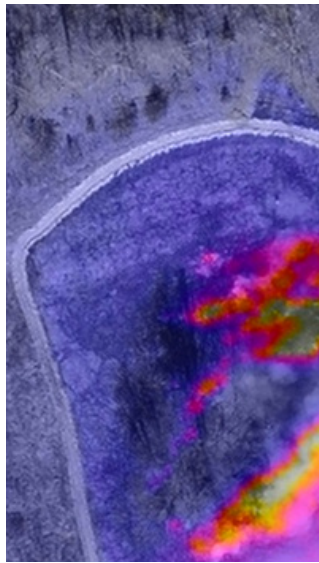
- Manage administration, replacement cycles, and maintenance of 742 pieces of equipment and rolling stock owned and operated by the Division.
- Provide sound leadership, technical expertise, and fiscal accountability in fleet management decisions.
- Increase Tennessee's wildland firefighting capacity and capability through implementation of the Federal Excess Property Program and the Firefighter Property Program sponsored through the USDA Forest Service and Department of Defense.
- Develop commercial driver license training program in compliance with federal law.

## ACCOMPLISHMENTS FOR JULY 1, 2021 - JUNE 30, 2022

- Secured funding and placed order for 6, 300-gallon Type 6 engines and 80, 150-gallon quick attack slip-on units. We look forward to the Type 6 engines as they are new fire apparatus being added to the fleet. The 80 slip-on units will replace units nearing end of life.
- Deployed 12 new dozers and transports. International supply chain issues are limiting planned deployment of new units.
- Completed statewide inventory and photo catalog of 105 pieces of Federal Excess Property sponsored by the USDA Forest Service and executed by the Division. The Division acquires the property and loans it to fire departments in need at no cost.
- Utilized federal funding to contract with an equipment specialist to assist in screening, securing, and managing federal property for distribution to Tennessee fire departments.
- Collaborated with Data Analysis Unit, Tennessee Forestry Association, and the Federal Motor Carrier Safety Administration to implement a commercial driver license training program for Division personnel in compliance with a new federal law enacted in February of 2022.









# RADIO COMMUNICATIONS

## OBJECTIVES FOR YEAR

- Maintain highest level of integrity for current radio communications network.
- Establish interoperability solutions with emergency response partners.
- Plan and budget for upgrade of Quantar repeaters and replacement of statewide signal quality controllers.
- Acquire dedicated repeaters for fire mission support.

## ACCOMPLISHMENTS FOR JULY 1, 2021 – JUNE 30, 2022

- Optimized and maintained equipment at repeater sites across the state to ensure reliable communications.
- Installed radio communication equipment on 20 dozers, 20 transports, 13 vehicles, and 4 road tractors.
- Supported Sevier County wildland fires response by establishing additional VHS tactical (VTAC) repeater for two-way radio interoperability during the Indigo and Seymour fire incidents and built out a communications plan for ground and aerial resources.
- Installed 32 satellite trackers on Division vehicles and equipment.
- Modified and updated firmware on 154 Division units.
- Collaborated with Bendix King Technologies and identified issues and solutions. These actions benefited the Division and wildland fire agencies nationwide.
- Built multiple deployment-ready repeaters for fire mission support.
- Completed the planning and budgeting phase for upgrading of Quantar repeaters and statewide signal quality controllers (comparators).
- One Radio Technician attended and graduated from the Commissioner of Agriculture's Leadership Academy.



*TriStars 20-person hand crew on Pritchard Fire in Idaho, August 2021*





# FOREST HEALTH AND SUSTAINABILITY

The health of a forest directly influences all aspects of forestry and is a part of every Unit within the Division. Not limited to insects and diseases, forest health is also influenced by abiotic events, invasive plants, improper silvicultural prescriptions, harvesting damage to residual stand, air and water quality, soil compaction, wildland fire, and much more. Forest health is considered in all settings, whether the forest exists within an urban environment or a riparian strip between two agricultural fields. This focus on forest health provides the Unit with a holistic and sustainable approach to all forest management. It demonstrates the connectivity among forest health, the human interface, and the ecosystem services all forests provide.

## UNIT MISSION

The mission of the Forest Health and Sustainability Unit is to protect and enhance the health and productivity of Tennessee's forests.





# FOREST HEALTH

Forest health programs involve detecting, monitoring, managing, and suppressing native and non-native damaging forest health issues. The major forest health issues managed within this Unit are spongy moth, hemlock woolly adelgid, laurel wilt disease, southern pine beetle and other pine bark beetles, and invasive plants. Other threats to Tennessee's forests are addressed through consistent off-plot monitoring by aerial detection, ground detection, and technology including satellite imagery. A significant component of this Unit is education and outreach that emphasizes current and imminent threats and their transportation vectors (i.e. firewood).

## PROGRAM MISSION

Enhance the health of Tennessee's forests and minimize forest resource losses caused by forest pests through effective prevention, detection, evaluation, suppression, and technical assistance measures.

## OBJECTIVES FOR YEAR

- Promote forest health through monitoring and management activities, staff trainings, technical assistance, and outreach.
- Improve the collection, analysis, and sharing of data internally and externally to enhance customer relationships.
- Partner with the Slow the Spread Foundation and USDA Animal Plant Health Inspection Service (APHIS) to conduct annual survey of spongy moth (formerly known as gypsy moth) by placing and monitoring traps across Tennessee.
- Monitor for southern pine beetle and other pine bark beetles to evaluate areas at a higher risk and mitigate outbreaks.
- Support research, collect data, and conduct outreach for laurel wilt disease, which was recently introduced to Tennessee.
- Promote management of invasive plants through outreach and by providing funding to government and nonprofit organizations for implementation of invasive plant management projects across the state.
- Provide leadership to the Tennessee Hemlock Conservation Partnership through meeting facilitation, cooperative field days, and outreach.
- Protect significant hemlock forests from extinction through continued operation of the Hemlock Woolly Adelgid (HWA) Strike Team.
- Increase prescribed fire statewide with with the Prescribed Fire Strike Team.

## MAJOR ACCOMPLISHMENTS FOR JULY 1, 2021 - JUNE 30, 2022

- Recorded 643 forest health observations submitted statewide by Division personnel on ESRI's Survey123 platform. Observations included widespread pine needlecast, invasive plants, and a variety of native and non-native pests.
- Monitored spongy moth activity via placement of 4,876 traps, capturing 172 male moths in 13 counties. The most moths were found within the Slow the Spread Action Area in Northeast Tennessee, which is closest to the current range of spongy moth.
- Completed road and ground surveys for the presence of laurel wilt disease, detecting the disease in four additional counties. This disease has spread to 20 counties in Tennessee since its first detection in 2019.

- Deployed southern pine beetle traps to assess the number of SPB and clerid beetles present in four counties. Low catch numbers at all sites indicated that these areas were at low risk of experiencing SPB outbreaks in 2022.
- Held several forest health training events for Division personnel, partner agencies, and private landowners.
- Conducted an aerial damage survey from the December 10, 2021 tornado at Natchez Trace State Forest, located in Henderson, Carroll, and Benton Counties to calculate the acres of forested land damage, the severity of damage, and number of landowners impacted. This data informs management and emergency aid decisions to other government agencies.
- Provided funding for 2 invasive plant control projects, including 6 acres at Laurel-Snow State Natural Area and 9 acres at Cardwell Mountain State Archaeological Area.
- Treated more than 10,700 trees on more than 1,199 acres throughout 19 Hemlock Conservation Areas.
- Presented at the National HWA Manager’s meeting in Portsmouth, NH to showcase how the HWA Strike Team operates.
- Assisted with releasing more than 3,000 beetles statewide with the Lindsay Young Beneficial Insects Laboratory.
- The Prescribed Fire Strike Team assisted with burning 2,115 acres across the Cumberland Plateau while also assisting with fire suppression, including the Seymour Fire in Sevier County in March 2022.

## HWA FIELD DAY WITH COMMISSIONERS AT SAVAGE GULF

*Members of the Hemlock Woolly Adelgid (HWA) Strike Team met with the leaders of the Departments of Agriculture and Environment and Conservation, and the Tennessee Wildlife Resources Agency at the Savage Gulf State Natural Area in March of 2022. Coordinator Jackie Broeker and team members provided background on the history of HWA and the development and success of the strike team. They also demonstrated treatment techniques and instructed the guests for first-hand experience. This event was invaluable in encouraging collaboration among agencies.*



## RURAL FOREST MANAGEMENT

Family forest owners are the key to keeping Tennessee’s forests productive and healthy. They play an important role in providing all Tennessee citizens with forest products, clean water, wildlife habitat, and natural beauty. Many of these landowners are unaware of the role forest management plays in maintaining sustainable and resilient forests. This lack of awareness often results in activities that leave forests less productive or at risk to insect, disease, and water quality problems.



The Division of Forestry provides forest management planning and financial assistance to encourage landowners to manage their forest resources in a manner that increases productivity, maintains forest health, and protects water quality. Forest management planning assistance is provided as individualized management plans, published materials, and group presentations. Financial assistance is offered through various federal and state cost-share programs.



*Division crews conduct prescribed fire on a small patch of private woodlands in Roane County to control invasive, exotic kudzu.*

## **PROGRAM MISSION**

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

## **OBJECTIVES FOR YEAR**

- Provide professional development and continuing education opportunities for Division foresters.
- Develop landscape management plan for Tennessee.
- Advanced implementation of the ArcGIS Pro landowner assistance mapping, geospatial database, and performance tracking suite of tools.
- Provide excellent customer service to Tennessee's forest landowners.

## **MAJOR ACCOMPLISHMENTS FOR JULY 1, 2021 - JUNE 30, 2022**

- Continued work on Landscape Management Plan (LMP) for Tennessee. This project will reduce the burden of individual management plan development, allow foresters to spend more time with landowners on the ground, and contribute to accomplishing landscape-level goals.
- Continued to improve the implementation the ArcGIS Pro landowner assistance mapping, geospatial database, and performance tracking suite of tools specifically designed for landowner assistance.
- Assisted 5,184 forest landowners and educated 21,770 Tennesseans through direct outreach programs.
- Wrote 46 Forest Stewardship plans addressing 9,588 acres.
- Wrote 227 other forest management plans addressing 27,862 acres.
- Wrote 491 prescription plans improving 14,268 acres.
- Assisted 133 forest landowners through the vendor service program impacting 8,281 acres. This includes services for standby, firebreak construction, tree planting, and timber marking, as well as prescribed burns on 1,172 acres of public land and 5,184 acres of private land.
- Funded 65 cost share applications to complete forest management practices totaling \$299,813. Total project cost generated with our cost share applications including match was \$641,841.



## URBAN AND COMMUNITY FORESTRY

Urban and Community Forestry programs provide technical and financial forest and tree management assistance to communities and municipalities statewide. Technical assistance can be offered at the tree board or city planning level, through rapid on-site forest or tree assessments, or communication through outreach events or individual inquiries. Financial assistance is offered to cities, municipalities, and nonprofit groups through a competitive proposal process. These proposals range from ball-and-burlap plantings to urban riparian restoration projects. The urban forestry programs also include nationally recognized programs that allow cities, utilities, and centers for higher learning to promote their urban forest status and bring awareness to the importance of urban trees.

### PROGRAM MISSION

Assist and encourage municipalities and private urban landowners to establish, improve, and maintain healthy urban forest resources.

### OBJECTIVES FOR YEAR

- Provide grant opportunities to municipalities to increase canopy cover.
- Provide assistance and support for Arbor Day Foundation Program participants.
- Partner with the Tennessee Urban Forestry Council (TUFC) to fit staffing and program demands.
- Provide urban forest information and training to Division foresters.

### MAJOR ACCOMPLISHMENTS FOR JULY 1, 2021 – JUNE 30, 2022

- Administered Tennessee Agricultural Enhancement Program tree planting grants for 13 municipalities that planted 1,750 trees valued at \$85,972. Total project value including match was \$190,720.
- Provided technical assistance to 45 Tree Cities, 18 Tree Lines, and 8 Tree Campus Higher Learning USA members. Tennessee now has two recognized Tree Cities of the World and two Tree Campus K-12 recipients.
- Continued support of Champion Tree Program contract with the University of Tennessee. The UT Knoxville urban program lists 107 confirmed Champion Trees throughout the state.



- Participated in and supported Arbor Day Celebrations statewide. The state achieved a 97.83% recertification rate for Arbor Day Foundation Programs.
- Supported positions with the TUFC through federal funding.
- Received USDA Forest Service Landscape-Scale Restoration grant to complete approximately 20 additional tree canopy assessments in communities throughout the state. These efforts support the goal to utilize data to ensure the greatest impact of Division programs in communities. The tree canopy assessments will be followed by master planning and strategic planting.
- Provided Murfreesboro with \$9,250 in matching funds to conduct a tree canopy cover study. An urban master plan based on this study is under development.
- Hosted the first regional Urban and Community Forestry Summit to convene diverse stakeholders from across East Tennessee.
- Completed an in-person introductory training on urban and community forestry programs with Division employees statewide.
- Conducted weekly social media engagement through TUFC and *Protect TN Forests* to provide education, raise awareness about our programs, and connect people to opportunities to get involved.
- Assisted Tennessee Environmental Council with Tennessee Tree Day by providing funding and serving as a location to pick up trees.
- Hosted three Weed Wrangles to provide hands-on education about the impact of non-native invasive species in Tennessee's urban and community forests.

## FOREST LEGACY

This USDA Forest Service Program, authorized by the Farm Bill and facilitated by the Division, works to identify, permanently protect, and maintain well-managed, working forests on the landscape.

### PROGRAM MISSION

Protect environmentally important, private forestlands threatened with conversion to non-forest uses.

### OBJECTIVES FOR YEAR

- Monitor all Forest Legacy conservation easement tracts.
- Facilitate the completion of the Myers Cove Conservation Easement acquisition.

### MAJOR ACCOMPLISHMENTS FOR JULY 1, 2021 – JUNE 30, 2022

- Closed on Skinner Mountain Forest Legacy Tract totaling 11,723 acres in Fentress and Overton Counties.

# WATER QUALITY

Water is a valuable product of the forest. The benefits of water are difficult to measure, but changes in quality and quantity are easily observed. Forests act as buffers and filters to reduce damage to waterways caused by practices from other land uses such as urban runoff, and protect stream banks from erosion caused by flooding. Since the mid-1980s, the Division has provided leadership to ensure timber harvesting operations do not pollute our streams and rivers. Encouraging implementation of Forestry Best Management Practices (BMPs) is the foundation of the Division's water quality program. We assist the forestry community with BMP implementation through three major program areas: technical assistance, water quality complaint investigations, and BMP implementation monitoring.

Best Management Practices are integral to keeping Tennessee's forests healthy and preserving our water quality. Division professionals provide technical assistance and training to loggers and landowners and visit logging sites to ensure BMPs are used.

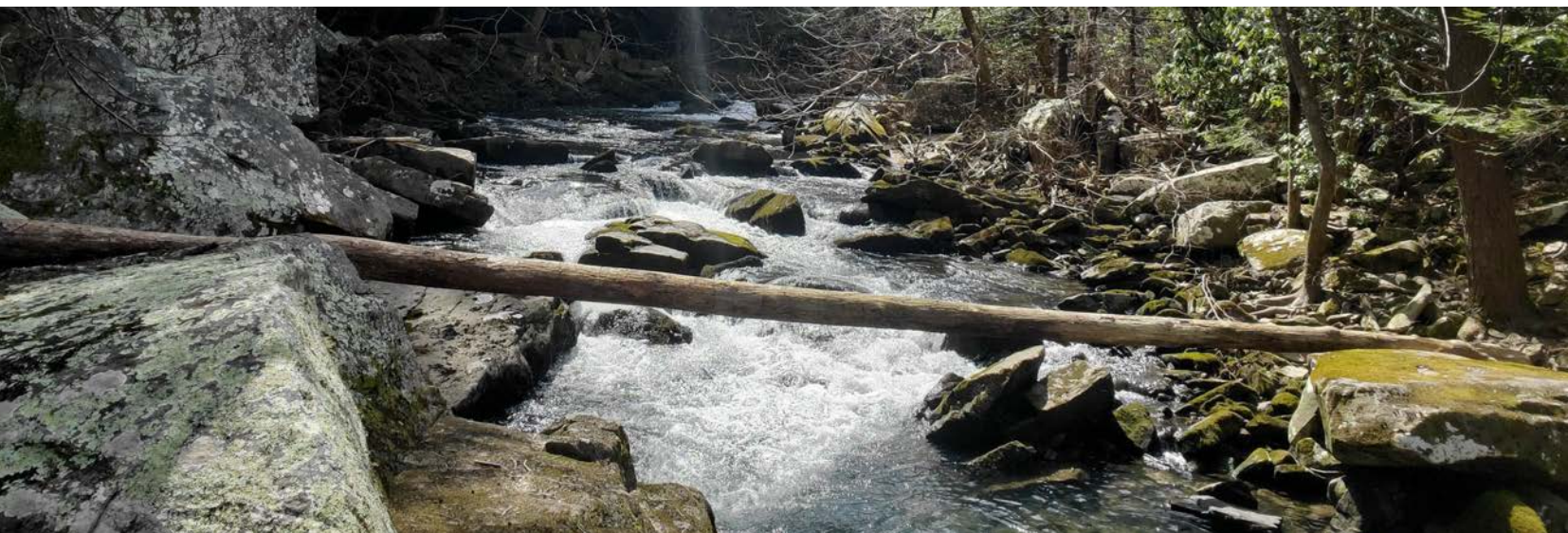
## UNIT MISSION

Improve the quality of surface and sub-surface water using forest cover as a filter and buffer for industrial, urban, and agricultural point and non-point pollution sources.



## OBJECTIVES FOR YEAR

- Maintain focus on water as a valuable product of the forest.
- Maintain focus on Best Management Practices (BMPs) which are integral to keeping Tennessee's forests healthy and conserving our water quality.





# THE COMMUNITY RIPARIAN RESTORATION PROGRAM



*The Community Riparian Restoration Program (CRRP) for Tennessee aims to drive community involvement in riparian restoration through applied research. Funded by the Tennessee Division of Forestry, this is a multidisciplinary effort among UT's School of Natural Resources, Department of Biosystems Engineering and Soil Science, Department of Civil and Environmental Engineering, and Department of Agricultural Leadership, Education and Communications. The CRRP's work has focused on identifying watersheds that are in greatest need for restoration and implementing educational workshops, collecting data, and creating publicly available resources related to riparian forest health and management across the state. In the coming months, they will continue to develop relationships with a variety of organizations and entities in East Tennessee to establish programs and incentivise communities to enhance riparian vegetation in their neighborhoods. Find more CRRP information at [riparian.utk.edu](http://riparian.utk.edu).*

## MAJOR ACCOMPLISHMENTS FOR JULY 1, 2021 - JUNE 30, 2022

- Completed 65 logging site complaint checks, of which 30 of had violations. The top three complaints related to stream-side management zone (SMZ) problems (25 complaints), stream crossings (21), and skid trail issues (18). Eight SMZs were resolved, and seven stream crossings and four skid trail issues were resolved.
- Completed 786 logging site courtesy checks. On those visits, the primary concerns were 3 SMZ issues, 8 stream crossing issues, and 7 skid trail issues. None of those SMZ issues were resolved, 6 stream crossings were resolved, and 7 skid trail issues were resolved.
- Assisted forest industry with BMP implementation through technical assistance, water quality complaint investigations, and BMP implementation monitoring.
- Observed over 90% compliance rate for BMPs on harvesting operations.
- Partnered with the Tennessee Forestry Association to provide training and technical assistance to more than 3,000 foresters, loggers, and landowners since the start of the program.
- Partnered with TFA to provide funding to loggers to procure safety equipment, such as flagging and lights for the back of loaded trailers and trucks, new DOT regulation gas cans, etc.
- Supported University of Tennessee Institute of Agriculture's Community Riparian Restoration Program (CRRP) for Tennessee to promote community involvement in riparian restoration.





# REFORESTATION

The Division of Forestry's seedling nursery in Delano produces tree seedlings that are available for sale to landowners in Tennessee. These seedlings are adapted to growing conditions found in the state 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 to ensure the long-term productivity of the soil.

## UNIT MISSION

The mission of the Reforestation Unit is to provide high quality, affordable seedlings to Tennessee landowners and to optimize genetic improvements to increase the productivity of the state's forests.

## OBJECTIVES FOR YEAR

- Build partnerships to plan for this year's seedlings and to establish seed sources for the future.



## **MAJOR ACCOMPLISHMENTS FOR JULY 1, 2021 – JUNE 30, 2022**

- The White Oak Initiative, the University of Tennessee, Vanderbilt University, county Extension offices, and citizens supported the 1st Annual Great White Oak Acorn Collection. These partners helped collect 2,755 pounds of white oak acorns for donation to the East Tennessee Nursery.
- Growing Bridges LL – Oklahoma ordered 500,000 pine seedlings and 250,000 hardwood seedlings.
- New relationship established with Bean Suntory to purchase up to 10,000 white oak seedlings.
- Maintained existing partnerships with D’Addario, Huber, Duck and Elk Watershed Initiative, One Tree Planted, TWRA, and UT to help provide quality seedlings to the public.
- Sold 2,743,800 seedlings, including 1,968,025 pine and 775,775 hardwood.
- Produced \$442,638.59 in revenue.
- Hosted tours for local 3rd grade students, USDA officials, and county Extension agents.
- Harvested white pine elite pine cones and yellow poplar 2.0 seeds.
- New hybrid chestnut orchard planted on Chuck Swan State Forest to provide a future seed source.
- Partnered with Dr. Hill Craddock to create a new hybrid chestnut orchard at the Nursery for future seedling production.





# STATE FOREST MANAGEMENT

Tennessee's 15 State Forests total 166,459 acres and range from mountain coves in the East to bottomlands along the Mississippi River. State Forests are managed for a mix of natural resources including game and non-game wildlife, and high-quality timber. State Forests do not feature inns, golf courses, or restrooms. However, they offer hunting, hiking, bird watching, and tranquility.

Many State Forest lands were in poor condition when acquired, either eroded or unsustainably harvested. Some were planted with trees to control erosion; others regenerated naturally into hardwood forest. Following decades of restoration, conservation, and careful management, Tennessee's State Forest system now contains an abundant supply of high-quality timber and other forest products.

Timber harvested from some of these forests helps support local forest products industries. Money spent by consumers in the pursuit of recreational opportunities on the forests supports local merchants. State Forests are sites for field sessions demonstrating application of sustainable forestry practices that maintain and enhance multiple use values. Sites have been established to demonstrate how forestry best management practices maintain, protect, and enhance water quality. State Forests also provide data to characterize the resources and values provided to local communities and local economies.





## UNIT MISSION

Provide for the multiple-use management of all resources on State Forest lands so that those resources are protected and utilized to best meet the long-term needs of the citizens of Tennessee.

## OBJECTIVES FOR YEAR

- Hold two demonstrations, tours, or field days on State Forests.
- Harvest and regenerate 1,072 acres of timber.
- Manage \$3.2 million in expected revenue collections to maintain health and sustainability objectives across the State Forest system.
- Complete Sustainable Forestry Initiative 3rd party annual audit.

## MAJOR ACCOMPLISHMENTS FOR JULY 1, 2021 - JUNE 30, 2022

- Held one Forest Industry Supply Chain tour at Standing Stone State Forest and one prescribed burning demonstration at Pickett State Forest.
- Conducted 22 timber sales totaling 1,129 acres.
- Thinned 119 acres of pine and salvaged 192 of the 1,000+ acres damaged by a tornado at Natchez Trace State Forest.
- Harvested more than 8.5 million board feet of timber generating \$3,290,093 in timber sale revenue.
- Completed annual audit for Sustainable Forestry Initiative 3rd party accreditation.
- Completed the Chuck Swan State Forest Work Center and started construction on the Standing Stone State Forest Work Center.

## TORNADO

*Natchez Trace State Forest, located in Henderson, Carroll, and Benton Counties, was struck directly by a tornado on December 10, 2021. As soon as the storm passed and conditions were safe, Division personnel cleared roads and assessed the impact. An estimated 1,400 acres were affected in a very clear destructive path - ¼-½ mile wide and 6 miles long - running west to east across the southern end of the forest. Damage included trees blown over with root ball still attached, trees snapped off midway up the trunk, and trees partially blown over and leaning. Downed trees fell in many different directions, creating a challenging situation for cleanup and salvage operations. Harvest operations began in March 2022 to salvage large trees for sawtimber and snapped and twisted trees for pulpwood. Reforestation strategies were also determined to maintain the proper hardwood or pine forest types.*







# FOREST DATA AND ANALYSIS

The Forest Data and Analysis Unit manages Division of Forestry data resources, provides visualization and analytical services, interprets data, and communicates findings to internal and external audiences. Critical work areas include statewide forest inventory, integrated database management, analytics and mapping, and remote-sensing technology.

The Unit tracks availability and sustainability of forest resources and provides this information to landowners, forest industry, other state agencies, external partners, and the public. Furthermore, the Unit facilitates the evaluation and implementation of pertinent technologies for efficient data collection and management, mapping, and distribution to field staff.

## UNIT MISSION

Collect, manage, visualize, analyze, and communicate data to address forest resource availability and sustainability; support Division of Forestry operations; and enhance business intelligence. The Unit facilitates the development and utilization of technology, administers the Division's Forest Inventory and Analysis (FIA), Geographic Information Systems (GIS), and Unmanned Aircraft Systems (UAS) programs, and supports other Units and TDA's Division of Business Development.

## OBJECTIVES FOR YEAR

- Modernize the State Forest inventory and data system.
- Implement an Analytical Services program for agri-forestry businesses and partners.
- Create a real property geodatabase for State of Tennessee Real Estate Asset Management (STREAM) and State of Tennessee Excess Property Strategy (STEPS).
- Establish Unmanned Aircraft Systems (UAS) program.



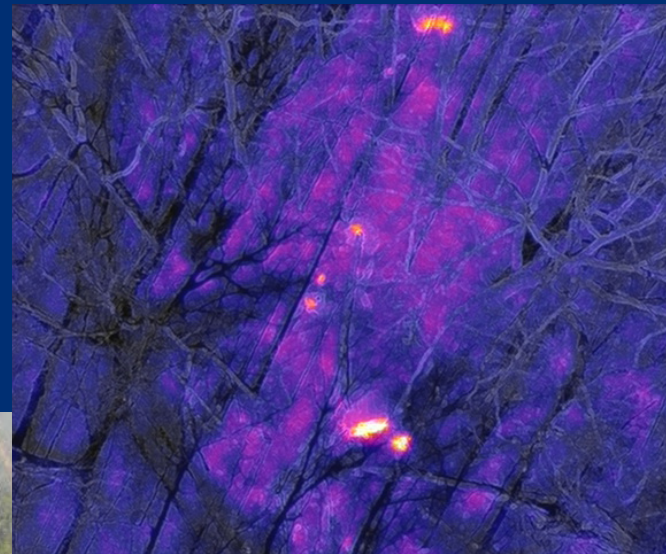
## MAJOR ACCOMPLISHMENTS FOR JULY 1, 2021 – JUNE 30, 2022

- Modernized State Forest inventory by creating and deploying a custom mobile app for timber cruising.
- Modernized State Forest data system by leveraging ArcGIS capabilities and licensing.
- Filled 9 requests for analytical services spanning a range of topics: timber availability for new and expanding mills, market development potential for hardwood mass timber, forestry business networking, wildland fire protection, and identifying and quantifying compost material to mitigate highly-pathogenic avian influenza.
- Created the State's first authoritative real property geodatabase and transferred it to STREAM.
- Trained and credentialed 9 UAS pilots across all Grand Divisions.
- Successfully utilized Unmanned Aerial Vehicles (UAVs) during emergency fire response and to survey tornado damage on Natchez Trace State Forest.
- Developed an interactive app to showcase forest industry's economic impact in every county.
- Developed an app to communicate and showcase TDF's ability to assist emergency fire and flooding response efforts in other states.

## UAV MONITORING

*Tennessee Division of Forestry (TDF) protects, conserves, and enhances Tennessee's 14 million acres of forests. To do so safely, effectively, and efficiently, TDF launched an Unmanned Aircraft Systems (UAS) Program to provide accurate and real-time wildland fire behavior information, monitor forest health issues, and film forest management demonstrations for landowner education and outreach.*

*TDF's 9 pilots were involved in 2 major efforts during FY22-- surveying tornado damage at Natchez Trace State Forest in West Tennessee and planning wildland fire operations and monitoring fire behavior in East Tennessee. In West Tennessee, a tornado caused severe damage in Henderson County on December 10, 2021, creating a 6-mile-long path through Natchez Trace State Forest damaging 1,400 acres of forest on state property. The UAS program provided the initial assessment of the extent and area of tornado damage. During wildland fire operations, pilots were able to see full color and thermal images to identify fire perimeters, gauge rate of spread, and make operational decisions. The use of Unmanned Aerial Vehicles (UAVs) on fires allowed more efficient use of resources and improved firefighter awareness and safety.*







## FOREST INVENTORY AND ANALYSIS

Forest Inventory and Analysis (FIA) is a continuous census of forest resource condition and health, productivity, and sustainability that dates back to the late 1940s. Tennessee's FIA foresters complete detailed forest inventory measurements on more than 4,200 permanent plots on public and private lands on a 7-year cycle. The FIA Program also conducts felled tree studies and timber product output surveys, gathering information from loggers and facilities in the state that utilize wood produced by forests. The FIA Program provides information on forest age dynamics, forest health, ownership patterns, socioeconomic benefits, and emerging market opportunities such as biomass and carbon.

### PROGRAM MISSION

Monitor the condition, productivity, and sustainability of Tennessee's forest resource to formulate policies, support economic development, and develop programs.

### OBJECTIVES FOR YEAR

- Complete measurements for Inventory Years 2018 and 2019.
- Begin measuring Inventory Year 2020.
- Use backlog of funds from COVID-19 hiring freeze to temporarily increase staffing.

### MAJOR ACCOMPLISHMENTS FOR JULY 1, 2021 – JUNE 30, 2022

- Completed measurements on 331 plots and 17 National Forest intensification plots, a productivity increase of 40% over FY21.
- Completed measurements on plots associated with Inventory Years 2018 and 2019
- Hired two additional inventory foresters for an interim period to catch up on Inventory Years 2019 and 2020.
- Conducted exit interviews with foresters to pinpoint reasons for leaving employment with the Division. Low salary was the number one reason.







*FIA Forester Thomas Rowe carefully takes inventory of forest floor seedlings under the watchful eye of local fauna on one of the many plots across the state.*



# COMMUNICATIONS AND OUTREACH

The Forestry Communications and Outreach Unit strives to inform and educate audiences by providing a better understanding of forestry as a discipline and the role that the Division plays in maintaining a healthy and productive forest resource. A successful effort enhances the appreciation for the state's forests and teaches citizens the benefits of conserving, protecting, and enhancing the resource. As a result, our society receives essential ecological benefits. The Unit also helps foster communication within the Division, a critical function of a healthy organization.

## UNIT MISSION

Communicate clearly and accurately to Tennessee's citizens the information necessary to accomplish the Division's mission and to optimize in-house communications.





## OBJECTIVES FOR YEAR

- Raise awareness about important and timely forest resources issues.
- Educate youth about the importance of trees and forests in rural areas and communities.
- Maintain social media profile for *Protect TN Forests* conservation education campaign.
- Develop internal communication tools to promote unified messaging and efficient collaboration.

## MAJOR ACCOMPLISHMENTS FOR JULY 1, 2021 – JUNE 30, 2022

- Held 1,077 educational outreach events reaching 36,168 children and adults statewide.
- Administered a contract with the Tennessee Forestry Association to fund a Conservation Education Coordinator who managed the Project Learning Tree program, conducted Teacher Conservation Workshops, and trained facilitators.
- Facilitated the 71st annual Forestry Camp for 50 FFA high school students.
- Produced 23 news releases pertaining to relevant topics including forest pests, wildland fire danger, burn permit requirements, capital improvements, tree planting, urban forestry, cost share opportunities, and timber theft.
- Gave multiple radio and television interviews addressing Division programs and topical issues.
- Promoted Division services and outreach campaigns across multiple media outlets. This included advertising campaigns for wildland fire prevention, prescribed fire, landowner assistance, forest health, Tennessee Wood Products, and East Tennessee Nursery tree seedlings.
- Grew reach of social media profiles for *Protect TN Forests* conservation campaign including Facebook (616 new likes and 21,815 reach), and Instagram (48 new followers and 393 reach) to connect with a broad audience and promote conservation education and Division activity in forest management.
- Facilitated monthly state forester video messages for internal communications to highlight Division activity.
- Developed new Microsoft Sharepoint sites and Teams based on the Division's organizational chart and related projects.



*State Forester David Arnold sends Division staff monthly messages emphasizing safety, an accomplishment or activity, staff successes, and a tree ID quiz.*





# ADMINISTRATION

Spread across the state and administered from 4 district offices and one reforestation office, the 405 employees (314 full time, 91 seasonal) of the Department of Agriculture Division of Forestry have responsibilities in 9 separate programs. Effective planning, priority setting, and communication within the Division are crucial to organizational effectiveness. Assistant State Foresters work with staff to refine systems that improve customer services and operational efficiencies.

## UNIT MISSION

Increase the effectiveness of management, the quality of customer services, the efficiency of operations, and the cost effectiveness of Division programs.





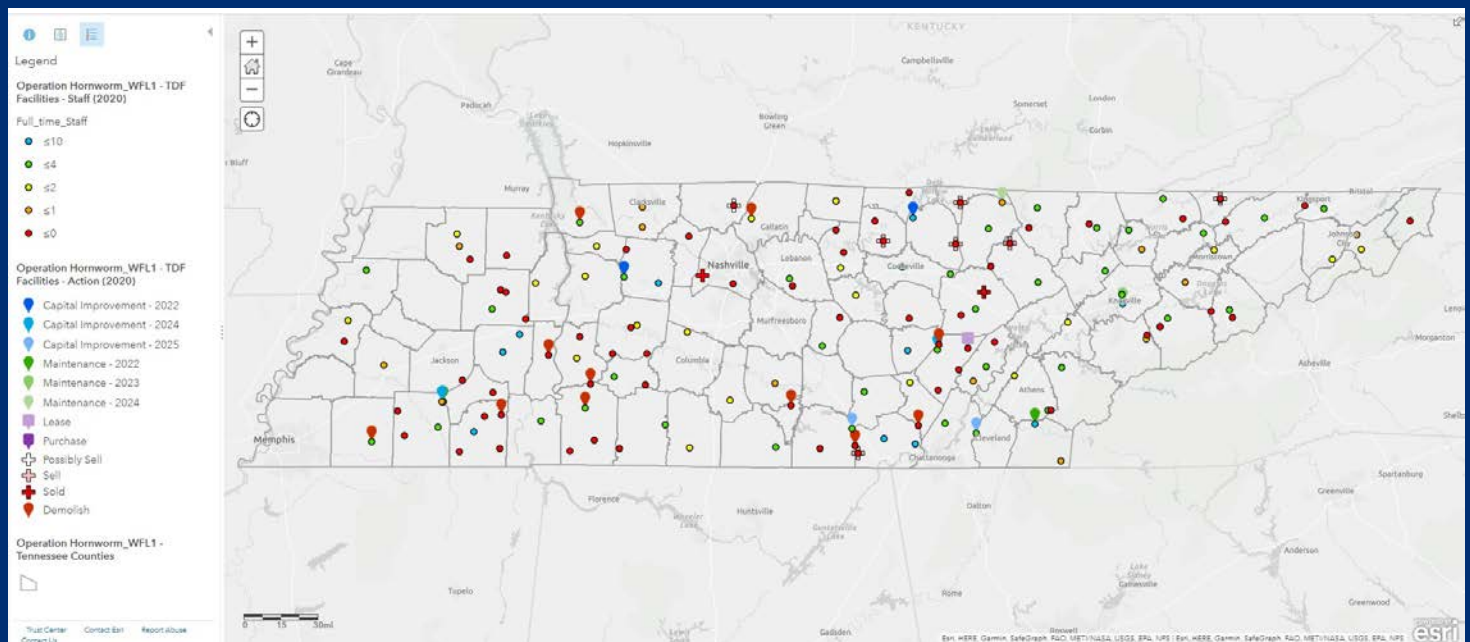
## OBJECTIVES FOR YEAR

- Manage personnel, facilities, vehicles, and equipment.
- Provide administrative support to Division-wide projects.
- Manage two budgets-- Operations and Facilities Maintenance.
- Procure and manage federal grants.

## MAJOR ACCOMPLISHMENTS FOR JULY 1, 2021 - JUNE 30, 2022

- Developed a comprehensive mapping tool to assist in managing the Division's 400+ facilities.
- Continued to partner with the Tennessee Forestry Association to execute the highly successful Forestry Workforce Development program and develop forestry curriculums for technical colleges and high schools.
- Executed a Change Management Workshop in August 2021 to increase Division leaders' ability to adapt.
- Welcomed market pay rate increases to state employee salaries in April 2022.
- Completed construction on the new work center and held a grand opening event at Chuck Swan State Forest in June 2022.

## Operation Hornworm – Facilities Map



*In 2021, the Division launched Operation Hornworm-- an initiative to review facility locations to optimize. This map depicts facility locations by number of full-time staff, stages of capital maintenance and improvement projects, lease cancellation and renewal, and potential and completed sale of state property. Staff positioning and facility location were also reviewed relative to landowner assistance requests, forest management priority areas, state forest locations, wildland fire frequency, and personnel hours and equipment miles spent on emergency response.*





### **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. Provide an annual report to the Governor; Commissioner of Agriculture: the Senate Energy, Agriculture, and Natural Resources Committee; and the House Agriculture and Natural Resources 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.

If you seek more information or feel that you have been treated unfairly in regard to the State's services or hiring practices, contact the Tennessee Department of Agriculture, EEO/AA/ADA Coordinator, P.O. Box 40627 Melrose Station, Nashville, TN 37204, 615-837-5115.

## **MEMBERS**

**Chair Tom Midyett** | Knoxville | Represents pulp and paper manufacturers

**Vice-Chair John Charles Wilson** | Collinwood | Represents conservation organizations

**Secretary Sharon Jean-Philippe** | Knoxville | Represents public at large

**Bill Legg** | Westpoint | Represents owners of fewer than 500 acres

**Drew Getty** | Winchester | Represents hardwood industry

**Alex Richman** | Lynchburg | Represents owners of greater than 500 acres

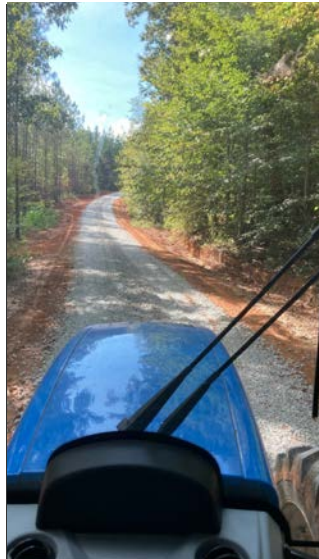
**Mike Witt** | Cookeville | Represents owners of fewer than 500 acres

**Ex-Officio Charlie Hatcher, D.V.M.** | Commissioner - Tennessee Department of Agriculture

**Ex-Officio Jason Maxedon** | Director - Tennessee Wildlife Resources Agency

**Ex-Officio David Salyers** | Commissioner - Tennessee Department of Environment and Conservation









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**Agriculture**

Forestry



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