Investment in State’s Cooperative Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>FY 2021 Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Forestry and Open Space</td>
<td>$0</td>
</tr>
<tr>
<td>Cooperative Lands - Forest Health Management</td>
<td>$542,371</td>
</tr>
<tr>
<td>Forest Legacy</td>
<td>$1,820,000</td>
</tr>
<tr>
<td>Forest Stewardship</td>
<td>$165,090</td>
</tr>
<tr>
<td>Landscape Scale Restoration</td>
<td>$699,431</td>
</tr>
<tr>
<td>State Fire Assistance</td>
<td>$1,172,091</td>
</tr>
<tr>
<td>Urban and Community Forestry</td>
<td>$315,697</td>
</tr>
<tr>
<td>Volunteer Fire Assistance</td>
<td>$285,897</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$5,000,577</strong></td>
</tr>
</tbody>
</table>

NOTE: This funding is for all entities within the state, not just the State Forester’s office.

The Tennessee Department of Agriculture-Division of Forestry's priorities are set forth in the Division's 5-year strategic plan and 2020-2030 Forest Action Plan. The 5-year strategic plan focuses on internal operational priorities designed to strengthen business processes and promote a capable, sustainable internal workforce. 5-year strategic plan goals include:

• Create a sustainable workforce
• Foster effective business practices, operational efficiencies, and good governance
• Understand the needs of our customers
• Empower division personnel to better demonstrate sound forestry practices
• Seek more divers funding

The 2020-2030 Forest Action Plan focuses on programmatic priorities and aligns program development and implementation on the following objectives:

• Enhancing forest health and resiliency
• Expanding market diversification
• Maintaining and improving connected landscapes
• Strengthening wildfire resilient communities

The Division has been quite successful in pursuing the goals and objectives of these strategic planning documents. Examples include complete overhaul of business practices associated with wildland fire resource deployments and initiation a forest industry workforce development program to support Tennessee's forest industry workforce needs. The Division will continue to apply funding to our strategic priorities, better positioning us to protect, conserve, and enhance Tennessee's forests.

Program Goals

• The cooperative programs are administered and implemented through a partnership between the State of Tennessee, the USDA Forest Service, and many other private and government entities. These programs promote the health and productivity of forestlands and rural economies. Emphasis focuses on timber and other forest products, wildlife, water resources, rural economies and conservation practices.

• The overarching goal is to maintain and improve the health of urban and rural forests and related economies as well as to protect the forests and citizens of the state. These programs maximize cost effectiveness through the use of partnerships in program delivery, increase forestland value and sustainability, and they do so in a voluntary and non-regulatory manner.
Key Issues

- Supporting active forest management and initiatives to create and sustain diverse and competitive forest product markets
- Dealing with increasing forest health risks from native and non-native forest pests, from an aging forest, and from an urbanizing human population.
- Dealing with increasing demand for prescribed fire services to ensure management objectives are met while minimizing the potential for escaped fires.
- Maintaining a motivated, well-trained, experienced work force.
- Determining appropriate services and incentives to facilitate increased forest management on private lands when the average tract size is shrinking and long-term landowners are increasingly passing management of land to inexperienced heirs.
- Providing landowners guidance before timber is harvested to ensure the harvest method is meeting objectives and that a plan is in place for regeneration.
- Determining appropriate services and incentives to create value added forest industry based jobs.
- Taking advantage of the current and future income and marketing opportunities forest certification offers non-industrial private forest (NIPF) landowners for managing their lands.
- Determining the most effective ways for the Tennessee Division of Forestry to use existing and emerging technology to improve forest health.
- Utilizing social media to educate and engage Tennessee citizens and landowners with forestry issues.

Forest Facts and Accomplishments

<table>
<thead>
<tr>
<th>Selected Facts</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>6,346,105</td>
</tr>
<tr>
<td>Acres of Forest Land</td>
<td>13,881,540</td>
</tr>
<tr>
<td>Acres of Nonindustrial Private Forest Land</td>
<td>11,206,000</td>
</tr>
<tr>
<td>Number of NIPF Landowners</td>
<td>534,000</td>
</tr>
<tr>
<td>Acres of Federal Land Under State Fire Protection</td>
<td>70,000</td>
</tr>
<tr>
<td>Acres of Private Land Under State Fire Protection</td>
<td>25,668,400</td>
</tr>
<tr>
<td>Number of Rural Fire Departments</td>
<td>821</td>
</tr>
<tr>
<td>Cities and Towns</td>
<td>345</td>
</tr>
<tr>
<td>Forest Based Employment</td>
<td>98,154</td>
</tr>
<tr>
<td>Economic Impact of Forestry (by rank)</td>
<td>4</td>
</tr>
<tr>
<td>State Forestry Budget (All Sources)</td>
<td>30,089,500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FY 2021 Accomplishments</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landowners Receiving Educational or Technical Assistance</td>
<td>24,202</td>
</tr>
<tr>
<td>Acres Covered by New or Revised Forest Stewardship Plans</td>
<td>11,747</td>
</tr>
<tr>
<td>Acres in Important Forest Resource Areas Covered by New or Revised Stewardship Plans</td>
<td>4,639</td>
</tr>
<tr>
<td>Volunteer Fire Departments Assisted</td>
<td>75</td>
</tr>
<tr>
<td>State Fire Communities Assisted</td>
<td>140</td>
</tr>
<tr>
<td>Coop Forest Health Acres Protected</td>
<td>1,350</td>
</tr>
<tr>
<td>Forest Legacy Project Acquisitions</td>
<td>11,723</td>
</tr>
<tr>
<td>Communities Provided Urban Forestry Program Assistance</td>
<td>54</td>
</tr>
<tr>
<td>Population Living in Communities Provided Urban Forestry Program Assistance</td>
<td>2,767,713</td>
</tr>
<tr>
<td>Urban Forestry Volunteer Assistance</td>
<td>34,514</td>
</tr>
</tbody>
</table>

Program Highlights

**Conservation Education**

- Held 391 educational outreach activities reaching 12,217 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.
- Produced 19 news releases pertaining to relevant topics including forest pests, wildland fire danger, burn permit requirements, capital improvements, tree planting, urban forestry, cost share opportunities, state forest closures, and state forest certification.
- Gave multiple radio and television interviews addressing Division programs and topical issues.
• Launched new website for wildland fire and management unit - www.TNWildlandFire.gov.
• Promoted Division services and outreach campaigns across multiple media outlets. This included advertising campaigns for wildland fire prevention, forest health, the Tennessee Wood Products campaign, and East Tennessee Nursery tree seedlings.
• Grew reach of social media profiles for Protect TN Forests conservation campaign including Facebook (added 403 Likes and a reach of 20,018 people), Twitter (added 68 new followers and 41,400 impressions), and Instagram (add 48 followers and a reach of 309 people) to reach a broad audience and promote conservation education and Division activity in forest management.

Cooperative Fire Protection
• Deployed 215 highly trained personnel to support wildfire and all hazard emergencies across 13 states resulting in transferrable skills and experience to be utilized in Tennessee as well as generating over $2.6 million in revenue.
• Secured $797,775 in federal grant funding to support state fire assistance surrounding remote automated weather stations, training, supplies, and personal protective equipment.
• Facilitated the 18th annual Wildland Fire Training Academy. The academy provided 683 students from 34 states access to 27 high quality fire and leadership courses taught by 114 professionals over the two-week period.
• Suppressed 709 fires for 6,910 acres and deployed 35 highly trained personnel in-state to 4 all-hazards missions supporting ice storm restoration efforts.
• Awarded $220,000 to 74 volunteer fire departments.
• Provided free wildland fire training to 150 students from 5 fire departments.
• Secured $441,209 in federal funding to implement wildfire mitigation activities and secured $150,688 in Community Fire Protection grant for 250,000 acre wildfire hazard mitigation project in Cocke County.
• Awarded $112,000 in hazard mitigation grants to 17 communities for Community Wildfire Protection Plan development, outreach, education and community mitigation action items.
• Issued 431,100 safe debris burn permits to residents and agencies totaling 34,257 acres.
• Facilitated annual Fire Adapted Communities Workshop and awarded 2 communities for 15 years of participation in the program.
• Deployed 48 new fire fighting bulldozers and 48 heavy equipment transports.
• Implemented a digital vehicle and equipment inspection process through a phone application connected to a reporting dashboard.
• Procured and deployed 605 new VHF handheld radios.

Economic Action
Tennessee’s forest industry relies on 14 million acres of forestland in the state, most of which is privately owned. As Tennessee’s population grows and shifts toward urban centers, and increasing number of forest landowners are out-of-state, absentee, and/or don’t have the experience and expertise needed to manage their forest resource. In 2019, TDF received growing concerns from forest industry stakeholders and partners regarding possible changes in wood availability and ownership types near Tennessee’s 250+ mills. In response, the Division’s Forest Data and Analysis Unit developed and Analytical Services Program to offer comprehensive analytical and mapping services for the forest resource and timber availability assessments. The Analytical Service Program examines ownership and parcel dynamics, FIA’s forest condition and wood volume data, insect and disease risk, and availability of transportation corridors (e.g. rails). These data and analyses inform business decisions such as mill siting and expansion, while supporting the 98,000+ jobs in Tennessee’s forest industry.

FiResponse
FiResponse is an enterprise decision support system that provides capabilities for monitoring wildland fire incidents and all associated operational activities related to incident response, dispatch, and resource tracking
- The Forest Data and Analysis unit supported nearly 350 staff in the implementation of FiResponse during 924 emergency response incidents.

Forest Action Plan
The Division of Forestry partnered with The Tennessee chapter of The Nature Conservancy to write the 2020-2030 Forest Action Plan. This plan addresses the following objectives:
- Enhancing Forest Health and Resilience
- Expanding Market Diversification
- Maintaining and Improving Connected Landscapes
- Strengthening Wildfire Resilient Communities

The plan aspires to motivate a wide variety of partners to collaboratively address these objectives and bring resources that can be leveraged to support the strategies and actions identified in the plan.

**Forest Health Protection**

- Recorded 1,050 forest health observations submitted statewide by Division personnel on ESRI’s Survey123 platform.
- Protected 3,779 hemlock trees across 374 acres in 10 conservation areas from hemlock woolly adelgid.
- Provided operational and financial support to University of Tennessee’s Lindsay Young Beneficial Insect Laboratory for release of over 1,000 biocontrol beetles.
- Accepted the 2020 Governor’s Environmental Stewardship Award for the efforts made in managing for hemlock woolly adelgid and spearheading the Strike Team model to achieve statewide conservation goals.
- Monitored state-wide gypsy moth activity via placement of 5,665 traps, capturing 66 male gypsy moths in 8 counties, which is similar to last year.
- Conducted gypsy moth mating disruption treatments on 8,500 acres in Johnson County.
- Completed road surveys for the presence of laurel wilt disease of which 16 counties had symptomatic sassafras trees. This was 6 more than last year.
- Provided funding for 4 invasive plant control projects: 6 acres at Laurel-Snow State Natural Area, 9 acres at Cardwell Mountain State Archaeological Area, 40 acres at Radnor Lake State Natural Area, and 2 acres at Spanish War Memorial Park and Lichterman Nature Center in Memphis.
- Held several forest health training events for Division personnel, partner agencies, and private landowners.
- Staffed a Prescribed Fire Strike Team including four crew members and one crew leader. The strike team coordinator oversees this team as well as the HWA Strike Team.

**Forest Legacy**

The Tennessee Forest Legacy Program currently conserves 53,315 acres valued at $59 million across Tennessee through fee simple and permanent conservation easement purchases. Over half of the $59 million land value ($32.9 million) was funded with Forest Legacy grants with the balance being private, non-federal matching lands and funds.

This past year, the Division submitted Myers Cove Conservation Easement Acquisition (Warren County) to a national panel for consideration. This is a 2,100 acre hardwood forest that has been operating as working farm and forest since 1851. This property contributes to the local economy through timber harvests, an agroforestry nursery, and hunting leases. The property encompasses almost the entire watershed of Panther Creek, which is an important source of clean water to the Collins River supporting its unique fishery and federally protected aquatic species. The property contains 31 cave openings, underground flowing streams, a small rare forest and general forest habitat protecting seasonal birds. Myers Cove contains a National Historic Register site with artifacts dating back more than 6,000 years and a portion of the Trail of Tears which would be permanently protected by this proposal.

**Forest Stewardship**

- Provided assistance to 2,899 forest landowners who own 115,230 acres of forestland. This type of boots on the ground assistance is up 20% from the previous year.
- Wrote 46 Forest Stewardship plans addressing 11,100 acres.
- Wrote 471 other forest management plans addressing 56,245 acres.
- Wrote 653 prescription plans improving 25,473 acres.
- Provided services for standby, firebreak construction, tree planting, and timber marking.
- Fully implemented the ArcGIS Pro landowner assistance mapping, geospatial database, and performance tracking suit of tools.
- Conducted 1,027 harvest operation site visits statewide and responded to 38 reported water quality complaints.
- Evaluated yearly logger BMP implementation rate of 98% based on harvest sites inspected for compliance.
- Evaluated 22 of the 38 sites that were reported water quality complaints had issues affecting water quality. The Division provided technical expertise to vendors to bring the issues into compliance with
Tennessee's Water Quality Control Act (TCA 69-3-101).
• Completed 5-year review of interagency enforcement MOU for water quality complaints.
• Grew and sold 2,744,296 seedlings which generated over $450,000 in revenue.
• Collaborated with the TN Forestry Association, the University of Tennessee and the White Oak Initiative to develop educational videos that taught the public how to identify white oak acorns and encouraged them to collect and deliver those acorns to the Division's nursery.
• Developed new green partnership with Growing Bridges, LLC to provide 500,000 loblolly pine and 250,000 tulip poplar seedlings to be used for carbon offset projects.

**Good Neighbor Authority**
The Division continues to build its partnership with the USFS Cherokee National Forest through many Supplemental Project Agreements (SPA). To date, the Division and the Cherokee work within 3 SPAs: Common Stand Exam, Prescribed Burning, and Best Management Practices Monitoring.

Currently being developed is a Timber Sale Administration SPA which would allow the Division to market and sell timber on designated areas on the national forest.

**Landowner Assistance**
• Funded 66 cost share application for completing forest management practices totaling $376,589 which is a 39% increase from last year.
• Provided training and technical assistance to more than 3,000 foresters, loggers, and landowners since the start of the program in partnership with the Tennessee Forestry Association.
• Assisted 118 forest landowners in the implementation of forest management activities on 10,509 acres that included hardwood and softwood tree planting, site preparation and release activities, prescribed burning, wildlife habitat improvement, stream crossings, and erosion control.
• Completed 8,739 acres of prescribed burning via vendor services.

**Landscape Scale Restoration**
Hemlock Woolly Adelgid Suppression TN/KY
- The Division's Hemlock Woolly Adelgid Strike Team was awarded the Governor's Environmental Stewardship Award.
- The Strike Team treated 6,718 trees on 587 acres; released 2,550 predatory beetles, and continue to conduct private landowner outreach and education events.

Forestry Workforce Promotion and Training Program
- The Division partnered with the TN Forestry Association (TFA) to hire a Workforce Program Coordinator and established a Workforce Steering Committee to guide the efforts and direction of the program.
- TFA signed an MOA with the Forestry Workforce Training Institute in Alabama and purchased access and material for the ForestryWorks! branded program.
- The team has develop forest industry curriculum to inform and support Forest Worker certificates in several technical schools. In process of being developed is a curriculum to be accepted in high schools that provides students with Forestry certificates upon graduation.
- Participate in career fairs, development of social media platforms and websites and planning of job camps/workshops are underway.

Landscape Management Plan
- The Division has partnered with a forestry consulting firm to develop a statewide Landscape Management Plan.
- Several stakeholder meetings have been conducted to secure input and feedback on the development of the plan.
- A first draft has been provided to the Division and is under review.

**Urban and Community Forestry**
• Administered Tennessee Agricultural Enhancement Program tree planting grants for 15 municipalities that planted 3,549 trees for a total investment of $239,090. This is a more than 100% increase from previous years.
• Provided technical assistance to 46 Tree Cities, 18 Tree Lines, and 10 Tree Campus Higher Learning USA members.
• Supported the Champion Tree Program contract managed by the University of Tennessee – Knoxville.
• Participated in or supported Arbor Day Celebrations statewide.
• Created two positions with the TN Urban Forestry Council: Urban and Community Forestry Program Coordinator and Urban and Community Forestry Partnership Coordinator.

Contact Information

**Tennessee Department of Agriculture**

David Arnold  
*State Forester*  
Division of Forestry  
P.O. Box 40627, Melrose Station  
Nashville, TN 37204  
615-837-5411  
david.arnold@tn.gov

**US Forest Service Southern Region**

Shardul Raval  
*Acting Deputy Regional Forester - State and Private Forestry*  
USDA Forest Service  
1720 Peachtree Street, Suite 760S  
Atlanta, GA 30309  
404-909-0239  
shardul.raval@usda.gov