Investment in State's Cooperative Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>FY 2022 Final</th>
</tr>
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<tbody>
<tr>
<td>Community Forestry and Open Space</td>
<td>$0</td>
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<tr>
<td>Cooperative Lands - Forest Health Management</td>
<td>$790,444</td>
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<tr>
<td>Forest Legacy</td>
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<tr>
<td>Forest Stewardship</td>
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<tr>
<td>Landscape Scale Restoration</td>
<td>$748,085</td>
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<td>State Fire Assistance</td>
<td>$1,339,266</td>
</tr>
<tr>
<td>Urban and Community Forestry</td>
<td>$359,283</td>
</tr>
<tr>
<td>Volunteer Fire Assistance</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$3,745,906</strong></td>
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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 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>
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<tbody>
<tr>
<td>Population</td>
<td>6,910,840</td>
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<tr>
<td>Acres of Forest Land</td>
<td>13,846,005</td>
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<td>Acres of Nonindustrial Private Forest Land</td>
<td>9,703,581</td>
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<td>Number of NIPF Landowners</td>
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<td>Acres of Federal Land Under State Fire Protection</td>
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<td>Acres of Private Land Under State Fire Protection</td>
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<td>Number of Rural Fire Departments</td>
<td>821</td>
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<tr>
<td>Cities and Towns</td>
<td>343</td>
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<tr>
<td>Forest Based Employment</td>
<td>98,154</td>
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<td>Economic Impact of Forestry (by rank)</td>
<td>4</td>
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<tr>
<td>State Forestry Budget (All Sources)</td>
<td>37,118,900</td>
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<table>
<thead>
<tr>
<th>FY 2022 Accomplishments</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landowners Receiving Educational or Technical Assistance</td>
<td>39,077</td>
</tr>
<tr>
<td>Acres Covered by New or Revised Forest Stewardship Plans</td>
<td>6,506</td>
</tr>
<tr>
<td>Acres in Important Forest Resource Areas Covered by New or Revised Stewardship Plans</td>
<td>1,634</td>
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<tr>
<td>Volunteer Fire Departments Assisted</td>
<td>50</td>
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<tr>
<td>State Fire Communities Assisted</td>
<td>140</td>
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<tr>
<td>Coop Forest Health Acres Protected</td>
<td>2,050</td>
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<tr>
<td>Forest Legacy Project Acquisitions</td>
<td>0</td>
</tr>
<tr>
<td>Communities Provided Urban Forestry Program Assistance</td>
<td>61</td>
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<tr>
<td>Population Living in Communities Provided Urban Forestry Program Assistance</td>
<td>3,166,099</td>
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<tr>
<td>Urban Forestry Volunteer Assistance</td>
<td>24,064</td>
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</table>

Program Highlights

Conservation Education

- Held 1,077 educational outreach activities 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.
- 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, state forest closures, and state forest certification.
- Gave multiple radio and television interviews addressing Division programs and topical issues.
- Facilitated the 71st annual Forestry Camp for 50 FFA high school students.
- 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 616 Likes and a reach of 21,815 people), Twitter (added 68 new followers and 41,400 impressions), and Instagram (add 48 followers and a reach of 393 people) to reach 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 Divisions Unit led organizational chart and related projects.

Cooperative Fire Protection
- Deployed 137 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 for 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 USFS, NPS, and TNARNG. 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 TN/KY Wildland Fire Training Academy providing 29 leadership and incident management courses to 685 students from 36 states.
- 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.
- Secured $272,299 in federal grant funding and awarded $222,000 in grants to 74 volunteer fire departments and maintained 255 agreements with volunteer fire departments.
- Provided free wildland fire training to 200 firefighters representing 10 fire departments.
- 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.
- Installed radio communication equipment on 20 dozers/transports, 13 vehicles, & 4 road tractors.

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 85,000+ jobs in Tennessee's forest industry.

Forest Health Protection
- 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 nonnative pests.
- Monitored state-wide 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. It has spread to 20 counties in Tennessee since its first detected in '19
• 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 survey of tornado damage from the 12/10/21 tornado 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 two invasive plant control projects, including 6 acres at Laurel-Snow State Natural Area and nine acres at Cardwell Mountain State Archaeological Area.
• Treated more than 10,700 trees on more than 1199 acres throughout 19 Hemlock Conservation Areas.
• Presented at the National HWA Manager's meeting in Portsmouth, NH to showcase how the TDF 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 of 2022.

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.

The Division closed on Skinner Mountain Tract totaling 11,723 acres in Fentress and Overton Counties.

Forest Stewardship

• Assisted 5,184 forest landowners and educated 21,770 Tennesseans through direct outreach programs.
• Wrote 46 Forest Stewardship plans addressing 9,588 acres.
• Continued work on Landscape level forest 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.
- Development and growth of partnerships:
• 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, Humber, DEWI, 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.
- Installed a new hybrid chestnut orchard planted on Chuck Swan State Forest and the nursery in Delano to provide a future seed source.

Landowner Assistance
• Wrote 227 forest management plans addressing 27,862 acres.
• Wrote 491 prescription plans improving 14,268 acres.
• Assisted 133 forest landowners through our vendor service program impacting 8,281 acres. This included 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 for completing forest management practices totaling $299,812.66. Total project cost generated with our cost share applications was $641,840.67.
• Completed 65 logging site complaint checks, of which 30 of had violations. The top three complaints related to Steam-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 trails were fixed.
• 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.
• Observed over 90% compliance rate for BMPs on harvesting operations.
• 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.

Landscape Scale Restoration
Hemlock Woolly Adelgid Suppression TN/KY
• Treated more than 10,700 trees on more than 1199 acresthrough 19 Hemlock Conservation Areas.
• Presented at the National HWA Manager’s meeting in Portsmouth, NH to showcase how the TDF HWA Strike Team operates.
• Assisted with releasing more than 3,000 beetles statewide with the Lindsay Young Beneficial Insects Laboratory.

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.
• Forestry Curriculum Revised, Approved for Use in High School Agriculture Classes/Forestry Worker Certificate Program approved by TN Dept. of Education. Link to Curriculum, Testing Will be on TFA Website by 11/1/22.
• Wayne County Schools Set to Launch Hands On High School Forestry Program with Simulators, portable sawmills, other equipment available for instruction
• Testing for Forestry Worker Certification Program Will Be Available in Early 2023.
• First TCAT Graduate in Forestry & Ag Technology, Crump TCAT Campus
• TCAT Leadership Contacts at Campuses Located in Livingston & Dickson
• University Contacts: Promoted FWTI & Forestry training programs to UT Knoxville & UT Martin leadership
• TN State Fair Presence & Visibility: 776,195 attended TN State Fair 2022
• Adult Workforce Programs: Provided programs to TFA Members on Cul2Vate; Veterans Hiring Initiatives; 45 industry representatives present; Participated in TN Dept. of Labor & Workforce Development Job Fairs at 3 locations with 38 contacts; Cul2Vate program at TN Dept. of Agriculture, 12 attendees.
• Other Outreach: I-Heart Radio Program Reached Statewide Audience; TN Farm Bureau Convention, 1,200 attendees; TN Farm Bureau Women’s Conference; Waterfest Programs for Elementary Students in Rutherford County

Urban and Community Forestry
• Administered Tennessee Agricultural Enhancement Program tree planting grants for 13 municipalities that planted 1750 trees for a totaling $85,972. Total project cost generated with Tennessee Agricultural
Enhancement Program tree planting grants 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. The state achieved a 97.83% recertification rate for ADF programs in 2021. The Division and TUFC continue to work with cities, utilities, and schools to increase participation.
- Continued support of Champion Tree Program contract with University of Tennessee Knoxville. The UTK Urban program lists 107 confirmed Champion trees in the state.
- Participated in Arbor Day Celebrations statewide.
- Supported positions with the Tennessee Urban Forestry Council 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 are part of our programmatic goal to utilize data to help our programs have the greatest impact in the communities that need it most. The tree canopy assessments will be followed by master planning and strategic planning.
- Provided City of Murfreesboro $9,250 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.
- Hosted three Weed Wrangles to provide hands-on education about the impact of nonnative invasive species in Tennessee's urban and community forests.
- 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.

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