

DIVISION OF FORESTRY TAKES ACTION ON NEW FOREST THREATS



New Forest Threats

Threat

Emerald Ash Borer
(*Agrilus planipennis*)

Species Affected
all Ash species

Symptoms
crown dieback starting from top of crown.

Healthy trees killed within 1 - 3 years of first visual symptoms.

Economic Impact to TN

266 million ash trees in TN with a value over \$11 billion.

Threat

Thousand Cankers Disease

Species Affected
all Walnut species

Symptoms
crown dieback starting from top of crown.

Healthy trees killed within 2 - 3 years of first visual symptoms.

Economic Impact to TN

27 million walnut trees in TN with a value over \$3 billion.

The Tennessee Department of Agriculture along with its Division of Forestry announced the detection of two new pests in the state in late summer 2010. The new pests - Emerald Ash Borer (EAB) and Thousand Cankers Disease (TCD) - were both first detected in the Knoxville area. Both pests have the potential to cause significant damage to Tennessee forests by wiping out entire species of trees, much like the chestnut blight did to American chestnut in the early part of the last century.

The Division, which is familiar with responding to forest threats such as wildfire in rapid fashion, was quick to take action on these forest health issues and participated in or led incident management teams following each detection. The teams' objectives were to survey surrounding counties for additional infestations and to conduct outreach to commercial and public interests that could be affected by quarantine regulations and/or could assist in

preventing further spread of the pests.

EAB had been found previously in several lake states and other states north of Tennessee, but this was the first detection of the destructive tree pest in Tennessee and in the South. The discovery was made at a truck stop in mid-July in Knox County near the Loudon County line by an Ohio forester visiting the area. After receiving the report of a suspected find, state and federal officials collected specimens for submission to the U.S. Department of Agriculture for positive identification.

EAB attacks only ash trees. It is believed to have been introduced into the Detroit, Michigan area 15 to 20 years ago on wood packing material from Asia. Since then, the destructive insect has been found also in Illinois, Indiana, Iowa, Kentucky, Maryland, Minnesota, Missouri, New York, Ohio, Pennsylvania, Virginia, West Virginia and Wisconsin.

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Forest Resource Protection



Forest Resource Management



Urban Forest Resource Management



State Forest Management



Reforestation



Forest Data & Technology



Forest Businesses



Environmental Affairs & Public Outreach

Tennessee Forestry Commission

Members

Core Businesses
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Bill Williams, Chair

Newport, TN
Represents hardwood manufacturers

John Ross, Vice-Chair

Savannah, TN
Represents owners of greater than 500 acres

Paul Trianosky, Secretary

Mountain City, TN
Represents owners of less than 500 acres

Jack Holder

Counce, TN
Represents pulp and paper manufacturers

Bob Qualman

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Agency

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Environment and Conservation

Tennessee Forestry Commission Actions and Activities for 2011

The Tennessee Forestry Commission met three times during the 2011 fiscal year. The Commission received reports from citizens, staff, and subject matter experts on various forestry topics and issues affecting forest landowners and citizens of Tennessee during the year. The Commission discussed and took action on the following matters:

- Reviewed and approved the Division of Forestry operating budget for FY2012.
- Reviewed and approved the Division of Forestry forest seedling price schedule for 2011-12.
- Reviewed and approved the Division of Forestry annual activities report for 2010.
- Presented the Forestry Commission’s 2010 Annual Report to the House Conservation and Environment Committee and the Senate Environment, Conservation and Tourism Committee.
- Discussed and received comments on the next steps of the implementation process of the Tennessee Forest Resource Assessment and Strategy (Forest Action Plan).
- Discussed the efforts by the American Forest Foundation and others to get LEED Green Building Rating Systems to include forest products certified or recognized under the American Tree Farm System, Sustainable Forestry Initiative, and other certification systems in addition to the Forest Stewardship Council in order to provide more support for products from certified forests in Tennessee.
- Discussed and received comments on the status of forest health pests such as Emerald Ash Borer, Thousand Canker’s Disease, Hemlock Woolly Adelgid, and Gypsy Moth.
- Discussed and received comments on damage to forest lands caused by off road vehicle use.
- Supported the implementation of an on line burn permit system.
- Discussed and received comments on the State Forest 20 / 20 Plan.
- Discussed and received comments on applicability of personal property tax on logging equipment.



Forest Resource Protection

Wildland Fire Protection

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

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

Objectives for Year

- Develop one county-wide Community Wildfire Protection Plan (CWPP) integrating the Southern Wildfire Risk Assessment (SWRA).
- Continue integrating fire prevention in daily job tasks.
- Implement on-line Burn Permit system.

Major accomplishments for July 1, 2010 – June 30, 2011

- Implemented on-line burn permit system on a trial basis in 4 counties across the state.
- Suppressed 1,494 forest fires that burned 14,407 acres.
- Issued 388,345 burn permits across the state.
- Conducted fire prevention project at Volunteer Village (pre-game football event) with Univ. of Tenn. @ Knoxville.
- Conducted fire prevention project at Fan Fest (pre-game football event) with Univ. of Tenn. @ Chattanooga.
- Conducted additional fire prevention outreach with a total of 1,128 activities reaching nearly 358,000 people.
- Deployed 110 out-of-state fire resources: 17 federal, 22 in Georgia, 71 in North Carolina.
- Provided \$289,500 in grant funds to 127 Volunteer Fire Departments statewide.
- Conducted 2 Firewise Community Leader workshops across the state.
- Completed 2 Community Wildfire Protection Plans.
- Completed a county-wide Community Wildfire Protection Plan for Monroe County.
- Held annual fire prevention planning session with Assistant District Foresters.
- Received 6 new Type VI slip-on pumps.
- Completed 1 hazard mitigation project (see sidebar).

Unit Mission

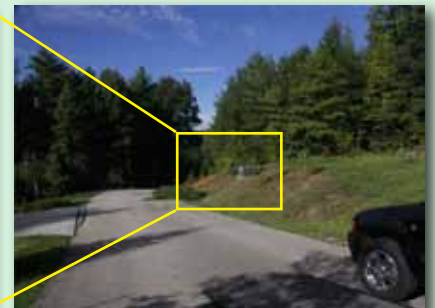
The mission of the Forest Resource Protection Unit is to reduce losses from wildfires and forest pests, and to prevent water quality degradation from forestry sources. The Forest Resource Protection Unit administers the Division's Wildland Fire Protection, Forest Health, and Water Quality programs.

Hazard Mitigation Project

Hazard mitigation projects aim to reduce the wildfire risk in Tennessee's wildland/urban interface communities that have attained Firewise Communities status. These communities can apply for hazard mitigation grants that cover such things as assessment costs, vegetation management work such as bush hogging, developing fire breaks, updating signage, etc.



before



after



Forest Resource Protection

Forest Health

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

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

Objectives for Year

- Detect, monitor, and manage forest pests including southern pine beetle, gypsy moth, hemlock woolly adelgid, sudden oak death, emerald ash borer, and thousand cankers disease.
- Implement the Hemlock Woolly Adelgid Strategic and Management Plan.
- Secure forest health support.

Major accomplishments for July 1, 2010 – June 30, 2011

- Conducted southern pine beetle (SPB) trapping in Chester, Marion, Rhea, and Wayne Counties where pine is a major component of several forest types. Surveys indicated low and stable SPB populations for this summer. Surveys for the entire southeast region of the country generally indicated the same for all the southern states.
- Responded to the confirmation of emerald ash borer in Tennessee. Forestry personnel participated in surveying with USDA Animal and Plant Health Inspection Service - Plant Protection and Quarantine and TN Department of Agriculture Regulatory Services. Knox and Loudon counties were confirmed in July 2010.
- Responded to the confirmation of thousand cankers disease in Tennessee. Forestry personnel surveyed and sampled counties in the affected area. Anderson, Blount, Knox and Union counties were confirmed in July 2010.
- Placed approximately 14,000 traps throughout the state for gypsy moth in spring 2011. These included 11,910 detection traps, 1,713 delimiting traps and 877 random traps.
- Conducted egg mass surveys during December of 2010 (Pattie Gap site in Roane County, Pine Road and Hwy 127 sites in Bledsoe County). Egg masses were found at Pattie Gap and Pine Road.
- Aerially treated for gypsy moth infestations on 1,629 acres with a naturally occurring beneficial bacterium *Bacillus thuringiensis var kurstaki* (*Btk*) from April 19 – 28, 2011 (see picture). After treatment, no moths were caught at the Pine Road and Hwy 127 sites in Bledsoe County. At the Pattie Gap site in Roane County 8 moths were caught, in addition to 12 larvae.
- Developed the Thousand Cankers Disease (TCD) Action Plan with the cooperation of the TCD Technical Committee which includes the Division of Forestry and a number of cooperating agencies.



Aerial treatments were applied to eradicate gypsy moth infestations in Bledsoe County.



Forest Resource Protection

Water Quality

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

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

Objectives for Year

- Update complaint investigation MOU with the Tennessee Department of Environment and Conservation – Division of Water Pollution Control (TDEC-WPC).
- Collect and compile courtesy visit, complaint investigation and enforcement actions data in the Nashville Office.
- Conduct the next round of Best management Practices implementation survey.

Major accomplishments for July 1, 2010 – June 30, 2011

- Held 3 Best Management Practices (BMP) training sessions attended by 37 loggers in conjunction with the Tennessee Master Logger program.
- Conducted 961 contacts with landowners and loggers, providing technical assistance concerning application of BMPs; 635 of these were courtesy checks with loggers.
- Prepared 1,301 written BMP recommendations for forest landowners in forest management plans and timber sale assistance.
- Investigated 11 complaints arising from forestry operations in cooperation with the TDEC-WPC.
- Investigated and made recommendations on 99 complaints from other sources.
- Assisted with 4 Notices of Violation and 1 Director's Order issued by TDEC-WPC.
- Provided Master Logger scholarship funding through the Tennessee Agricultural Enhancement Program, in partnership with the TFA, to train 446 loggers in BMPs.
- Collected data for next cycle of BMP implementation monitoring.
- Developed a Microsoft Access based program to collect data associated with courtesy visits.
- Revised complaint investigation MOU with TDEC-WPC.



Forest Resource Management

Forest Landowner Assistance

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

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

Objectives for Year

- Increase use of spatial data.
- Identify priority landowners in high priority areas.
- Facilitate 3rd party certification of private forest landowners.
- Leverage funding for forest landowners from other natural resource conservation organizations.
- Provide assistance to the Natural Resources Conservation Service (NRCS) in implementing their Environment Quality Incentives Program (EQIP) Forest Management Planning activities.

Major accomplishments for July 1, 2010 – June 30, 2011

- Provided 1,874 forestland inspections to landowners (1,172 were first time assists).
 - ◇ Forest Management Planning
 - » Wrote 165 Forest Stewardship plans addressing 29,736 acres.
 - » Recognized implementation of 18 Forest Stewardship plans improving 3,426 acres.
 - » Wrote 1,118 other forest management plans addressing 100,467 acres.
 - ◇ Forest Stand Prescription Planning
 - » Wrote 413 prescription plans improving 18,269 acres.
 - ◇ Forest Stand Prescriptions Implemented
 - » Assisted 37 landowners in planting 1,162 acres of hardwood trees.
 - » Assisted 110 landowners in planting 7,223 acres of pine trees.
 - » Assisted 102 landowners in other forest improvement activities on 4,969 acres of forestland.
 - ◇ Other Forestry Technical Assistance
 - » Assisted 18,758 landowners by phone, pre-prepared information, follow up-checks, individual consultations or e-mail.

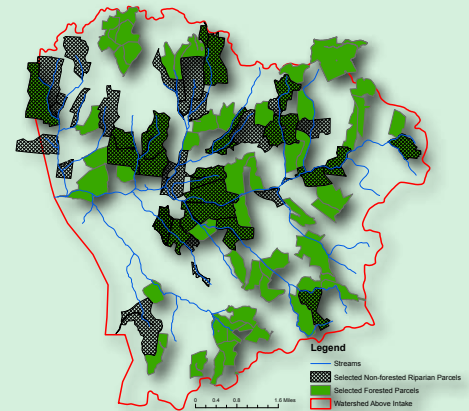
Unit Mission

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

- Trained area foresters in GIS applications as a means to improve mapping and collect features of private forest landowner's properties enrolled in forest management programs.
- Developed procedures to identify priority landowners in high priority public use watersheds as a means to more efficiently address forest conservation issues (see sidebar).
- Facilitated Tennessee's American Tree Farm 3rd party audit that verified program participants are sustainably managing their forests.
- Continued a contribution agreement with the NRCS to share resources for the promotion of forestry programs to Tennessee forest landowners.
- Trained 222 forest landowners on techniques for establishing hardwood tree plantings through the Tennessee Healthy Hardwoods partnership (partners include the Division of Forestry, UT Extension, and the Tennessee Forestry Association).
- Assisted with the development of Environmental Assessments on 20 EQIP Forest Management Plans.
- Reviewed and approved 20 EQIP Forest Management Plans.

Targeted Outreach for Priority Watersheds

Procedures were developed to identify priority landowners in high priority public use watersheds. These procedures will guide an effort to focus active outreach for forest stewardship planning and application of forestry practices to sustain the watershed's quantity and quality of water.



Forest Resource Management

Forest Legacy

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

The Forest Legacy Program identifies and protects environmentally important private forestlands that are threatened by conversion to non-forest uses. Program emphasis is to maintain well-managed, working forests on the landscape. Since initial involvement in 2000, fee simple and permanent conservation easement purchases now total 39,726 acres valued at \$38.4 million. Tennessee utilized \$21 million of federal Forest Legacy grant money in reaching that total. Two projects are in process that will protect an additional 7,600 acres.

Objectives for Year

- To complete appraisals Emory River Forest Legacy Tract.
- To close on Phase 1 of the Emory River Forest Legacy Tract.

Major accomplishments for July 1, 2010 – June 30, 2011

- Completed the appraisal on the entire Emory River Forest Legacy Tract. Appraisal included a timber cruise and valuation, minerals estate valuation, and fee simple appraisal of the tract as a whole, and in the 3-phased parts.
- Received Legacy funding for both phases 1 and 2 of Emory River Tract.
- The Emory River Tract Appraisal was reviewed and approved by the State's review appraiser.



Urban Forest Resource Management

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

Objectives for Year

- Implement a post planting inspection process for the Tennessee Agricultural Enhancement Program (TAEP) community tree planting grants.
- Provide urban and community forestry assistance to cities and towns across Tennessee and to green industries (arborists, grounds managers, landscape architects, others) that impact the management of the urban forest resources.
- Administer grants, Tree City USA, Tree Line USA, Tree Campus USA, Arbor Day poster contest, Champion Tree and related program and project administration.
- Complete a canopy cover analysis for Tennessee communities.

Major accomplishments for July 1, 2010 – June 30, 2011

- Completed 21 TAEP community tree planting grants in cities and towns across Tennessee. Approximately 1,760 trees were planted by these projects. Post planting inspection was completed on 17 projects.
- Made 73 assists to 48 cities and towns; and 68 additional secondary assists to arborists, nurseries, landscape architects, schools, grounds managers and other related entities who have an impact on urban forests. Assists provide technical information on planting care and maintenance of trees and information to tree boards, ordinance reviews, tree city information, planting recommendations, etc.
- Partnered with the Tennessee Urban Forestry Council to host a state urban forestry conference and State tree climbing championship for arborists.
- Provided significant assistance to the Tennessee Urban Forestry Council to support and continue their programs through a transition period of changing officers and their executive director.
- Completed canopy analysis for Livingston, Tullahoma, Johnson City and started Lakeland (which will be finished in FY 2012).
- Certified 3 new Tree Line USA utilities, and re-certified 12 Tree Line USA utilities (see sidebar).
- Recognized 40 cities and towns as Tree City USA.
- Re-certified Cleveland State Community College as a Tree Campus USA.
- Conducted 46 teaching and training programs for a total of 2,687 hours of instruction received by the various audiences that attended programs and workshop being presented by staff.

Unit Mission

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

Tennessee #1 for Tree Line USA



In 2011, Tennessee became the number 1 state in the country with the most utilities recognized as a Tree Line USA.

Utilities can have a significant impact on the urban tree population. Tree Line USA

recognizes utilities that meet standards aimed at improving the health and vigor of trees within power line right-of ways. These standards are: 1). Improved tree pruning practices; 2). Vegetation management plan; 3). Tree care worker training; 4). Educational efforts directed toward their customers on the value and importance of trees in the community; 5). Participation in the community's or a local school's Arbor Day program.



State Forest Management

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

Objectives for Year

- Finalize and publish 2020 Harvest Level Plan.
- Complete public use designation, individual forest signage plan and publish official public use maps.
- Complete state forest user guide web page.
- Develop TWRA/TDF State Forest agreement.
- Meet Compartment Planning goal of eight or more completed plans – ongoing.
- Complete storm damage salvage operations and summary report.
- Achieve FSC re-certification.
- Complete Sequatchie LLC acquisition at Bledsoe State Forest.

Major accomplishments for July 1, 2010 – June 30, 2011

- 2020 Plan near completion; currently in final edit phase and awaiting printing.
- Completed State Forest Training for all state forest foresters and technicians.
- Implemented State Forest pesticide use and application policy and planning system.
- Completed the state forest inventory. Results have been presented and distributed.
- Completed FSC contract and new FSC Licensing Agreement; awaiting final reviews by Rainforest attorney. FSC introduced new national standards in 2010 to replace the various regional standards. A new compliance assessment is required before the State Forests can be certified.
- Initiated operations to salvage 550 acres of timber blown down by the April storm (see picture).
- Completed timber sales except for pine and some hardwood sales at Chickasaw and Natchez Trace Forests due to storm damage.
- Initiated public use designation map project, which includes GIS mapping system and signage guidelines.
- Completed five Compartment Plans.
- Held two Tennessee Healthy Hardwood Field Days - one at Natchez Trace and one at Standing Stone State Forests.
- Updated Timber Sale information on web page.



On April 27, 2011 Chickasaw and Natchez Trace State Forests experienced storm damage to 500+ acres. TDF conducted emergency salvage sales on these two forests in an effort to maintain the value of products available from the blown down resource.

Unit Mission

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



Reforestation

Seedling Nursery

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

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

Objectives for Year

- Increase seedling sales and accompanying sales revenue by 25% over FY10 levels.
- Complete and refine new web-based nursery management/seedling sales software.
- Facilitate planning for new seedling cold storage building at Chickasaw SF.

Major accomplishments for July 1, 2010 – June 30, 2011

- Increased revenue from seedling sales by 21%.
- Increased number of seedlings sold by 52%.
- Signed a Memorandum of Understanding with the Tennessee Wildlife Resources Agency to produce 190,000 hardwood seedlings for their use at various locations in the state.
- Produced 4.6 million pine seedlings and 1.5 million hardwood seedlings for sale and distribution during the 2010-2011 field planting season (see picture).
- Continued to refine and develop the new web-based seedling sales computer program. Changes were made to reflect the new organizational structure of the Division of Forestry and additional improvements were made to several reports.
- Replaced the aging shingle roof on the main office building at the Pinson Reforestation Complex with a new roof. Also replaced gutters and repaired fascia and soffit areas of the building as needed.
- Attained a customer satisfaction rating of greater than 95%, based on responses from our annual customer survey.



Seedlings grown by the Tennessee Division of Forestry help landowners meet a variety of objectives including timber production, wildlife habitat improvement, and water quality protection.

Unit Mission

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



Reforestation

Tree Improvement

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

The Division manages over 200 acres of seed orchards and more than 214 acres of progeny tests at various locations around the state. Currently, the Division is actively working with 7 hardwood and 4 conifer tree species. Tennessee is also a member of the North Carolina State University – Cooperative Tree Improvement Program. Membership allows accelerated breeding and establishment of genetically superior seed orchards. Seed produced from these orchards is used to grow seedlings tailored for survival and fast growth on Tennessee's landscape (see picture).



Seed produced from genetically superior seed orchards, such as this northern red oak orchard at the East Tennessee Nursery, are used to grow seedlings tailored for survival and fast growth on Tennessee's landscape.

Objectives for Year

- Continue development of Barclay tract into new West Tennessee Tree Improvement Center.
- Refine preliminary work plan for new West Tennessee Tree Improvement Center.
- Facilitate in-house production of 2nd generation and 3rd cycle loblolly pine seed and an Elite Sawtimber seed source.
- Develop succession plan for critical tree improvement positions.

Major accomplishments for July 1, 2010 – June 30, 2011

- Harvested 315 bushels of loblolly pine cones from two orchards at the Pinson Reforestation Complex which yielded 202 pounds of improved seed. Thirty two pounds of seed were from the 3rd cycle orchard.
- Harvested 322 pounds of hybrid chestnut seed from the orchard at the East Tennessee Nursery.
- Harvested over 2,300 pounds of acorns from the sawtooth oak seed production areas at the East Tennessee Nursery and the Pinson Reforestation Complex.
- Installed the first round of grafted loblolly selections for the new Sawtimber Elite orchard at the West Tennessee Tree Improvement Center.
- Installed select white oak seedlings for the new orchard at the West Tennessee Tree Improvement Center.
- Produced containerized seedlings and planted cold hardiness loblolly pine progeny tests (44 open pollinated families) at two locations; the West Tennessee Tree Improvement Center and Scott State Forest.
- Produced containerized seedlings and planted white pine progeny test (50 open pollinated families) at Scott State Forest.
- Produced containerized seedlings and planted shortleaf pine progeny test (28 open pollinated families) at Scott State Forest.
- Cancelled harvest of black walnut seed this year due to thousand cankers disease.
- Grafted all loblolly, shortleaf, and white pine scion material needed to produce trees for various orchards.
- Fertilized all seed orchards in need of fertilization based on recommendations from North Carolina State University.



Forest Data and Technology

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

Objectives for Year

- Re-design and implement water quality database.
- Develop insect and disease occurrence database.
- Update nursery online system.
- Develop central database site for GIS information for district and Nashville offices.

Major accomplishments for July 1, 2010 – June 30, 2011

- Updated photos in online photo directory for TDF staff.
- Finalized contract with TN Department of Transportation for their Global Navigation Satellite System network at Delano Nursery.
- Developed statewide location database/GIS for all TDF Buildings.
- Identified potential sites for radio towers based on TN Department of Safety's interest in TDF property.
- Scanned deeds for TDF property to attach to building database.
- Upgraded Incident Qualification System (IQS) server software to version-2 with direct Resource Ordering and Status System interface.
- Conducted pilot test of online burn permit system.
- Moved TDF's Structure Query Language (SQL) database from under Department of Agriculture.
- Made online reporting systems more accessible for TDF staff to edit and change.

Unit Mission

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



Forest Data and Technology

Geographic Information Systems

Mission: Analyze and present tabular information in visual (map) form or extract data from imagery and present it in tabular form that assists in making resource decisions.

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

Objectives for Year

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

Major accomplishments for July 1, 2010 – June 30, 2011

Gypsy Moth

- Managed the property inventory of global positioning system (GPS) units issued annually to the seasonal and full-time employees, and laptop computers issued annually to the lead trappers used in gypsy moth trapping.
- Conducted technology training and refresher training of 42 full-time and 36 seasonal employees in the use of GPS units and/or laptop computers and downloading software in the execution of the gypsy moth trapping program.
- Downloaded GPS waypoint (trap placement) data from 23 full-time employees.
- Provided support to lead trappers for assigned GPS units, laptop computers and associated software used in gypsy moth trapping.
- Received and processed 133 GPS data downloads from full-time employees and seasonal employees.
- Collected, imported, converted, inspected, modified, corrected, organized and archived more than 13,900 trap placement data records from field employees in the production of gypsy moth occurrence/spread maps.
- Produced small scale delimiting grid maps for gypsy moth trap placement.
- Produced large scale (statewide) gypsy moth trap placement maps.
- Produced large scale (statewide and district) gypsy moth catch location maps.
- Produced small scale maps of gypsy moth proposed and final eradication and control projects.
- Produced maps illustrating the current statewide status of gypsy moth occurrences and infestations over the past year.
- Produced maps illustrating the spread of gypsy moth regionally over the past year.

Forest Health

- Produced pest occurrence, spread & quarantine maps from current field survey data for Emerald Ash Borer and Thousand Canker Disease.
- Produced detection grid maps for counties in the East Tennessee District for the initial Thousand Canker Disease survey.

Fire Prevention

- Produced fire risk assessment and communities-at-risk maps for Monroe County CWPP project.

Other

- Produced multi-year forest management practice implementation maps for the Tennessee Agricultural Enhancement Program.
- Produced map of newly consolidated East Tennessee District with TDF facilities, points-of-concern, and critical facilities.



Forest Data and Technology

Forest Inventory Analysis

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

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

Objectives for Year

- Measure 924 plots.
- Train and certify crews.

Major accomplishments for July 1, 2010 – June 30, 2011

- Measured 935 Forest Inventory plots.
- Trained 7 Foresters for new data acquisition system.
- Trained 1 Forester at the Tennessee-Kentucky Wildland Fire Academy.

Radio Communications

Objectives for Year

- Begin narrow band conversion for all Districts.
- Secure funding and contract for critical microwave paths.
- Implement quarterly inspection of all radio sites.
- Establish agreements and attend monthly meetings with TVRS in Chattanooga.

Major accomplishments for July 1, 2010 – June 30, 2011

- Installed radios in dozers.
- Renewed agreement with USDA Forest Service for the Starr Mountain site.
- Purchased backup batteries for each radio tower repeater.
- Purchased helmet microphones to work with handheld radios while in helicopter.
- Surplused old radios as needed.
- Implemented narrowband across the entire radio system for the Cumberland District.
- Developed agreement with Rutherford County to allow the construction of a radio tower on TDF property.
- Cooperated with TEMA for Williston radio tower upgrade.
- Ordered 31 Radio Microwave Paths to replace old ones.



Forest Businesses

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

Objectives for Year

- Conduct Forest Industry Survey.
- Publish the quarterly Tennessee Forest Products Bulletin.
- Provide information and technical assistance to forest industries in East Tennessee concerning the Emerald Ash Borer and Thousand Cankers Disease.

Accomplishments for July 1, 2010 – June 30, 2011

- Assisted with the Hardwood States Export Group Trade Show to develop recruitment and trade leads for Tennessee exporters.
- Published a contact booklet for foreign trade shows that details Tennessee companies that want to export hardwood lumber.
- Stayed current on market developments in both the domestic and export market place.
- Assisted with the Biomass Crop Assistance Program in Tennessee.
- Served as contact for the Tennessee Department of Economic and Community Development information and coordination for forest industry needs.
- Published the Tennessee Forest Products Bulletin in August, November, and February. This Bulletin is posted online on the Department of Agriculture's website (<http://www.tn.gov/agriculture/forestry/bulletin.shtml>).
- Conducted the Forest Industry Survey (2010) for primary and secondary facilities (the next survey will be conducted in 2012).
- Provided a "first step" for landowners questions concerning their property or timber.
- Served as the Division of Forestry contact for USFS Forest Inventory Analysis data for the Tennessee Forestry Association, landowners or industry use.
- Provided information and technical assistance to forest industries in East Tennessee concerning the Emerald Ash Borer and Thousand Cankers Disease.

Unit Mission

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



Environmental Affairs and Public Outreach

The Environmental Affairs and Public Outreach Unit seeks creative ways to provide outreach to the various publics in the State of Tennessee. Additionally, the unit seeks to foster greater collaboration with environmental advocacy groups to produce a climate for problem solving which will help reduce unnecessary conflict in various arenas with favorable outcomes for all.

Objectives for Year

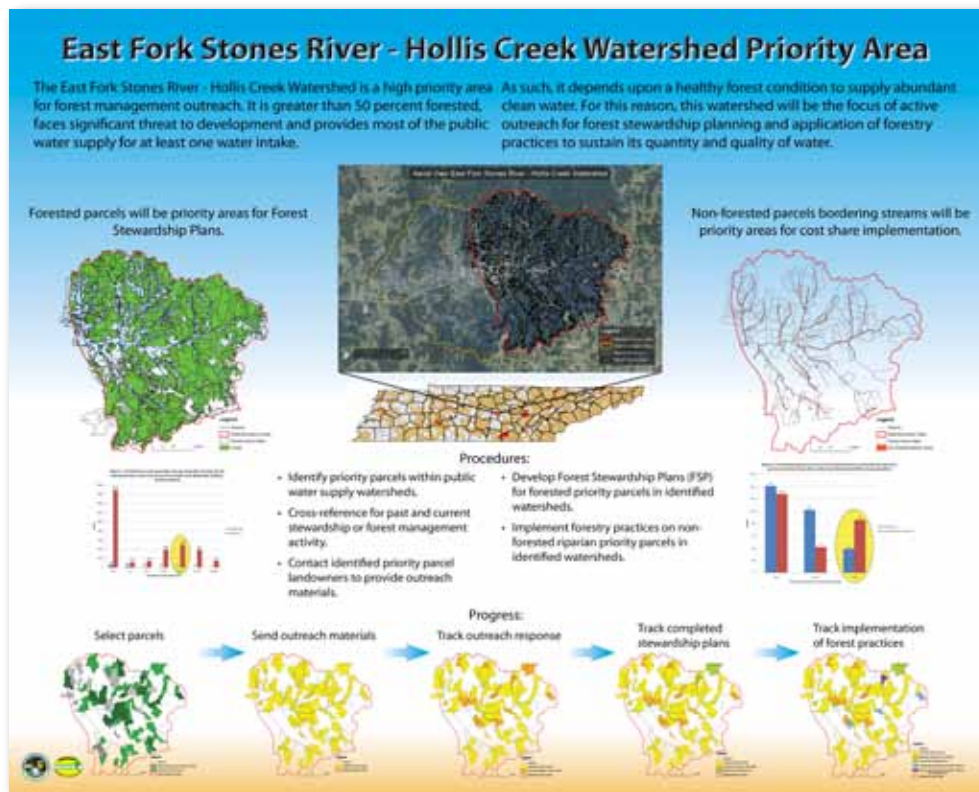
- Promote the Tennessee Forest Resource Assessment and Strategy.
- Coordinate among planners and natural resource professionals to improve planning conservation.
- Develop and implement training for staff on land use planning.
- Engage and inform environmental/conservation organizations on Division activities.

Major accomplishments for July 1, 2010 – June 30, 2011

- Promoted the Tennessee Forest Resource Assessment and Strategy to TN Legislature, stakeholders, and publics.
- Developed a strategy to promote findings from the Tennessee Forest Resource Assessment and Strategy to key audiences in targeted watershed priority areas (see picture).
- Conducted workshop with partners on land use planning.

Unit Mission

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



An example illustrating how priority parcels within public water supply watersheds are targeted for outreach and forest stewardship implementation.



Environmental Affairs and Public Outreach

Information and Education

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

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

Objectives for Year

- Raise awareness about important and timely forest resource issues.
- Increase social media integration.
- Utilize technological capacity to produce informational products in-house to more effectively and efficiently raise awareness of division activity and program diversity.
- Promote Forestry Camp.

Major accomplishments for July 1, 2010 – June 30, 2011

- Held 3,742 educational outreach activities reaching 367,830 children and adults. This represents a 14% increase in the number of activities and a 20% increase in the number of children and adults reached over last year. The increases were again the result of greater fire prevention efforts.
- Led statewide communications response to two new forest health threats - emerald ash borer and thousand cankers disease including press releases, informational awareness products and presentations to partners and publics.
- Produced 17 news releases pertaining to relevant topics including: wildfire prevention, urban forestry, forest health, forest action plan, employee awards, Arbor Day, woods arson arrests and storm damage.
- Gave radio and television interviews addressing Division programs.
- Referenced in 503 newspaper articles.
- Produced 2 informational print products - Forest Landowner Assistance and TAEP for Landowners.
- Produced promotional materials for Tennessee Forest Resource Assessment and Strategy including bi-fold brochure, posters, and a Powerpoint presentation.
- Maintained fire prevention website – BurnSafeTN.org. The site had 615,000 hits from 15,700 visits.
- Developed Firewise module for BurnSafeTN.org website (see picture).
- Increased views of TDF videos on YouTube by 95%. The channel had a total of 5,702 video views. The most viewed video continues to be “Using Handtools to Suppress Tennessee Forest Fires” representing 37% of total views.
- Facilitated 62nd annual Forestry Camp for 57 Future Farmers of America high school students.



The new Firewise module on BurnSafeTN.org website provides a wealth of information on how homeowners can take proactive measures to protect their structures from the threat of wildland fire.



Safety and Training

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

Objectives for Year

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

Major accomplishments for July 1, 2010 – June 30, 2011

- Administered the work capacity test to assess fitness among Division firefighters.
- Conducted the Division's annual wildfire training academy for new employees.
- Made materials available for the Division's annual wildfire safety refresher.
- Revised the Division's Safety and Health Manual.
- Coordinated "Changing Roles" Wildland-Urban Interface Issues/ Connections Training.
- Administered web-based training database for Incident Qualification System (IQSweb).
- Facilitated National Incident Management System (NIMS) Training.
- Participated in the ninth annual Tennessee Kentucky Wildland Fire Academy, which offers advanced wildfire training for Division firefighters.
- Trained firefighters in the use of fire operations in the wildland-urban interface.
- Assisted with Pest Management Training for employees.
- Assisted with Edison Performance Planning/Evaluation Training.
- Coordinated First Aid/CPR Training.
- Coordinated Defensive Driving Training.
- Administered the Division's Title VI Program.
- Maintained the Division's Pesticide Certification Program/Records.
- Compiled and submitted OSHA reports.
- Chaired Safety/Training Committee meetings.

Unit Mission

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



Administration

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

Objectives for Year

- Plan and allocate budget (revenues, reversion and FY 2012).
- Rewrite Policy and Procedures Manual.
- Map business processes that need streamlining.
- Sell excess real estate and move Capital improvements forward.
- Maintain TDF partnerships.
- Continue Radio Communications Systems improvements.
- Implement Forest Plan Writer.
- Establish On-line Burn Permit system.
- Develop new harvesting plan for State Forests.
- Develop specifications for modular buildings to replace building destroyed by fire in Gordonsville.
- Monitor results of Work Capacity Test in all districts.

Major accomplishments for July 1, 2010 – June 30, 2011

- Developed budget and reversion plans.
- Continued updating TDF Policy & Procedure Manual.
- Updated a portion of the radio system by narrow-banding the Cumberland District.
- Developed harvesting plan for State Forests.
- Tested on-line burn permit system.
- Began implementation of the Forest Resource Assessment and Strategy.
- Applied for and obtained \$7.12 million in federal grants for forestry programs through USDA Forest Service's State & Private Forestry Section \$3.6 million of this total was secured through competitive processes.

Unit Mission

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



...continued from page 1

The Division of Forestry estimates that five million urban ash trees in Tennessee are potentially at risk from EAB. The risk represents an estimated value loss of \$2 billion. There are an estimated 261 million ash trees on Tennessee public and private timberland potentially valued as high as \$9 billion.

The second pest, TCD, was confirmed just a couple of weeks following the EAB find. Two astute Division of Forestry foresters, Diane Warwick and Darren Bailey, had been observing dying walnut in a neighborhood in north Knoxville and found close resemblance to the disease, which they had read about through a cooperative pest alert. Following sample collection and processing, this was the first confirmation of the disease in the native range of black walnut and the first known incidence of TCD east of Colorado.

TCD is a progressive disease that may kill a tree in as little as two to three years after initial infection. The disease-causing fungus, *Geosmithia morbida*, is transmitted by the walnut twig beetle. Branches and trunk tissue are killed by repeated infections by the fungus, as the beetles carry the fungus into new bark. The name “thousand cankers” is due to the numerous cankers, or infected tissue, surrounding multiple beetle entry points on branches and main stems.

The Tennessee Department of Agriculture Division of Forestry estimates that 1.38 million black walnut trees in Tennessee’s urban areas are potentially at risk from TCD. The risk represents an estimated value loss of \$1.37 billion. There are an estimated 26 million black walnut trees on Tennessee public and private timberland potentially valued as high as \$1.47 billion.

Continued surveying for new infestations began in the spring of 2011 and detections were made in several adjacent counties. This type of monitoring will continue and expand similar to other pest programs the Division is already undertaking such as with gypsy moth, hemlock woolly adelgid, southern pine beetle and others.

As with many forest health issues, support from public and private sectors is necessary to prevent the spread of further movement. Active outreach to multiple entities with the coordinated assistance of partner agencies will continue to play a big part in the action plan of these two new forest threats.

Simplified messages currently urge area residents and visitors to help prevent the spread of TCD and EAB through the following ways:

- Don’t transport firewood into or even within Tennessee. Don’t bring firewood along for camping trips. Buy the wood you need from a local source near where you plan to burn it. Don’t bring wood home with you.
- Watch for signs of infestation in your ash or black walnut trees. If you suspect your ash or black walnut tree could be infested with EAB or TCD respectively, visit www.TN.gov/agriculture/eab or www.TN.gov/agriculture/tcd for an online symptoms checklist and report form or call TDA’s Regulatory Services Division at 1-800-628-2631.

Forestry Commission Duties and Functions

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

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

The State of Tennessee policy of non-discrimination

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

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.

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