

2025 Forest Health Highlights in Texas

Texas A&M Forest Service through a partnership with USDA-APHIS, USFS Forest Health Protection and Texas Parks and Wildlife deployed 437 purple panel traps across Texas. Traps were baited with hexenol and concentrated in east Texas and in urban areas along the I-35 corridor from Dallas/Fort Worth to San Antonio, Texas. EAB has been detected in 30 additional counties since the original Harrison County detection was made in 2016. Additional positive confirmations have been made in Jack, Navarro, Rockwall, Somervell, and Bell Counties during FY25. State quarantines have been established for all counties restricting the movement of all ash material outside the county. Texas A&M Forest Service maintains a website (<http://tfsweb.edu/eab>) providing information about EAB and hosts workshops to educate Texans on how to properly identify EAB and how to manage infected trees.

Oak wilt continues to occur in 76 documented counties in Texas, mostly counties west of I-35 from Dallas to San Antonio across I-20 to Lubbock. Texas A&M Forest Service personnel contribute technical assistance to landowners to help educate landowners and the public and to minimize the impact and spread of this disease. Technical information on oak wilt is made available via a web page devoted exclusively to oak wilt in Central Texas (texasoakwilt.org). During FY 2025, 7 trenches with a combined length of 16,142 feet (7086 in cost shares) were installed to help stop the spread of oak wilt as part of the federally funded Cooperative Oak Wilt Suppression Project. During FY 2025 project staff responded to 685 oak wilt incidental assists (e.g. phone calls, email inquiries, general questions from public, provided 422 (149 off site, 273 onsite) oak wilt hard assists (e.g. case file is created for landowner/homeowner, can be an onsite visit or off-site visit) on 34,687 acres. Staff also provided 47 presentations and trainings to 1,842 people. The Texas Oak Wilt website had 106,382 users during the year. TAMFS has been involved in several projects related to oak wilt. A historic analysis of PSE (post suppression evaluation) data and soil analysis helped understand variables in trench failure, with the results already published. The development of the Oak Wilt ArcGIS Database and CTexGIS is ongoing, involving the restructuring and curation of the core database, migration of the Cost-Share Database to ArcGIS, and the yearly updating and visualization of County and mortality center maps for Texas. Current effort include a long-term Trapping Nitidulid Beetles Experiment to study their flight activity and the viability of oak wilt spores throughout the year, with a paper currently being written in collaboration with the University of Tennessee. Finally, a promising rapid detection technique for oak wilt using LAMP (Loop-Mediated Isothermal Amplification) has been developed in collaboration with the University of Georgia and Bartlett, with a paper submitted for publication.

- The spring 2025 SPB prediction survey was conducted in 17 East Texas counties (Angelina, Cherokee, Hardin, Houston, Jasper, Liberty, Nacogdoches, Newton, Panola, Polk, Sabine, San Augustine, San Jacinto, Shelby, Trinity, and Tyler), and included four National Forests and The Big Thicket National Preserve (BTNP) covering about six million total survey acres. Results from this survey predicted continued low or no SPB activity in Texas for 2025-2026. No SPB were collected from survey traps in East Texas in 2025, while 3,364 clerids were collected. This is far from the 11,351 clerid beetles collected in 2024. Average catch was 1.6 clerids/day/trap. The prediction of low SPB activity (from 2024 trapping) proved to be accurate as **NO (0)** SPB infestations were reported in East Texas in 2025. Early indications are that southern pine beetle activity in 2026 will continue to be low to none.

- Texas A&M Forest Service continues to administer the Southern Pine Beetle Prevention Program in East Texas. During FY 2025, through funding from USFS-Forest Health Protection, Texas A&M Forest Service approved 31 cases for preventative thinning and paid \$33,505 to 9 landowners who completed the thinning of overly dense pine forests thereby reducing their risk of an SPB attack. A total of 11 SPB thinnings were completed with two to be paid in Q1 of FY26. Since the inception of the program in 2003, more than 2,500 landowners have utilized over \$6.9 million to thin more than 133,000 acres of overly dense pine stands in East Texas. A depressed market for pulpwood resulted in the decreased ability to complete scheduled thinnings and an increase in project time extensions.
- Texas A&M Forest Service deployed 12 cross vane traps for *Euwallacea fornicatus* after interception reports from Texas Department of Agriculture in Dallas and Houston. Efforts to study establishment of potential new invasive ambrosia beetles were made; no captures during FY2025.
- Texas A&M Forest Service continues to support integrated management of Brazilian peppertree in south Texas. Through a 3-year project in collaboration with the Army Corps of Engineers, the US Forest Service, and the CWMA, the objective is to mitigate the impacts of the invasive Brazilian Peppertree along the Gulf Coast of Texas, using Brazilian peppertree thrips. Through the release of these thrips in different areas of Port Aransas, we are evaluating the establishment and effect of the thrips on different management strategies for Brazilian peppertrees.
- Laurel wilt fungus been confirmed in Gregg, Smith, Anderson, Henderson, and Van Zandt Counties. Texas now has 24 counties infected with laurel wilt. Texas Forest Service finished the project Laurel Wilt Distribution in South Texas (2025), investigated the potential spread and establishment of laurel wilt disease in the region. The study first focused on mapping the distribution of potential host trees belonging to the *Lauraceae* family, such as avocado, redbay, and sassafras, across southern Texas and northern Mexico to identify areas vulnerable to the disease. Concurrently, the project involved a field trapping effort to monitor and determine the actual distribution of the invasive vector insect, the redbay ambrosia beetle (*Xyleborus glabratus*), which carries the deadly laurel wilt fungus.
- During Fiscal Year 2025, the Texas A&M Forest Service (TAMFS) forest health staff continued critical restoration efforts for Ponderosa Pine forests in the Davis Mountains region, an area challenged by a decade of severe wildfires, extreme drought, and subsequent mountain pine beetle infestations. This region is home to the southernmost extent of the Ponderosa Pine population, and TAMFS, in partnership with USFS-Forest Health Protection, the Southern Research Station, and The Nature Conservancy, is leading the way in restoration and improving overall forest health. Since 2021, TAMFS staff have been actively surveying and documenting spots of the Southwestern Pine Beetle (*Dendroctonus barberi*) across The Nature Conservancy's Davis Mountains Preserve. A major effort, begun in 2023 in collaboration with the USFS, involves testing potential semiochemical repellents to prevent attacks on susceptible trees. The

initial trapping experiment in Spring 2024 yielded promising preliminary data, suggesting that these repellents, such as Verbenone Plus, reduce the capture of the southwestern pine beetle by more than 95%. This study on the effect of semiochemical repellents is ongoing. Furthermore, a zone of inhibition study was conducted in 2025, which involved deploying 20. The accompanying survey successfully documented the beetle's activity, identifying a total of 61 trees attacked by the pest during the summer. Yearly monitoring of active centers of infestation continues to evaluate the overall impact of bark beetles in the Ponderosa Pine stands, and a one-year trapping effort to adjust flight periods for management strategies is currently reviewing samples.

- Overall pine mortality was a major concern in FY 2025 across central and east Texas with areas of mortality large and widespread across East Texas. Weather conditions (drought followed by freeze followed by drought) resulted in extreme pine stress. The appearance of ips beetles, ambrosia beetles and deodar weevils resulted in stand-level mortality. It should be noted that deodar activity has been decreasing.
- Texas A&M Forest Service staff made numerous site visits across West Texas for juniper mortality. During the drought of FY 2025, high mortality of ashe junipers was observed across West and Northwest Texas. The areas that had issues with decline/ mortality were areas that the juniper density was very high. Cedar bark beetles and other borers were common across the region. Eastern red cedar has been also affected in central and East Texas. Mortality has been observed related to secondary pests, including cedar bark beetle (*Phloeosinus* spp.), Botryosphaeria cankers, *Seiridium* canker, and other secondary agents.
- A perennial regeneration pest in east Texas, TLCA, continues to plague landowners. In 2018 TAMFS initiated a program to assist qualifying landowners by treating TLCA nests with PTM Insecticide (Fipronil). In 2025, 10 nests were treated across the sandier regions of east Texas. TAMFS management plans have been revised to reflect the threat of TLCA to recommend treatment before planting. The unavailability of Leaf Saver ant bait limits control options to PTM (preferred but site restricted), Amdro Ant Killer (least effective) and Alpine WSG (more site options).
- Texas experienced severe drought conditions over FY 2025. This resulted in widespread decline and mortality of multiple tree species. Based on ForWarn 24-day 3-year NDVI change map, we saw a decrease in forest canopy greenness that was occurring in softwood forests / woodlands in several west central Texas counties. Based on US Drought Monitor maps, the overall area in general has been subject to a multi-month drought that ranged from moderate to exceptional severity. This region roughly occurs from San Antonio to Fort Worth. The area of concern was generally north and west of San Antonio and extends westward to about the longitude of Abilene. Most of the softwood forest / woodland of this region showed moderate to severe decline in NDVI.

- Texas experienced severe drought conditions over FY 2025 and resulted in widespread decline of Post Oaks (*Quercus stellata*). This weather pattern results in a root/shoot carbohydrate imbalance and causes rapid decline and eventual mortality. Older trees seem to be more susceptible. Mortality is scattered but occurs frequently across the range. Counties that exhibited higher mortality rates during FY 2025 included Anderson, Kaufmann and Grimes Counties.
- During FY 2025 Texas A&M Forest Service staff made numerous recommendations for the treatment of typical pest/disease issues seen in Texas each year. These are minor in nature and usually do not pose any threats to the forests of Texas. Recommendations were made for fungal (mainly Tubakia leaf spots) and bacterial foliage diseases, trunk rot, roundheaded borers, Pales weevils, twig girdlers, forest tent caterpillars, yellownecked caterpillar, oakworms, drippy nut disease, spider mites, pear rust, needlecast, Dothriostoma, Diplodia, cottonwood leaf beetle, elm leaf beetle, webworms, red-headed ash borers, carpenter ants, carpenter bees, fusiform rust, smooth patch, hypoxylon canker, bacterial wetwood, aphids, mites, leaf miners, galls, bark lice, dogwood anthracnose. In addition, freeze damage was significant \in February; wood borers (ambrosia beetles and Ips engraver beetles) and other insects that thrive in stress conditions were common across Texas. Sycamore Anthracnose was widely observed in Austin in early Spring.
- During FY 25 TAMFS supported research initiatives related to forest health issues that impact Texas.
 - i. Oak Wilt Identification. Collaboration with University of Tennessee will improve molecular identification tools, particularly PCR methods for rapid detection of the pathogen.
 - ii. Oak Wilt Rapid Detection. Collaboration with University of Georgia to develop rapid detection technique for oak wilt using loop-mediated isothermal amplification (LAMP).
 - iii. Oak wilt vectors. TAMFS staff is trapping and sending sap beetles to University of Tennessee to identify the species of Nitidulidae (sap beetles) that are moving oak wilt spores in Texas.
 - iv. Biological Control of Brazilian Peppertree. Establishment of the biocontrol agent, *Pseudophilothrips ichini* and integrated pest management of Brazilian peppertree on the Texas Gulf Coast. Collaboration with US Army Engineer Research and Development Center and CWMA.
 - v. Cedar Bark Beetle Semiochemicals. Sampling of infested cedar trees to provide beetles for semiochemical interaction with host Gant Sequoia.
 - vi. Juniper decline in Texas. Collaboration with Texas A&M University. Identification of main forest health issues that are causing juniper decline in central Texas.
 - vii. Oak wilt management through herbicides. Collaboration with Texas A&M University through the Oak Wilt Advisory Committee.
 - viii. Biofuels from killed trees. Collaboration with University of Texas. Find uses for trees killed by beetles or other insects through essays using pyrolysis.

Texas A&M Forest Service FH staff developed and implemented ArcGIS Online (AGOL) Field Maps apps to spatially track occurrences of and investigations into forest health inquiries. Training was provided to field users. The apps are designed to supplement the use of DASM. The use of this product

allowed TAMFS field staff to ground survey 492,251 acres and to do on-site assessments of various forest health issues on 29,850 acres across Texas.