

Kansas Forest Health Highlights 2012

Forest Resource Summary

In Kansas, the Eastern hardwood forests transition into the prairie of the Great Plains. Forestland accounts for 5.2 million acres of land; of which, over 95% is privately owned. Our forests are productive. Local forest products contribute approximately \$1.3 billion annually to the Kansas economy.

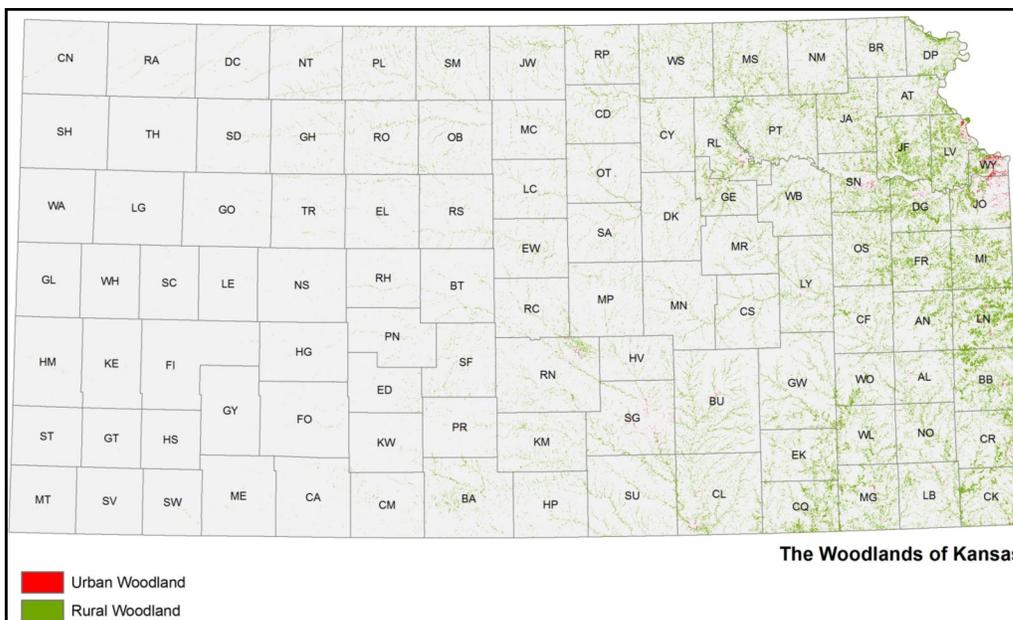
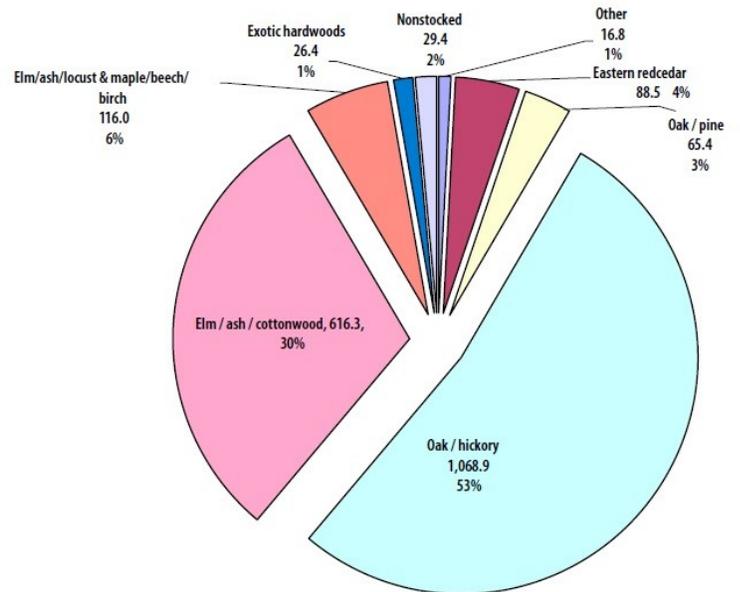
Most of the contiguous forestland is located in the far eastern third of the state. Much of the Kansas landscape is devoted to agriculture, but forests and trees are prominent components of the landscape.

The majority of the state's woodlands are linear in nature and follow water features along the terrain.

The top tree species by statewide volume from 2011 are Hackberry, Cottonwood, American elm, Green ash, Osage-orange, Black walnut, Mulberry, Bur oak, Honeylocust, and American sycamore.

Over the past 60 years or so, cottonwood regenerations levels have been low. Reengineering of our riparian environments from the expansion of agriculture, construction of dams, and stream channelization have altered the landscape where cottonwood previously flourished. Unlike cotton-

woods, eastern red cedar trees have been very successful at early invaders on grasslands and abandoned range and farmlands. Oak/Hickory and elm/ash/cottonwood are the two dominant forest types. Even



DROUGHT

Trees in general had an extremely challenging year in 2012 when historic drought conditions continued from the previous year and persisted into the end of this year. For much of this year's growing season, Kansas was at the center of the drought. Significant drought effects were seen around the state as trees suffered from the unrelenting dryness of 2011 and the extreme heat that persisted throughout the summer. Much into the autumn months there has been little moisture. It became increasingly common to see windbreaks, riparian systems, and woodlots with trees that had succumb to the lack of water and heat stress. September brought cooler temperatures and periodic rain events that mitigated drought conditions in localized areas, but by no means eliminated the damage.

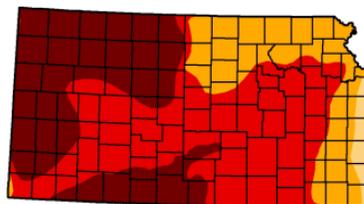
The National Drought Mitigation Center - U. S. Drought Monitor continues to indicate that most Kansas counties remain in the "Exceptional Drought" (63% of the state), "Extreme Drought" (90% of the state), or "Severe Drought" categories. The latest Drought Monitor indicates that conditions are expected to continue through the winter into 2013. Lack of precipitation and hot temperatures caused many trees to show their fall color as early as August and drop their leaves. Trees on higher or rocky sites, and along dry stream beds turned yellow and then brown late summer. The continuation of dry weather has taken the toll on our planted pine sp., eastern red cedar, native oak species, silver maple, cottonwood, ash, and black walnut. Much decline is seen in mature trees that can not compensate for the additional stress over multiple years.



U.S. Drought Monitor Kansas

November 20, 2012
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	97.45	77.53	34.46
Last Week (11/13/2012 map)	0.00	100.00	100.00	97.45	77.53	30.98
3 Months Ago (08/21/2012 map)	0.00	100.00	100.00	96.43	66.93	
Start of Calendar Year (12/27/2011 map)	42.48	57.52	47.15	23.21	12.79	0.22
Start of Water Year (09/25/2012 map)	0.00	100.00	100.00	100.00	88.34	51.04
One Year Ago (11/15/2011 map)	14.39	85.61	76.21	57.21	36.47	15.39



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

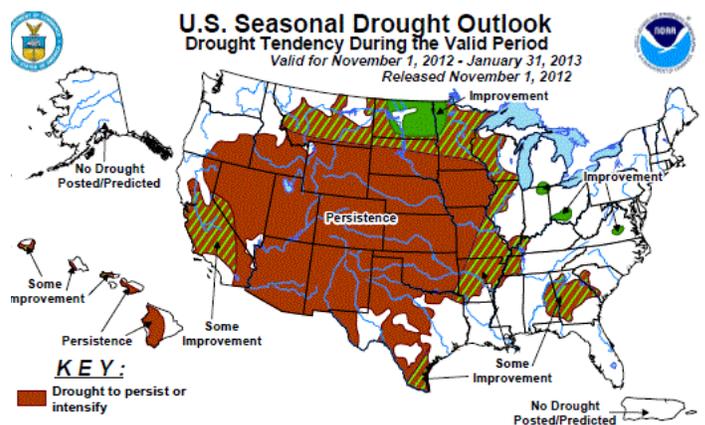
<http://droughtmonitor.unl.edu>



Released Thursday, November 22, 2012
National Drought Mitigation Center.

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for November 1, 2012 - January 31, 2013
Released November 1, 2012



- KEY:**
- Drought to persist or intensify
 - Drought ongoing, some improvement
 - Drought likely to improve, impacts ease
 - Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events — such as individual storms — cannot be accurately forecast more than a few days in advance. Use caution for applications — such as crops — that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 Intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

URBAN & RURAL FOREST HEALTH ALERT:

Emerald Ash Borer (EAB)

Agrilus planipennis Fairmaire

White, Green, and Blue ash

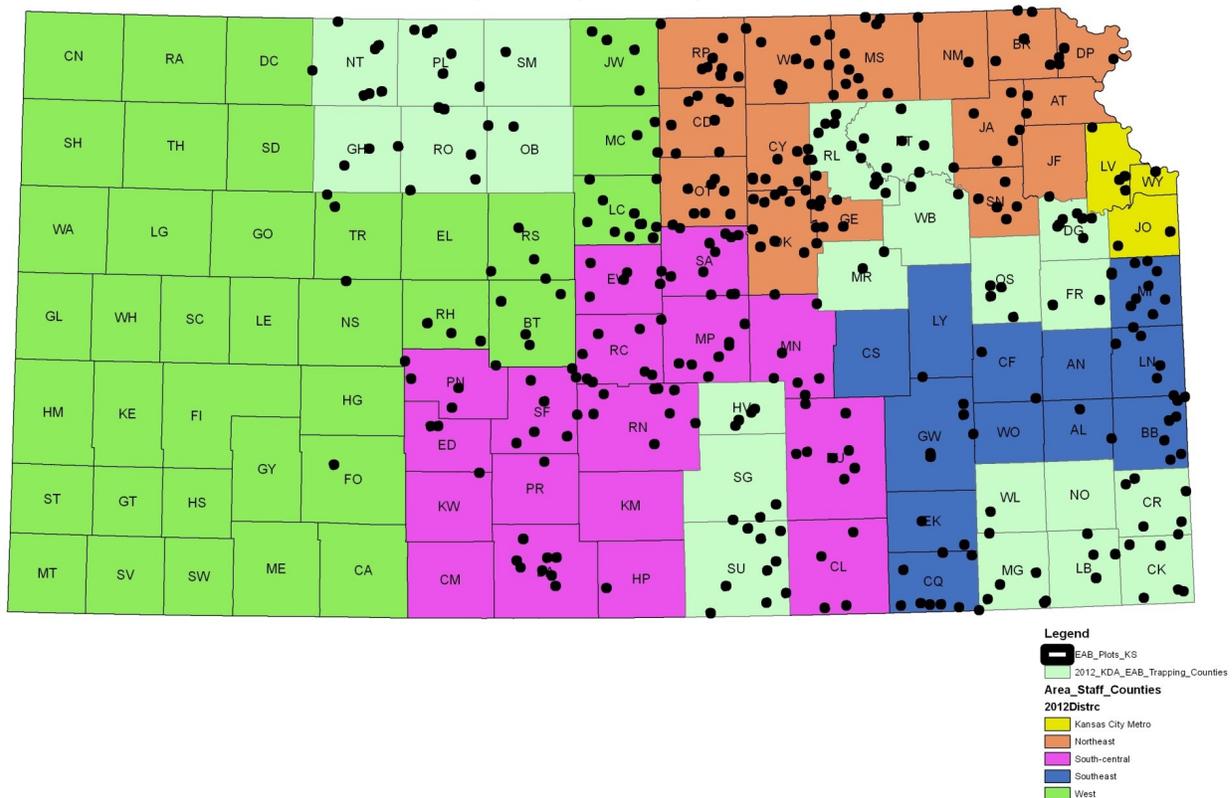


Kansas Forest Service is involved in projects to survey and prepare Kansas's urban and rural forestland owners for the arrival of EAB. August 26, 2012 Kansas enacted its EAB Quarantine for Wyandotte County. Information sessions with community leaders in Leavenworth, Wyandotte, and Johnson counties have been held to guarantee our cities have the necessary information needed for their EAB Strategic Plans.

State survey efforts were made during the late summer and early fall months to detect any new isolated populations. No new detections were made in non-quarantined counties. Visual surveys will continue in 2013 along with an increased deployment of purple traps. Traps will be placed at a greater frequency near the initial find, and at areas of high-risk like our heavily visited state campgrounds in the east, major travel corridors, and sawmills.

Additional Pest Detector Trainings have offered around the state to increase our detection efforts and keep our citizens informed. Training sessions to municipality leaders have been conducted in the tri-county region of Leavenworth, Wyandotte, and Johnson.

Statewide Purple Trap Survey for 2012



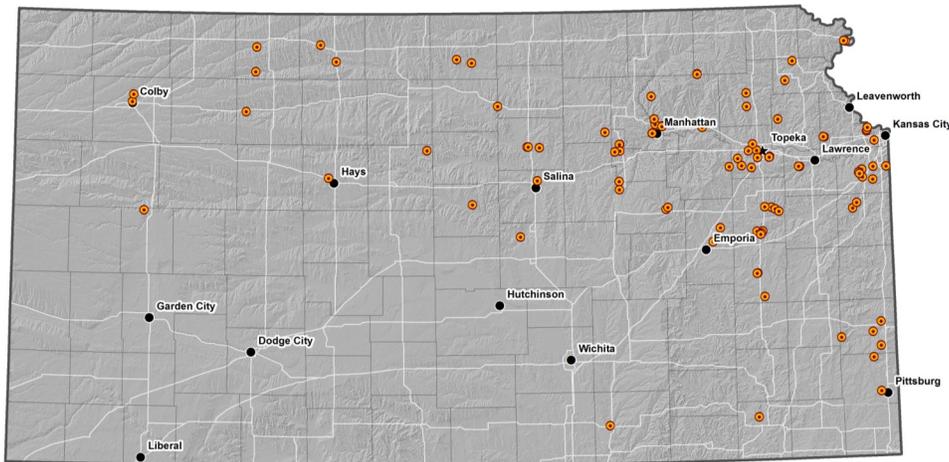
Thousand Cankers Disease (TCD)

Geosmithia morbida & *Pityophthorous juglandis*
 Black walnut most susceptible

This newly discovered disease has not been detected in Kansas, however Colorado is an infested state. Street-side and on the ground visual surveys of black walnut were conducted across the state. Lingering traps with lure were set up and monitored by Kansas Dept. of Agriculture at key locations statewide. TCD trainings occurred quarterly during the year to arborists, municipalities, and citizens. This will greatly increase the detection network and provide further outreach efforts.



Walnut Twig Beetle Trap Locations



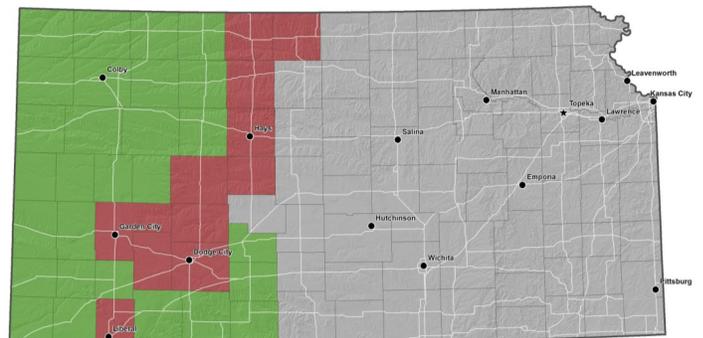
● Trap Locations



Pine Wilt

Bursaphelenchus xylophilus & *Monochamus* spp.
 Scots (most susceptible), Mugo, Austrian, and White pines

In 2011, eleven counties in western Kansas have had detections of pine wilt. Thus far, in 2012 we have not seen this disease move to any other counties. Pine wilt is caused by a plant parasitic nematode called the pine wood nematode, *Bursaphelenchus xylophilus*. The nematode is vectored by a long-horned borer, called a pine sawyer beetle. These beetles are of the genus *Monochamus*. They kill pine trees by feeding and reproducing in the resin canals of the branch and trunk. This disease is continuing to spread westward. Since most pines are planted in the state, windbreaks and conservation plantings are often damaged.



■ Pine Wilt established both in communities and rural settings.
 ■ Pine Wilt present, but limited to one or a few locations. Eradication ongoing.
 ■ Pine Wilt not yet discovered.

Other Forest Health Concerns

Exotic Species:

Asian Bush Honeysuckle

The non-native bush honeysuckles (*Lonicera maackii*, *L. tatarica*, and *L. x bella*) and their viney counterpart, Japanese honeysuckle (*Lonicera japonica*) have invaded many woodlands, forests, and nature preserves causing declines in species diversity and richness of native ground cover and mid-story vegetation (Miller 2004; Batcher and Stiles 2005). The loss of the fine-rooted forbs in the ground cover often has prompted an increase in erosion in these wooded areas, which has negative impacts on downstream aquatic systems.



Honeysuckle infestation can be ascribed, in part, to their adaptability to a wide variety of habitats and spread as a result of being a prolific producer of seeds (bush honeysuckles primarily) that are easily dispersed by birds. Japanese honeysuckle possesses rapid aboveground and belowground growth, is adapted to low-light environments, begins growth earlier and can continue growing later in the growing season than most other woodland species (Nuzzo 2005). Our urban woodlands around Wichita, Topeka, and the Kansas City metro area are now getting some much needed additional management to combat these invasive shrubs and vine. This project will need several seasons of control efforts in the prescribed high priority target areas controlled by county parks & recreation, Kansas Dept. of Wildlife, Parks & Tourism, and private stakeholders.

For Forest Health Assistance and further information on Forest Health in Kansas, please refer to the following contacts and links below.

Kansas Forest Service

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<http://www.kansasforests.org>

USDA Forest Service – Rocky Mountain Region

Forest Health Protection (FHP) – Forest Health Monitor

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www.fs.usda.gov/goto/r2/fh

