Report for State Fact Sheet

November 15, 2022

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Annual Forest Health Highlights:

Forest health Highlights are prepared on an annual (calendar year) basis, and previous years reports can be found at this link: https//www.kansasforest.org/forest_health

Changes to the Forest Health Program in 2022:

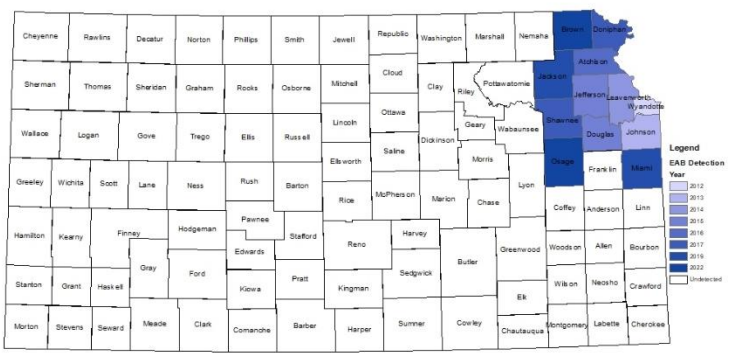
A new Forest Health Coordinator was hired on March of 2022 with dual responsibilities in rural forestry and forest health until the district forester position for the northeast could be filled in July 2022. The new Forest Health Coordinator provided on-board training or the new district forester until August 2022 and was able to transition full time to forest health responsibilities in mid-August 2022. The previous Forest Health Coordinator, Ryan Armbrust, accepted a job as the Rural Forestry Coordinator at the Kansas Forest Service and Ryan P. Rastok now serves as the Forest health Coordinator for KFS.

Planned and in-progress activities for 2022:

Emerald Ash Borer (EAB):

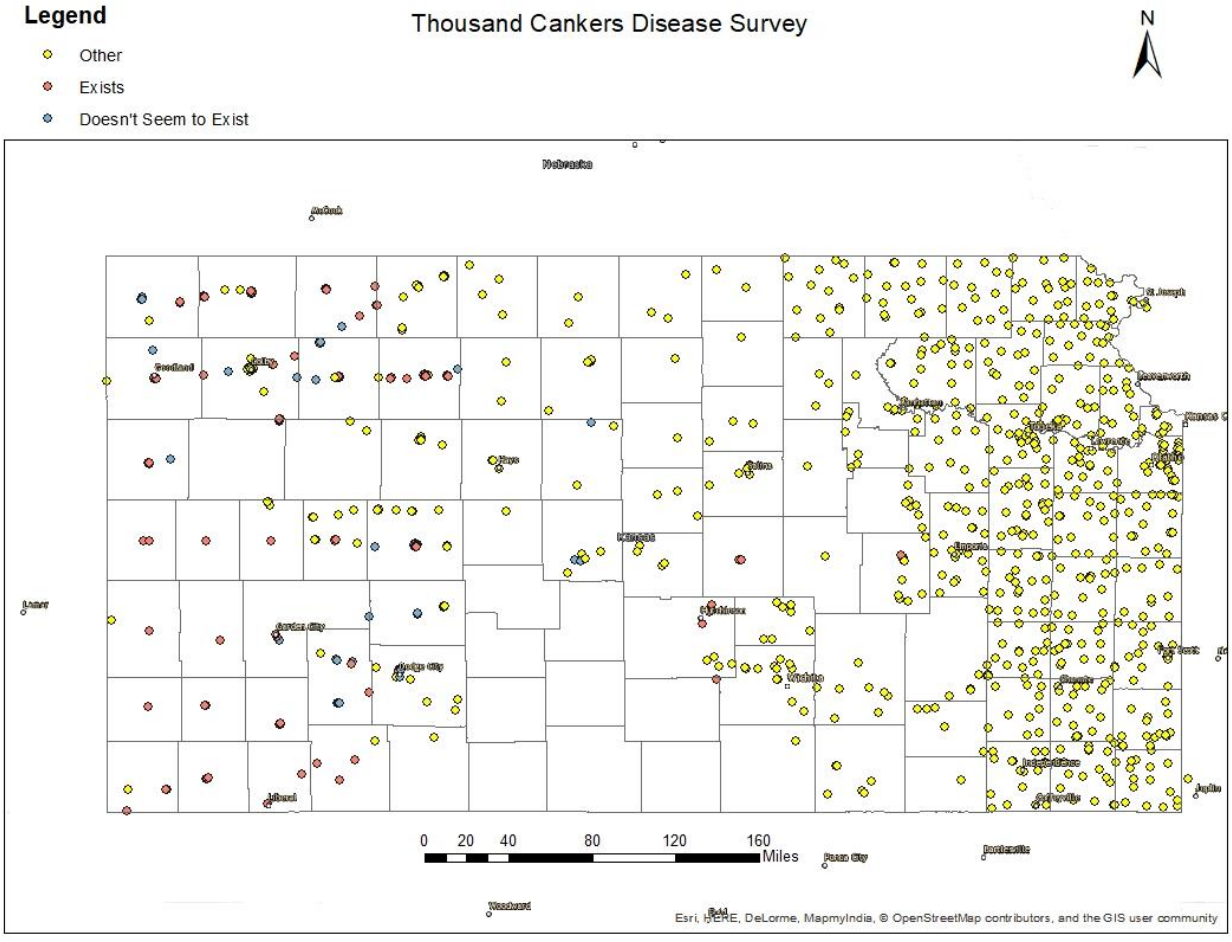
We will continue to monitor for EAB throughout KS and keep the map of known detections updated at the county level for communities and tree managers. We will continue outreach efforts with communities throughout the state to help strategize the best management options for their ash resources. We will collaborate with biocontrol operations where possible. New county detections were discovered in trap trees in two new counties, Brown and Osage. All the counties where EAB has been positively detected are still in a contiguous area in the northeast corner of the state consisting of 12 counties to date (map below). Seven trap trees were peeled in southeast KS in mid-November 2022 in the towns of Parsons, Pittsburg, Columbus, Baxter Springs, Chetopa, Oswego, and Wichita with no new detections. Visual surveys were conducted in Wichita and Manhattan. Several stressed trees were identified during these visual surveys and inspected closer, but no signs of EAB were found.

Emerald Ash Borer Detections as of 2022



Thousand Cankers Disease (TCD) of Black Walnut

KFS began updating and expanding a dataset from 2009/10 that was created to survey for early detection of TCD in KS. A subset of these 'sentinel walnuts' were located, assessed for condition, and photographed to track any future canopy decline. The nearest known location of TCS is Eads, CO. As such, the known walnuts were prioritized in 2021. 227 trees were evaluated and the information was updated using ArcGIS Field Maps to collect the information (map below). These trees will be reevaluated and new trees assessed in 2023.



Spotted Lanternfly Update:

In September of 2021, an adult spotted lanternfly was identified in the entomology collection of a student from Thomas County at the State Fair. KFS and KDA staff surveyed the alleged collection site in Colby, KS a few days after the insect was identified. The entire town was surveyed and no conspicuous evidence was found where spotted lanternfly could be positively identified and established. As such, there is no official detection of spotted lanternfly in KS because it couldn't be verified that the sample was collected in KS. Subsequently, KDA and KFS staff have revisited the site several times over the summer in and in September of 2022 and they did not find anything, or any signs of an established population. KFS and KDA will continue to monitor the area and report any developments.

Top reported and Diagnosed Tree Health Issues in Evergreens:

Abiotic/Environmental:

-Winter desiccation

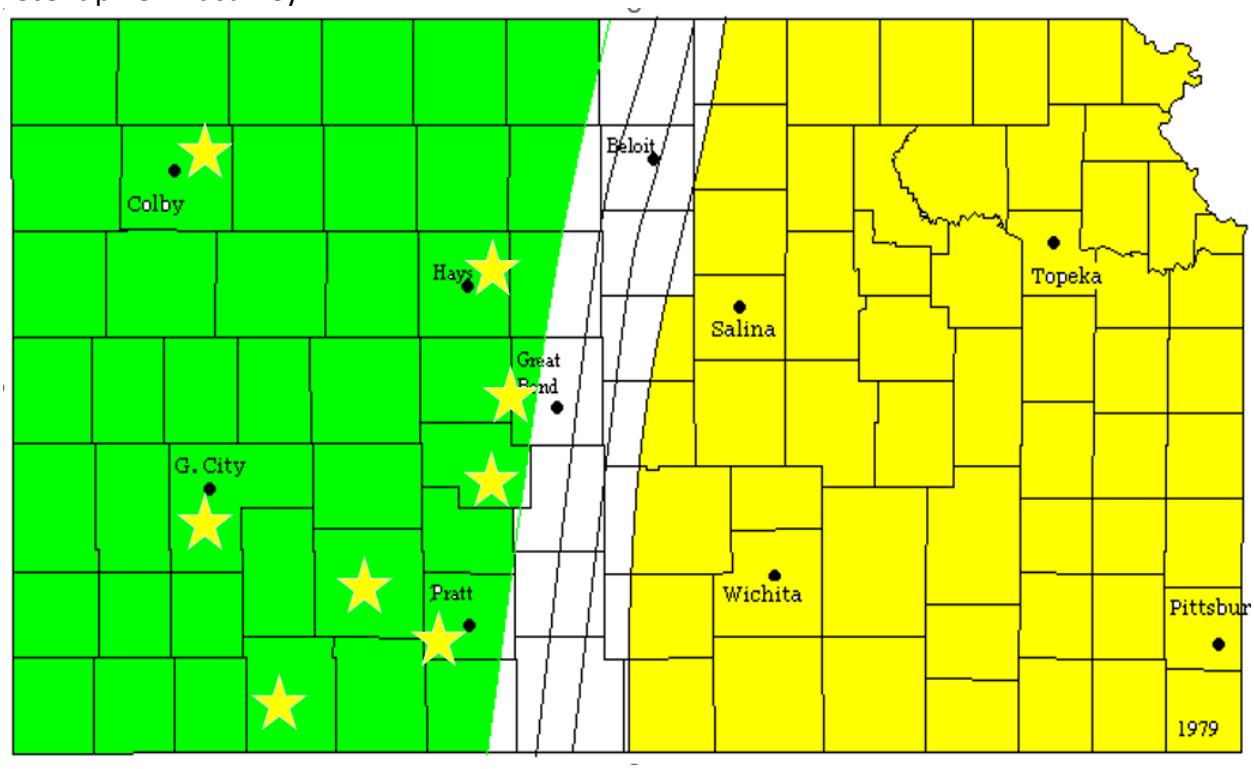
-Drought Stress

-Common in Spruce

-Heat Stress causing leaf scorch/drop

Insects and Disease:

-Pine Wilt (moving west). Some introductions on firewood. Below are the results of the recent pine wilt survey.



-Diplodia tip blight

-Dothistroma needle blight

-Spider mite Damage
    -Common on Spruce
-Rhizosphaera needle cast on Spruce
-Cytospora canker was occasionally reported in spruce
-Natural needle drop

Top Reported and Diagnosed Tree Health Issues in Deciduous Trees:
Several reports of declining oaks (red and white oak group) came from southeast, KS. Upon inspection, there was no conspicuous evidence of insects or disease. Many of the oaks were mature (40-50 years) and >15" DBH. All the trees observed were growing on marginal sites with shallow rocky soil. We will investigate more in the spring, but the general consensus is that environmental stress and drought are exacerbating the mortality of these oaks on marginal sites.

Several reports of honey locust mortality came in from Northeast, KS. Johnson county and Douglas county had the most activity of honey locust mortality reported. In some cases, these trees had honey locust spider mites present on the specimen/sample, but likely not the main factor to mortality, just an association to note. A few isolated cases had thyronectria canker, but this was very rarely reported and confirmed.

Several reports of rapid sugar maple mortality came in during the peak of the summer when temperatures were high. In every case that I personally observed, these trees had circling/girdling roots and were growing in places with significantly restricted soil volume along roadways and parking lots. Several samples were submitted to the plant pathogen diagnostic lab at K-State as being suspected of verticillium wilt, and none of those samples came back positive.

Abiotic/Environmental:
-Drought Stress
-Herbicide Damage
Insects and Disease:
-Hypoxylon Canker
-Oak wilt (not common, but being confirmed more). Confirmations in Northeast, KS.
-Tubakia Leafspot in oak
-Honey Locust Spider mite

Bur Oak: Galls & Herbicide: (update from 2021)

"KFS and the Nebraska Forest Service received a multi-state Landscape Scale Restoration grant from the USDA Forest Service to assess and respond to impacts on bur oaks in the Great Plains. This project is in the initial phase of a broader program to improve bur oak resiliency by examining herbicide injury and damaging oak galls. This first phase will focus on 20 priority landscapes, 11 in Nebraska, and 9 in KS encompassing multiple forest resources, including woodlands, rural community forests, conservation & and shelterbelt plantings. A stakeholder

survey will provide information about the extent of bur oak damage by these threats. Herbicide symptom documentation and tissue tests will provide baseline data currently lacking on the effects of herbicides on bur oak. Seed sources that are potentially resistant to galls will be identified. Test/demo plots will be established with long-term outcome of improved bur oak lines. Initial activities include collecting samples of bur oaks potentially impacted by herbicides for tissue analysis and assessing impact from three different gall-forming insects (*Disholcapsis quercusmamma*, *Andricus quercusfrondosus, Callirhytis flavipes)*." The funding has only recently been obligated so very little movement has occurred to this day, but will be moving forward with logistics over the coming year.

Invasive Plants:

Invasive plants continue to pose a threat to the Kansas Landscapes, with severe infestations of bush honeysuckle, callery pear, tamarisk, and others disrupting the functionality of a variety of ecosystems across the state. Supported by USDA competitive grant funding, KFS has partnered with local land managers to increase their effectiveness in treating invasive plants by offering remote sensing access to specialized equipment, technical assistance and leveraged grant funding to address these threats. Some developments of 2022 are as follows:

Callery Pear: We continued to map the distribution of callery pear throughout the landscape and are working on several projects to eradicate it in several areas. We are also working with collaborators in a multi-state area on efficacy trials for herbicide and burning treatments for callery pear. One particular project that will be starting in a few weeks is in Lawrence, KS for a prairie restoration project in which the prairie site has become overgrown with callery pear. This project will treat 5-10 acres of callery pear to restore the prairie ecosystem in that area. There has also been discussion on implementing a 'bounty program' targeting the removal and replacement of callery pear throughout KS. This is in the beginning stages and sounds promising.

Bush honeysuckle: We have expanded the number of 'backpack mistblower' units for the public to use to 14. This is a viable tactic for managing infestations of bush honeysuckle in the fall. Rural forestry staff is working with private landowners to manage bush honeysuckle. Bush honeysuckle continues to be the biggest threat to our rural forests in KS due to its propensity to establish in low light conditions, dominate the understory, and push out other native vegetation. Approximately 70 acres of honeysuckle were treated in 2022 using these mistblowers.

Sick Tree Requests:
KF and partner organizations are actively strategizing how to handle 'sick tree requests' throughout the state. Working with KSRE to devise a strategy for handling the increasing volume of requests with decreasing staffing. TBD

Continued emphasis is focused on outreach to landowners, agency partners, and others to identify insects, diseases, invasive plants, and abiotic stress factors to reduce negative impacts on our forests and woodlands and increase overall tree health and vigor.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