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Tri-Basin Topics

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Area Residents Should Prepare Now for Emerald Ash Borer

The Nebraska Department of Agriculture has announced that the emerald ash borer (EAB), an insect that destroys ash trees regardless of their size, age or health, has been found in two locations in Nebraska. The first affected tree is located in Pulaski Park in South Omaha. The second confirmed infestation is on private property in Greenwood, NE.

An adult emerald ash borer. Photo courtesy David Cappaert, Bugwood.org

While residents in the affected areas are working to prevent the spread of the insect and treat healthy ash trees to minimize loss, people in other areas of Nebraska, including Tri-Basin Natural Resources District (TBNRD), should be aware of the pest, but should delay treatment of ash trees. The Nebraska Forest Service recommends waiting until emerald ash borers are found within 15 miles of your ash trees to begin treatment.

"It may be two years, or it may be 20 years before emerald ash borer reaches our area," said John Thorburn, manager of Tri-Basin Natural Resources District (TBNRD) and Holdrege Tree Board member.

There are, however, a couple of things people in this area can do to prepare for the arrival of the emerald ash borer.

First of all, you can help prevent the spread of the insect. The primary means of the emerald ash borer's spread is through the transportation of ash wood (firewood, pallets, sawlogs, etc.), so the simplest way to prevent the spread of the pest is to use only local ash wood products.

"The insects can only fly a few miles a year on their own, but they have been spread to 27 states by people hauling infested wood," said Thorburn.

Second, you can identify ash trees on your property and begin planning for their treatment or removal. According to the Nebraska Forest Service, Nebraska's taxpayers and homeowners may spend over $900 million on ash tree removal, disposal and replacement over the next few years because of the emerald ash borer.

"Upwards of 80 percent of the ash trees will die within eight years after EAB is found in a community if nothing is done to manage the pest," said Eric Berg, Program Leader for Community Forestry and Sustainable Landscapes. "This can put a strain on city budgets and staff and create liability issues if dead trees are left standing. Nebraska municipalities need to be proactive in dealing with EAB."

Communities should begin identifying ash trees that are in poor condition, located under wires, or planted too close to sidewalks and buildings and consider removing those trees now to help spread the cost of dealing with emerald ash borer over more time.

As an individual, you can begin the same process on your own property. In appropriate locations, trees that are removed should be replaced with a diverse selection of trees instead of just a few species. This will help prevent other major losses of trees because of species-specific pests or diseases. Once EAB has reached our area, property owners and communities will only want to treat healthy ash trees, since treatments have to be administered every one to two years for the life of the tree in order to protect it from EAB.

Ash trees can be identified by their leaves, buds and stems that are located directly across from each other. The leaves are compound, typically consisting of 5 to 11 leaflets. Seeds are paddle-shaped and hang in clusters that stay on the tree until late fall or early winter. Photo courtesy Keith Kanoti, Maine Forest Service, Bugwood.org

For assistance in identifying ash trees on your property or for more information about emerald ash borer, contact your tree board or call Tri-Basin NRD at 1-877-995-6688.

Manager's Message

by John Thorburn

Dynamic Grasslands

South-central Nebraska was a vast grassy plain before the arrival of homesteaders in the 1870s and 1880s. It wasn't necessarily the "Sea of Grass" that early Oregon-bound emigrants frequently noted in their descriptions of eastern Nebraska, because lower average annual precipitation resulted in sod-forming, low-growing Buffalo grass and Blue Grama dominating much of the table lands outside the Platte Valley. In the valley itself, tall grasses, such as Little Bluestem and Indian grass were more prominent, due to the high groundwater table. That said, these native grasslands were and still can be a mosaic of plant and animal species, soils and terrain that change continually, defying generalization.

Variations in the frequency and vigor of dozens of species of grasses and broadleaf plants produce a variety of "micro-ecotones" that provide niches for many species of wildlife, ranging from lowly dung beetles to prairie chickens and prairie dogs. Mixed-grass prairies were impacted and to a great degree shaped by grazing ungulates like bison, elk, antelope and deer. Their grazing was seasonal and sporadic, but they significantly affected the landscape because of their huge numbers. Pre-settlement bison herds consisted of millions of animals. Their impact was most substantial and severe in and around water sources such as streams and Rainwater Basin wetlands. These areas were frequently trampled, compacted and grazed hard, which influenced the plant species mix.

Another group of animals, insects, have a strong influence on grasslands, but we rarely give them much thought. Most grasses are wind-pollinated, but insects are the primary pollinators of most broad-leaved plants. Earthworms and other decomposers break down dead plant and animal matter into humus that fertilizes successive generations of vegetation. Insects also consume live plants. A dramatic, but often forgotten, example of insect consumers are locust swarms. Up until the mid-1870s hordes of locusts regularly passed over the plains in countless numbers, blocking out the sun and eating everything in their paths. They were unintentionally exterminated by settlers as they plowed up river valleys, where the locusts laid their eggs in moist, sandy soils.

Meteorological phenomena also strongly influence the appearance and composition of grasslands. Residents of this region know that there is no such thing as "average" rainfall on the plains. Our average annual precipitation is about 24" per year, but averages obscure the extremes of which they are composed. The climate record is riddled with examples of wild swings in rainfall from one year to the next. Reviewing weather data from Holdrege, Nebraska as an example, you will find one of the wettest years on record at this location, 1915, had 40.7" of annual precipitation. The preceding year was exceedingly dry, with just 16.3" inches of moisture. More recently we had 31.3" of precipitation at Holdrege in 2011, but just half that amount (15.8") the following year. Climatologists warn that Global Climate Change could result in even more drastic variations in rainfall in the future. Such variations of moisture affect the growth rate and seed production of all plants, but some species are more resilient than others. Early or late freezes and heavy snow in winter also sporadically, but sometimes dramatically, alter grasslands.

Another disturbance of grasslands worthy of consideration is fire. Fire is the "reset button" of grassland ecosystems. Fire occurs naturally as a result of lightning strikes, but it was also widely used as a tool and a weapon by both Native Americans and whites. Prairie fires could be truly epic events, sweeping over hundreds of square miles in a few hours, driven by ceaseless winds. Wildfires not only changed the density and mixture of grasses and other prairie plants, they also limited the ability of trees to expand their range onto the plains. More recently, we have learned to manage and use fires to reinvigorate grasslands. Prescribed burning of grasses is an important tool of both ranchers and wildlife habitat managers.

We have transformed most of the native grassland of our region into highly productive cropland, capable of feeding both our own citizens and much of the rest of the world. This is a beneficial and necessary change, but this massive alteration of land use has disrupted or eliminated many of the natural disturbance mechanisms that maintained a dynamic equilibrium in grassland ecosystems. The bottom line is that grasslands need regular disturbance from a variety of causes to be dynamic and healthy. Leaving them undisturbed is unnatural and ultimately harmful to them and the animals that call them home.

Tri-Basin NRD Interns Gain Natural Resources Experience

The Tri-Basin NRD Summer Internship Program gives college students an opportunity to gain natural resources management experience. Interns collect and test groundwater quality samples, monitor wildlife habitat, test irrigation system efficiency, and help maintain drainage improvement project areas, or IPAs. The interns also work with staff from Central Nebraska Public Power and Irrigation District, the USDA Natural Resources Conservation Service and the Phelps County Weed Control Authority. TBNRD currently has three interns.

Justice Mott, Dalton Refior, and Shelbi Strong are working as interns at Tri-Basin NRD this summer.

Justice Mott is originally from Jacksonville Beach, FL. He attends the University of Nebraska-Kearney and is studying geography, GI science, and history. He is a member of the Nebraska Army National Guard and is a fan of the Jacksonville Jaguars.

Dalton Refior has returned to TBNRD for a second summer. He is from Loomis and attends the University of Wyoming, where he is studying rangeland ecology and watershed management and environmental natural resources. Dalton attends the Loomis Evangelical Free Church, coaches peewee wrestling and little league baseball, and serves as a counselor at Camp Joy in Alma. He enjoys hunting and fishing.

Shelbi Strong is from rural Phelps County. She is studying agricultural economics and grazing livestock systems at the University of Nebraska-Lincoln. She is a University Health Center Student Advisory Board member and attends Wilcox Community Church. Shelbi's interests include being outdoors and traveling.

Flowmeter Checks Suggested

Check flowmeters on your wells periodically throughout the irrigation season. Making sure that your flowmeters are working properly benefits both Tri-Basin NRD and you, as an irrigator, so that you can keep accurate irrigation records. It is the responsibility of producers to make sure flowmeters function properly during the irrigation season.

Producers who have Senninger brand flowmeters may want to make sure the batteries they are using are the correct size. These meters take lithium 3.6 volt batteries instead of standard 1.5 volt AA batteries. Using standard AA batteries will cause these flowmeters to not work properly.

Assistance Available to Treat Phragmites Infestations

Phragmites is an invasive perennial that is found in wet areas, such as along rivers, ponds, creeks, CRP acres, and sub-irrigated ravines and road ditches. It spreads by both seed and rihzomes, so it can spread tenfold in a single season. It has no forage value for livestock or wildlife.

Phragmites is on Nebraska's Noxious Weed list, which means that landowners are required to treat infestations on their property. The Twin Valley Weed Management Area (TVWMA) has worked diligently over the past several years to combat phragmites along the area's river channels. If the weed is allowed to go untreated on private property, however, the TVWMA's progress will be in vain. The TVWMA, with grant funding from the Nebraska Environmental Trust, is providing assistance to landowners in treating phragmites. If you have phragmites on your property, contact Charles Brooks at the Tri-Basin NRD office, to find out if you're eligible to have it sprayed free of charge.

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Summer 2016

Non-Profit Permit
U. S. Postage
PAID
Holdrege, NE 68949
Permit No. 220

Tri-Basin Natural Resources District
1723 Burlington St. Holdrege, NE 68949
(308) 995-6688
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www.tribasinnrd.org

RETURN SERVICE REQUESTED

Nebraska's NRDs: Protecting Lives, Protecting Property, Protecting the Future

CALENDAR

July 4 .....NRD Closed for Independence Day

July 12 .....NRD Board Meeting, 1:30 p.m.*

August 9 .....NRD Board Meeting, 1:30 p.m.*

September 5 ..... NRD Closed for Labor Day

September 13 .....NRD Board Meeting, 7:30 p.m.*

September 13-15.....Husker Harvest Days near Alda

September 22 ..... Rainwater Basin Conservation Day at Sacramento-Wilcox WMA

* Times are tentative. All meetings are at TBNRD office in Holdrege unless otherwise noted.

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