

Great Plains Tree and Forest Invasives Initiative

A MULTI-STATE COOPERATIVE EFFORT FOR EDUCATION, MITIGATION AND UTILIZATION

Emerald ash borer (EAB) is a highly invasive, exotic insect that attacks and kills all species of North American ash trees. Since its introduction from China in the early 1990s, EAB has killed more than 50 million ash trees in Michigan, Illinois, Indiana, Ohio, Pennsylvania, Maryland, West Virginia, Virginia, Missouri, Wisconsin, Minnesota and Ontario and Quebec, Canada. Across the United States, hundreds of millions more ash trees are at risk.

Funded by a U.S. Forest Service grant and matching state funds, state forestry agencies in Kansas, Nebraska, North Dakota and South Dakota are engaging in a regional initiative to prepare for the arrival of invasive pests, such as EAB, that threaten tree resources in the northern Plains. The Great Plains Tree and Forest Invasives Initiative (Great Plains Initiative) gives state forestry agencies the opportunity to work together to create public awareness, promote alternatives to ash tree plantings and prepare for invasive's arrival by assessing the region's tree resources and determining and addressing the potential impacts of EAB to those resources.

WHAT IS AT RISK?

Ash concentrations are higher in the northern plains than anywhere else in the United States. Ash populations average 25–35 percent of the total tree resource for most communities in Kansas and Nebraska and increase to as much as 60 percent in some North Dakota communities. In rural landscapes, green ash dominates riparian ecosystems, native forests, woodlots and conservation plantings, such as windbreaks. In fact, estimates show more than 50 percent of windbreaks or farmsites in the northern plains contain green ash.

EAB's impact can be compared to that of Dutch elm disease, which killed millions of American elm trees throughout the country, and chestnut blight, which has all but eliminated the American chestnut tree from forests in the eastern United States. Costs of removing, disposing of and replacing community trees lost to EAB can average \$600–800 per tree. Coupled with economic benefits associated with trees lost to EAB, such as reduced energy costs and ecosystem services, the insect's impact could far exceed \$1 billion dollars per state.

EAB: AN APPROACHING THREAT

EAB (*Agrilus planipennis* Fairmaire) is a highly destructive pest that poses a new and substantial threat to our rural and urban forests.

EAB was first identified in 2002 near Detroit, almost 10 years after its introduction to the U.S. from China. By early 2008, EAB had killed more than 50 million ash trees in Michigan, Illinois, Indiana, Ohio, Pennsylvania, Maryland, West Virginia and Ontario, Canada. State and federal quarantines are currently in place, involving significant survey, containment and eradication operations in affected areas.

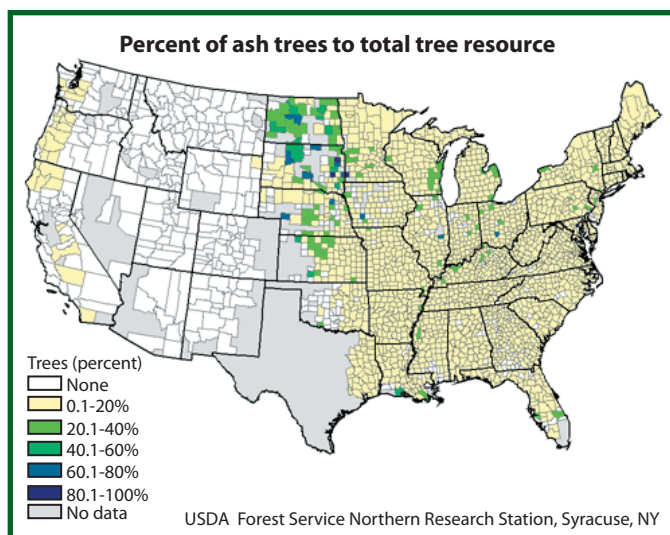
EAB is spread primarily through the transport of firewood and infested nursery stock. Across the U.S., hundreds of millions of ash trees are at risk. Trapping and eradication efforts have not been successful. Insecticide injections provide some protection from EAB, but do not eradicate the insect.

Most EAB experts believe it is only a matter of time before this pest is found throughout eastern and central North America; however, as

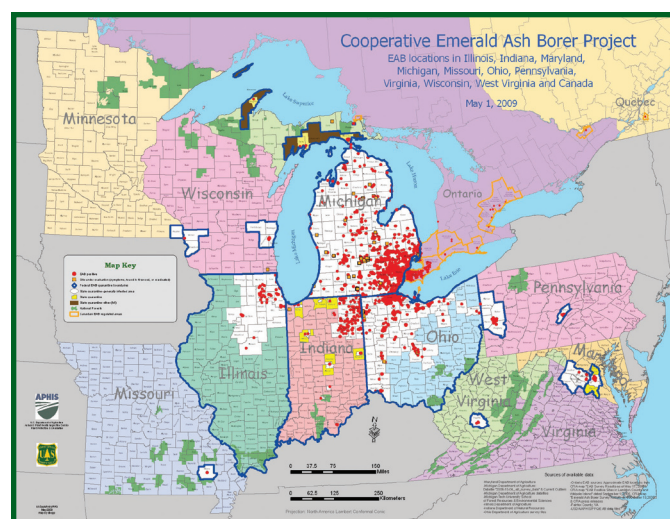
of May 2009, EAB has not been detected west of Missouri.



Photo: David Cappaert, www.forestryimages.org



Because of ash's popularity in both community and rural landscapes, EAB has the potential to decimate forest resources throughout the U.S., particularly in the northern plains where ash accounts for up to 60 percent of some community and native forests.



Since its introduction to the U.S. from China in the early 1990s, EAB has killed more than 50 million ash trees in Michigan, Illinois, Indiana, Ohio, Pennsylvania, West Virginia, Maryland and Ontario, Canada. Because EAB attacks and kills all native ash species, including white, green, black and autumn purple ash, hundreds of millions of trees across the U.S. are at risk.

WHAT WILL BE ACCOMPLISHED?

As part of the initiative, states will:

- assess regional rural and urban forest resources;
- develop public education programs to inform the public of invasive species, their threats and how citizens can get involved in prevention, detection and mitigation efforts;
- create and establish regional, citizen-based monitoring and detection networks; and
- identify and cultivate markets for the vast quantities of waste wood generated by trees lost to invasive species.

Ash Resource Assessment

Both urban and rural areas in each state are being surveyed to determine the location of ash resources, the percent of the total tree resources likely to be impacted by EAB and areas most at risk to EAB. These assessments will help pinpoint areas where EAB is most likely to be discovered, as well as determine the potential volume of wood available for utilization and estimated costs of removing and replanting trees lost to EAB.

Among the four states, nearly 2,000 communities and 2.2 million acres are being sampled. Assessment results will be applied geospatially, allowing forestry professionals to target efforts to areas most at risk.

Education and Outreach

A well-informed public is essential to combating invasive species. In many areas where EAB has been found, well-educated citizens who suspected EAB infestation were the first to contact natural resource professionals. For EAB, a series of educational materials, both print and electronic, are being developed to inform people of EAB's threat, how to identify both the insect and ash trees and alternative species for landscape plantings.

Monitoring and Detecting

The project will establish a monitoring system for early detection of an invasive species infestation. In the case of EAB, it is most commonly spread through infested ash firewood. Therefore, locations most likely to have infested firewood and areas where firewood is most likely to be used, such as campgrounds, will be closely monitored. States will work closely with Departments of Agriculture and USDA Animal and Plant Health Inspection Service (APHIS) to develop the most effective detection methods.

Marketing and Utilization

Dead and dying trees generate a tremendous volume of wood. Opportunities for utilizing this wood to foster rural economic development will be explored.

EAB TIMELINE

Mid-1990s

- EAB is thought to have arrived in the U.S. on solid wood packing materials from Asia.

2002

- EAB discovered near Detroit, Michigan.

2003

- EAB discovered in Ohio.
- EAB transported to Maryland on infested nursery stock from Michigan.

2004

- EAB discovered in northern Indiana.

2006

- EAB discovered in northern Illinois.

2007

- EAB discovered in Pennsylvania and West Virginia.
- Great Plains Tree and Forest Invasives Initiative established to prepare for EAB's arrival in the northern plains states.

2008

- EAB discovered in Missouri, Virginia and Wisconsin.

Sources: www.emeraldashborer.info, Maryland Department of Agriculture.

TO LEARN MORE

For more information about the Great Plains Initiative or to request materials distributed by the group, contact any of the state forestry agencies involved or Steve Rasmussen, Nebraska Forest Service district forester and Great Plains Initiative coordinator, at srasmussen2@unl.edu or 510 N. Pearl Street, Suite C Wayne, NE 68787.

For more information about emerald ash borer visit www.emeraldashborer.info, www.na.fs.fed.us (USFS Northeast Area) or www.msue.msu.edu (Michigan State University Extension).



Ash's adaptability and beautiful fall foliage have made it a desirable landscape tree. For decades, it has been planted extensively in communities across the country, meaning EAB has the potential to turn lush urban forests into barren, shadeless landscapes. Photos: USDA APHIS.



www.nfs.unl.edu



www.ndsu.nodak.edu/forests-service/



www.kansasforests.org



www.state.sd.us/doa/forestry



www.fs.fed.us



Mixed Sources
Product group from well-managed forests, controlled sources and recycled wood or fibre.

Cert no. SW-COC-002827
www.fsc.org
© 1996 Forest Stewardship Council