

Great Plains Tree & Forest Invasives Initiative – Preparing for Emerald Ash Borer and other Invasives

Great Plains Tree and Forest Invasives Initiative

A Multi-State Cooperative Effort for:
Education – Mitigation – Utilization



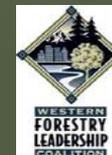
Drafted by the Nebraska Forest Service
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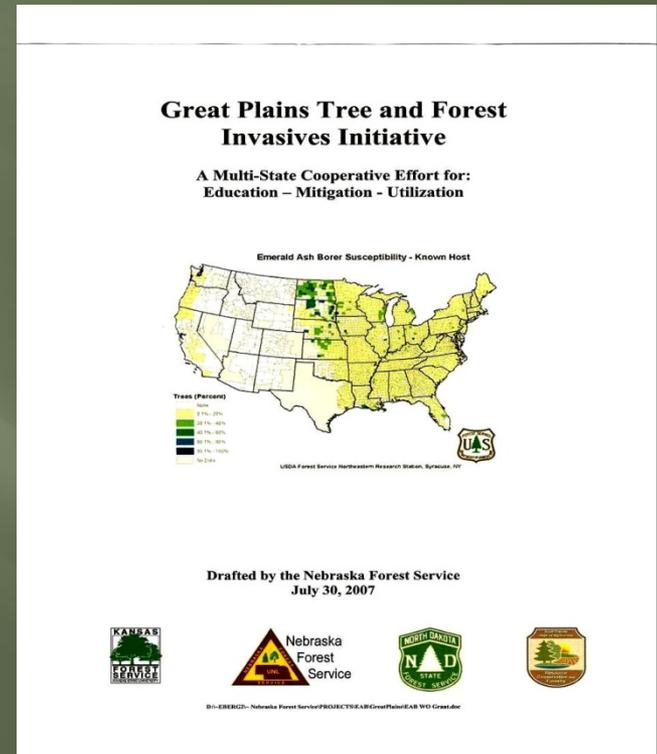
Great Plains Riparian Forest Management Summit
September 9-11, 2008
Sioux Falls, SD

Steve Rasmussen, NFS District Forester and GPI Coordinator



Great Plains Tree & Forest Invasives Initiative (Great Plains Initiative, GPI):

- Multi-state cooperative effort to prepare for and better manage invasive pests of trees
- Funding & support provided by the US Forest Service with two, one- year grants to state forestry agencies in Kansas, Nebraska, North Dakota and South Dakota
- Focus on Emerald Ash Borer, (*Agilus planipennis*, EAB), but to be applicable for any tree pest
- State Forestry Agencies take the lead with cooperation from other state agencies, university faculty, USDA offices, conservation districts and other natural resource entities

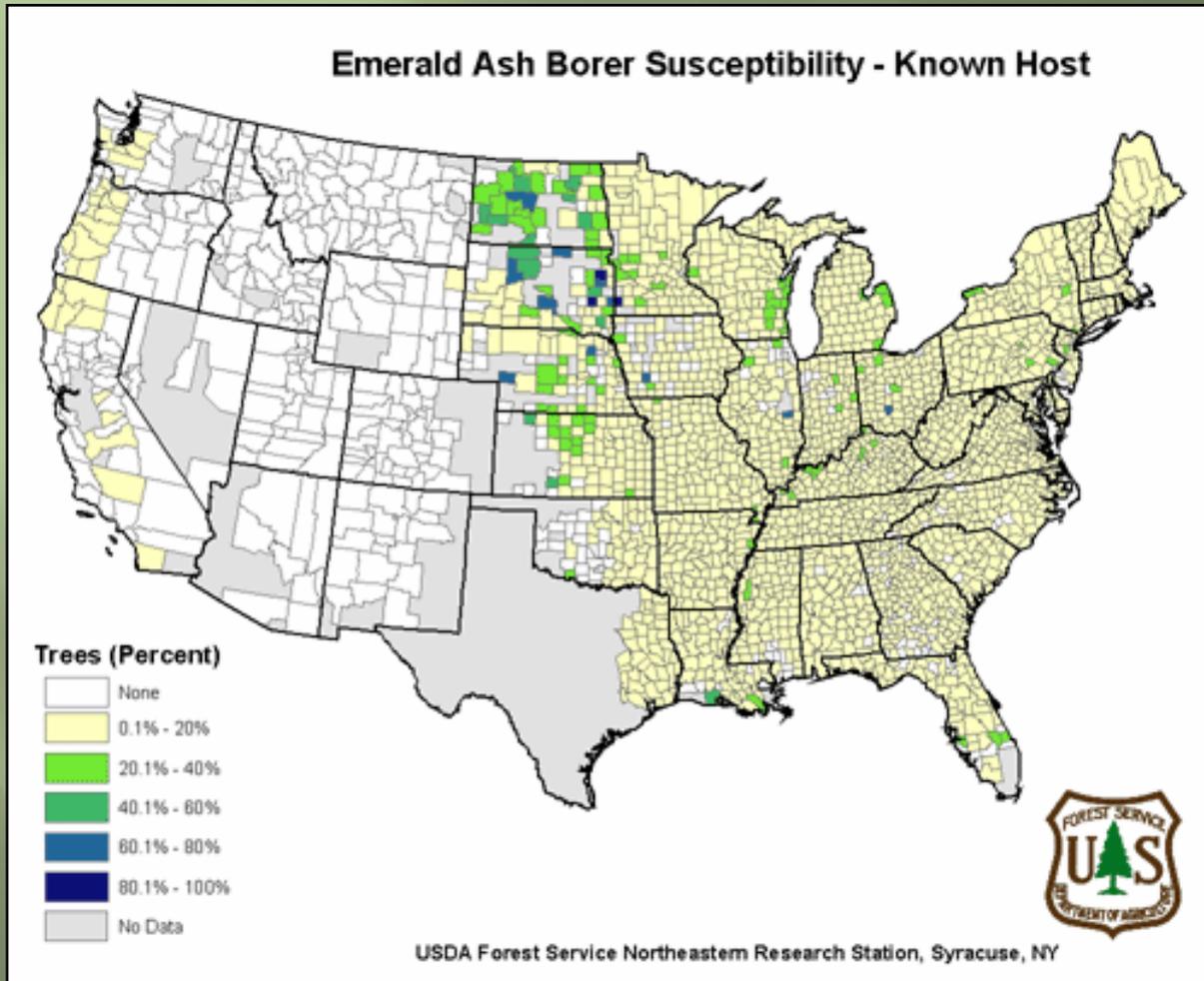


There is a common need for the Great Plains Initiative

- ▣ The four north central Great Plains states share a common tree resource concern due to limited tree resources and the general lack of tree diversities on the Great Plains
- ▣ Across the region, the impacts could be worse than Dutch Elm Disease
- ▣ GPI project is structured to prepare for EAB and other future invasives



Ash (*Fraxinus* spp.) resource at risk:



- Green ash (*Fraxinus pennsylvanica*) is a common woodland tree and a popular native specie to plant
- Represents 20 – 40% of many community forests
- Estimated to be in 50% of the conservation tree plantings in some areas
- Major component of riparian forest buffers

Area of total and riparian forestlands

State	Total forestland area (acres)	Riparian forestland area (acres)	Riparian (%)
ND	701,400	135,000	19
SD	1,734,700	126,800	7
NE	1,317,200	363,200	28
KS	2,103,900	590,300	28

Source: USFS Forest Inventory Analysis 2006 Data on identified Forestland (minimum 1 acre size, 10% stocked and 120 feet width)

Area and percent of forestland with ash present

State	Area of forestland where Ash is present (acres)	Percent of forestland area
ND	507,700	70
SD	185,200	11
NE	421,100	34
KS	682,700	32

Source: USFS Forest Inventory Analysis from 2005 Data on identified Forestland (minimum 1 acre size, 10% stocked and 120 feet width)

Emerald Ash Borer (*Agrilus planipennis*)

- ▣ Attacks all North American ash trees regardless of age or condition
- ▣ Kills trees in 3 – 5 years
- ▣ No known natural pests have been identified
- ▣ Control and quarantine measures have not been successful
- ▣ Recently (July/August, 2008) has been found in Missouri and Wisconsin bringing the total to 10 states and several provenances in Canada

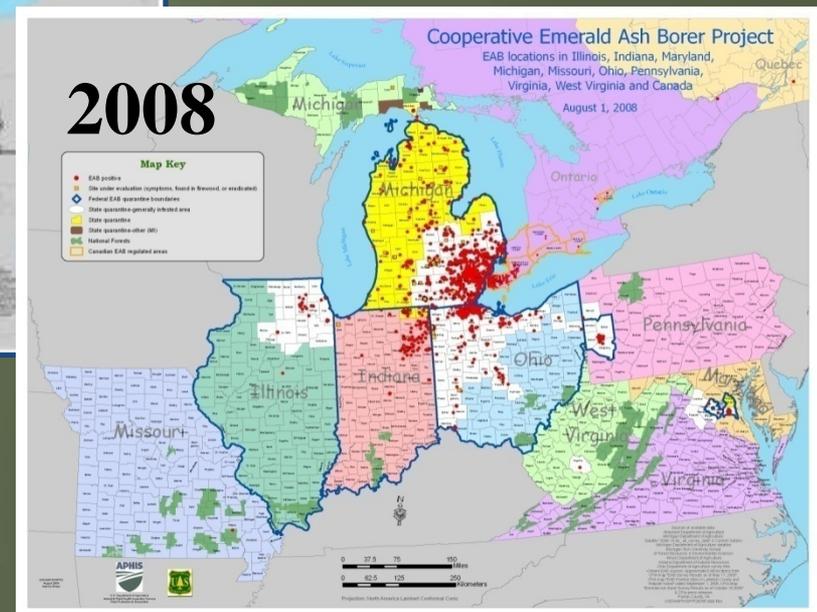
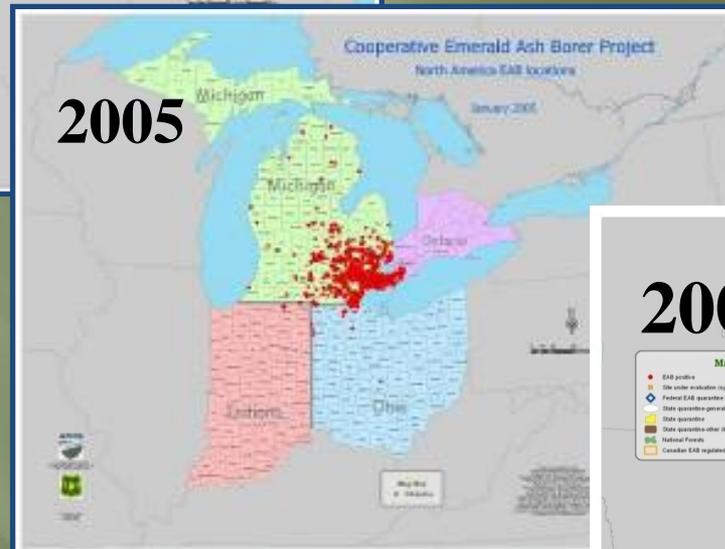


For complete information on EAB visit the national website: emeraldashborer.info

Emerald ash borer has not been stopped or contained since being identified in 2002



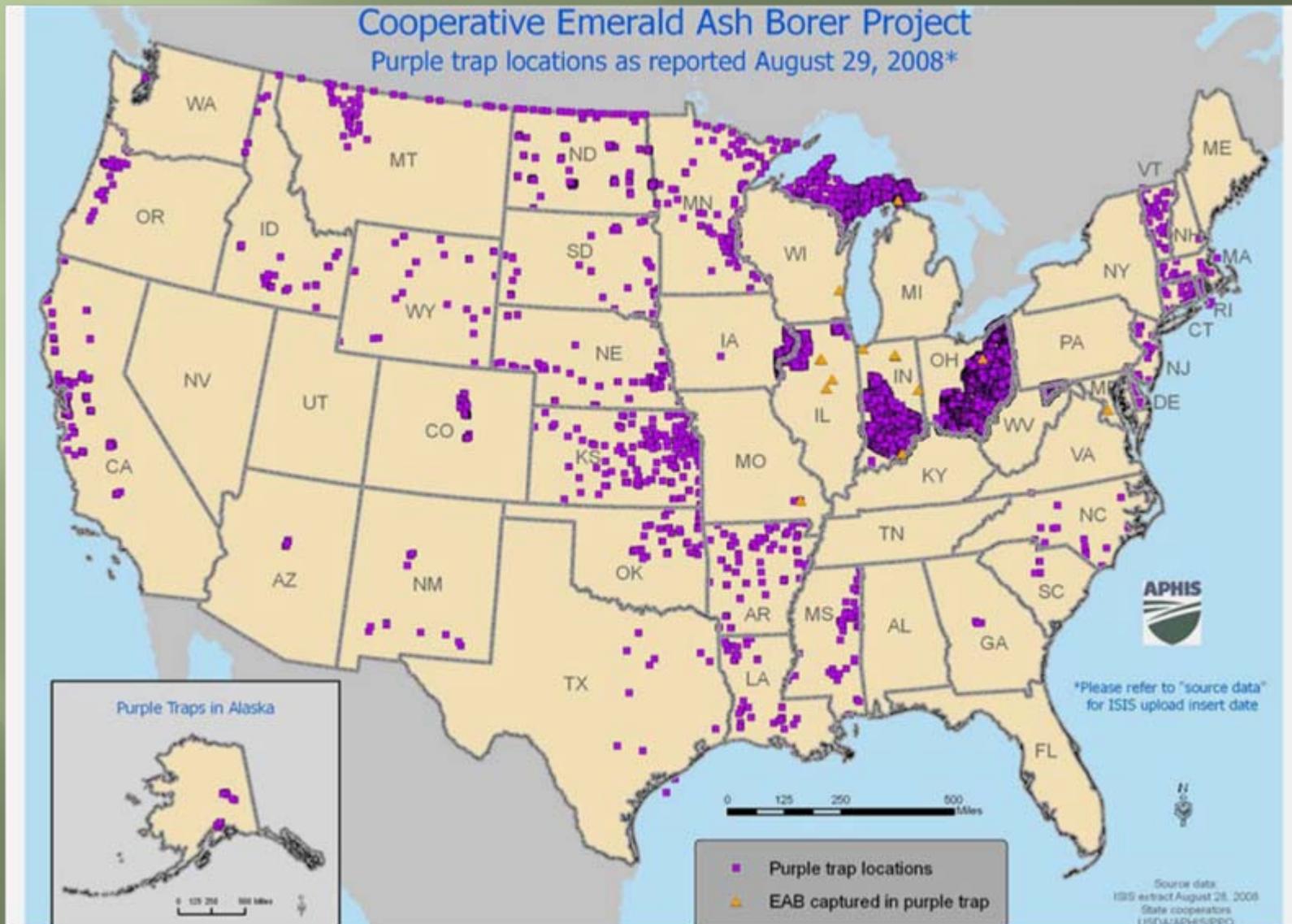
NOTE - These represent confirmed finds NOT extent of spread.



The actual extent and spread of EAB is unknown.

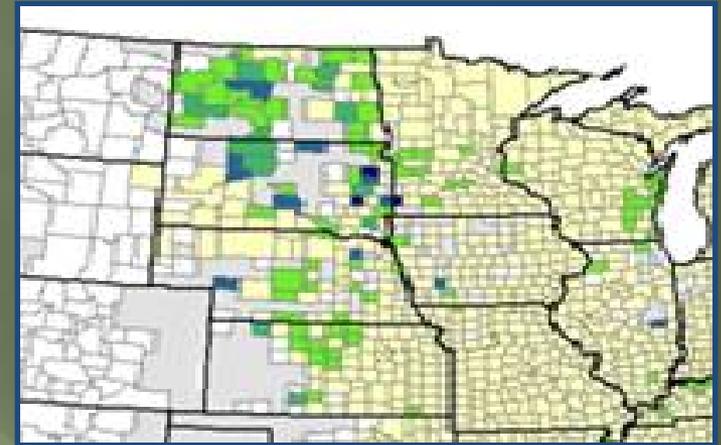
Emerald ash borer is a national threat and has most parts of the country worried

Cooperative Emerald Ash Borer Project
Purple trap locations as reported August 29, 2008*



With this national threat and great concern in the Plains, the USFS provided grant funding for GPI with the following guiding principles :

1. Landscape-scale approach
2. Collaborative planning and implementation
3. Prioritization of outcomes
4. Innovative use of technology



GPI was proposed with six primary objectives (over 2 years)

1. Comprehensive tree resource assessment of urban and rural tree resources across the four state region
2. Education and outreach



GPI objectives (cont.)

3. Monitoring and detection
 - Citizen monitoring and detection
 - Firewood movement education

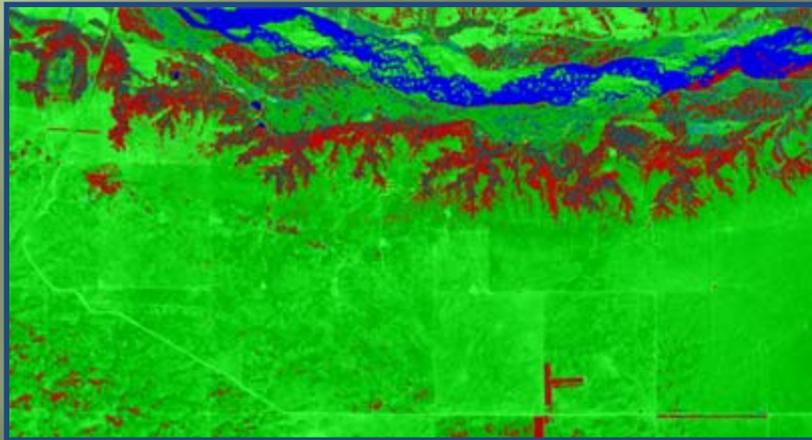


4. Marketing and utilization



GPI objectives (cont.)

5. State and regional planning for EAB readiness and other invasive pests
6. Geospatial mapping



GPI accomplishments: 2007- 2008

- ▣ Developed new, fast, low cost, statistically-valid inventory models for:
 - Agroforests & linear forests (non USFS classified “forestland”)
 - Urban and community forests, enabling extensive analysis via the I-Tree suite of tools
 - Integrate FIA, agroforest & Urban Forest Effect Model (UFORE) for consolidated data analysis & geospatial products
 - Uses new and cutting edge technology - iPAQ pda units with drop down menus, LaserAce hypsometers, & Garmin GPS
 - 1,200 inventory plots measured summer of 2008



GPI accomplishments: 2007- 2008 (cont.)

- Identified education needs and existing resources, implement outreach program (EAB Awareness Packets) to targeted groups:
 - agency/extension personnel, campgrounds, fuel wood entrepreneurs, legislators & government leaders, general public, etc.



GPI accomplishments: 2007- 2008 (cont.)

- ▣ Developed citizen monitoring system for early detection and this is being looked at by other states and region
- ▣ Over 1,000 kits have been distributed in the Great Plains with other regions and Canada interested in the methodology.

Emerald Ash Borer **Detection Kit**

For submitting an insect suspected of being
emerald ash borer



Nebraska Forest Service UAS APHIS
UNIVERSITY OF Nebraska

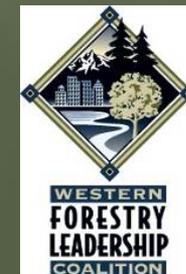
Dave Campsen, Michigan State University, Bugwood.org

GPI accomplishments: 2007- 2008 (cont.)

- ▣ Over fifty presentations, news releases and information sheets developed and shared at workshops, arborists meetings, landscape conferences, tree care projects, and other tree related functions,
- ▣ Core team members and others will go to Brighton, MI for an intensive EAB Clinic sponsored by USDA APHIS and visit with MSU and USFS research scientists for the most current and up –to – date information on EAB and invasives
- ▣ Fostered a close working partnership among state forestry agencies, the USFS and other partners

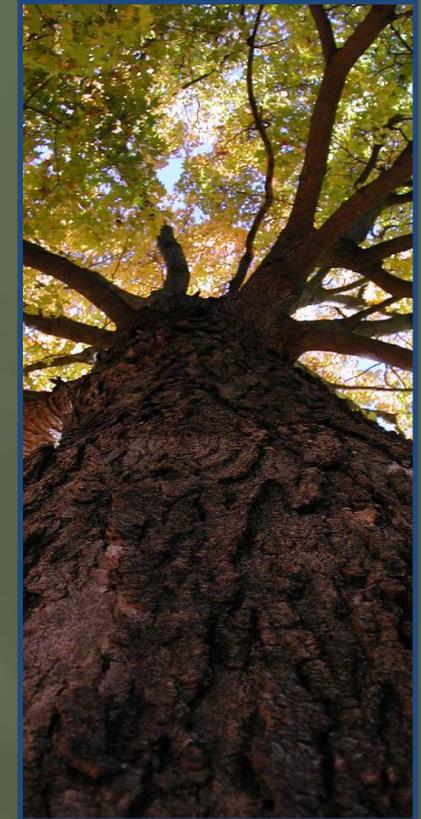
Examples of additional partners within the four states that have helped with the GPI project the first year:

- ▣ Western Forestry Leadership Coalition
- ▣ State Game and Parks agencies
- ▣ Land Grant Universities and Extension
- ▣ Green Industry (arborists & nursery)
- ▣ USDA APHIS, NRCS and USFS
- ▣ Soil & Water Conservation & Natural Resource Districts
- ▣ State Departments of Agriculture
- ▣ Community Agencies and Tree Boards



Second year proposed activities: 2008-2009

- ▣ **Conduct 2nd round of regional urban / agro-forest inventories**
- ▣ **Develop geospatial applications & products of all inventory & other data**
- ▣ **Continue implementing targeted education & outreach programs**
- ▣ **Use inventory and geospatial data to identify and/or develop markets for ash wood**
- ▣ **Integrate inventory data into state forest assessment & response plans**
- ▣
- ▣ **Develop Great Plains regional EAB readiness / initial response plan for state forestry agencies**



GPI's proactive work will better prepare the states and save resources:

- Pro-active involvement and awareness of EAB and other invasive pests will make for a quicker response when the pest arrives
- Prior actions of promoting tree specie diversity and the removal of currently poor growing ash trees will make removals less burdensome when EAB arrives
- Early detection will help to keep infestations small. Smaller infestations are far cheaper to manage than larger infestations
- Slower spread allows communities and states to even out removal & replacement costs over time



End / Questions

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University of NE – Lincoln approach
to EAB resistant trees

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