Preparing for the Emerald Ash Borer at Kansas State University
Native Range: Russian Far East
Mongolia, China, Japan, Korea, Taiwan
All species of ash (*Fraxinus* spp.) attacked by EAB and *all horticultural cultivars* of these species.
What’s At Risk?

Ash trees lining a street before (left) and after (right) they were decimated by EAB.
31 States + D.C. Initial detection in SE Michigan near Detroit, Summer 2002
Life Cycle: Typically 1 Gen/Year

Adults: May - July
Hatch in 7-9 days. Females mate several times. Avg. 77 eggs laid in crevices.

Eggs: May - July

Pupa: April – June

Prepupa: Oct – April

Larva: June – Oct.
Ash Mortality from EAB

Years After First EAB Infestation

Percent Mortality

Options

EAB Mortality
K-State Ash Inventories

Ash Tree Locations - Manhattan

Ash Tree Locations - Polytechnic
### Summarized Ash Tree Data: Manhattan Campus
**Inventoried July 17, 2017**

<table>
<thead>
<tr>
<th>Diameter by Range</th>
<th>0 to 5.99&quot;</th>
<th>6&quot; to 11.99&quot;</th>
<th>12&quot; to 17.99&quot;</th>
<th>18&quot; to 23.99&quot;</th>
<th>24&quot; to 29.99&quot;</th>
<th>30&quot; to 35.99&quot;</th>
<th>36&quot; to 41.99&quot;</th>
<th>42&quot; to 47.99&quot;</th>
<th>48+&quot;</th>
<th>Total Trees</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Good Condition</strong></td>
<td></td>
<td></td>
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<tr>
<td>All Ash</td>
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<td>28</td>
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<td>30</td>
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### Summarized Ash Tree Data: Polytechnic Campus
**Inventoried January 19, 2018**

<table>
<thead>
<tr>
<th>Diameter by Range</th>
<th>0 to 5.99&quot;</th>
<th>6&quot; to 11.99&quot;</th>
<th>12&quot; to 17.99&quot;</th>
<th>18&quot; to 23.99&quot;</th>
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<th>Total Trees</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Good Condition</strong></td>
<td></td>
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**Notes:**
- The data includes Ash trees inventoried on different dates with varying conditions.
- Values are estimated based on the diameter of the trees.
- Total value calculations are based on the estimated value per condition and diameter.
Action Plan Highlights

- **Polytech:** 9 Trees: 6 poor, 2 fair, 1 good condition
- **MHK:** 251 Trees: 2 dead, 46 poor, 122 fair, 81 good condition
- **Highlights:**
  - 5 Year Management Cycle
  - Remove dead (already done), poor, fair trees, and good trees in poor locations
  - Plant 2 trees for every tree removed (not necessarily where ash are removed)
  - Treat historic, iconic, large healthy specimens when EAB 15 miles from campus
  - Treat good trees in prime locations
  - Utilize good quality logs
  - Communication strategy for alumni, students, faculty and staff, University and campus leadership, general public
  - Annual review of plan and strategy
EAB Readiness Team Members

Ryan Swanson  
Associate Vice-President of Facilities and University Architect

Kevin Schindlbeck  
Director of Facilities Services

Joe Myers  
Facilities Grounds Maintenance Supervisor

Mark Taussig  
Landscape Architect, Campus Planning and Project Management

Skyler Harper  
Associate Director, Department of Housing and Dining

Scott McElwain  
Director, Kansas State University Gardens

Charles Barden  
Professor, Horticulture and Natural Resources

Cheryl Boyer  
Associate Professor, Horticulture and Natural Resources

Greg Davis  
Associate Professor, Horticulture and Natural Resources

Cathie Lavis  
Professor, Horticulture and Natural Resources, Tree Campus USA Chair

Chad Miller  
Associate Professor, Horticulture and Natural Resources

Ray Cloyd  
Professor, Entomology

Chip Winslow  
Professor, Landscape Architecture/Regional and Community Planning

Lee Skabelund  
Professor, Landscape Architecture/Regional and Community Planning

Judy O’Mara  
Instructor and Diagnostician, Plant Pathology

Chandler Day  
Graduate Student, Plant Pathology

Kim Bomberger  
Community District Forester, Kansas Forest Service

Randy James  
Consulting Arborist, Tree BioLogics and Growing Concerns

J. David Mattox  
City Forester, City of Manhattan
When treating any tree with ≥30% canopy thinning and/or dieback, tree condition may compromise treatment effectiveness.