

EAB in Oregon Pacific Northwest Dis-ash-ter

PARC Board Meeting
Max Ragozzino, PhD



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Emerald Ash Borer, *Agrilus planipennis*

- Invasive buprestid from China
- Non-Asian ash have little/no resistance
- Estimated damage is \$20-50 billion
 - Tree removal & replanting urban ash in 25 states
- Untold ecological damage



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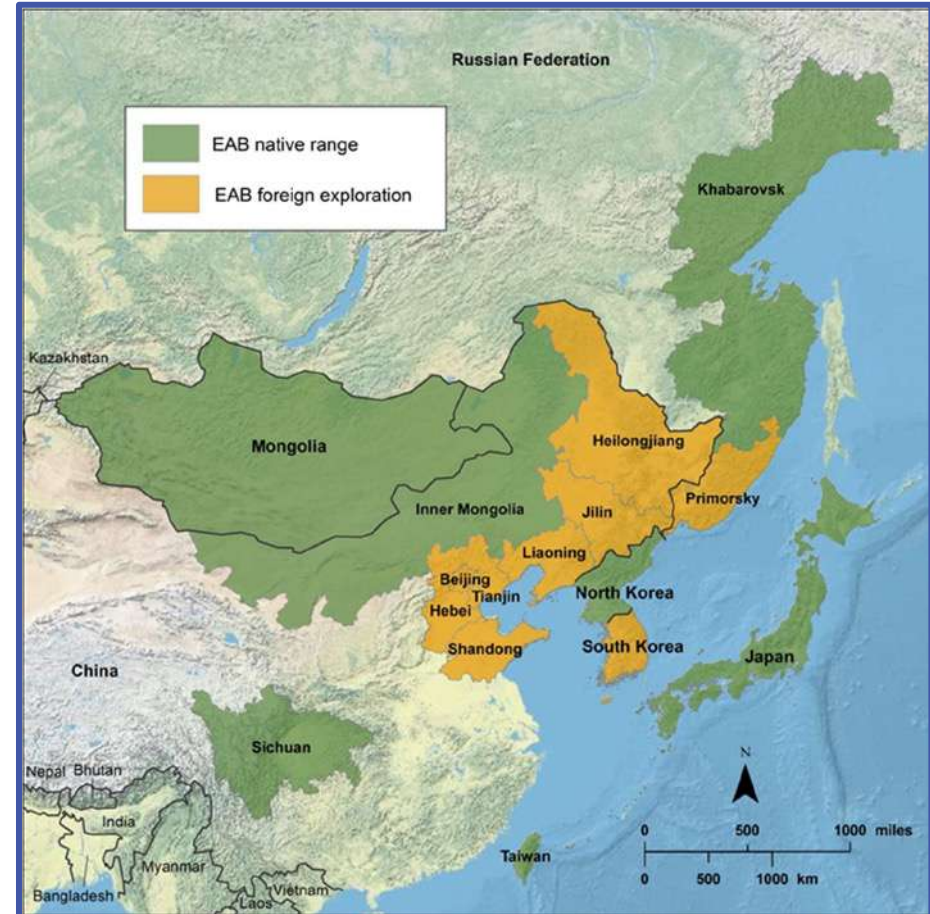


Before & After EAB



Origins & Invasion

- Invasive buprestid from China
- First discovered in Michigan in 2002
- Dendrochronological evidence suggests arrival in mid 1990's
- Currently detected in 36 states



EAB Damage

- Larvae feed on the phloem
- As larvae feed, they carve S-shaped galleries into the phloem
- This essentially girdles the tree



EAB hosts

- Initially thought to be exclusive to Ash (*Fraxinus* spp.)
- White fringe tree (*Chionathus virginicus*)
- Cultivated Olive (*Olea europaea*)



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Oregon Ash?

- Oregon Ash is fully susceptible to EAB
- Oregon Ash is a competent host of EAB
 - Originally proven in common garden experiments
 - Confirmed in Forest Grove
- 80% of Oregon Ash grows below 1000' elevation



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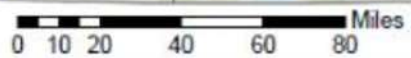
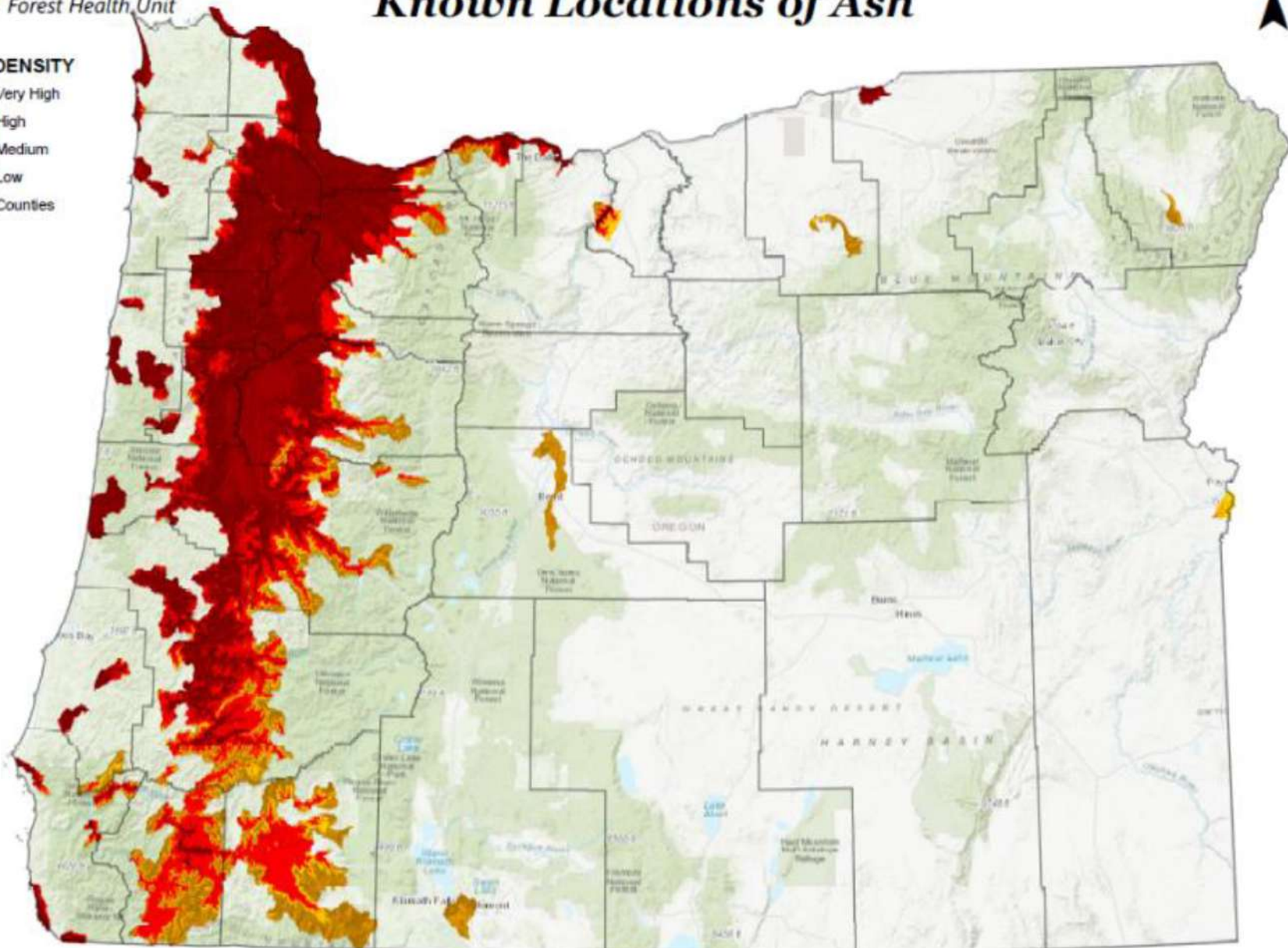


Known Locations of Ash



ASH DENSITY

- Very High
- High
- Medium
- Low
- Counties



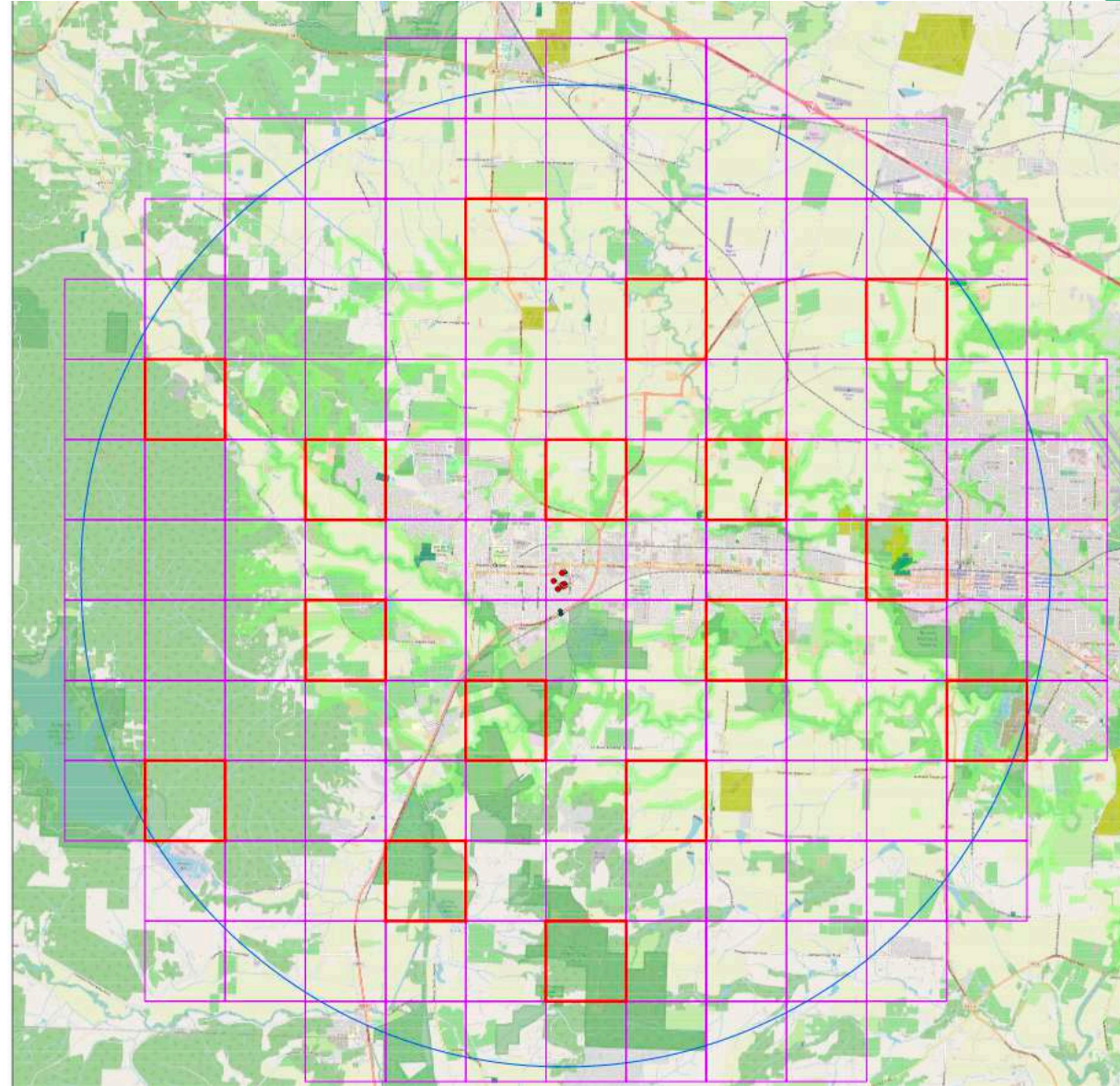
Date: May 2018



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EAB Spread

- 0.5miles per year on a population level
- Up to 12 miles per year for an individual female



Chemical Treatments

- Literature shows trunk injections of emamectin benzoate provide 2-3 years of protection
- Soil injections & drenches of other active ingredients provide shorter term protection
- All products labeled for EAB are listed on the ODA Pesticide Products page
- Google “ODA Pesticide List EAB”



<https://www.oregon.gov/oda/shared/Documents/Publications/IPPM/PesticideProductsEAB.pdf>

Biological Control



Oobius agrili



Spathius galinae



Spathius agrili



Tetrastichus planipennisi



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The Timeline: June 30th 2022

- June 30th, 2022:
"Oregon Dad", a trained pest detector, spots EAB in Forest Grove.
- ODF responds same day
- 16 infested trees



The Timeline: June 30th 2022

- Christine Buhl, ODF, confirms EAB
- Galleries under bark
- D-Shaped exit holes
- EAB adults present

- ODA contacts Joseph Gale Elementary School for tree removal



The Timeline: July 5th 2022

- Standing ash chipped
- Oregon taxonomists confirm ID
- Sample sent to USDA for federal confirmation
- Immediate area scouted



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The Timeline: July 5th 2022

- Additional EAB infestations identified
- Nearby Oregon Ash, and Green Ash infested





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Oregon Invasive Species
Online Hotline

Search Reports

Report Now

News Release: July 11, 2022

The Timeline: July 11th 2022

- EAB ID Confirmed by USDA
- Press release prepared
- OISC Hotline

Farmer spots the first emerald ash borer in the West Coast during summer cleanup in Forest Grove

Forest Grove – On June 30, Dominic Maze, an invasive species biologist from the Oregon Department of Agriculture, was waiting outside a summer camp in Forest Grove to pick up his son. He noticed several ash trees in decline. When he took a closer look he recognized the small holes made by adult emerald ash borers (EAB), an invasive pest that kills trees as they exit an infested tree.

"When I arrived, I asked them to look for adult beetles," said Maze. "My son was looking on him. Knowing how many millions of ash trees across the country have been killed I felt like I was going to throw up."



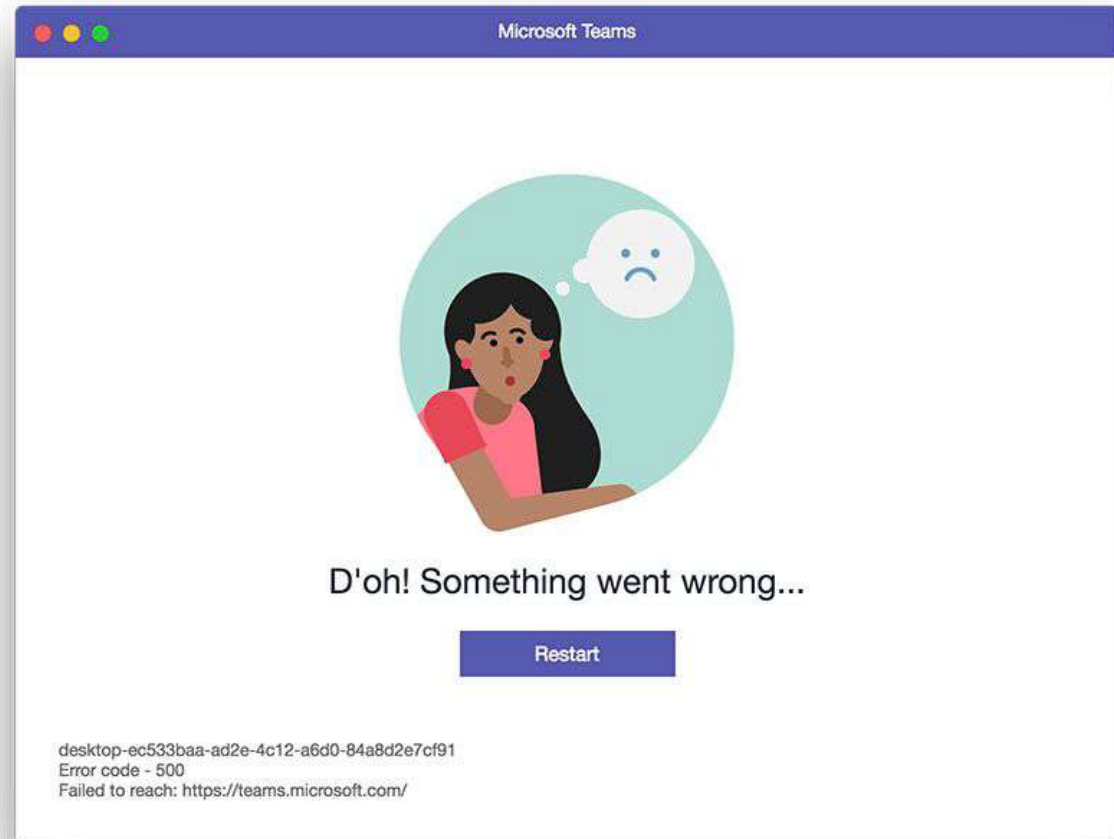
potential invasive species you've found in Oregon or to request a field inspection. The information you provide will assist invasive species managers in identifying and managing the species. Please try to be as complete and detailed as possible.

The information in your report may become viewable by the public. If you do not want the information to be visible to you and Hotline managers, it will not be made available.

red

The Timeline: August 1st 2022

- EAB Task Force is created
- Oregon EAB Dashboard is live
- Field staff are performing visual surveys of Ash



EAB Task Force

- 40 Agencies & Counting
- Lead by ODA, coordinated by OISC
- Eight Subcommittees:
 - Survey & Monitoring
 - Wood Waste
 - Training
 - IPM
 - Research
 - Communications
 - Funding
 - Steering



ODA Response

- Visual Surveys
- Trapping
- Treatment Response Plan



Current Extent

- Immediately 30 traps were placed
- One new site detection with purple prisms
- Visual surveys coordinated in Survey123
- Seemingly contained to Forest Grove
- 452 trees surveyed, 18 positive
- Visual surveys have only detected new infestations with trained wood-borer experts

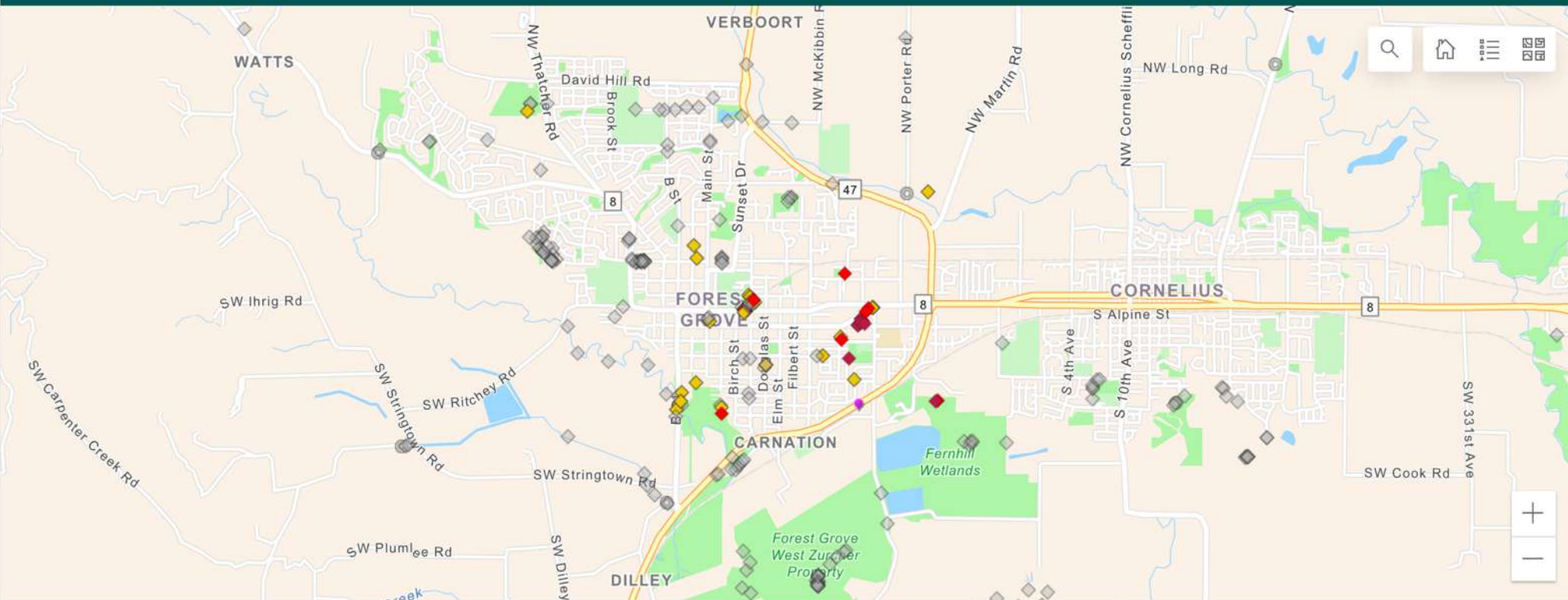




Emerald Ash Borer in Oregon: Initial Detections Dashboard



Initial Detections of EAB from Visual Survey



Oregon Metro, State of Oregon GEO, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA

Each point represents an ash tree surveyed for EAB through visual surveys by the EAB task force and cooperating agencies and organizations.

Visual Survey Result

Are EAB Present?

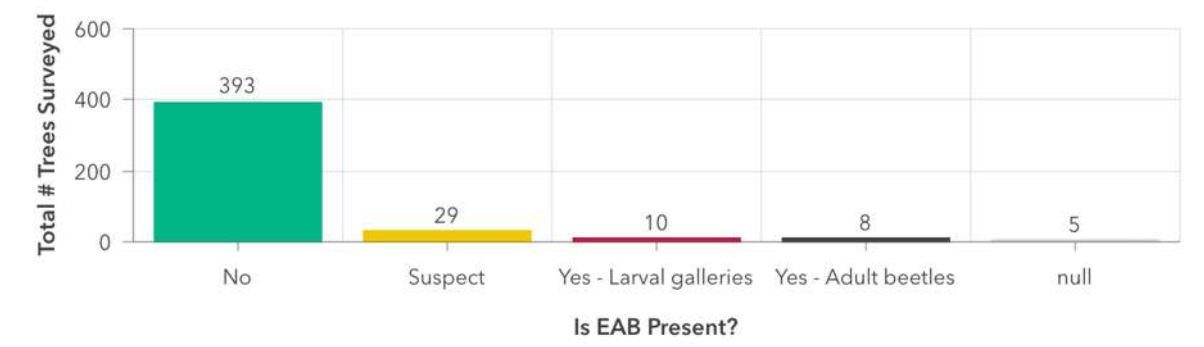
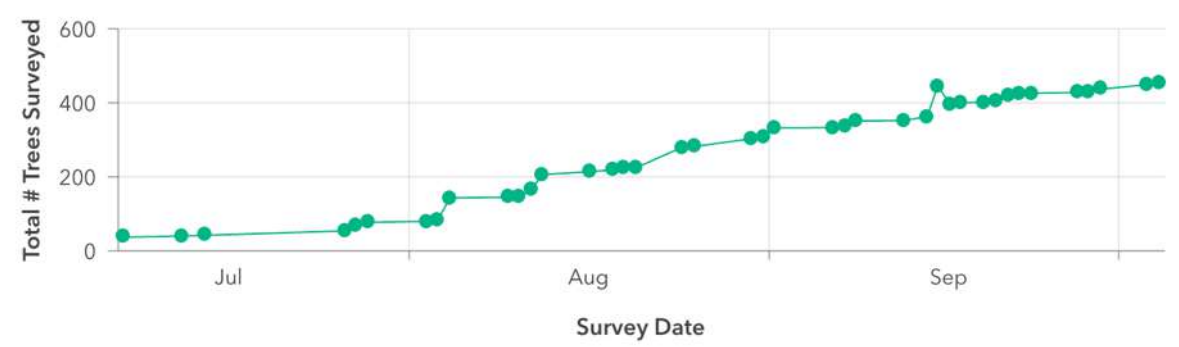
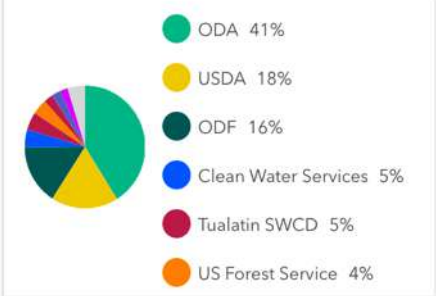
- ◆ Yes - Adult Beetles
- ◆ Yes - Larvae & Galleries Present
- ◆ Suspect - Requires Confirmation
- ◆ Tree Surveyed

EAB Trap Sites 8.10.22

agency

- USDA APHIS

Organizations Reporting



What can a homeowner do?

1. Treat your tree with insecticide.
2. Cut down a live ash tree.
3. Cut down a dead ash tree.



Questions?

