

OREGON TREE HEALTH THREATS



March 2024

Square miles known to be infested with EAB: 10.4

This monthly newsletter gives updates and resources on emerging threats to the health of Oregon's trees in natural and managed landscapes. It is published by the Oregon Department of Forestry with the collaboration of other state, regional, federal, Tribal, and local agencies and organizations. To subscribe, email jim.gersbach@odf.oregon.gov

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For healthy ash trees, treatment can be the cost-effective choice

Dealing with EAB is expensive. [A 2017 study](#) found that when EAB infestations were at their peak, municipal tree management budgets across the Midwest and East Coast increased by an average of over 300%. Most of these costs are related to removing dead or infested trees.

Treating ash trees with insecticides is a cost-effective method to protect them from EAB, while lowering annual management costs by spreading them out over time. Treatment also ensures that an established ash tree can continue providing essential benefits for many years to come, rather than waiting 20-50 years for a replacement tree to reach maturity. Mature trees provide shade and cooling, air and stormwater filtration, wildlife habitat, and add value to properties and neighborhoods.



Photo credit: Whitney Cranshaw
[Colorado State University Extension](#)

EAB experts from Purdue and Michigan State University recently published a review article highlighting several analyses that found treatment to be the least expensive EAB management option in the near to medium term. Although tree removal costs can vary depending on the tree's size, condition, and context, these studies found that

removing and replacing a tree was typically more expensive than treating it for 20 years. One of the studies identified healthy trees greater than 8" DBH (diameter at breast height – measured 4.5' above the ground) as the most cost-effective candidates for treatment. When

accounting for the social and ecological benefits that these large trees provide to a community, the economic value of treatment is even higher.

Emamectin benzoate is the most effective treatment

The most effective way to protect ash trees from EAB is systemic trunk injections of emamectin benzoate. This treatment should only be applied to healthy ash trees greater than 6" DBH because they have the highest chance for survival. Please see ODF's new [EAB Insecticide Treatment Factsheet](#) for more information.



To identify ash trees that are good candidates for treatment, communities should start by conducting tree inventories to assess the quantity, condition, and characteristics of any ash trees. ODF's Urban and Community Forestry team can offer tutorials on using [TreePlotter](#), a free tree inventory software. TreePlotter also has a built-in EAB cost calculator to support management decisions. Working proactively will help communities develop EAB response plans *before* it arrives, saving time and money in the long run.

ODF publishes a fact sheet on insecticide treatment for EAB

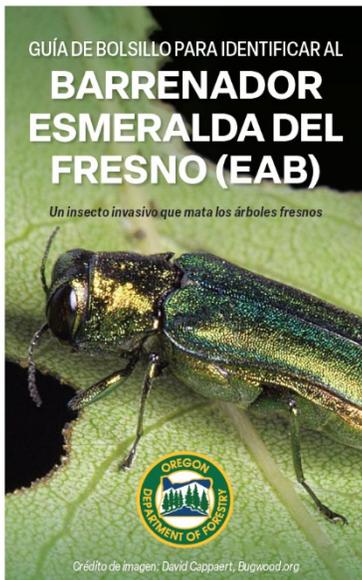
ODF staff recently developed and published an EAB insecticide treatment fact sheet to help inform decisions on how to manage treatment of ash trees. The fact sheet outlines the

methods available for protecting ash trees from EAB, effectiveness of treatment options by active ingredient, and impacts of treatment options to species other than EAB. You can find the digital version of the treatment fact sheet [here](#). Contact Evan Elderbrock (evan.m.elderbrock@odf.oregon.gov) or Lilah Gonen (lilah.gonen@odf.oregon.gov) to request printed copies for outreach or trainings.



EAB quarantine is now permanent in Washington County

The Oregon Dept. of Agriculture has made the EAB quarantine of Washington County permanent. Material from ash (of any species in the genus *Fraxinus*), olive, and white fringe tree (*Chionanthus virginicus*) cannot be removed from Washington County. The material must remain within the county's borders. Wood waste must be processed to kill any EAB larvae and disposed of according to best management practices to slow the spread of emerald ash borer (EAB) in Oregon. Find details [here](#).



EAB pocket guide is now available in Spanish

ODF has produced its handy pocket guide to EAB management in a Spanish version. The guide can be ordered in either Spanish or English versions or both through evan.m.elderbrock@odf.oregon.gov or lilah.gonen@odf.oregon.gov

Oregon's Translation Advisory Council estimates that there are more than 128,000 people in the state who are Spanish speakers with limited English proficiency. In Washington County they estimate there are more than 25,000 people with limited English proficiency and whose first language is Spanish, six times more than the next most numerous group of non-English speakers (Vietnamese). Centro Cultural staff in Cornelius did the translation.

A quarter of suspected EAB sightings in 2022 proved to be look-alikes

There were 77 reports to the Oregon Invasive Species Council hotline last year about suspected emerald ash borer infestations. About 8% of these were found to be EAB, all within the infested area inside Forest Grove. Three times as many reports (26%) turned out to be other insects that just look similar to EAB but don't harm ash trees.

Oregon citizens can quickly log a report of any suspected invasive species to the hotline, using a mobile device or computer. Before making a report, members of the public are urged to first check with ODA's [EAB lookalike reference guide](#) to rule out that what they're seeing isn't a harmless insect, such as the golden jewel beetle (see photo at right).



Above: Golden jewel beetle



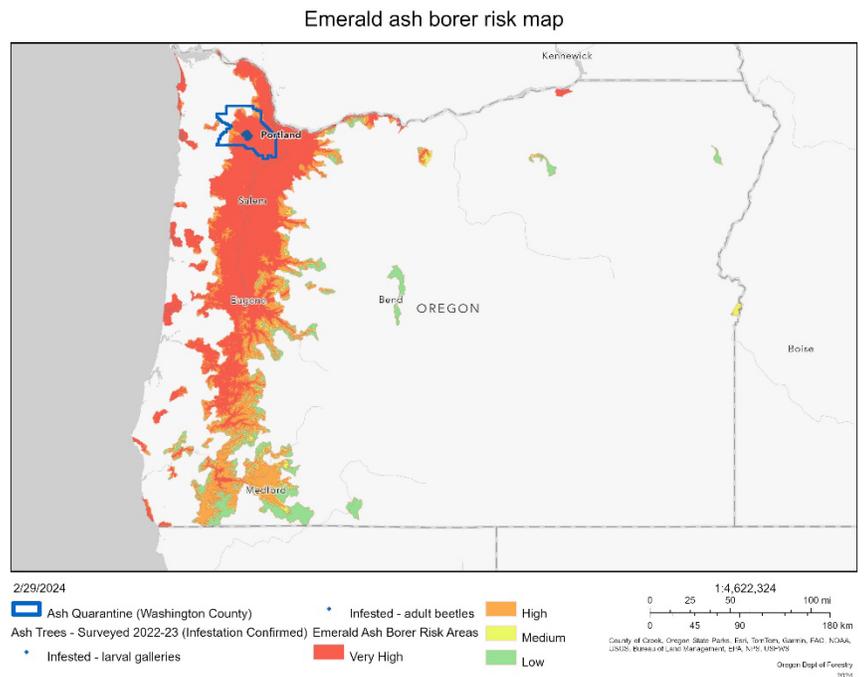
Dieback in Oregon white oak may stem from causes other than MOB

Concerns about dieback in Oregon white oak from Mediterranean oak borer have grabbed the public's attention since dozens of trees in Wilsonville were found last year to be infested. But ODF Forest Entomologist Christine Buhl reminds Oregonians that their iconic native tree suffers from a number of problems unrelated to the invasive MOB. Some of these include:

- **Oak lacebugs** (their feeding on oak leaves turns the leaves yellow which can weaken trees but does not appear to kill them)
- **Oak galls** (tiny wasps make homes for their larvae by causing swellings in foliage and twigs. Colors of these galls vary from yellow to green, eventually turning tan-brown. Once the larvae emerge as adult insects, the gall slowly disintegrates. Extensive galls can girdle twigs but this damage is minimal across the large canopy of an oak. Galls do not prevent growth of new buds or cause serious harm to otherwise healthy oaks.)
- **Squirrels** (in their hunt for gall insects they can debark and girdle twigs resulting in clumps of dead leaves)
- **Carpenter worms** (these are moth caterpillars which burrow into the wood of many hardwood trees, including oaks. Their tunneling can cause dieback of even large branches and is usually targeted at branches weakened or broken by storms.)
- **Fungi** (a variety of fungal diseases can attack and kill trees. Oaks are no exception. *Armillaria* and *Inonotus* are some of the potentially fatal root and butt rots that can attack Oregon white oak, often entering through tree wounds. However oaks often tolerate these fungal rots for quite some time).

Map reveals areas at highest risk for native ash tree loss in Oregon

The map below shows watersheds where ash is found in Oregon. These areas are at risk for losing all or most of those trees to the invasive emerald ash borer. Most Oregon ash can be found in the western part of the state. An important habitat tree for wildlife, Oregon ash grows along streams, rivers and lakes or in wetlands, mostly at elevations below 2,500' elevation, with greatest abundance below 1,000'.





Publications

Alternatives to Ash in Western Oregon: With a Critical Tree Under Threat, These Options Can Help Fill Habitat Niche. G. Kral, and D.C. Shaw. 2023. OSU Extension EM 9396.

<https://catalog.extension.oregonstate.edu/em9396>

Oregon Ash: Insects, Pathogens and Tree Health by Oregon State University Extension (also available in Spanish at this same website)

<https://extension.oregonstate.edu/pub/em-9380>

Wood Decay Fungi Associated with Galleries of the Emerald Ash Borer by the University of Minnesota and Uruguay's *Instituto Nacional de Investigación Agropecuaria*

[Forests | Free Full-Text | Wood Decay Fungi Associated with Galleries of the Emerald Ash Borer \(mdpi.com\)](https://www.mdpi.com/forests/Free-Full-Text/Wood-Decay-Fungi-Associated-with-Galleries-of-the-Emerald-Ash-Borer)

Useful links for more information

Mediterranean oak borer fact sheet

<https://www.oregon.gov/odf/Documents/forestbenefits/fact-sheet-mediterranean-oak-borer.pdf>

EAB monitoring guidance

<https://www.oregon.gov/odf/forestbenefits/Documents/eab-monitoring-guidance.pdf>

Oregon Dept. of Agriculture

<https://www.oda.direct/EAB>

Oregon Dept. of Forestry

<https://www.oregon.gov/odf/forestbenefits/pages/foresthealth.aspx>

OSU Extension

<https://extension.oregonstate.edu/collection/emerald-ash-borer-resources>

Emerald Ash Borer Information Network, a collaborative effort by the USDA Forest Service and Michigan State University

www.emeraldashborer.info

USFS Forest Health Protection

<https://www.fs.usda.gov/foresthealth/index.shtml>

