



Oregon Forest Health



Emerald Ash Borer: Information for Forest Landowners

What is emerald ash borer?

Emerald ash borer (EAB) is an invasive beetle that kills North American ash trees. Native to China, eastern Russia, Japan, and Korea, it was first found in North America near Detroit, Mich., in 2002 and has spread to most states in the eastern U.S. killing almost all ash trees.

What kind of damage does it do?

EAB feeds on all species of ash. It readily attacks and kills Oregon's one native ash species (*Fraxinus latifolia*). It takes 3-5 years for infested trees to die. Ash mortality is widespread where the insect occurs. Healthy ash trees of all sizes above the seedling stage will be readily attacked by EAB.

EAB larvae damage trees by boring through the inner bark. Heavy feeding by the immature, grub-like larvae blocks the movement of nutrients and water, eventually killing the tree. When mature, the insect then makes a D-shaped hole to exit. Branches smaller than 1" in diameter can be infested. Branches near the top of the tree are often infested first.



**MOVING FIREWOOD IS
THE #1 CAUSE OF SPREAD.**

It has been found in Oregon

In 2022 Oregon became the first West Coast state to report an infestation when EAB was detected in the Washington County town of Forest Grove. EAB has since spread to other counties. Over the next several years, it is expected to reach much of the state. A map of the area infested can be found at **OregonEAB.com**. EAB cannot be eradicated but we can slow the spread by:

- » Not moving firewood beyond the local area (please buy it where you burn it).
- » Disposing of ash wood by burning, burying, chipping or heating to 170°F in a certified kiln for at least an hour.
- » Reporting signs of infestation at OregonEAB.com.

The beetles are capable fliers, and good at finding ash trees. When EAB first arrives, the infestation may not be easy to spot. Within a few years, however, EAB numbers grow, leading to widespread ash decline and death.

Moving firewood is the #1 cause of spread. Other new infestations have been traced to shipments of nursery trees and untreated logs. But all stages of the insect can travel long distances inside infested wood! Also, EAB will survive Oregon's winters. It is a cold-hardy insect, native to areas with cold winters in NE Asia.

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How can I tell if I have EAB?

Woodpecker damage to live trees may be the first sign that a tree is infested. When feeding on EAB, woodpeckers scrape off outer bark, leaving irregular holes and smooth, light colored patches. If the bark is removed, S-shaped galleries weaving back and forth on the surface of the wood may be visible. The D-shaped exit holes are good EAB indicators but are only ¼" long and can be difficult to see.

Other health problems can kill ash trees. Many ash species are sensitive to drought. Learn to tell the different signs of common ash problems at OregonEAB.com. Adult beetles are ½" long and metallic green. Under the wing covers, their abdomen is purple. Adult beetles are present between late May, June, and August. Information about lookalike insects is available at <https://www.oregon.gov/oda/programs/IPPM/SurveyTreatment/Documents/EABLookAlikes.pdf>.

» If you think you might have EAB, report it.

Collect and/or photograph any suspect insects. Click the "REPORT NOW" link on the website. Or you can call your local ODF office.

What will happen now that EAB has been found in Oregon?

We won't get rid of EAB by removing ash trees. This has been tried many times before without success in infested states. Even when all ash within 1½ miles of known infested trees were cut, the beetle was soon found beyond the treatment area.

Most ash trees in a stand can be killed by EAB within six years from initial infestation in the stand. In a forest, once trees die, additional sunlight reaches the forest floor. This stimulates the growth of young trees and other plants, including non-native invasive species if they are present. While they're standing, dead ash trees may provide feeding and cavity sites for wildlife, but they also create a hazardous situation for recreational users, loggers and firewood cutters.

Landowners can still sell ash logs and firewood, but there are risks and restrictions. EAB can be transported in logs and firewood. The Oregon Dept. of Agriculture has put restrictions on ash and white fringe tree wood and other plant parts and nursery materials in all



counties where EAB has been confirmed. Other states may also have restrictions in place that can affect if or how wood can be imported. Contact buyers before selling ash or olive wood out of your local area. If you are enrolled in a Natural Resources Conservation Service (NRCS) program, please consult with your project manager from your local NRCS or Soil and Water Conservation District for further instructions.

"Trap trees" can indicate whether or not your woodlot is infested. To find out how to use the girdled trap tree technique, ask your ODF stewardship forester or OSU Extension agent for your area. Oregon officials have no plans to remove infested trees on private rural properties.

Should I cut my ash trees now?

Not necessarily. The answer depends on a lot of variables. However, you should plan for EAB now if you have ash. It may take a while to carry out any plan, especially on large properties. Know what's at risk: how much ash you have, its size and quality, and where it's located. Think about what you want from your forest in the long term, and how your response to EAB will fit in to your goals. For some, doing nothing may be the right approach.

The closer your trees are to the infestation, the sooner they are likely to be affected. Expect that the edge of a known infestation will naturally expand about 1-2 miles every year. Consider the ecological, aesthetic, and economic value of your ash, your tolerance of risk, and your objectives for ownership. Stay abreast of new information to avoid short-sighted decisions. Visit OregonEAB.com for the latest news on EAB.

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Should I cut my ash trees now? (cont.)

Work with a licensed forester to protect your interests and your forest. Studies have shown that woodland owners who use professional forestry services before they cut make more money and are more satisfied with the results than owners who sell timber on their own. For more information, view a series of videos from Oregon State University for forest landowners about working with loggers to harvest your timber. Search for them on ODF's YouTube channel. Reassess your plan if EAB is detected nearby. Keep abreast of news about the insect's spread. The threat of tree death increases when EAB is within 10 miles of your property.

If you are located within the infested area, there is a risk of moving potentially infested wood, if you choose to cut your ash trees. All ash from the infested area should be treated as harboring EAB, since the insect is difficult to detect when it first attacks a tree. Check with your ODF stewardship forester or logger to ensure that they are following any restrictions that may be in place on movement and handling of ash wood. Examples include limiting movement to locations within the infested area, transporting logs during EAB's dormant period, and chipping infested materials so EAB cannot survive.

Where saw timber trees are killed by EAB, it will constitute a loss of potential revenue for landowners. For some, this loss could be significant. Landowners should consider this in the context of other management objectives. During scheduled harvests, you can take steps to limit your exposure to loss. Reduce the percentage of ash if it exceeds 20%. Review your diameter target (how big to grow trees before cutting them) with your forester, discussing site quality, tree condition, and markets. To keep from degrading your woodlot, regenerate and retain good quality trees of a variety of species.

If you're growing trees for timber income, don't cut immature ash too early. If the trees are too small to yield high value sawlogs, you may get a better return if you allow them to grow. They will increase in volume, and may improve in grade, which will lead to a better return. If you decide to cut, plan to leave scattered ash trees in the woods. The last trees standing will be the last to produce seed. Hope for the survival of ash species will depend on fresh seeds to start a new generation of ash trees.



What else can I do?

Spread the "Don't Move Firewood" message in your town. Visitors who bring infested firewood to second homes or campgrounds near you put your trees at risk. Talk with neighbors and campground owners. Post leaflets, available through the contacts below, in your community. Know when EAB arrives near you by supporting detection efforts. Participate in more formal monitoring efforts through the website.

Think big. Take action. Encourage your town to plan ahead for EAB. By addressing issues before EAB arrives, the loss associated with an infestation can be spread over a longer period of time. Neighboring communities can coordinate to share resources and reduce costs.

Is there any hope?

We've only known about EAB since 2002. Our knowledge about the insect is rapidly expanding. Substantial research efforts are underway to improve insect management and tree survival.

Scientists are investigating natural enemies of EAB. Parasites and predators can potentially reduce EAB populations. Several parasites from Asia have been approved, released, and have become established in the US. These efforts may lessen the impact of EAB.

Healthy ash trees of all sizes are still growing in infested states. Occasional ash trees have survived on sites with heavy mortality, suggesting that they may have some genetic tolerance to the insect.