What is the emerald ash borer (EAB) and how is it a problem for ash trees?

- Emerald ash borer (EAB) is a destructive invasive insect that attacks and kills ash trees. EAB is native to northeastern Asia. Since its accidental introduction to North America in 2002, EAB has killed millions of ash trees in more than 35 states and five Canadian provinces.
- The metallic-green adult beetles are a half inch long (roughly the size of a penny). EAB larvae kill ash trees by feeding on the layer just under the bark of the tree.
- In Vermont, the flight (active) season for EAB is June 1st – September 30th.

What are the signs of an EAB infestation?

- Potential signs of EAB damage include woodpecker damage (especially at the top of the tree and referred to as “blonding”), bark cracks or splits, s-shaped galleries under the bark, and die-back of leaves in the upper one-third of the tree branches.

How can town staff or residents report a suspected EAB or another invasive tree pest?

- Municipal staff and residents should learn the signs and be on the lookout for EAB.
- Suspicious findings should be reported online at VTinvasives.org. Use the “Report It” function on the homepage.
- It is possible for landowners to take part in the state’s survey work by intentionally girdling their ash trees. You can learn more about the trap tree process at VTinvasives.org/eab.

Does EAB kill all species of ash and of all sizes?

- Although EAB prefers some species of ash over others, all ash species (genus Fraxinus) native to North America are suitable hosts. In Vermont, white, green, and black ash are all susceptible. Mountain ash (genus Sorbus) is not a true ash and is not susceptible to EAB.
- Generally, all branches and stems one inch in diameter and larger are susceptible.

Why do we need to plan ahead if the ash trees are going to die anyway?

- Dead and dying trees can threaten public safety, increase town expenses, and decrease property values. Planning prepares municipalities to take prompt and specific actions to avoid or mitigate the problems associated with EAB.
- Additionally, scientists are making great strides in developing EAB management tools such as the introduction of natural enemies, host species resistance, and better survey methods for early detection.
- At this point, however, eradication of EAB is impossible and is no longer considered an appropriate response to an EAB infestation. Instead, the goal is to slow down the spread of the insect to allow more time for communities to prepare and to develop management tools.

What are our town’s legal responsibilities regarding EAB and infested ash trees?

- Maintaining public safety: dead and dying ash trees can threaten people and property.
- While not a legal responsibility, the municipality should respond to public values, such as a desire to preserve significant and historic trees, at both the community and individual homeowner levels.
Should we plan for other invasives, such as the Asian longhorned beetle (ALB) and the hemlock woolly adelgid (HWA), and how?

- While management actions, cost estimates, and disposal and utilization options will be focused on managing EAB and its effects, your EAB preparedness and management plan will help you plan for other pests by helping your community:
  1. Develop a plan for increasing tree species diversity and selecting site-appropriate species.
  2. Improve public awareness and engage community leaders and residents in natural resource decisions and motivate them to get involved.
  3. Strengthen or enact local policies and partnerships to support long-term tree management.
- HWA has been confirmed in Vermont. While it is not expected to kill trees as quickly as EAB, HWA is already impacting trees and initiating municipal awareness and action.
- Since we don’t know if (or when) ALB or another destructive pest will arrive in Vermont, wait until an invasive insect threat is in your area before adjusting your plan.

Where is EAB and how long before EAB goes away? How soon can we replant ash?

- EAB was first discovered in Vermont in February 2018 in Washington, Orange, and Caledonia counties. As of early 2019 it has also been detected in Bennington and Grand Isle counties.
- Naturally, the EAB moves about 2 miles per year, however, it often moves faster unintentionally in infested wood such as firewood.
- A small population of EAB will probably persist for many years after the initial infestation; planting ash trees is not recommended.
- The best option is to select the right tree for each site and to be careful not to overplant any one tree species. A diverse tree population is more resilient. More information on tree selection is available at VTcommunityforestry.org/resources/tree-selection.

Will trees be cut?

- Ash trees that threaten public safety or property will either need to be cut or treated with an insecticide.
- In most cases, the municipality or private landowner is responsible for tree removal or treatment on their respective properties or management areas (i.e. municipal road right-of-ways).

We have a lot of ash trees in our municipal right-of-way (ROW). They are also on private property and would affect the town ROW if they die and fall. What do we do about it?

- The municipality will need to decide, at a minimum, what needs to be done to ensure public safety.
- A minimum but reasonable approach would be to remove any dead ash along municipal roads that threaten public safety and leave those that are not a threat. Preemptive removal of large structurally unsound or unhealthy ash trees will help to spread the cost of removals out over a longer time span. Cutting live trees is much safer for the tree worker and costs roughly half as much as removal of dead trees.
- On private land, removal of trees that threaten public safety is the responsibility of the landowner unless your town has an ordinance to the contrary. You will want to review your public policies related to trees and consider if your town has the authority needed to respond to EAB effectively and efficiently. Learn more about municipal tree policies at: VTcommunityforestry.org/resources/public-policy.
- Some towns in other states have offered to split the removal or treatment cost with the landowner to ensure that high-risk trees are removed promptly or that high value trees preserved.
Can we treat ash trees? How long will they have to be treated?

- Because landscape trees provide many tangible benefits, insecticide treatments can be well worth the investment for culturally and economically valued trees. Note that protective treatments with insecticides will likely be needed for the duration of the tree’s life.
- No treatments are recommended until the insect is present in the area. However, you can start planning and budgeting for it now.
- There are several products currently available and effective against EAB for both homeowners and commercial applicators.
  - The most commonly used application method is systemic trunk injection.
  - Depending on the insecticide, trunk injections may be effective for 1 to 3 years.
  - Material costs alone (not factoring in equipment and labor) range from $3/inch of DBH to $15/inch of DBH for 1 to 3 years of control respectively, depending on the insecticide used.
  - Many of the insecticides available fall in the neonicotinoids family that has been linked to declining pollinator populations. Learn more about insecticide options at VTinvasives.org/eab.

Should we encourage preemptive removal of ash trees? When is that appropriate?

- Municipalities with a large number of public ash trees may want to reduce the ash component over time using a prioritized process that starts with structurally unsound ash trees in poor health. Use your exciting tree inventory data or conduct an ash tree inventory to understand the quantity, location, condition, and size of your town-managed ash trees. This will help you determine if preemptive removal is a good decision. Learn about ash inventories at VTcommunityforestry.org/ash-inventory.
- Insecticides can also be used to extend the timeframe of ash tree removals.

What is the role of our local utility companies?

- The utility companies are responsible for removing trees within their utility right-of-way (ROW).
- Utility companies will also want to remove “danger trees” that lie outside the ROW but are a threat to the powerline.
- Communities should work collaboratively with utility companies. Tree work within 10 feet of a powerline should only be performed by tree service professionals that have specialty training.

How will municipalities, residents and businesses dispose or utilize trees?

- Within Vermont, using low-risk options for transport, use and disposal of potentially infested wood will reduce the movement of EAB. Recommendations to Slow the Spread of Emerald Ash Borer When Moving Ash from the Infested Area can be found at vtinvasives.org/land/emerald-ash-borer-vermont/slow-spread-of-eab.
- You can hire arborists or loggers to remove and dispose of trees for you. Go to treesaregood.org for more information on hiring an arborist.
- Explore options for utilizing the wood on-site, such as for landscaping materials, lumber, or firewood. Whatever you choose to do with your removed ash trees, be sure that no ash wood leaves the quarantined area.
- The entire state of Vermont is under the USDA EAB quarantine boundary. The wood and debris can be transported within the federal quarantined area where it originates. However, removing it from the quarantined area is prohibited without a compliance agreement. Learn more about the quarantine at: vtinvasives.org/land/emerald-ash-borer-vermont/quarantine-information.
- Identify a wood disposal area where residents and businesses can drop off wood and debris.
• Use all the resources available to you to inform residents and businesses, such as your website, town newsletter, email distribution list, flyers, information sent home with students, newspaper articles, and public meetings.

• The Vermont Department of Forests, Parks and Recreation, the Agency of Agriculture, Food and Markets and UVM Extension can assist with public meetings and provide information for print advertisements.

Is there state or federal funding available to help?

• Unfortunately, no federal or state funding for removal of private or municipal trees is currently available; however, that could change in the future. The Vermont Urban & Community Forestry Program does offer annual grants that help communities develop EAB preparedness and management plans. You can learn more on our website: VTcommunityforestry.org

What technical assistance is available from state government?

• State technical assistance is available to all towns for community preparedness and response planning, ash tree surveys and inventories, outreach and education, pest surveys, pest identification, and coordination of pest management activities. Visit VTinvasives.org/emerald-ash-borer-resources for resources. For assistance with municipal EAB management, contact Elise Schadler at elise.schadler@vermont.gov. For assistance with your forest lands, contact your county forester.

Learn more about municipal EAB management at go.uvm.edu/eab