



SAINT PAUL
MINNESOTA

Emerald Ash Borer

Frequently Asked Questions

Parks and Recreation – Forestry, Updated February 2021



CITY OF SAINT PAUL
EMERALD ASH BORER
MANAGEMENT
PROGRAM

Why the concern over emerald ash borer (EAB)?

- **EAB has now advanced to the critical stage!**
- **EAB kills all ash trees**, *Fraxinus spp.*, native to North America that are not treated with an insecticide.
- EAB has now been found in every Saint Paul neighborhood, infesting both public and private trees. It is expected that all ash trees in Saint Paul will die within the next few years unless they have been treated with an insecticide labeled for use against EAB.
- Minnesota has the largest population of ash trees of any state in the nation at over 998 million. As of February 2021, EAB has spread to 26 counties in the state.

What is emerald ash borer (EAB) & how does it spread?

- Emerald ash borer (EAB), *Agrilus planipennis* Fairmaire, is an invasive insect from Asia that has been found in thirty-five states and five Canadian provinces as of January 2021.
- Adult beetles are metallic green, about 1/2" long, and cause very little damage to ash trees themselves.
- EAB larvae feed for one or two years beneath the bark of ash trees, creating characteristic "S"-shaped galleries. It is the physical damage caused by larvae feeding that ultimately kills the tree by destroying its ability to transport water and nutrients.
- Larvae grow and develop beneath the bark into adult EAB beetles that emerge in the spring, chewing "D"-shaped exit holes through the bark.
- Adult beetles mate and lay 40-70 eggs on ash bark that hatch into immature larvae that burrow into the tree to feed.
- EAB's ability to spread naturally is typically slow at first and often goes undetected for years. Human-induced spread is more problematic as the pest can be carried many miles from one infested area to create a new one, which again may go undetected for several years.
- Without any natural controls or enemies, EAB reproduces exponentially, increasing infested areas rapidly, and advances quickly to kill all untreated ash trees in a community, usually within 10-15 years.



How did EAB arrive in Saint Paul and how long has it been here?

- The first known EAB infestation in Minnesota was discovered in Saint Paul in the South Saint Anthony Park neighborhood in May 2009. However, it is believed that EAB arrived as early as 2004.
- It is believed that EAB became established in Saint Paul through human movement of infested wood and wood products (e.g.: firewood and pallets). Without the help of humans, EAB spreads less than a few miles a year.

How do you identify an ash tree?

- Leaves: Compound (several leaflets per stem), 8"-12" long with 5-11 leaflets, smooth or finely toothed edges.
- Branching/buds: Opposite with a single brown bud at the end of the branch.
- Bark: Smooth on younger ash trees becoming ridged and diamond-shaped as tree matures.
- [View more ash tree identification information](#)

How do you know if an ash tree is infested with emerald ash borer?

- Signs of EAB include:
 - Small (1/8") "D"-shaped exit holes where beetles emerge (photo at right- not actual size).
 - Serpentine "S"-shaped larval galleries underneath the bark.
 - The presence of larvae or adult beetles. It is best to collect a sample and receive confirmation as they can often be confused with other *native* insects.
- Symptoms of EAB infestation include:
 - General thinning of canopy and increasing dieback until the tree is bare/dead.
 - Bark "blonding" - the inner bark being exposed when the outer bark is removed - from increased woodpecker activity/damage is very common, but not indicative of EAB in an unhealthy ash tree.
 - Sprouting of new growth from the trunk(s) and roots (epicormic/water sprouts).
- Review the [EAB Insect Guide](#) and [Insects Commonly Confused with EAB](#) from the MN Department of Agriculture.



What should you do if you suspect a tree is infested with EAB?

- Review the above signs, symptoms, and identification of EAB.
- If you suspect your private ash tree to be infested with EAB, contact a [licensed tree care company](#).
- For trees outside of Saint Paul:
 - Contact Arrest the Pest @ Voicemail: 1-888-545-6684 or email: arrest.the.pest@state.mn.us (Note exact location and take a digital photo if possible) or download the free [Great Lakes Early Detection Network](#) App for smartphone/devices.



What should I be doing with my private ash tree(s)?

- Because EAB has now advanced to the critical stage, **it is important to act now!**
- View the [Homeowners Guide to EAB](#) to learn more about management options for private property ash trees.
- Contact a [licensed tree care company](#) once you decide to remove or treat your ash tree(s).
- Please know that dying ash trees dry out quickly and become brittle. They can drop limbs easily and become unpredictable. For this reason, they will also become more difficult and expensive to remove even for professionals. In other words, the consequences become more dangerous the longer you wait to act.
- The City encourages residents to replant trees on their property after ash removal in order to take advantage of the countless economic, environmental, and social benefits trees provide.

How else can people help?

- EAB is usually spread by people. Do not transport firewood - "Burn It Where You Buy It" unless it is MDA certified firewood (look for the MDA seal).
- Become knowledgeable about recognizing EAB and remain vigilant about the condition of your ash trees.
- Take care of the trees that are already in your yard. Have them properly pruned at the right time of year, water them when there is a drought (for mature trees too), and mulch.
- Plant new trees and nurture them - regular watering and correctly mulching your new trees will help to ensure their survival.

What is the City of Saint Paul doing in response to EAB?

- The Department of Parks and Recreation – Forestry has been aggressively managing EAB since it was first discovered in 2009.
- The Saint Paul Emerald Ash Borer Management Program was created in June 2009 which was approved by the City Council to serve as a blueprint for action.
- The Emerald Ash Borer Management Program focuses on:
 - *Monitoring*: annual surveys to find ash trees in severe decline
 - *Removals*: Structured Removal of blocks of ash trees (all considered infested)
 - *Insecticide Treatments*: select public trees are treated to reduce EAB population
 - *Inventory*: all public property boulevard trees are included in an inventory
 - *Reforestation*: with a goal of replanting a variety of species to increase diversity
 - *Outreach and Education*: in order to give residents information on the insect
- Forestry monitors public ash trees throughout the city. Efforts are made to remove trees on public property that are identified in severe decline as promptly as possible.
- Forestry treats selected ash trees with an insecticide to reduce EAB population growth and mitigate removal costs.

How does the City choose which ash trees to treat with insecticides?

- Treated trees were initially selected based on the following criteria:
 - 10-20 inches in diameter at breast height (DBH)
 - Good health; without structural or other defects
 - Good site location: wide boulevard or park setting, no overhead utilities
 - The City is no longer adding trees to the treatment program

Why isn't the City treating all public ash trees with insecticide?

- Ash trees that are not structurally sound, unhealthy, or beneath overhead utilities do not warrant investment in insecticide treatment.
- Treating all ash trees is not cost effective due to the ongoing expense of the treatments.
- The goal of insecticide treatments by the City is to lengthen the response time to EAB infestations to one that is more manageable.

Does the City use neonicotinoids to treat ash trees?

- **NO.** Saint Paul does not use neonicotinoids to treat its ash trees. The City injects treated ash trees with emamectin benzoate, which is not in the neonicotinoid family of insecticides.

Why is the City removing blocks of ash trees (Structured Removal)?

- To mitigate the effects of EAB, the City began removing blocks of declining ash trees in order to reduce the number of trees requiring removal in the future. This management strategy has multiple benefits that include helping the City stay ahead of the pending crisis, spreading out the cost of removing thousands of expected dead trees, creating a more manageable and realistic financial plan, and allowing for increased diversity in the age and species of replanted trees.
- As of 2017, Structured Removal of ash trees transitioned to blocks of EAB-infested trees. In previous years removals mainly consisted of ash trees in declining health, but not necessarily infested. All ash trees in the City are now considered infested.
- There were about 27,000 boulevard ash trees alone in Saint Paul when EAB management began in 2009. Today there are about 11,000 remaining.
- 60% of boulevard ash trees have been dealt with in ten years of management, putting the City in a difficult position to deal with the remaining 40% in less than half that time.

How are residents or property owners informed that their block has been chosen for Structured Removal?

- Residents are notified via U.S mail; postcards are mailed to all addresses on blocks that will be affected by Structured Removal (picture of postcard at right).
- A map of all Structured Removals is available on the City Forestry website. The website is frequently updated with the most recent program information.
- All blocks of ash trees will eventually go through the Structured Removal process in Saint Paul.



What happens after the ash trees on Structured Removal streets are removed?

- The removal of dying ash trees has been prioritized over stump grinding and replanting due to the potential hazard these infested trees pose.
- Removal of stumps on Structured Removal streets will follow tree removal.
- Replacement trees are planted by a contractor following the stump removal. In some cases, a replacement tree might not be planted, but in general if a tree was removed, one will be replanted.
- Replanting efforts now emphasize a diverse mix of species in order to decrease susceptibility to future invasive pests or pathogens.

Why can't the City wait for trees to die before removing them?

- Dying and dead ash trees become brittle and unpredictable, posing significant hazard and liability from falling limbs and branches to both people (the public, City staff, and tree service professionals and property (buildings, homes, vehicles, infrastructure and roads).
- There could be thousands of trees in need of removal at one time if removal is delayed until the trees are dead or near so from EAB—a scenario that could not be mitigated efficiently no matter the resources.
- Waiting for tree mortality is not considered a best management practice and does not mitigate the spread of EAB.
- Tree and stump removal will not be timely if removal is delayed until thousands of trees are dead at once. Replacement trees may not be planted until the more urgent matter of removals is resolved.

Is there a special assessment for Structured Removal of public boulevard ash trees?

- No, there is not a special assessment for this work.

Why are ash trees removed in construction projects?

- In areas where streets are being torn up and re-constructed, i.e., new pavement, curbs and utilities, Public Works and other large construction projects offer a logical opportunity to update infrastructure including boulevard trees that might need to be replaced.
- While efforts are generally made to preserve healthy trees in construction areas, trees in direct conflict with the construction, those in declining condition, trees with severe defects, or trees facing other issues such as EAB, are removed and replaced in the final landscaping phase (the end) of the project.
- The University of Minnesota conducted a study in Minneapolis after a large storm event that found a direct correlation between construction-related severing of tree roots and subsequent tree failure (uprooting). This means the larger trees highly susceptible to construction damage require extra scrutiny.
- Regarding ash trees specifically, considering the impacts of construction, the inevitability of death from EAB, and the efficiencies gained through project collaboration, using construction projects as an opportunity for additional EAB management efforts is a smart use of taxpayer funds. Thus, ash tree removal and replacement became a regular part of construction projects starting in 2010.

For additional information on EAB please visit our web site and listed links to other resources.