



Emerald Ash Borer

Frequently Asked Questions

Parks and Recreation – Forestry Division, Version 4.0, March 2016

What is emerald ash borer?

- Emerald ash borer (EAB), *Agrilus planipennis* Fairmaire, is an invasive insect from Asia that has been found in twenty four states and two Canadian provinces as of March 2016. All ash trees, *Fraxinus spp.*, native to North America are susceptible and infestation will lead to tree mortality.
- Adult beetles are metallic green and are about 12 mm long. The EAB larvae will feed for one or two years, creating characteristic s-shaped galleries beneath the bark of ash trees. Adult EAB emerge in the spring, chewing D-shaped exit holes in the wood.



Why the concern over emerald ash borer?

- Minnesota has the largest populations of ash trees in the nation at over 998 million: about 20% of Saint Paul's urban forest is ash trees. Thus, EAB poses a devastating environmental and economic threat to both our city and state.
- According to the [National Tree Benefit Calculator](#), a 15" diameter green ash tree provides about \$147 in benefits every year to the residents of Saint Paul and there are an estimated 20,000 ash trees on Saint Paul's boulevards.



What is the life cycle of emerald ash borer?

- Adult beetles begin to emerge in May and continue to emerge throughout the summer.
- Females lay eggs about two weeks after they emerge which hatch in one to two weeks.
- The EAB larvae, not the adult beetle, bore through the bark and into the cambium (outer layer of wood) and feed on the cambium between late July and October. *This is the life stage that is eventually fatal to trees as the cambium is the portion of the tree that transports water and nutrients.*
- The larvae overwinter in the cambium and begin to emerge as adults in May.

Is emerald ash borer in Saint Paul and how did it get 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.
- EAB became established in Saint Paul through human movement of infested wood and infested wood products (e.g.: firewood and pallets). On its own, EAB spreads less than a few miles a year.



How do we slow the spread of emerald ash borer?

- In order to slow the spread of EAB, Anoka, Chisago, Dakota, Fillmore, Hennepin, Houston, Olmsted, Ramsey, Scott, Washington, and Winona counties, as of March 2016, are under [state and federal quarantines](#) which make it illegal to move any ash wood or products and all non-coniferous firewood from these counties.

How do you identify an ash tree?

- Leaves: Compound, 8-12 inches long with 5-11 leaflets with smooth or finely toothed edges.
- Branching/buds: Opposite with a single bud, typically brown, at the end of the branch.
- Bark: Smooth on younger ash trees becoming ridged, 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:
 - Splitting bark and/or small (1/8") "D" shaped exit holes where beetles emerge.
 - Serpentine "S-shaped" larval galleries underneath the bark (photo on right)
 - The presence of larvae or adult beetles (these 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.
 - Increased woodpecker activity/damage is very common, but not indicative of EAB in an unhealthy ash tree.
 - Sprouting of new growth (epicormic sprouts)

Visit www.stpaul.gov/eab

For translation in Hmoob, Somali, Español, or another language, please call 651-266-6400.

What should you do if you suspect a tree is infested with emerald ash borer?

- Please review the signs and symptoms of EAB from above before calling Saint Paul Forestry. Contact the Department of Parks and recreation – Forestry Section at 651-632-5129 or e-mail forestry@ci.stpaul.mn.us if your ash tree, public or private, is in Saint Paul and you believe that it is infested with EAB.

What should I be doing with my private ash tree?

- Because EAB infestations have been found throughout the city, it is important to take management measures now. View the [Private Ash Tree Management Recommendations](#) to learn more about management options for private property ash trees.
- Per [city ordinance](#), private property trees will be inspected for EAB and the city will order the removal or abatement of infested ash trees.

How can people help?

- Do not transport firewood to or from the Saint Paul area.
- If you are interested in helping Saint Paul replant trees and maintain the city’s urban landscape, you may make a [tree donation](#).

What is the City of Saint Paul doing in response to emerald ash borer?

- The Department of Parks and Recreation – Forestry Section has been aggressively managing EAB since it was first discovered in 2009.
- The Department of Parks and Recreation created the Saint Paul [Emerald Ash Borer Management Program](#) in June 2009 and was approved by the City Council to serve as a blue print for action.
- The Emerald Ash Borer Management Program focuses on:
 - *Monitoring and Inspections*: survey to find infested trees and new infestations in Saint Paul
 - *Sanitation*: prompt removal and disposal of infested trees
 - *Insecticide Treatments*: select public trees within infested areas are treated to help reduce beetle populations
 - *Inventory*: of all public property boulevard trees
 - *Structured Removal*: proactive removal of non-infested ash trees
 - *Reforestation*: with a goal of replanting a variety of species to increase diversity
 - *Outreach and Education*: in order to give citizens information on the pest
- Forestry monitors the infested areas for newly infested trees which are promptly removed once identified.
- Forestry, per ordinance, inspects private property trees for EAB and will order the removal or abatement of the nuisance.
- Forestry, with its partners, releases bio-control agents (three species of parasitic wasps which feed solely on EAB) and does randomized branch sampling.
- Forestry treats selected ash trees with an insecticide in order to slow the spread of EAB and mitigate removal costs.

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

- Treated trees are 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, no overhead utilities

Does the City use neonicotinoids to treat ash trees?

- The City does not use neonicotinoids to treat its ash trees. The City uses insecticides with Emamectin Benzoate as the active ingredient, which is not in the neonicotinoid family of insecticides.

Why is the City removing non-infested ash trees (“structured removal”)?

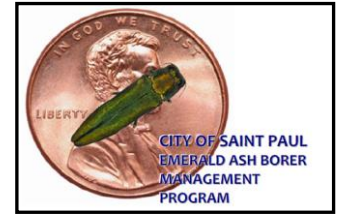
- The ash tree population in Saint Paul is estimated to be about 20,000 on public street boulevards alone. To mitigate the effects of EAB, proactive structured removal of ash trees reduces the number of trees requiring removal in the future. This management strategy spreads out the cost of removing thousands of trees, creates a manageable and realistic financial plan, and allows for an increased diversity in the age and species of replanted trees.

How does the City select areas for structured removal?

- The focus for structured removal is on areas that were planted in a monoculture of ash. Ash trees with structural defects and those that are under utility lines may also be selected for structured removal.

How are residents or property owners informed that their block has been chosen for structured removal?

- Postcards are mailed to all addresses on blocks that will be affected by structured removal (picture of actual postcard at right). Postcards are mailed at least two weeks before removals begin.



What happens after the ash trees are removed?

- All of the stumps on “structured removal” streets will be removed when weather permits. For example, if your tree is removed in February, then the stump will be removed in the spring of that year.
- A replacement tree may be planted by a contractor following the tree and stump removal. Planting occurs twice per year, once in the spring and once in the fall.
- Forestry is planting a diverse range of species in order to decrease the city's susceptibility to damage from future invasive pests.
- Generally, if your tree is removed in the winter, a new tree would be planted that spring. If a tree is removed too late for spring planting, it will be planted in the fall. However, there are a few species (e.g.: oak and hackberry) that are not available for fall planting and it may be necessary to wait until the following spring for these species to be planted.

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

- Dying and dead ash trees become brittle and pose a significant hazard and liability from falling limbs and branches. If delayed until all the trees are dying from EAB, there could potentially be thousands of trees in need of removal at one time—a scenario that could not be handled sufficiently under current resource allocations.
- Waiting for tree mortality is not considered a best management practice and does not mitigate the spread of EAB.
- If delayed until the trees are dead there will be no guarantee as to the timeliness of tree and stump removal, and replanting of replacement trees—all of which are dependent upon available future resources.
- Spreading out the cost of removals and replacement of ash trees over an extended time frame will ensure that as the EAB population increases in Saint Paul: a) budgets are not as severely impacted; b) there are less ash trees that need to be managed, which is a costly task; and c) possible hazardous situations will be decreased making public areas safer for citizens of Saint Paul.

Is this a special assessment that residents will be billed for?

- Residents will not get an extra bill for this work.

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

- Ash trees that are not structurally sound or healthy do not warrant the ongoing expense of insecticide treatment.
- Treating all ash trees is not cost effective due to the ongoing expense of annual or bi-annual treatments.
- The goal of any insecticide use by the City will be to employ it as a tool to assist in slowing the spread of and lengthening the response time to one that is more manageable.

How does the city manage areas infested with emerald ash borer?

- Public property trees found to be infested with EAB are promptly removed during “non-flight” season, September through April. If an infested tree is found in June or July it is best to wait until EAB adults are no longer active, from September through April, to remove the tree in order to decrease the chance of spreading EAB.
- Saint Paul will continue the aggressive removal of confirmed EAB infested trees with the exception of those found on the river bluffs and wooded areas, as these are very difficult to access.
- Leaving live, non-infested, ash trees in the original infested neighborhood of South St. Anthony is a strategy to contain the pest in the area as long as possible. If all ash trees were removed, the loss of potential food and egg-hatching sites for the beetle could cause them to spread more rapidly.

What plan does the City have to address private property infested ash trees?

- The city updated its ordinance in 2010 to include inspection for EAB on private property and to order the removal of infested ash trees.
- Property owners are required to remove their infested ash trees. If the owner refuses to comply, the city may abate the nuisance and all associated costs for doing so will be assessed to the property owner. All property owners have the right to appeal any such action.
- Finally, the City encourages residents to replant in order to take advantage of the countless economic, environmental and social benefits trees provide.