



Frequently Asked Questions ***Forestry / Emerald Ash Borer***

June, 2016

What is the beetle and how does it impact ash trees:

Emerald Ash Borer (EAB), *Agrilus planipennis* Fairmaire, is an exotic beetle that was discovered in southeastern Michigan in 2002. It probably arrived in the United States on solid wood packing material carried in cargo ships or airplanes originating in its native Asia. The adult beetles nibble on ash foliage but cause little damage. The larvae (the immature stage) feed on the inner bark of ash trees, disrupting the tree's ability to transport water and nutrients. Unlike other trees like oak or elm, which remain relatively stable after they die, ash trees lose moisture internally very quickly and begin to fall apart soon after they die. The City of Cedar Rapids' (City) diversification efforts will help reduce impacts felt by the loss of ash trees.

What has the City done to prepare for an Emerald Ash Borer threat?

Since the beetle's arrival in the U.S, the City of Cedar Rapids has implemented a multi-year plan to prepare for a possible EAB infestation. The City has already removed approximately 2,000 declining public ash trees. The City follows the Iowa Department of Natural Resources (DNR) and Iowa State Extension Service recommendations for Emerald Ash Borer preparations. A timeline of preparations includes:

- 2005: The City stopped planting ash trees in an effort to reduce the population.
- 2008: City Council supported additional funding to replant a more diverse stock of trees, which would reduce the impacts felt during an infestation.
- 2009: New programs like the "Plant Some Shade" partnership with MidAmerican Energy and the DNR offer low cost trees for residents. Inspections already taking place in areas with high number of ash trees.
- 2010: Ash trees that met the DNR criteria for removals are taken down, public education on treatment and prevention begins.
- 2011: City staff are trained on EAB identification, and all forestry crews begin inspecting every ash tree they remove or prune.
- 2013: A public meeting was held on EAB preparedness, with speakers from City, DNR, Iowa State University (ISU) and United States Department of Agriculture (USDA).
- 2011 – 2014: Removal of declining ash trees continues.
- 2014: Forestry staff meet with several community groups regarding EAB, including Jefferson High School science classes, neighborhood and church groups, and Cedar Rapids Optimist Club.
- 2014-2015: EAB Action plan updated
- 2015: EAB confirmed within Cedar Rapids limits
- 2016: Initial EAB treatment begins

Other efforts to prepare for an infestation include:

- Diversifying the street tree composition through community street tree planting.
- Ongoing review of existing tree ordinances, to plant trees during development and to address future removals of hazardous trees.
- Review of staffing requirement to address public trees and reforestation.
- Inspections of areas with high concentrations of ash trees to determine potential hazards and prioritization area. Walkways to schools, primary roads, access to hospitals, food and gas services take priority.
- Participation in ISU Extension, DNR and International Society of Arborist programs for educational opportunities.
- Maintained the longest running Tree City USA status in Iowa - a sign of Cedar Rapids' commitments to the urban forest and the environment.
- Completed the Street Tree Inventory in 2016.

How many ash trees exist in Cedar Rapids?

Cedar Rapids has approximately 10,000 public ash trees. If *all* public ash trees were removed due to an infestation, the City would still retain 70-75 percent of our tree canopy.

How does the City prioritize ash tree removal?

The City will proactively remove ash trees that are hazardous, unhealthy, have poor structure or ash trees that have a negative effect on more desirable trees. This process will continue until the effects of the EAB are complete within the city.

Who determines which trees selected for removal?

The City Arborist – a certified arborist through the International Society of Arboriculture determines which trees will go on the removal list.

In addition to tree removal, what other treatment options are being explored?

The City has researched and plans to implement a limited chemical treatment strategy. Forestry staff will identify 1,200 – 1,900 of the best quality, city-owned ash trees to receive chemical injections. This follows the latest studies which have found that a middle approach combining tree removal and insecticide use is better than trying to remove every ash tree, and more affordable than trying to inject every tree with insecticide.

The City will target trees to inject that have diameters at breast height of between 18 and 28 inches, which represents trees in the range of 20 to 25 years. Trees that have a particular historical significance or exhibit excellent structure and form will also be targeted. These trees will be considered as candidates for treatment. In order to save an ash long term, a lifetime of treatment is needed.

Planting diversity remains one of the best management tools. Ash and silver maple were planted in large numbers as replacement trees for American elms killed by Dutch Elm Disease. As a result, these species are overrepresented as a percentage of the urban tree canopy. The city of Cedar Rapids has expanded its planting list to include over 60 different species of trees each year. New development is also required to maintain high diversity levels with their associated landscaping. Residents are encouraged to plant species other than maples, lindens, ash, honey locust and hackberry, which make up over 70% of the current street tree population. Native trees like oaks are adapted to our climate, provide a food and breeding source for hundreds of beneficial insects and are underrepresented along the city ROW.

What are the treatment options available for residents?

It is important to remember that insecticide treatments are not guaranteed to eradicate EAB in ash trees. Health and condition of the tree, the age of the tree, soil moisture, soil compaction, and other site and environmental factors influence the effectiveness of these products. Current success rates are in the 90 percent range, but there is a possibility that you could invest the time and funds to treat your tree and it could still be infested and fail.

Treatments are not preventative. They are meant to be applied just before the insect infests the tree – which is difficult to predict – or once the tree is infested. You must be vigilant and learn the signs and symptoms of EAB. If your tree has an early EAB infestation, treatments may stop the infestation. You should consult with a certified arborist and have your tree evaluated for treatment if you wish to try and protect it.

Treatment is only part of an overall management program. The tree should be properly pruned on a regular basis (every 5 years or so), watered regularly and fertilized yearly. This will keep the tree in the healthiest state possible and allow it to be more effective in fighting off an infestation. This applies to all trees, not just ash. Most insecticide control measures against EAB must be used either yearly or every two years for the life of the tree.

Treatment options for private property ash trees:

The chemical solutions Emamectin Benzoate (sold under the trade name Tree-Age) and Merit (Imidacloprid) are commonly used to treat ash trees. There are several things to keep in mind when treating ash trees with these products, and the City recommends residents review the options carefully:

- If you treat a parkway tree, you need to contact the Forestry Division so the tree can be evaluated, approved and put on a list so it is not removed prematurely.
- An ISA Certified Arborist should evaluate private trees to see if they are in good condition.
- Once you start treatment on a tree, you will need to continue it for the life of the tree. If you stop, the insect can infest the tree and kill it.
- These products are not preventative and do not guarantee survival of the tree. To be effective, the insect's larva needs to ingest the chemical by chewing through the bark. In addition, some treatments require injections, which create small wounds and stress to the tree.
- Merit, when applied as a ground treatment instead of a trunk injection, can contaminate groundwater if the per acre limitations are surpassed. Merit is used to control a variety of insects, not just Emerald Ash Borer.

Why does the City remove ash trees instead of treating them?

Cedar Rapids has a large number of ash trees. The cost to treat the population would be significant. Many of our ash trees, while healthy, are not good candidates for treatment (have poor branching habits, have declining structure, or are not in ideal locations). Since treatment does not guarantee the survival of the tree, the City would still need to remove trees that die during infestation. Another reason the City has decided not to treat its ash trees is because the treatments are invasive and stressful to the tree. Treatment must be applied for the life of the tree, and research is not conclusive on the long term effects of wounding the tree every year or every other year for treatment. Treatment is a viable option for homeowners, college campuses, businesses and even smaller towns and cities.

What is the key to limit the spread of the insects?

The public can help limit the spread of EAB by using and purchasing local firewood only, as a key factor in the spread of the beetle is human activity.

Where can I go for State information on Emerald Ash Borer?

- The Emerald Ash Borer Information website is
<http://www.emeraldashborer.info/>
- The Department of Natural Resources:
<http://www.iowadnr.gov/Environment/Forestry/ForestHealth/EmeraldAshBorer.aspx>
- The Iowa State University Extension Service website is:
<http://www.extension.iastate.edu/pme/EmeraldAshBorer.html>