Emerald Ash Borer (EAB) Management Plan SUMMARY

City of Shakopee

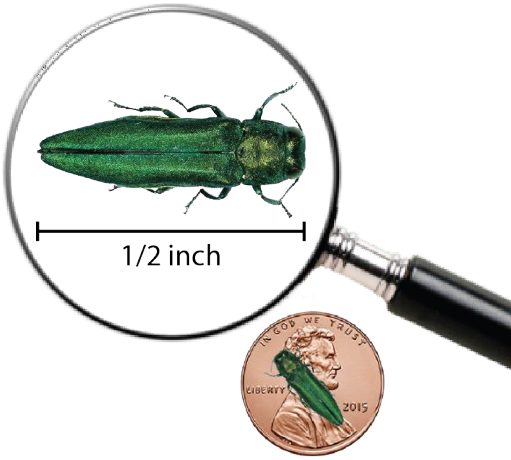
THE EMERALD ASH BORER THREAT

Emerald Ash Borers (*Agrilus planipennis*) are invasive, exotic beetles that attack and kill ash trees (all trees within the genus Fraxinus). Native to Asia, the beetles were first discovered in Michigan in 2002 and, by 2009, the destructive insects had invaded the Twin Cities Metro Area. While the shiny green beetles feed on ash tree leaves, the larvae (immature beetles) do the worst damage by far. As the larvae tunnel under the bark of ash trees, they feed on the inner bark (vascular tissue) which transports the tree's food and water supply. As the larvae grow in number, more inner bark is destroyed, eventually killing the tree within two to four years.

Ash trees comprise about 17% of the trees within the City of Shakopee and an Emerald Ash Borer (EAB) infestation threatens all of them. Because of the EAB threat, the City Council approved the Emerald Ash Borer Management Plan in 2015. The Plan's purpose is to prepare the city for an EAB infestation by protecting good quality ash trees along boulevards and in parks while removing and replacing the rest. The Plan takes a proactive approach to dealing with EAB that distributes costs over time and lessens both ecological and social impacts.

Emerald Ash Borer

Adult beetle



Actual size

EAB MANAGEMENT PLAN STRATEGIES

There is approximately 1,437 public ash trees in Shakopee located in parks and along street boulevards. Most of the public ash trees (about 1,157 trees) are along the streets in the boulevards and about 280 are in parks. Ash trees found in natural/wooded areas and on private property have not been inventoried. The city's EAB plan uses multiple approaches to deal with the EAB threat. Listed below, these strategies will occur in phases and will be ongoing:

PROTECT the best ash trees:

- Located on city property (street/park).
- Not in a natural, unmanicured woodland.
- Condition rating of "good" (treat the best; replace the rest).
- Diameter of 10 inches or more

REMOVE dead and poor ash trees:

- Located on city property (street/park).
- Not in a natural woodland areas unless identified to be a hazard.
- Condition rating of "poor" or "dead" (treat the best; replace the rest).

Larva of Emerald Ash Borer (immature beetle).

EAB damage to inner bark of ash tree.

Credit to: City of Burnsville for sharing their Summary plan as our template

REPLACE dead/poor ash trees:

- Trees chosen as replacements will consist of several species to increase diversity of the city's tree population.
- Replacements will occur after the poor-quality ash trees have been removed, with some replacements occurring sooner as budget allows.

ASSIST residents with private trees:

- Provide ash tree and EAB information through the city website, newsletter, news releases, social media, and other outlets.
- Offer replacement trees for sale through city's annual tree sale.

Green ash
(*Fraxinus pennsylvanica*)

CITY-OWNED ASH TREES

The condition of public ash trees along streets and in parks will be evaluated periodically. Poor quality ash trees will be removed with the worst trees being removed first. Good quality, mature ash trees will be protected from EAB using trunk-injected pesticides. Treatments delay the loss of good quality mature trees, which provide significant social and environmental benefits.

Ash are also in public (city-owned) natural areas and woodlands. Within these unmanicured public areas, ash trees will not be treated to protect against EAB. If infested, these trees will be allowed to die and naturally decay in place, unless they are identified to be a hazard.

Protection of Good Quality, Public Ash Trees

By 2015, the city established a baseline evaluation of the citywide tree population through inventories and surveys. Trees along street boulevards, parks, and other city properties were identified by species, measured for diameter, and assigned a condition rating from dead to good. Trees on private property and within public natural areas and woodlands have not been inventoried.

Based upon public ash tree density and distribution, the city treats ash trees on a three year rotation. Phase one was treated in 2016 and 2019, phase two in 2017 and 2020, and phase three in 2018 and 2021. Treatment of ash trees is performed by contractors and is applied through trunk injection.

By the end of 2021, the best ash trees along streets and in parks will have received two rounds of treatment to protect against EAB. *Table 1* shows the number of trees treated in each phase. Attached figures shows the locations of ash trees treated in each phase.

Injection of pesticide into ash tree by trunk injection.

Table 1. Numbers of ash trees treated by year.

Treatment Year	Phase	Treated Trees
2016, 2019	1	200
2017, 2020	2	166
2018, 2021	3	176

Removal of Low Quality, Public Ash Trees

Public ash tree removals started as part of the EAB management plan in 2015. Ash trees with a condition rating of "dead" or "poor" and trees that had conflicts with utilities were prioritized for removals. When choosing ash for removal, staff select trees dispersed across the city to minimize the impact of tree loss on any one neighborhood.

There are also a limited number of public trees routinely removed as needed because of street reconstruction projects, storm damage and other situations that cause trees to decline or become hazards.

The condition rating of a tree is based on multiple factors including canopy size and fullness, disease/insect problems, and injury. Trees rated dead and poor are the unhealthiest trees, pose safety hazard liability, and provide the least value to Shakopee's urban forest.

Council allocated budget for the removal of ash trees. Currently there are public ash trees with a rating of dead or poor and these have been prioritized for removal. Public ash trees with a current "fair" rating will be removed as their condition declines.

PRIVATELY-OWNED ASH TREES

Emerald Ash Borer on ash leaf.

The removal or treatment of private trees is at the discretion of the property owner. Residents may apply non-restricted use pesticides to their ash trees themselves or hire a tree contractor with a pesticide license.

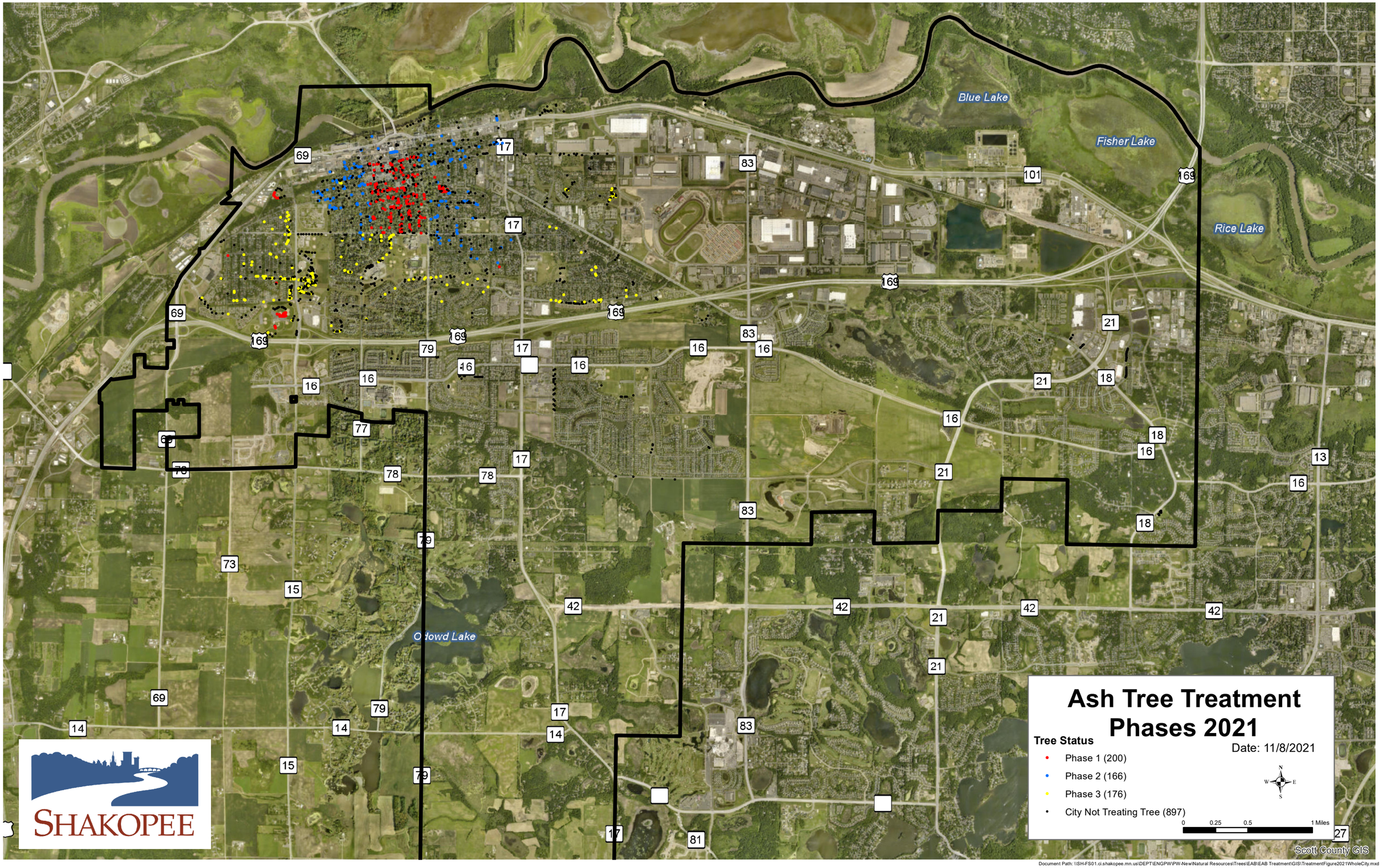
When a suspected EAB infestation occurs on private property, the city has the authority to inspect those trees. If an infestation is confirmed, the city may require the property owner to remove and properly dispose of tree materials, especially in cases where a tree is a nuisance or safety issue.

Ash trees in large, private woodland areas can be difficult and costly to protect. Property owners of these large woodlands will not be required to remove or treat EAB-infested trees, unless they pose a public safety concern or neighborhood nuisance.

FOR FURTHER INFORMATION

Visit http://www.shakopeemn.gov/EAB. For questions, contact publicworks@shakopeemn.gov.

Image credits
Page 1: EAB adult beetle, Univ. of Georgia; EAB larva, David Cappaert, Univ. of Michigan; EAB damage, City of Burnsville
Page 2: Green ash leaf, Tom DeGomez, Univ. of Arizona; Injection into ash tree, Anna Reed, Star Tribune
Page 3: EAB on ash leaf, Daniel Herms, Ohio State Univ.



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