

City of Bayport Minnesota



Emerald Ash Borer Management Plan

2020

Emerald Ash Borer Management Plan

PURPOSE

By implementing the provisions of this management plan, the city is attempting to mitigate the disruption to its urban forest caused by the infestation of the Emerald Ash Borer (EAB). Taking a proactive approach to the potential infestation enables the city to address both public and private impacts in an efficient and effective manner.

The city will attempt to distribute costs associated with the EAB over a manageable time period, and lessen the economic and social impact that an extensive loss of ash trees would have on the quality of life in our community.

In establishing this management plan, the city has taken into consideration the following factors:

- EAB was discovered in Bayport in 2019
- Being proactive will allow the city to have greater control over the matter, as well as minimize and better manage the impact and costs of EAB
- Removal of diseased or declining ash trees will help prevent the more rapid spread and impacts of EAB in the community
- The application of chemical treatments for both public and private ash trees may assist in controlling EAB over time
- Reforesting the city with native tree species will increase the diversity and sustainability of the forest
- Grants and/or other funding sources will help determine the type of EAB management techniques and practical implementation over time

APPLICABILITY

This plan applies throughout the city on all public property and public rights-of-way. Elements of the plan will also be applied to ash trees on private property.

BACKGROUND

Agrilus planipennis, commonly known as EAB, has a natural range of eastern Russia, northern China, Japan and Korea. In the past decade, the exotic beetle found its way to the United States. EAB is a bright metallic green color with an elongated, slender body measuring 1/2 inch. The adult beetles nibble on ash foliage, but cause little damage to leaves. Trees become infested when adult beetles lay eggs on the bark, which hatch into larvae that bore into the tree. The larvae tunnel in the phloem layer (between bark and wood) and disrupt the movement of water and nutrients, causing eventual death of the tree.



EAB was first discovered in Michigan in July 2002. It is suspected that EAB arrived on solid wood packing material shipped from its native Asia. Without any natural predators or controls in North America, the insect has spread to 14 states and 2 Canadian provinces. Millions of ash trees have been killed and some cities have reported a complete loss of all ash trees within 5 years of EAB detection. There has been no stopping the devastation to the urban forest, though millions of dollars have been spent on prevention methods. Research shows that early sanitation efforts in Minnesota have helped slow the spread of EAB, but new infestation sites are being reported every growing season.

EAB adults can fly at least 0.5 miles from the tree when they emerge. However, new infestations are most often created when people transport infested nursery ash trees, logs, or firewood into non-infested areas. Shipments of ash trees and transportation of firewood has been regulated by the state to reduce the spread of EAB. Washington County is designated as a quarantine area, and transportation of ash wood outside of a quarantine area is prohibited. The Minnesota Department of Agriculture is responsible for quarantine enforcement and penalties.



Signs of EAB include:

- Splitting bark and/or small “D” shaped exit holes where beetles emerge
- Serpentine “S” shaped larval galleries underneath the bark
- The presence of EAB or larvae

Symptoms of EAB infestation include:

- General thinning of canopy and increasing dieback of the ash tree
- Increased woodpecker activity
- Sprouting of new growth shoots from the base of the tree

EDUCATION AND COMMUNITY OUTREACH

Resident education and ongoing outreach to the community are key components of managing the impact of the EAB, especially as more information becomes available. Continued coordinated public information dissemination to residents and the media will be administered through the city’s website, newsletter, and social media. Public meetings will be conducted as necessary. The city will maintain a list of resources for property owners from relevant agencies (see Resources). As EAB activities occur in isolated neighborhoods, direct communication will be made by the city to advise property owners on the status of boulevards, privately owned trees, and general activity in the area.

EAB STATUS

EAB was discovered in the city in the fall of 2019 during a routine tree trimming project. An analysis of the infestation showed that EAB was likely present for multiple years prior to its detection, which is consistent with the insect’s path of destruction. Symptoms are slow to appear, and once EAB is actually found, it has likely been present for 3-5 years. It is estimated that more than 30% of trees located on city property, rights-of-way, and boulevard areas are ash trees (excluding the forested area of Barker’s Alps Park). Once EAB is found in an area, the mortality rate of ash trees increases exponentially. After discovery, the mortality rate of ash trees in 4-6 years is 30% and increases to 90% in 8-10 years.

EAB MITIGATION

Although it is impossible to stop the spread of invasive species like EAB, the management plan has been created to lessen the impact of EAB on the city’s landscape and budget. Without a proactive approach, the city will encounter substantial ash tree loss in a short period of time, creating a safety hazard and significant budget constraints.

In an effort to mitigate EAB, the city will implement the following:

1. Removal of EAB infested ash trees

The city will remove ash trees that have become infested with EAB on all public property. The most critical period for movement of confirmed EAB ash trees is June and July. This is the period when adult beetles emerge from trees, begin feeding on foliage, and move to more trees to lay their eggs. To reduce the chances of spreading EAB, ash trees should be left standing from May 1- September 1.



The city will also update the city ordinance to include EAB and allow for the authority to enter private property for inspections, to order removal of diseased trees, and to abate diseased tree nuisances upon non-compliance by a property owner. The ordinance may also be modified to include recommendations by the League of Minnesota Cities Shade Tree Pest Control guidelines and the Department of Agriculture and Department of Natural Resources rules and regulations regarding EAB infestation.



2. Preemptive removal of declining ash trees:

The city will begin pre-emptive removal of declining ash trees on public property, even when EAB has not yet been identified. This would include ash trees on city grounds, parks, rights-of-way, and boulevard areas. In general, pre-emptive removal would be completed by a contractor, supplemented by the Public Works Department as time and work schedules permit in the late fall and winter months. Pre-emptive removal will allow for reforestation and diversification with other species of trees and distributing the cost of these activities over time. A 2012 tree survey indicated that ash trees made up 37% of the city boulevard trees at that time. For

diversification purposes, an individual species of trees should not exceed 20%, to allow for the tree population to be less affected by disease and/or infestations.

3. Removal of all ash trees

Unless treated with chemicals, every ash tree within the city will eventually be impacted by EAB, resulting in death. Removal will include ash trees on both public and private property.

4. Chemical treatment

There are currently two methods of treatment, including drenching the soils with chemicals, and injecting chemicals into the tree. The city strongly discourages the use of soil drench insecticides due to potential water pollution and negative impacts to wildlife. The city follows the Department of Agriculture guidelines for treatment of ash trees to help control the onset of EAB and considers trunk injections a management tool to utilize on significant trees within parks and rights-of-way. Due to the compounding cost of reoccurring treatments and the potential unknown effects on ash trees, water resources, and the environment, the city will identify the best potential candidates for treatment and use this application with discretion, when deemed appropriate and cost effective.



5. Reforestation

The city acknowledges the aesthetic and environmental impact that the loss of significant ash trees will have on the community. As grants and/or other funding sources become available, the city will make every effort to plant new trees within boulevard and rights-of-way where ash trees have been removed.

6. Wood disposal

The city will promote the Department of Agriculture's regulations for handling and disposal of ash wood. Washington County is currently under a quarantine, which prohibits the transportation of wood from a quarantine area to a non-quarantine area unless properly handled. If wood transportation is occurring outside a quarantine area, it is required to be chipped to a dimension less than 1"x1"x1" to comply with the Department of Agriculture requirements. Best management practices call for this removal to occur between September 15 and April 30 to reduce the potential for spreading EAB.



Any storm damaged ash trees during the EAB active growth season (spring and summer) should be chipped within the area to kill EAB larvae before transportation. This includes any and all debris created by property owners, commercial tree services, or the Public Works Department on private or public property. If chipping is not an option, covering the load while transporting to a disposal site is an acceptable alternative. Any ash tree taken down on private property can be used as firewood on that property. However, any tree debris removed from the property will need to follow the rules of the quarantine area for transportation.

7. Public and private collaboration

The city will attempt to promote contractors hired by the city to conduct EAB activities, such as tree removal, treatment, and plantings to property owners, which could result in potential cost savings. However, all work on private property will be a direct contract between the property owner and contractor.

8. Monitoring and tracking

The Department of Agriculture surveyed and mapped ash trees on city property in December of 2019 (see Resources). The survey verified the presence of EAB and identified 10 trees as infested. The Department of Agriculture also maintains and updates a map for EAB infestations throughout the state. The city will continue to work with the Department of Agriculture to monitor and track EAB.

RESOURCES

EAB Information for Property Owners

<https://www.mda.state.mn.us/eab-info-homeowners>

Bayport EAB Infestation Map

<https://mnag.maps.arcgis.com/apps/webappviewer/index.html?id=63ebb977e2924d27b9ef0787ecedf6e9>

EAB Best Management Practices

<https://www.mda.state.mn.us/best-management-practices-eab>

Quarantine and EAB Wood Movement Regulations

<https://www.mda.state.mn.us/plants-insects/questions-answers-about-eab-quarantine-compliance-agreements>

EAB Insect Information

<https://www.mda.state.mn.us/plants-insects/emerald-ash-borer>