



# City of Robbinsdale

## Emerald Ash Borer (EAB) Management Plan

Last updated 9 February 2024

### **Background**

Municipalities and landscape managers who failed or did not have the time to prepare for the emerald ash borer (EAB) have echoed the philosophy that being unprepared created massive management and logistical challenges. Lacking a plan or strategy in place when EAB becomes established in a community is a scenario to avoid at all costs since serious public safety hazards are created by the rapid deterioration of ash trees killed by EAB. Years of academic and experiential research, most prominently undertaken by Dr. Richard Hauer at UW-Stevens Point, have shown it is more financially, environmentally and socially acceptable to make treatments (injections) of healthy ash trees the hallmark of any management plan, while only removing those trees that are in decline or no longer providing measurable benefits.

### **Purpose**

The purpose of this plan is to specify strategies minimizing the social, economic and environmental impact the emerald ash borer (EAB) has on the City of Robbinsdale, and to document in writing the planned procedures and policies for managing EAB on a municipal level. It is meant to distribute costs over a sensible amount of time, maximize and maintain long-term benefits provided by ash trees in the community forest, and to be used as a guide for actions taken throughout the course of EAB infestation.

### **History of EAB in Robbinsdale & Current Status**

The Emerald Ash Borer (EAB), *Agrilus planipennis*, is a nonnative beetle native to eastern Asia that was first discovered in Michigan in 2002. The larvae stages of the insect feed on the inner bark (phloem) of ash trees, disrupting the flow of water and nutrients between the roots and canopy, causing eventual tree decline and death. EAB attacks all ash in the *Fraxinus* genus.

EAB was first confirmed by the Minnesota Department of Agriculture (MDA) in Robbinsdale on 11 April 2018 in a private tree along Lilac Drive N. A second private EAB infestation was confirmed a week later by the MDA at a private residence in the 3700 block of Major Ave N. Additional trees were confirmed with EAB in several other separate areas of the City in the spring of 2019. Ongoing inspections by the City Forester/Natural Resources Specialist have documented the insect's increasingly exponential spread throughout the City in private untreated ash trees. As of February 2024, the City is considered "generally infested", with signs of EAB damage now visibly detectable in nearly every untreated tree.

### **Coordination**

The City staff member responsible for administering the City of Robbinsdale's EAB Management Plan, performing protective treatments, coordinating preemptive removals and replanting is Stephan Papiz, City Forester/Natural Resources Specialist. As of February 2024, seasonal staff or volunteers are not expected to be enlisted to assist with implementing the City's EAB Management Plan.

### **Application**

This plan will apply to the property categories below:

#### **Public Properties-**

- **Rights of way (ROW)** - City rights of way (public ownership) typically extends to an area from 12 to 15 feet beyond the curb. This plan is applicable to all ash trees located within City-owned rights of way as documented in Robbinsdale’s Geographic Information System (GIS) tree inventory, which is based on Hennepin County GIS parcel map data. The City of Robbinsdale is responsible for general maintenance, pruning, removal and (if applicable) replacement of trees in these areas. This includes those trees planted by residents or trees that grew up naturally “volunteered” and grew up on their own.
- **Parks & Landscapes** - City parks, open spaces, public landscapes, Economic Development Authority (EDA) properties, woodlands and land with other City easements. The City is responsible for general maintenance, pruning, removal and (if applicable) replacement of trees in these areas as well. Woodland (wild) ash trees are not actively managed and there is no plan to treat or remove these trees.
- **MnDOT** – There are a dozen ash trees growing on MnDOT rights of way along the Hwy 100 right-of-way corridor. Of these ash trees, 3 are being regularly injected due to their mature size or landscape prominence. A permit to treat the tree along the northbound Hwy 100 off ramp to eastbound Co Rd 9 was approved in 2022. Most other MnDOT trees are volunteers growing in the patch of woodland known as “Fantasy Woods” well away from any buildings or rights of way, and pose little risk when they succumb to EAB.

**Private Properties-**

- **Residential/Commercial/Industrial/Vacant Lots** - This plan will only apply to properties where EAB infested and declining ash trees are likely to negatively affect busy public rights of ways upon failure. Unless deemed a nuisance or a hazard tree adjacent to a major roadway or collector street, the City will not condemn private ash with EAB. Removal of infested ash trees does little in the way of reducing overall insect pressure on the community forest or benefitting treated trees. Further details are explained in the Private Ash Tree Management subsection.

**Ash Tree Inventory & GIS**

Seasonal forestry assistants conducted an inventory of most public landscape and rights of way trees in 2011-2012 using ArcGIS. The consulting forestry firm, TreeBiz LLC, paid for through a grant from Hennepin County, completed a full inventory of public trees in 2020. The inventory is managed/housed/backed up by the City’s GIS consultant, LOGIS.

As of February 2024, there are 498 public ash trees under active management/treatment. This number will continue to decline as unhealthy ash trees are removed over time. Ash trees currently make up 8.2% of the urban forest, which is down from 12.2% in 2018. The average diameter at breast height (DBH) of all public ash trees is 18.6”, with the largest DBH at 42” and the smallest DBH at 5”.

Every public ash tree within the City’s ArcGIS inventory includes attribute data, including but not limited to DBH, last year measured, last year pruned, specific tree health conditions, current overall condition and most recent treatment data. The City Forester/Natural Resources Specialist makes regular updates to the GIS inventory using both desktop ArcMap and Field Maps mobile data collection application.

**Public Engagement & Budget**

**City Council:** Elements of the City’s EAB Management Plan have been presented to the City Council during annual Forestry Reports beginning in 2016. Reports have highlighted the ongoing strategy to treat all healthy ash trees on a 3-year rotation and remove declining ash trees that are no longer providing significant benefits, or are in harm’s way of a street reconstruction project.

**Public Outreach, Education & Tree Marking:** Information summarizing the City’s ongoing strategy for EAB management and providing recommendations for residents on how best to manage private ash trees are highlighted and published at least twice a year in City newsletters. The City’s forestry webpage has various links about EAB and best management

practices for ash trees as well. Whenever residents contact the City with questions about EAB or ash trees, inquiries are promptly answered with necessary detail.

All treated public ash trees are marked with a round aluminum tag stamped with the letters "RF", standing for Robbinsdale Forestry and the last two digits of the last year treated. Marking tags are engraved/stamped in-house, provide physical evidence of treatment and also visually communicates to residents public ash trees are protected.

**Budget:** An average annual funding level between \$12,000 to \$16,000 is generally required for ongoing yearly treatment materials and ash tree removal costs, which is provided through capital funding. This figure is expected to remain constant until the time when the local EAB population declines after all untreated trees in the surrounding area have died, possibly extending the public tree treatment rotation. These costs primarily cover preventative insecticide treatments (injections) and removals of ash trees found to be in decline from maladies other than EAB. The cost of emamectin benzoate insecticide (TREE-äge) accounts for the greatest financial portion of annual budgeting for EAB management. Initial startup costs in 2016 for purchasing insecticide and injection equipment was the City's costliest for EAB management. A large number of removals of long declining ash trees was performed from 2016-2018, adding to the overall initial management cost. Year to year funding needs vary depending on the number of trees up for retreatment and number of declining ash that are ultimately removed.

In 2022 the City was awarded a grant through the Minnesota Environment and Natural Resources Trust Fund, administered by the DNR, and titled "Managing Ash for EAB". The grant awarded is for \$32,500, specified to help purchase insecticide, arbor plugs and equipment. The grant includes an in-kind match of \$10,000 provided through in-house labor and use of existing equipment. The grant period runs through June 30<sup>th</sup>, 2025.

## **Management Actions & Strategies**

**Detection, Monitoring and Reporting:** The City Forester/Natural Resources Specialist has been the primary inspector searching for and documenting EAB in the past. With the City now "generally infested" this role is much less important. The City Forester/Natural Resources Specialist will continue to regularly inspect ash tree canopies during both the leaf-off and leaf-on periods, monitoring the degree of spread. Because the Twin Cities Metro Area is now deemed "generally infested" the City no longer reports EAB finds to the MDA or via EDDSMaP.

**Public Ash Treatments:** City-owned ash trees found to be in healthy or in generally decent condition, exhibit good architecture, and not suppressed are injected with TREE-äge R10 (emamectin benzoate) once every 3 years. Experience and research has shown that emamectin benzoate injections are nearly 100% effective at keeping ash trees safe from EAB. Equipment used for injections is the ArborJet QuikJet-Air system. Municipal EAB treatment costs using TREE-äge R10 average out to be around \$2.50 per diameter inch, not including arbor-plugs. To legally inject trees using TREE-äge R10, the City Forester/Natural Resources Specialist maintains a Non-Commercial Pesticide Applicator License with categories A (Core) & E (Turf & Ornamentals) credentials.

The first three-year treatment rotation of ash trees began in 2016 and concluded at the end of August 2018, with the 2<sup>nd</sup> three-year rotation undertaken from 2019-2021. Initially TREE-äge was used, then TREE-äge G4 which is a non-restricted formulation. During the middle of the 2020 treatment season, the City switched to TREE-äge R10, a higher concentrated restricted-use form of emamectin benzoate. With R10 uptake has been faster and treatments overall more efficient.

The City will continue to treat public ash trees with a trunk injection of TREE-äge R10 on 3-year rotations. Treatment frequency and dosage will be revised based on the most current research and local insect pressure. Annual expected ash tree treatment numbers for the next 3 years will be 131 in 2024, 152 in 2025, and 211 in 2026. These numbers may decrease to a minor degree as some trees are found to be in decline from non-EAB maladies and are removed.

The City will allow a boulevard ash tree to be treated by a property owner if they agree to have the injection performed by a licensed tree contractor using emamectin benzoate. As of February 2023, only a single public boulevard tree is being treated by the homeowner via Rainbow Tree Care, despite previous notification the City treats all healthy public ash trees.

**Public Ash Removals:** All declining or poorly placed City-owned ash trees will be removed as needed on an ongoing basis. This includes any ash in harm's way due to street reconstruction plans. In 2021 only 2 declining ash trees were removed, only 1 tree in 2022 and 0 in 2023. A total of 5 ash were removed as part of the 2022 Regent Ave N reconstruction project.

Even though all public ash are protected, any non-construction-related removals and wood disposal activities will occur between October 1<sup>st</sup> – May 1<sup>st</sup> during the EAB non-flight period, per the MDA's Best Management Practices for EAB Infested Areas. Public ash trees removed by the City will be performed by Nick's Tree Service, which is the City's tree removal contractor through 2024. With Robbinsdale considered "generally infested", adherence to this timeframe is now of minor significance, especially since public ash trees should theoretically be free of EAB larvae.

**Ash Wood Waste:** All ash wood waste will be taken care of by the contractor, and will likely be transported to Ceres Environmental. When possible, transport of ash material will be performed only during the no-fly period for EAB.

**Ash Tree Replacement:** Assuming no near future street reconstruction work is scheduled, removed ash trees are replanted with another suitable species in the first spring or fall following stump grinding & site restoration. It is the intention of the City to eventually replace every ash tree that is removed, assuming no utility or engineering conflicts are present. New tree species will be chosen based on hardiness zone, future pest/disease threats, species diversity within the urban forest, seasonal interest and tolerance to the urban/suburban environment. Essentially no maples or nonnative lindens will be planted due to past overplanting and various biotic & abiotic health issues facing these species.

Replacement trees are delivered in spring as bareroot stock and then immediately placed in the City's Missouri gravelbed nursery, where they are held and irrigated for the duration of the summer. Trees are then planted out in fall and following spring by the City Forester/Natural Resources Specialist. New trees are left with a Tree Gator watering bag and bark protector. As a general guideline, species selection for replacement trees attempts to follow the 5-10-20 percent rule, which emphasizes the importance of tree genus diversity over species diversity.

Both planting and future care for replacement trees follow the recommendations of the USDA Forest Service publication NA-FR-04-07 Tree Owner's Manual for the Northeastern and Midwestern United States.

**Private Ash Tree Management:** The City Forester/Natural Resources Specialist shall retain the right, as a Licensed Minnesota Tree Inspector, to enter private property to inspect any ash tree exhibiting telltale damage to confirm the presence of EAB. The diagnostic signs used to confirm the presence of EAB are S-shaped galleries exposed by woodpecker activity (canopy bark splits), D-shaped exit holes caused by adult beetle emergence, or direct observation of the insect itself. If EAB is confirmed in a high value mature private ash tree with less than 30% canopy dieback, a tailored letter is mailed to the property owner explaining EAB management options & recommending treatment, as time allows.

In addition to a letter, residents are provided a list of reputable tree services who have plant health care departments and perform ash treatments. The City will not treat privately owned ash, but does strongly recommend that residents inject trees using emamectin benzoate. Since treatments of public trees are all performed in-house, the City does not have a basis for furnishing a specific contracted treatment rate for residents.

**Private Ash Tree Removals:** If a private ash tree is confirmed to be infested with EAB and has declined beyond the point of a viable treatment, the infested tree will be considered a nuisance. The City will strongly consider intervening, requiring the property owner to remove a declared confirmed nuisance tree, if it meets **all** the below criteria:

- DBH (Diameter at 4.5 feet) >20"
- Extensive visual EAB damage throughout >50% of the canopy OR with >50% visual canopy dieback
- Trunk originates <10' from the edge of the right of way line or back of sidewalk
- Tree is a public safety hazard tree due to canopy condition, lean, location of limbs and/or below targets
- Is growing at an address adjacent to a busy collector street or high traffic volume roadway

For any condemned trees, an official notice will be mailed to the property owner's address, detailing City policy regarding private infested ash trees and outlining the timeframe for removal per the MDA's Best Management Practices.

Cost of removal for any private ash will be incurred by the property owner. Any private ash trees the City requires be removed will only be undertaken at a time of the year so that removal can be reasonably accomplished during the EAB non-flight period. As a result, condemned ash trees will only be marked for removal between October 1<sup>st</sup> and April 1<sup>st</sup>, with a deadline of May 15<sup>th</sup> to have the tree removed. If still standing after this date, the City will forcibly remove the tree and assess the cost to the property owner's taxes, along with a \$150 administration fee.

Any ash trees in any condition and not meeting the above criteria, including all backyard trees, will not be candidates for forced private removals. If staff time permits, communication to the property owner bringing to their attention the presence of their infested (or dying) ash tree(s) will be furnished in writing or via a door hanger notice. Standing dead trees become a Code Enforcement issue per the City's Property Maintenance Code.

The legal prerogative allowing for implementation of the City's EAB Management Plan on private property, including forced removal of private infested trees, is outlined in City Code Section 835.07 subsections d, e, and f, shown below:

### **City Code & Official Policy (Section 835.07)**

*Any known public or private ash trees that have become infested with or are harboring larvae of the Emerald Ash Borer (Agrilus planipennis) are deemed a public nuisance as outlined below in the City Code:*

*835.07. Nuisances. The following are declared public nuisances whenever they may be found within the city:*

- (d) any living or standing ash tree or part thereof of the Fraxinus genus infested to any degree with the emerald ash borer beetle Agrilus planipennis (Fairmaire) as confirmed by the Minnesota Department of Agriculture; and (Added, Ord. No. 15-02)*
- (e) any dead ash tree of the Fraxinus genus or part thereof including logs, branches, stumps, firewood or other material confirmed to have been infested with emerald ash borer (Fairmaire) from which the bark and outer 1" of wood has not been removed or destroyed; and (Added, Ord. No. 15-02)*
- (f) any tree or shrub that the Forester has determined has become, or may become a significant threat to public safety and/or forest health. (Added, Ord. No. 06-04, Amended, Ord. No. 15-02)*

### **Flexibility & Networking:**

This plan shall be re-evaluated and updated as time permits. Changes shall be made based on the most up to date research and recommendations, and will remain open to effective strategies being implemented in other similarly-sized communities. For the foreseeable future, all healthy ash trees will continue to be treated on a 3-year rotation using emamectin benzoate insecticide (TREE-äge R10).

The City Forester/Natural Resources Specialist regularly attends Minnesota Shade Tree Advisory Committee (MnSTAC) meetings to network and strategize with other municipal forestry professionals and arborists on EAB Management. Further networking occurs during the annual two-day Shade Tree Short Course held every March in Arden Hills, an event attended by over 1200 forestry & landscape professionals.