



**EMERALD ASH BORER
COMMUNITY
PREPAREDNESS
PLAN**

Updated 2019



Executive Summary

The Emerald Ash Borer (EAB) is an invasive species from Asia that was first detected in the United States in 2002 in Detroit, Michigan and has since spread to over 30 other states and parts of Canada. In 2008 EAB was confirmed in Eastern Wisconsin and in 2009 EAB was confirmed in Western Wisconsin. EAB has now been confirmed in the City of River Falls as of July 1st, 2019.

The erratic distribution pattern is caused by the transportation of infected ash material, (principally firewood) and cannot be attributed to natural spread as EAB can only fly approximately ½ mile from the tree where they emerge. It may be up to two years before newly infected trees show signs of distress. EAB kills all species of North American ash but not Mountain Ash (Sorbus) which is a different genus. In Wisconsin the damage to the ash population is significant as there are an estimated 737 million ash in Wisconsin forests and another 5 million ash in Wisconsin communities.

River Falls like many other communities used ash as a replacement for the American Elm that has been decimated by Dutch Elm Disease. It was considered a disease-free tree with good form and a moderate growth rate. However, ash trees were overplanted and there are boulevards in River Falls that are planted with almost 100 percent ash. Since 2000 the City has been diversifying its street and park tree population and ash trees were eliminated from boulevard tree plantings starting in 2004.

The effects of EAB will eventually be very noticeable across our community, and it will have an aesthetic effect on our community and a fiscal impact on the City budget for many years to come. Taking proactive steps to limit its spread will allow the City to extend our time horizon and manage the problem over a reasonable and affordable period.

Introduction

The State of Wisconsin Department of Agriculture Trade and Consumer Protection (DATCP) and the Department of Natural Resources have prepared a response plan for EAB that was last updated in May 2014. The plan identifies the appropriate response to be taken by State and Federal agencies to minimize the destructive effects EAB will have on Wisconsin's ash resource.

Local units of government such as the City of River Falls are stakeholders in this effort. The plan we develop will make us active partners with the State in responding to this problem. Our best efforts will contribute to slowing down and containing the spread of EAB. The goal of this plan is to identify appropriate and effective actions that the City will take to manage the effects it will have on our urban forest.

Element 1. The Tree Inventory

The first step in preparing for EAB is to determine the City's ash tree population. A tree inventory is the process of counting; characterizing and recording information about publicly owned trees that make up our urban forest. It documents important information including the total number of trees, tree size, their condition, location and species. The following information is collected for each tree as part of the inventory:

1. Species
2. Size (inch of diameter)
3. Condition (1-4 scale)
4. Location

An updated complete tree inventory is being completed in 2019. As of now the total tree count within the public right-of-way is over 8000 trees. The population of ash trees is near 2000 trees or 25 percent of the total boulevard tree population. The City also has an unknown amount of ash trees in our public parks and city-owned wooded properties.

This number is significant. Ash trees were the tree of choice to replace elm trees in River Falls during the period when Dutch Elm Disease (DED) was taking its greatest toll in the City. EAB was first discovered in the United States in 2002 in Detroit, Michigan and by 2004 it was clear that the destruction it causes would be equal to or greater than Dutch Elm Disease (DED).

Element 2. Survey and Detection Strategy

The second step in the plan is to implement a local EAB survey and detection strategy. An EAB infestation was confirmed on the southern end of River Falls in July of 2019 near Dick's Fresh Market. Official confirmation was made by the State of Wisconsin and Federal Government, making this the first detection in Pierce County.

EAB Signs and Symptoms

It takes several years before the outward symptoms of tree decline begin to appear. Signs and symptoms the public should be aware of and look for are:

1. Delayed leaf-out in spring (symptom)
2. Thinning canopy or crown (symptom)
3. Branch die back from top of tree (symptom)
4. S-shaped galleries –tunneling under the bark (sign)
5. Woodpecker flecking damage (symptom)
6. Epicormic shoots from base of tree or water sprouts on branches (symptoms)
7. Bark splits (symptom)
8. D shaped exit holes first spotted in upper branches (sign)

EAB Surveys and Inspections

EAB adults typically emerge from ash trees in late May and continue to emerge, mate and lay eggs through late summer. Early detection of a new infestation will give the City more time to implement our management plan and limit the spread. Below are methods to employ:

Visual Survey

This technique includes looking for visible outward symptoms. It requires the least amount of resources and a large area can be covered in a short time. The City Ash tree inventory can be used to prioritize areas for inspection. Biannual visual tree inspections are currently performed by the City Forester.

Tree Climbing/ Use of Lift Bucket

The advantage of this method is that inspection occurs in the tree canopy where EAB signs/symptoms appear first. This method would be used sparingly as time and cost are a disadvantage.

Purple Panel Traps

Emerald Ash Borer panel traps are made of a purple corrugated plastic board. Traps are triangular with an open center. Each panel of the trap measures 14 X 24 inches and is coated with glue on its exterior. Trap hanging is recommended on an open grown or edge ash tree at a height of 33-40 feet above ground. Research suggests that the EAB insect is visually attracted to the color of purple used for the traps. To date, researchers still consider the use of detection trees to be the best method for detecting low-density emerald ash borer infestations. The Wisconsin Department of Natural Resources typically deploys and monitors these traps.

Key Areas to Monitor

The artificial movement of EAB through human activity remains the most important risk factor in establishment of EAB populations. Ash nursery stock, saw logs, and firewood are the primary means of artificial movement of EAB. Focusing survey and monitoring activities at sites where infected material may be transported will help to aide early detection.

The following are sites that are of highest risk:

1. City compost site.
2. Hoffman Park campground.
3. Businesses that sell firewood that may contain ash wood.
4. Nurseries/Businesses that sell seasonal nursery stock including ash trees.
5. Businesses that may utilize wood pallets in their operation.
6. Businesses that may use ash saw logs as a raw material.

Element 3. Ash Management Policy

This element of the plan describes how the City will manage its ash trees and will guide decision making relative to how the City will address the following issues.

1. Proactive Removal
2. Disposal
3. Historic/Significant trees
4. EAB Treatment Options
5. Woodlot management
6. Private Property Trees
7. Tree Replacement
8. Regulations
9. Communications
10. Resources

Proactive Removal

A period of extensive tree mortality will overwhelm the City forestry budget. Proactive removal can help lessen the impact and smooth out the cost curve that will occur. This policy is a preemptive move that will be aimed at reducing the ash inventory to more manageable number.

An accurate estimate of the long-term costs for removal will take place with the ash tree inventory. As of the year 2019 approximately 24% of River Falls street trees were classified as ash. The City ceased planting ash trees on public property in 2004. Additional ash trees can be found in our parks and publicly-owned woodlots. For purposes of understanding the fiscal impact of this problem a preliminary estimate of 2000 trees will be used.

The following estimate is made:

- Total number of ash trees (public) in 2019	2000
- Removal cost per tree including grinding of stump	\$375
- Site restoration cost per tree removed (labor and materials)	\$50.00
- Per unit cost for replacement	\$100.00
- Estimated citywide cost for removal and replacement	\$1,050,000

It should be noted that the estimate assumes 100 percent loss. Experience has shown us that after 30 plus years of removal of diseased elms the City still has a few elms on our right of ways and the cost of removal was spread out over many years. The most likely scenario will probably see the City having a spike of activity within the next 2-5 years followed by a lower but steady number of infected trees in subsequent years.

Once a tree is infected with EAB it will begin to decline over a period of 2-3 years. The burden of removing many trees in a short period of time can put a heavy strain on the City's budget, personnel, and resources. The City can lessen this impact now by preemptively

removing a portion of non-infested trees each year. The ash inventory will prioritize the removal of non-infested ash. In general Ash will be prioritized as follows:

1. Hazardous trees: Any tree dead or alive that has the potential to entirely or partially fail and impact a target can be considered a hazard.
2. Dead or dying ash trees.
3. Trees with poor structure
4. Trees causing infrastructure damage.
5. Trees planted or growing in undesirable locations.
6. All other trees.

River Falls Municipal Utility is encouraged to remove Ash trees within their easements or the public right of way as part of regular line clearance activities.

Disposal

One of the largest challenges in EAB management will be the disposal of ash material. The number of trees removed in any one year will be significant with a volume of material not seen since the height of Dutch Elm Disease. Ash is a hardwood and has many potential uses and as markets develop disposal issues will become less of a problem.

The State of Wisconsin EAB Task Force is currently gathering information on the utilization of Ash material and is seeking funding to create an EAB wood utilization specialist. Utilization would be done by identifying potential users of the material and developing connections between the suppliers and these markets. Potential products include lumber, railroad ties, wood pellets for residential use, wood chips for use in biomass generating plants or as a bulk agent for sludge composting, mulch for landscaping and wood pulp.

The City's tree contractor currently removes between 50 and 75 trees per year on public property as well as materials that are pruned for utility clearance or structural problems. This material is transported to the City compost yard where it is stored with other woody plant materials brought in from the general public. The City works with an independent contractor that periodically grinds the material into chips and transports it to a biomass electricity generating plant in the Twin Cities metro. Currently the demand is greater than supply and the contractor takes as much material as the City can supply free of cost. However, as the market becomes flooded with ash material, supply will at some point exceed demand. As alternative markets develop, the City will seek to diversify its disposal options available in the open market.

Historic /Significant Trees

Treatment by means of chemical drench or chemical injection is an effective way to protect ash trees. Not all ash trees are created equal. The volume of trees on public property will make it cost prohibitive to treat all public trees. Special consideration should be given to ash trees that may have significance or have added value to the community. Treatment of significant ash trees will buy valuable time until long-term protection methods are available or a solution to the EAB problem is found. Examples of significant ash trees within the City are

the sixteen center median trees in the middle of downtown and specimen quality ash trees that are found in our parks and other highly visible public sites. The City Council with advice of the City Forester shall determine which trees will be treated contingent upon available funding. These injections will begin in the summer of 2020.

EAB Treatment Options

Educational information on the costs and benefits of treatment will be made available to the general public so that they may make an informed decision with regards to their own ash trees. The City does not have the resources to treat trees on residential boulevards. The City will allow for homeowners to have ash trees in their boulevards treated if the treatment is documented with the City so the treated trees can be added to the tree inventory. This will prevent accidental removal of treated trees by the City.

The EAB treatment needs to be reapplied on an annual or biennial basis. If a tree is being treated, but is still showing signs of decline, the City will still have the tree removed if deemed a public nuisance.

There are a variety of products available to treat ash trees for EAB, some of which can be done by the homeowner, but more effective treatments must be administered by professional applicators. A great comprehensive guide for treating ash trees can be found at:

[http://www.emeraldashborer.info/documents/Multistate EAB Insecticide Fact Sheet.pdf](http://www.emeraldashborer.info/documents/Multistate_EAB_Insecticide_Fact_Sheet.pdf)

Woodlot Management

The City has numerous properties under public ownership that are wooded. Ash is a native species and will be found growing naturally in these areas. Typically, these trees are not easily accessible and therefore removal would be costly and difficult.

Therefore, the plan is to mitigate the adverse impacts associated with the potential loss of these trees. In areas where ash may be a minor component or where Ash trees are small to sapling size the impact may be unnoticeable and no management will be necessary. There will be a visible impact in areas where ash trees are larger and make up a noticeable percentage of the woodlot composition. Ash trees that pose a hazard to public safety would be dropped in place and reduced to eliminate any danger to the general public.

Private Property Ash Trees

Most ash trees within the City will be found on private property. The responsibility for tree removal or chemical treatment for trees on private property will be that of the property owner. If a homeowner believes they may have EAB in their trees, the City Forester may be contacted to confirm a tree is infested. If an ash tree is deemed to be infested with EAB, the homeowner be given notice from the City and be given 30 days to have the tree removed. If the tree is not removed within the time given, the City will have the tree removed and charges incurred will be billed back to the property owner.

Tree Replacement

Public ash trees that are removed will be replaced with non-ash species as often as possible. However, not all ash trees removed will be replaced due to factors including budget, time, staffing, and the availability of other resources. The goal will be to enhance diversity of the City's urban forest and a variety of species will be used. Locations will be reviewed by the City Forester to assure proper tree placement within the City right of way and public parks. Factors determining proper location will be adequate lawn area between property line and sidewalk, adequate spacing between trees, and proximity to driveways, above and below ground utilities, traffic signage and the vision triangle area.

The City will also be replacing trees that were removed for reasons other than EAB. Replacement funds are set by the budget on a yearly basis. A balance in the tree replacement program will be necessary to provide a fair distribution of replanting between EAB sites and sites where trees were lost to other causes. The recommendation would be that ash replacements be no less than 25 percent and no more than 50 percent of the total replacements available in any one year.

Regulations

The State has several regulations that are already in place controlling the movement of EAB infected materials across quarantined areas and the importation of wood across state lines.

River Falls currently has an ordinance that was put into place many years ago to control and manage the effects of Dutch Elm Disease. A comprehensive review of forestry related issues and appropriate updates to the Municipal Ordinance to reflect the best management practices available should be undertaken. This is scheduled to take place in the Fall of 2019.

Communications

EAB is a topic that has been in the news recently. It is important that the general public remain aware and up to date on this issue. An informed public is an asset that will provide support and aid in management of this problem. Internal communication is also vital for the logistics of EAB management to flow smoothly. The following actions are recommended to strengthen communications.

Local Media

Coordinate press releases, current fact sheets and other materials for release to local media through one central contact point.

Public Officials

Prepare presentations and periodic status reports to Public Officials (Mayor, Council, Parks Board, and Plan Commission).

City Staff

Coordinate internally with Public Works Department and others on logistical issues including but not limited to removal, disposal, clean up and restoration of public areas and replanting. Coordinate training opportunities for key staff members and develop a list of topics and provide the associated information to raise the internal level of education and awareness.

General Public

Post contact information along with education and awareness topics on the City Web Site, Facebook page, and other news vectors. Also, timely informational updates that are provided by the Department of Natural Resources and others will be frequently posted.

Resources

The City maintains a forestry budget. Part of the budget supports the cost of professional services. It is out of this fund that the City pays for the removal of dead and dying trees on public property. The current budget (2019) for professional services is \$40,000. The City usually removes between 50 and 75 trees a year. Clean up of major storm events have been paid for by separate appropriations.

The current budget cannot support the expected increase in activity that will come with the onset of EAB. Additional or other sources of funding will be needed to pay for proactive removal before EAB arrives and reactive removal after EAB arrives.

Several financing options should be considered:

1. Increase in the City Forestry budget with funding specifically dedicated to EAB abatement activities especially during peak EAB population years.
2. Create a City Tree Utility. This would be set up like the City Stormwater Utility. A predetermined monthly charge would be assessed to all property owners and collected with their utility bill. Funds would be used for EAB abatement activities.
3. Assess adjacent property owners for removal of infected trees.
4. Use Public Works personnel in situations where EAB abatement activities can be conducted in safe manner, (removal of trees with a diameter of less than 12 inches or less than 25 feet in height). Removal of trees of this size will begin on a large-scale basis in Fall of 2019
5. Apply for any available grant funds that may be available.
6. A combination of all the above.

Conclusions

The urban forest is an important resource for the citizens of River Falls. It has positive impacts on the aesthetics of our community, contributes to stormwater mitigation, property values, air quality, and helps cool our city on hot summer days. We cannot prevent EAB from affecting our community, but we can prepare and manage it to mitigate its effects. Based on the plan the following timeline is recommended:

Emerald Ash Borer Management Timeline

In Fall 2019:

- Finalize the community-wide tree inventory.
- Finalize updated Tree Regulation and Protections Ordinance and present to City Council.
- Prepare Community Information Plan
- Identify and mark smaller boulevard ash trees that are scheduled to be pre-emptily removed by city staff. Send out EAB flyers to homeowners adjacent to the trees prior to removal. Target area for Winter 2019 is the Quail Ridge development along W. Maple St.
- Renew city tree service contract which is set to expire December 31st, 2019. Typical contract length is for three years.
- Public Works crews remove tagged trees in target area for 2019. All trees will be chipped and hauled to city compost site.

Spring and Summer 2020:

- Based on the tree inventory continue windshield surveys looking for new EAB infestations and continued inspections of neighborhoods where EAB has spread.
- Identify and remove any large boulevard ash trees that are showing visible signs of EAB. These removals will be removed via the contracted city tree service. Any city-owned woodlot trees will be dropped in place to abate hazards.
- Identify any privately infested ash trees and notify property owners of the public nuisance. Work with homeowners to have infested trees removed.

- Expand EAB public awareness program(s), providing information and resources for homeowners regarding options for their ash trees via website, other media sites, and at events across the City.
- Analyze financing options listed under resources section of plan and propose budget to cover costs of removal and replacement directly related to EAB (2021-2022 budget cycle).
- Implement an EAB injection program of high-value public ash trees. This may be contracted or done with certified city staff. An injection system was purchased in early 2019. Target areas for 2020 are downtown ash trees in the median and high value ash trees around city-owned buildings.
- City crews will stump grind and restore sites of all trees that were removed as part of the 2019 pre-emptive boulevard ash tree removals.

Fall 2020:

- Begin replanting removed boulevard ash trees as part of the City's tree replacement program. Consider options including expanding the Gravel Tree Bed Program and/or contracting tree planting to meet the amount of replacement trees needed.
- Identify and mark second stage of staff removal of small ash trees that are scheduled to be pre-emptily removed by city staff. Send out EAB flyers to homeowners adjacent to the trees prior to removal. Target area for Winter 2020 will be in the Highview and Royal Oaks neighborhoods.
- Public Works crews remove tagged trees in target area for 2020. All trees will be chipped and hauled to city compost site.

Spring and Summer 2021:

- Based on the tree inventory continue windshield surveys looking for new EAB infestations and continued inspections of neighborhoods where EAB has spread.
- Identify and remove any large boulevard ash trees that are showing visible signs of EAB. These removals will be removed via the contracted city tree service. Any city-owned woodlot trees will be dropped in place to abate hazards.
- Identify any privately infested ash trees and notify property owners of the public nuisance. Work with homeowners to have infested trees removed.
- Continue EAB injection program of high-value public ash trees. This may be contracted or done with certified city staff. Target areas for 2021 will be any high value trees not treated in the Summer of 2020 as decided by council and staff.

- Continue and expand EAB public awareness program, providing information and resources for homeowners of their ash tree options via website and at events across the City. Hold neighborhood town hall meetings providing information and answering questions about EAB management.
- City crews will stump grind and restore sites of all trees that were removed as part of the 2020 pre-emptive boulevard ash tree removals.

Fall 2021:

- Replace removed boulevard ash trees removed in the Fall of 2020 as part of the annual boulevard tree planting.
- Identify and mark third and final stage of staff removal of small ash trees that are scheduled to be pre-emptively removed by city staff. Send out EAB flyers to homeowners adjacent to the trees prior to removal. Target area for final stage of removals will be the Sterling Ponds neighborhood.
- Public Works crews remove tagged trees in target area for 2021. All trees will be chipped and hauled to city compost site.

Spring and Summer 2022:

- Perform large scale inspections of infested ash tree across the city. EAB infestations will be near their peak, so additional staff may be needed to assist in inspections.
- Identify and remove any large boulevard ash trees that are showing visible signs of EAB. These removals will be removed via the contracted city tree service. Any city-owned woodlot trees will be dropped in place to abate hazards. By now only large size ash trees will remain in the boulevard after pre-emptive removals are complete.
- Identify any privately infested ash trees and notify property owners of the public nuisance. Work with homeowners to have infested trees removed.
- Reapply chemical treatment to all healthy ash trees that were treated in 2019 as part of the chemical treatment program.
- City crews will stump grind and restore sites of all trees that were removed as part of the 2021 pre-emptive boulevard ash tree removals.