

City of New Richmond
Emerald Ash Borer Management Plan



Adopted by the City Council

December 11, 2017

Acknowledgements

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Thank you to the local elected officials who played an important role with this project:

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City Council

Public Works Committee

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“If you fail to plan, you plan to fail.” – Benjamin Franklin

Executive Summary

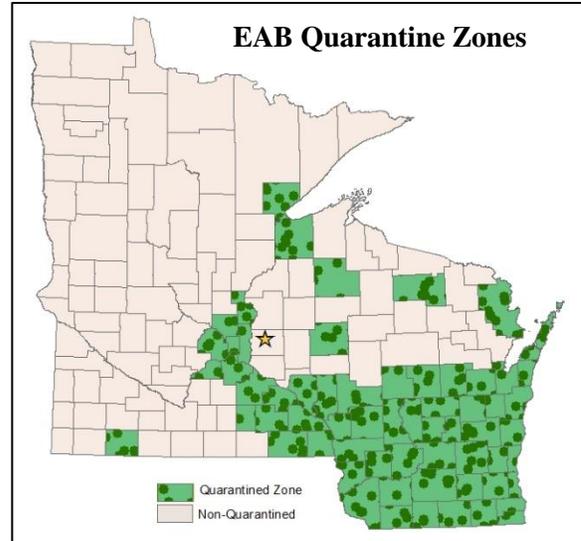
The City of New Richmond's EAB Management Plan serves as a guide for the community to prepare for and respond to the arrival of EAB, one of the most destructive tree pests in decades.

A tree inventory completed in the summer of 2017 found that there are 596 ash street trees in the City of New Richmond, representing 14.62% of all street trees. The recommended combination of management strategies consisting of tree removal, replacement, and treatment is estimated to cost more than \$200,000 over a five-year period. The City of New Richmond should begin to monitor for EAB and provide regular information to the community so that citizens can make the best informed decisions possible when it comes to ash trees located on their private property. The preemptive removal and replacement of ash street trees with a diameter of six inches or less is recommended to occur in 2018, as well as an expansion of the City's existing gravel bed nursery to accommodate a larger supply of bare root trees. In phases two and three, it is recommended that the City use contracted services for a phased removal of ash trees, with City staff completing stump grinding and replacement tree planting. The City's existing compost site shall be used as a disposal site for ash wood, with much of the smaller diameter ash trees being wood chipped and larger diameter ash trees possibly being used for higher value purposes such as flooring, trim, cabinetry, or furniture in partnership with nearby private milling or woodworking businesses. A limited number of high-value ash street trees should be treated with a trunk injection not as a long-term management solution, but rather to spread out the removal of ash trees while providing additional time for the replacement tree canopy to grow.

While the EAB Management Plan is prepared with City staff and elected officials in mind as the primary audience, it's important to recognize that the plan cannot be successfully implemented without public participation and awareness. Private citizens can play a critical role in monitoring and identifying EAB early, properly treating or removing ash trees on private property, planting a diverse variety of replacement trees, and preventing the unintended spread of EAB to other neighborhoods or communities.

Purpose

The purpose of the City of New Richmond's Emerald Ash Borer Management Plan is to prepare for the potential arrival of EAB, an insect that has killed hundreds of millions of ash trees in 31 states as of December 2017. Although the insect has not yet been located in St. Croix County, EAB has been confirmed in neighboring Washington County and has slowly spread throughout southern and central Wisconsin. It's possible that EAB is already present in St. Croix County and the City of New Richmond, but remains undetected at this time.



Trees play an important role in the high quality of life that residents enjoy in "The City Beautiful." Trees add aesthetic beauty to our community, reduce air pollution by absorbing carbon dioxide, conserve energy by providing shade to homes and businesses, create wildlife diversity by providing habitat for birds and small wildlife, and improve water quality by preventing runoff and erosion. By developing this EAB Management Plan, the City of New Richmond seeks to take a proactive approach to mitigating the harmful effects of EAB and to preserving our urban forest for present and future generations.

Applicability

The EAB Management Plan pertains to ash trees on public property, including the City of New Richmond's Parks and Trails System, as well as trees located in the street right-of-way. Additionally, the document provides management strategies for ash trees located on private property. Public and private education and cooperation are crucial to the effective and efficient management of a possible EAB infestation.

Responsibility

The City of New Richmond's Director of Public Works serves as the official forester for the City, and shall be responsible for plan implementation, oversight, and revisions. The Public Works Department will also rely on assistance from and collaboration with other city departments, as well as guidance from the City Council and active engagement and participation from citizens, to carry out the provisions of the EAB Management Plan successfully.

EAB Background

History

The Emerald Ash Borer (*Agrilus planipennis* or EAB) was first identified in the United States in 2002 in the state of Michigan. The insect is native to Asia, so it is suspected that EAB arrived in the United States after hiding in wood packing materials. EAB was confirmed in Wisconsin in August of 2008 near the community of Newburg. As of December 2017, EAB has been confirmed in 31 states, including 47 counties in Wisconsin.

Biology

According to the USDA Animal and Plant Health Inspection Service, current research suggests that EAB can complete either a one or two year life cycle. Each female can lay 60-90 eggs in their lifetime. EAB eggs hatch in about two weeks, and the new larvae tunnel through the bark of ash trees where they feed for approximately 300 days. The photo to the right is of larvae, which is the stage during which the tree is killed. Adults chew through the wood and emerge from trees out of small exit holes. Adults live about three weeks after emergence and are capable of flying relatively short distances, or “hitchhiking” long distances in wood products.



Identification

Emerald ash borer adults have a metallic green color, and are roughly the size of a cooked grain of rice: only 3/8 – 1/2 inch long, and 1/16 inch wide. In Wisconsin, adults typically emerge in June and early July and can be active throughout the summer months.



EAB Look-Alikes

There are several other insects in Wisconsin that look similar to EAB, including the following:



Blister Beetle



Dogbane Beetle



Ground Beetle

EAB Look-Alikes Continued



Tiger Beetle



Japanese Beetle



Green Weevil



Linden Borers



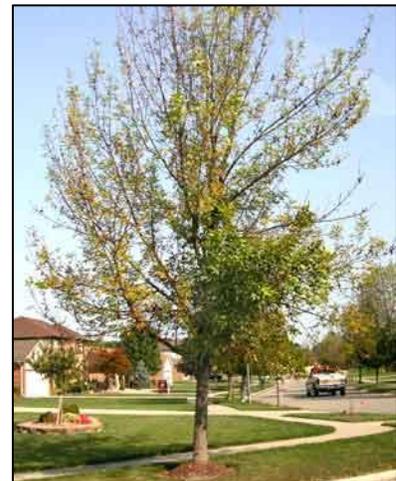
Metallic Wood Boring Beetles

How EAB Spreads

The adult beetle can fly and naturally spread to new host trees, but they will generally stay near the tree from which they developed. Some adult beetles will fly longer distances however, and with the help of the wind, may fly several miles if the right conditions come together. Emerald ash borer can also spread longer distances by humans who transport firewood that may unsuspectingly harbor live emerald ash borers.

Signs and Symptoms

Canopy Dieback: Trees start to show dead branches and leaf loss in the top one-third of the canopy, and the dieback progresses until the tree is bare. Larval feeding disrupts nutrient and water flow to the upper canopy, resulting in leaf loss.



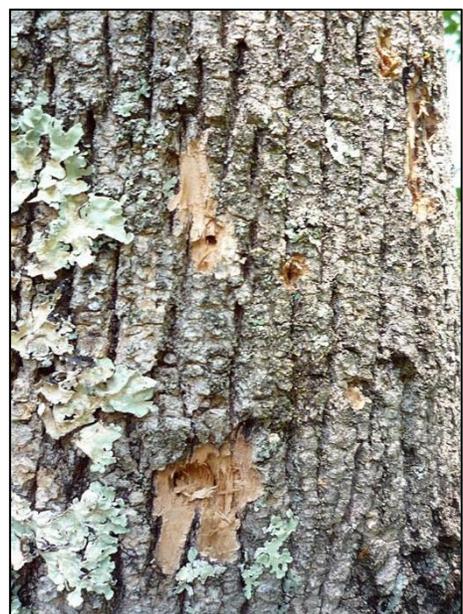
Signs and Symptoms Continued

Epicormic Sprouting: Trees will grow new branches and leaves at the base of the tree and on the trunk, below where the larvae are feeding.



Bark Splits: Tree bark will begin to split vertically, with 2 to 5 inch long vertical splits. Larvae kill the bark in the area where they are feeding. The following year, as the tree grows radially the dead bark above where the EAB was feeding will split.

Increased Woodpecker Activity: Some woodpecker species feed on EAB larvae/pupae and may create large holes when extracting the insects.



Regulatory Authority

The USDA Animal and Plant Health Inspection Service (APHIS) and the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) may identify areas in which EAB has been found as quarantined areas. Residents and businesses in these quarantine counties are restricted from moving firewood of all hardwood species, ash nursery stock, and ash logs or timber outside of the quarantine area. Neighboring counties can also be quarantined if EAB is found near a county border. The DNR restricts firewood movement onto DNR managed properties in Wisconsin to prevent the spread of EAB to forests and state parkland. Additional EAB regulations apply to all ash wood producers, transporters, and processors before ash wood materials can be moved out of a quarantine area.

Ordinances

As part of the urban forestry grant, City of New Richmond staff reviewed and updated City Code Chapter 90 Article II. – Trees and Shrubs. In summary, the revised ordinances describe the duties and responsibilities of the City Forester; designate the Public Works Committee as the Tree Board for the City of New Richmond; prohibit private citizens from planting, pruning, or removing trees in the public right-of-way or on any public property; and establish a process for the abatement of trees that have been declared a public nuisance. Trees growing on private property that have a communicable disease or insect infestation which threaten the health of the urban forest shall be treated or removed at the owner's expense within thirty days of notification, after which time the City of New Richmond may perform or contract the services, charging the property owner for the expenses incurred.

Monitoring

Given its proximity to counties where EAB has been confirmed, the City of New Richmond will begin to implement its EAB Management Plan as soon as possible. Early detection of EAB is still very important and could potentially accelerate the implementation timeline for the City's EAB Management Plan. As City staff time and resources are limited, citizen-based monitoring will also be important. Below are recommendations for EAB monitoring:

Training for City Employees

The City of New Richmond's Public Works Department spends considerable time in the field as they maintain our parks, trails, and streets. The Electric Department also trims trees during the winter months that might interfere with overhead lines. Thus, these two departments in particular should be trained about the visual signs and symptoms exhibited by trees afflicted with EAB.

Training for Citizens

While City staff can be trained to monitor many of the trees on public property, it's also important for citizens to help with this effort by monitoring for EAB on private property. This could include community presentations by City staff or UW-Extension, print informational materials (e.g. brochures, mailings, and newspaper articles) and online informational materials (e.g. City website, social media, and videos). Community involvement can help expand the range and speed by which an infestation can be detected.

Traps

Six to eight EAB traps will be strategically placed in the community, with priority given to high-risk facilities (e.g. campgrounds, recreational areas, heavily traveled streets, truck stops, saw mills, firewood dealers, nursery, recently landscaped residential subdivisions) and neighborhoods with a large amount of existing ash trees. Possible sites in New Richmond include Hatfield Park, Mary Park, Balsam Millwork, West Fifth Street, Willow Avenue, North Second Street, and East Third Street. Prism or funnel traps are relatively inexpensive for the Public Works Department to purchase (\$30-70) but do require regular monitoring by City staff. There could be a partnership opportunity for students from UW-River Falls to assist with monitoring as part of their academic coursework or through an independent research project. Several types of EAB traps that have been developed over the past decade, including double-decker traps, green and purple prism traps, and green funnel traps. The traps not only help detect EAB, but can also serve as a way to increase community awareness due to their visibility. Traps are limited in the fact that they do not indicate the approximate location of trees that are infested



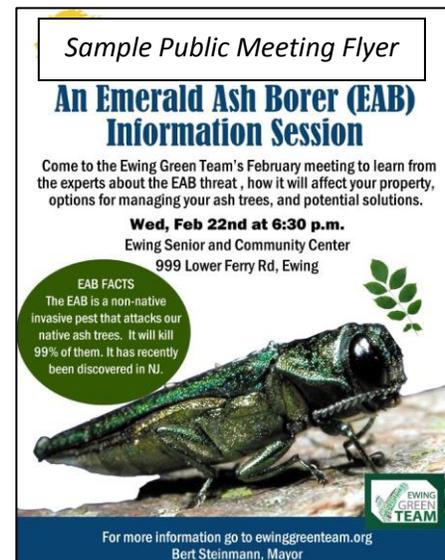
There are additional detection options including branch peeling and girdling live ash trees, but due to their labor intensity, are not suggested unless otherwise done as part of routine tree care work or in the case of girdling, if a large ash tree is planned to be removed in the near future. If the girdling methodology is going to be used, the City Forester should give careful consideration as to the location of the tree, as girdling weakens the condition of the tree as it dies. Girdling can create a risk tree situation that jeopardizes public safety, thus it should only be used in an area seldom used by the public.

Education & Outreach

It is critical to have a strong education plan prepared before EAB is even confirmed in St. Croix County, as the public will seek information immediately once the signs and symptoms of EAB become more apparent. There is also plenty of misinformation available via the Internet and even scam artists who can claim to be professional arborists offering their services to treat or remove ash trees. Local ordinances related to EAB also vary from one municipality to another. Thus, the City of New Richmond should take a leadership role as a trusted, reliable source of information and help educate citizens to make the most informed decisions possible. The City doesn't have to do this alone; there are several experts from the Wisconsin DNR, UW-Extension, and colleagues from other municipalities that have already experienced EAB who are more than willing to offer technical assistance and share best practices. The most current information about EAB in the state of Wisconsin can be found at www.emeraldashborer.wi.gov, including special tools and tips for homeowners.

There are a variety of ways that the City of New Richmond can increase awareness and communicate with citizens. Some examples include offering educational programs or workshops with guest speakers, making easy-to-read materials available online via the City website, educating and engaging students at New Richmond High School (who can in turn share their knowledge with their parents) through hands-on experiential learning opportunities, mailing informational letters to citizens who live in neighborhoods with high concentrations of ash trees, and working with the local newspaper to provide coverage about the City's EAB Management Plan. Educational materials that other municipalities have developed have focused on what to know when hiring a contractor, ash tree identification, and a decision guide for citizens debating whether to treat or remove ash trees on their property. Awareness campaigns such as tying green ribbons around ash trees as part of Arbor Day festivities with some small educational signage discouraging the movement of firewood can also be effective.

Local government can take a leading role in preparing for and responding to EAB, but it will take a collaborative effort with an educated and engaged public to ensure that New Richmond remains "The City Beautiful" if and when EAB is confirmed in St. Croix County. The City of New Richmond should not wait until EAB is confirmed to first begin these education efforts. It's possible that EAB is already in St. Croix County but has just not been detected yet. It's important for citizens, City staff, and policymakers to recognize that EAB is on New Richmond's doorstep and to be as proactive as possible in preparing for its arrival.



Ash Tree Management

The tree inventory conducted in the summer of 2017 by seasonal GIS technician Owen Haugen covered all boulevard/street trees within city limits. More than 4,000 trees were recorded and uploaded to the online database called the Wisconsin Community Tree Map. Ash trees make up 14.62% of the street trees in New Richmond. While this is a large percentage of the tree canopy, it should be noted that several other communities in Wisconsin are in the 20-25% range. There are some particular neighborhoods however that have a large quantity of ash trees; in some cases, nearly every street tree is an ash tree. The Southview Addition in the southeast limits of the city has a particularly large concentration of ash trees. Overall, the ash tree population in the city is currently in good condition and averages 17" in DBH.

The Wisconsin Community Tree Map estimates that the annual monetary value of all the street trees in New Richmond to be \$393,457. This value includes savings due to reduced stormwater runoff, increased property values, energy savings, improved air quality, and reduced atmospheric carbon and greenhouse gases. The National Tree Benefit Calculator estimates that a 17" ash tree provides overall benefits of \$157 per year, which when multiplied by the City's ash street tree population is a total of \$93,572 in annual benefits. This does not include the additional value of trees found in parks and private property. Clearly, ash trees provide significant benefits to the community.

Total Street Trees = 4,076		
Top Ten Species	Quantity	Percentage
Silver Maple	631	15.48%
Ash	596	14.62%
Blue/Green Spruce	353	8.66%
Norway Maple	320	7.85%
Red Pine	179	4.39%
Crabapple	175	4.29%
White Spruce	172	4.22%
Red Maple	158	3.88%
Basswood	143	3.51%
Cedar	129	3.16%

Total Ash Street Trees = 596		
Ash Tree Condition	Quantity	Percentage
Good	527	88.42%
Fair	58	9.73%
Poor	9	1.51%
Dead	2	0.34%

Ash Size Distribution – Ash Street Trees		
DBH (diameter at breast height)	Quantity	Percentage
1-3 inches	24	4.03%
4-6 inches	34	5.70%
7-12 inches	110	18.46%
13-18 inches	171	28.69%
19-24 inches	157	26.34%
25-30 inches	86	14.43%
31-36 inches	12	2.01%
37+ inches	2	0.34%

Top Ten Concentrations of Ash Trees			
Street	Quantity	Street	Quantity
Willow Avenue	33	S Oak Avenue	15
Parkview Drive	27	W 5 th Street	15
South Hill Drive	20	E 3 rd Street	15
Derrick Drive	17	N 2 nd Street	14
Meadowlark Lane	17	N 3 rd Street	14

Since EAB has not been confirmed yet in St. Croix County, the City of New Richmond has the advantage of learning about best practices from other communities that have dealt with EAB for many years. In preparing this document and in deciding what management strategies would be the best fit for the City of New Richmond, City staff reviewed current literature and several other EAB management plans, and spoke with urban forestry professionals from other communities.

There are several different strategies for consideration that include a mixture of tree removal, tree replacement, and insecticide treatment. Each strategy has several advantages and disadvantages. For example, proactive removal of all ash trees before EAB is even confirmed has the lowest long term cost of the various strategies, but would also cause the greatest losses to the aesthetic and ecological value that ash trees provide, not to mention the likely strong public outcry that would result. Reactive tree removal – waiting until the trees are significantly damaged or dead before removing them – costs much more than proactive removal and presents more hazards to the public. Meanwhile, insecticide treatments are becoming more effective and affordable, but must be applied generally every two years and over a few years can cost more than tree removal. Below are some of the estimated costs associated with various strategies. Note that not all of these actions are recommended, but are only shown for comparative purposes.

Example Action Options	Formula	Cost Estimate
Proactive Removal of All Ash Trees with DBH > 6” by Contracted Employees	\$16 per DBH	\$157,552.00
Stump Removal of All Ash Trees with DBH > 6” by Contracted Employees	1.5 x DBH x 3.5	\$51,696.75
Tree Replacement using Bare Root Stock by City Staff	\$50 per tree	\$29,800.00
Tree Replacement using Balled and Burlapped Trees by Contracted Employees	\$300 per tree	\$178,800.00
Trunk Injection Treatment for All Ash Trees with DBH > 6” by Contracted Employees; <i>Note: Cost shown is for two years, after which time the treatment is reapplied</i>	\$7.50 per DBH	\$73,852.50

After taking into consideration the generally accepted best practices, cost estimates, and several other factors, the following recommendations and implementation schedule are proposed:

Phase I: Calendar Year 2018

- Remove and replace 58 ash trees with DBH of 6” or less that are located in street boulevards regardless of health, as well as 11 ash trees that received a “poor” or “dead” condition rating as part of the tree inventory. Given the small size and limited quantity of these trees, this work could be completed in-house by City staff with existing resources.
- Expand the existing gravel bed nursery to increase capacity for growing bare root stock so that upwards of 300 bare root trees could be grown each year in the future.
- Plant 100 boulevard trees in neighborhoods with the heaviest concentrations of ash trees. Planting these trees now will give them time to grow in preparation for the possible future removal of the ash trees in these neighborhoods.
- Remove and replace three ash trees in the historic downtown business district, beginning a phased/staggered approach to addressing this highly visible and trafficked corridor.

Phase II: When EAB is confirmed within 15 miles of New Richmond (Estimated 2019-2020)

- Plant 100 new, diverse boulevard trees each year in neighborhoods with the heaviest concentration of ash trees. Planting these trees now will give them time to grow in preparation for the possible future removal of the ash trees in these neighborhoods.
- Update existing tree inventory for the City’s parks and trails system, and plant 100 new, diverse trees each year in preparation for the possible future removal of the ash trees.
- Remove and replace an additional three ash trees in the historic downtown district.
- Purchase a stump grinder that can be shared between the Public Works Department and New Richmond Utilities. This would allow for City staff to remove tree stumps rather than contracting out for these services. The estimated equipment cost is \$10,000.
- Strategically remove and replace 100 ash boulevard trees using contracted services. After this step and assuming all other recommendations are followed, there would be 424 ash trees remaining in the right-of-way, representing 9.9% of all street trees.
- Identify 200 boulevard ash trees that will be treated with a trunk injection in an effort to prolong their life. The estimated cost of this treatment would be \$25,500 and would have a strong probability of protecting the treated trees for two years. These trees should be in highly visible locations, exhibit no signs or symptoms of EAB, and be determined by the City Forester to be highly valuable.

Phase III: Calendar Years 2021-2022 (Estimated)

- Remove and replace 47 ash trees as part of the scheduled reconstruction of Bilmar Avenue, South Hill, and Parkview Drive. This street and utility project is identified in the City of New Richmond’s 2018 Capital Improvement Plan (CIP).
- Remove the remaining 177 boulevard ash trees that have not been treated using contracted services. Replace with bare root stock grown in the City’s gravel bed nursery.
- Re-treat the 200 boulevard ash trees that were previously treated in 2019-2020, if they are still in good health. If all other recommendations are followed, these would represent the only remaining boulevard ash trees in city limits, and would now make up less than 5% of all street trees after 4-5 years of removal and replacement. These remaining ash trees may still be removed in the future, but prolonging their life will give the replacement bare root trees additional time to get established and grow.
- Plant an additional 200 bare root trees raised in the gravel bed nursery in boulevards and the parks and trails system.

Annual Cost Estimates For Implementation of All Three Phases				
2018	2019	2020	2021	2022
\$11,533.75	\$43,850	\$43,850	\$53,814	\$53,814

Treatment

The most common EAB treatments are soil drenching and trunk injections. While there are some products available to homeowners for treating ash trees on private property, it's highly advised that the City of New Richmond hire a professional to treat the select boulevard trees that will be treated. In speaking with urban forestry professionals with other Wisconsin municipalities, more communities are shifting towards using trunk injections with the pesticide emamectin benzoate due to its effectiveness, especially for trees with a DBH greater than 10 inches. When applied correctly, the treatments are generally found to be upwards of 95 percent effective, but of course are not guaranteed to be successful in protecting the tree. The ash trees typically need to be treated every two years.



One of the common concerns for policymakers is the cost-benefit analysis of treatment versus removal. In the case of a healthy ash tree with a DBH of 17 inches, the estimated cost for treatment every two years is \$127.50 (adjusted to an annual cost of \$63.75). Meanwhile, the estimated cost for removal of the tree and replacement with bare root stock is \$322. While the removal costs are greater in the short-term, the cost of treating the ash tree would exceed the cost of removal after about five years.

As was discussed in the preceding section, it's recommended that after EAB is confirmed within 15 miles of New Richmond, the City Forester should identify the 200 most valuable boulevard ash trees and contract with a professional to treat them using a trunk injection method. While the cost-benefit analysis may suggest tree removal, treatment postpones removal so that the trees can survive long enough to be removed after the main wave of the infestation has passed, reducing the short-term strain on the City's budget, personnel, and resources. Chemical treatment is not a long-term solution to managing EAB, but defers and spreads removal costs over a longer period of time and preserves the benefits of existing ash trees until replacement trees fill in the urban canopy. Chemical treatments are not recommended until EAB is confirmed in close proximity.

Budgeting & Resource Support

Through the Urban Forestry Grant, the City of New Richmond's Public Works Department has started to prepare for the arrival of EAB by attending educational workshops and purchasing personal protective equipment and tools necessary in the future for tree removal, such as chaps, face shields, saws, loppers, harness, etc. City staff have also successfully grown and transplanted bare root trees for two years using the City's gravel bed nursery. Ash tree management after the arrival of EAB has cost municipalities tens of thousands of dollars for tree removal, treatment, and replacement. However, the City of New Richmond can save taxpayer dollars by having a plan in place and by completing some of the work in-house rather than contracting out for help.

Along these lines, it is recommended that City staff manage the removal and replacement of all ash trees with a DBH less than six inches. These can easily be done with existing staff and equipment. It's also recommended that the City continue to grow and plant bare root trees from its gravel bed nursery, rather than contracting with landscape professionals to plant balled and burlapped trees, which cost about six times as much money as a bare root tree, plus labor costs.

One piece of equipment that is recommended for purchase by the City of New Richmond for an estimated cost of \$10,000 is a stump grinder. The estimated cost for stump removal of all ash trees with a DBH greater than six inches if contracting out for services is \$51,696.75. Instead, a skid steer stump grinder attachment operated by City staff could be a much more cost effective choice.



Above: Skid Steer Stump Grinder Attachment

It is recommended that the City contract with outside parties for the removal of ash trees with a DBH greater than six inches, as City staff do not have the equipment or staffing levels necessary to professionally remove so many ash trees without taking away from other priorities. One additional seasonal employee may be necessary to assist with stump grinding, wood chipping, and tree planting. It is also recommended that the City contract with certified applicators for EAB pesticide treatment (trunk injections) of select, high-value ash trees.

Funding Sources

In addition to allocating additional funding to the Public Works Department in both the operating budget and the Capital Improvement Plan (CIP), the City of New Richmond can further explore grants and partnership opportunities to help reduce costs. Some examples might include:

- Wisconsin DNR Urban Forestry Grant, which provides up to \$25,000 in matching funds for ash tree replacement, treatment, tree inventories, and gravel bed nursery creation
- Partnering with forestry classes at UW-River Falls to assist with tree planting
- Creating a “Touchdowns for Trees” program replicated off the Green Bay Packers First Downs for Trees program, by which businesses or individuals would donate a tree for every touchdown scored by the New Richmond High School varsity football team
- New Richmond Utilities could offer a cash rebate for up to 50% of the purchase price of shade trees (up to \$50 per tree, three trees per household) to incentivize home owners to plant a diverse variety of trees on their private property
- The City of New Richmond could further expand and promote its existing Legacy Tree Program, through which individuals can donate a tree to be planted in the City’s parks and trails system in memory of a loved one, perhaps in a matching partnership with the New Richmond Area Community Foundation
- For citizens who decide to treat private ash trees, the City of New Richmond could assist in organizing for bulk pricing in partnership with local tree professionals in order to potentially reduce costs for citizens via greater economies of scale

Wood Utilization

Wood chipping is strongly recommended, especially with smaller diameter trees that are not suitable for lumber. One of the benefits of wood chipping is that the wood chips move a minimal distance from their original location, reducing the spread of EAB to other areas in the community. The wood chips can be used in the City's parks and trails system, or provided to abutting property owners for mulch. The wood chips should be chipped so that the size is no greater than one inch on more than one side. Equipment that is used for wood chipping must be properly cleaned afterwards to reduce further spreading of EAB. In addition to using wood chips for playgrounds or mulching, wood chips can be used for energy generation in the Twin Cities at District Energy (St. Paul) and St. Paul Cogeneration. This could help offset some of the costs associated with tree removal and help manage the large supply of ash wood residue stored at the public ash wood collection site(s).

EAB larvae can live under the bark of firewood for two years, and transporting firewood longer distances is strongly discouraged. Homeowners removing ash trees from their private property can use the wood as firewood. There is a DATCP-certified firewood dealer in nearby Star Prairie called Horsecreek Firewood, which heat treats wood to an internal temperature of 140 degrees F. or higher for one hour or more. In general, it's not recommended that the City of New Richmond utilize removed ash trees with the intent of reselling it as firewood, especially given the close proximity to Interstate State Park (25 miles away) and Willow River State Park (15 miles away) and the possibility that individuals might transport firewood to counties not yet quarantined.

While it's not recommended to use the ash trees for firewood, there are some higher uses besides wood chips that the City of New Richmond should consider. Ash is an inexpensive hardwood often used for flooring, baseball bats, tool handles, and wood crafts. Ash's strength, density and affordability make it a sought after wood for various applications. Before the wood may be utilized, it must be adequately processed to control the movement of EAB. In order to process the wood properly, ash logs should be completely debarked and the first half inch of wood removed. Before a mill can process or handle ash logs sourced from a quarantined area it must have obtained a DATCP or USDA EAB compliance agreement. All ash lumber is subject to this, with the exception of kiln dried square edge lumber. New Richmond is the proud home of businesses Balsam Millwork and Zaxx Cabinets, and there are several other woodworking businesses in the nearby area such as Traditional Woodworks & Lumber Company, Wevers Cabinet Shop, and Valley Custom Cabinets. The City of New Richmond should explore the possibility of developing partnerships with some of these local businesses so that some of the ash wood can be repurposed for furniture, trim, or flooring – perhaps in the new community library. The City of Menomonie also recently partnered with UW-Stout Research and Development Prototyping Lab to repurpose ash wood into benches for city parks and even pliable products such as canoes.



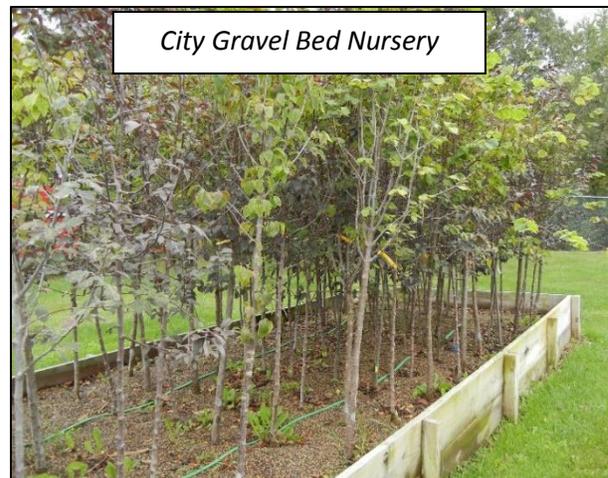
Site for Wood Collection

The City of New Richmond has a large compost site that is open daily to the public to drop off items such as brush, branches, leaves, and grass clippings. The compost site is fenced and opened/closed each day by the New Richmond Police Department. This could be an ideal location for residents to drop off local ash wood. Given that the site is located at the northwest corner of city limits, an additional site might also be pursued so that infested wood is not transported quite as far. In order to streamline these efforts, the City may also consider organizing pick-up dates by neighborhood rather than having individual citizens each driving separately to the collection site and unloading ash wood.



Canopy Replacements & Care

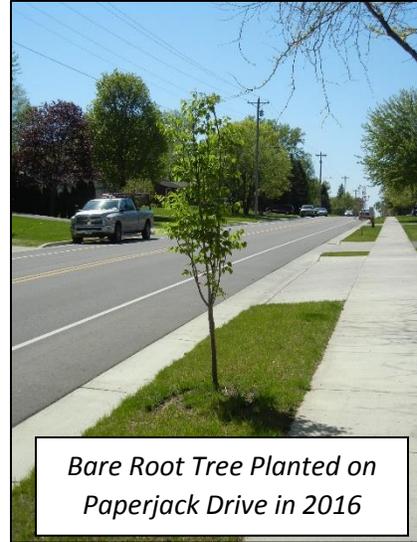
A significant portion of New Richmond's tree current tree stock being ash, there will undoubtedly be a sizable loss of trees as EAB makes its way into St. Croix County. The City of New Richmond will begin the replacement process with an emphasis on increasing the diversity of trees within the community. Robust tree diversity is the best approach to mitigating future tree stock loss to disease and infestations. As a general method of best practice, most urban foresters recommend using the 20-10-5 rule, when approaching the concept of tree diversity. The 20-10-5 rule is a method of urban forestry management which promotes diversity within a given area. If followed, no more than 20% of a city's tree population should be of the same family, no more than 10% of the same genus, and no more than 5% of the same species. This level of tree diversity is said to be sufficient to mitigate unacceptable losses of tree population to disease or pests. The 20-10-5 rule is a general guideline; when possible, a city should attempt to diversify its tree stock beyond this.



The City of New Richmond has a great asset already in place with its gravel bed nursery. Given the success of this project in the last two years and the substantial cost savings as compared to balled and burlapped trees, the City should expand the size of its gravel bed nursery so that it can accommodate a larger quantity of bare root trees annually in the future.

Replacement Trees

Some of the recommended ash replacement trees include hackberry, honey locust, Kentucky coffee tree, swamp white oak, Redmond linden, St. Croix Elm, lilacs, and flowering crabapple. These trees are recommended for many reasons including disease resistance, deep root systems, wildlife benefits, aesthetic beauty, and hardiness. Several guidelines should be considered to ensure that the “right tree is planted in the right place,” such as proximity to above and below ground utilities, tree height, soil and sun requirements, and biodiversity. The previous Ash Tree Management section calls for the following tree replacement strategy and timeline:



2018: Expand gravel bed nursery, plant 172 new boulevard trees

2019-2020: Plant 503 new trees, divided between boulevards and the parks and trails system

2021-2022: Plant 424 new trees, divided between boulevards and the parks and trails system

Several other planting partnerships should be pursued as discussed in the Budgeting and Resource Support section. Possible partners include New Richmond Utilities, UW-River Falls, the New Richmond Area Community Foundation, New Richmond High School, and local nonprofit or service organizations (Rotary, Kiwanis, Knights of Columbus, etc.) It should be noted that Rotary International is sponsoring a President’s Challenge for every Rotarian to plant a tree by April 22, 2018 (Earth Day). The Rotary Club of New Richmond currently has forty members and could potentially challenge other civic organizations in the community to plant a tree for each of their respective members.