Wisconsin Emerald Ash Borer Program

Reducing the Impact of Emerald Ash Borer Guidelines for Managing Ash in Wisconsin's Urban Forests

Update August 8, 2018

This document provides Wisconsin communities and the professionals that serve them with guidance and recommendations on how to manage their urban forests in the face of emerald ash borer (EAB). It is not a guide for controlling EAB, nor does it provide details on implementing management tactics. There are numerous publications and resources that contain that information and this document provides links to those detailed resources.

These guidelines and recommendations were developed by a panel of agency, university and private industry experts and reflect application of the best science and experience currently available to minimize the impact of EAB on Wisconsin's urban forests. There is no state mandate to implement these recommendations. It is up to individual local governments to adopt or adapt these recommendations as fits their situation and resources. Because the science and practice of dealing with EAB is changing rapidly, this document will only be produced electronically so that information and links can be continually updated.

Contents:

Wisconsin's Urban and Community Ash Resource

There are over 5.2 million ash trees in Wisconsin's communities – on streets and rights-of-way and in parks, private landscapes, natural areas and woodlots. About 20% of all trees in Wisconsin communities are ash. They have an estimated value of over $1.5 billion and also provide millions of dollars of environmental, social and economic benefits annually. On average, ash also make up about 20% of all street trees, but for some communities, over 50% of their street trees are ash!

More detail on the composition and value of Wisconsin's urban forests is available at:
http://dnr.wi.gov/topic/UrbanForests/urban.html

Why Manage Ash Now for EAB?

EAB is very difficult to detect and could be anywhere in the state - Right Now!
To date, infestations found in Wisconsin were detected 4-5 years after the infestation actually began, some after the trees started to die, but others where the trees showed few or no symptoms. EAB has been found in or adjacent to all four corners of the state. There is no reason to believe that any part of the state is safe from EAB. Because EAB is moved long distances by individual human activities, certain sites are at higher risk for introduction of EAB. These include:

- Campgrounds, recreational areas, and cottage communities – from infested firewood
- Public, commercial and residential areas landscaped since 1995 – from out-of-state infested nursery stock
- Sawmills, pallet operations, other wood utilization firms – from infested sawlogs from undetected infested areas.
- Major transportation corridors and industrial areas – from infested firewood and packing materials

However, every community has some of these types of sites or has residents that burn firewood that could have inadvertently been brought in from known or unknown infested areas, so all Wisconsin communities are at risk.

More information on current survey efforts and where EAB has been detected is available at:
http://datcpservices.wisconsin.gov/eab/article.jsp?topicid=25

The impact of EAB on Wisconsin's Urban Forests will be devastating.
Our native ash species have no known resistance to attack by EAB. Unless treated with insecticides, once ash trees are infested, EAB will likely kill them in 2 to 4 years. If we can slow the spread of EAB and ash mortality through management, we can buy time for research to potentially catch up and provide us even more options for managing this destructive pest. If we do nothing, rapid loss of our urban ash trees will likely:

- cost communities and their residents $2-4 billion to remove and replace their trees. This will overwhelm local government and private property owner budgets and overwhelm public and commercial capacity to remove the trees, handle the wood, and produce and plant new trees.
- increase fraud, substandard work, non-ash tree removal, damage and injuries from fly-by-night operators drawn to the disaster
- increase storm water runoff due to lost tree canopy
- increase energy use and cost for cooling and heating due to loss of shade
- increase water use for irrigating sun-parched landscapes due to loss of shade
- increase electric outages from dead ash trees falling on power lines
- reduce air quality from loss of trees' pollution filtering and air cooling capacity
- set up a repeat of this disaster if lost trees are replaced by too few species all the same age

Doing nothing is a risky option!

Many communities will wish to do nothing to manage their trees for a variety of legitimate reasons: no budget, no staff, higher priorities, etc. This strategy will work only until EAB is found in your community – and it will be found, as over half the counties in the state have had finds – and then you'll be faced with an even bigger problem!

When EAB is first detected in an unprepared community, a few dead trees will rapidly spread into many dead trees. If infested trees are allowed to stand, the insects will breed and spread far and wide, both naturally and by residents moving firewood. Dead ash trees, especially large ones, quickly become public safety hazards that have to be removed immediately to protect lives and property. Staff, equipment, and funding for contracts will have to be found from somewhere on short notice. In addition, **it will cost 2 to 3 times more to take down dead ash trees** than live or dying trees because dead trees are more hazardous to work in and tend to shatter into many pieces when they fall, creating greater clean-up costs.

Then there's the question of what to do with all that wood on short notice. There are fewer utilization options for wood from dead trees which can eliminate potential income to offset costs. Even chipping is more expensive because dead trees are harder on equipment. And where will you store the wood and debris? Consider viewing the Wood Users Directory.

And finally, how will you pay for replacing the trees and where will the trees come from? Experience has shown, communities that don't prepare, don't have funding to replace the lost trees, which just compounds the loss of ash trees, this is a prime reason why conducting and using a tree inventory is vital.

EAB offers opportunities to improve the urban forest resource and expand business.

Despite all the negatives of EAB, managing for EAB can improve your community forest and its overall management program. For example:

- Ash and maple are over-represented in our urban forests. EAB has highlighted the devastating result of this lack of diversity. A long-term management plan for the current and soon-to-be vacant planting spaces can help create a more diverse, adaptable and resilient forest in the future.
- EAB has improved public awareness of the value of urban forests. An inventory can quantify this value for community leaders and residents.

- EAB threatens so many aspects of the community that people don't realize are impacted by the urban forest. Partnering with these interests – community engineers, planners, waste managers, businesses, utilities, environmental groups, neighborhood associations – can result in stronger long-term support for tree management.

Beginning to manage for EAB now can also stimulate local business. For example:

- Urban forestry, tree service and landscape professionals can provide tree inventories, GIS layers, urban forest management plans, staff training, tree health care, planting, maintenance and removal services.
- Communities can work with nurseries to develop innovative ways to provide a broad diversity of tree species.
- EAB will generate a flood of wood to cope with. Large and small entrepreneurs can come up with creative solutions to produce products for a profit or at least offset some of the disposal costs not only for ash, but all urban wood.

On the other hand, waiting until EAB causes an emergency demand for services will overwhelm existing business and attract out of town disaster chasers.

Who is Responsible for Managing Ash and EAB?

The short answer is: Everyone! EAB has spread beyond the point where the federal or state governments alone can control it. While the federal and state governments have a role in public outreach, coordinating detection, regulating the movement of infested material, recommending control strategies, providing financial incentives and technical assistance and supporting research, ultimately it is up to the local governments, businesses and private property owners to regulate and manage ash and EAB in their own jurisdictions and control EAB in their own trees.

More information on responsibilities can be found in the current Wisconsin EAB Response Plan at: https://datcpservices.wisconsin.gov/eab/article.jsp?topicid=16

How to Manage Ash in Your Urban Forest

Ash Management Goals

With EAB in or adjacent to all four corners of Wisconsin, it is recommended that all communities adopt the following four broad goals.

1. Develop and implement an inventory-based management plan

Inventories will provide you with information on what trees including ash you have so you can determine what goals you are trying to reach and what resources you need to manage your urban forest efficiently and effectively.

2. Reduce the risk of introduction and spread of EAB

This will give you more time to prepare for EAB and respond once you detect it. It will also give researchers more time to develop better management tools.

3. Minimize the impact of EAB

If left unchecked, EAB can have a rapid and devastating affect, not only on your urban forest, but also on your community, overwhelming its resources, and causing long-term impact to its environment, quality of life and economy. Proper management now can both reduce those impacts and spread them out over a longer period of time.

4. Prevent future catastrophic losses

While EAB is a devastating threat, it also presents an incredible opportunity to demonstrate the value of your urban forest so you can develop support for management and create a more resilient and sustainable urban forest for your community.

Tactics to Accomplish Management Goals

The following tactics can be used to accomplish these four management goals:

1. Develop and implement an inventory-based management plan

a. Inventory the urban forest resource to determine the potential impact of EAB

An inventory should identify tree species, and count or estimate their numbers, size, location and condition. The inventory can be simple or detailed, but without one, it is impossible to assess your community's risk for EAB, the impact it will have on your community and budget, or even the ash management tactics you should consider using.

A street and park tree inventory will tell you what ash you'll have to deal with directly. However, most of the ash in a typical community will be on private property. When EAB starts killing private trees it will affect the community's waste stream and standing dead trees will create a public nuisance. A community-wide inventory will provide you with information on what to expect from private property. An analysis of the inventory data with software programs such as i-Tree Streets or i-Tree Eco (http://www.itreetools.org/)will also give you the value of the trees and services they provide to help you justify your management choices to decision-makers.

More information on inventories can be found in the Detection tab of the EAB Toolbox at: http://dnr.wi.gov/topic/UrbanForests/EABToolBox.html

b. Determine costs and resources

The treatment, removal, disposal/utilization and replanting of community ash trees will cost money and you need to identify sources of funding and resources. This cost information will show you the direct impact EAB will have on your budget and staff. It will help you make choices on whether to treat or remove trees, whether to spread the costs over time or deal with them all at once and what kind of training, equipment, supplies and contracts you'll need. Regardless of your choices, EAB will require more funding, whether it's redirected from other accounts or from new sources.

Information on estimating costs can be found in the Manage tab of the EAB Toolbox at: http://dnr.wi.gov/topic/UrbanForests/EABToolBox.html

c. Prepare and implement an EAB readiness and response plan

Like inventories, community readiness and response plans can range from very simple to complex depending on your needs. Regardless, these plans will help you organize your community's strategies to deal with EAB.

The Plans tab of the EAB Toolbox will walk you through the process at: http://dnr.wi.gov/topic/UrbanForests/EABToolBox.html

d. Train staff in needed skills

Your staff will need training whether you're going to do the work yourself or not. If you are going to survey, treat, remove or replace your ash yourself, your staff will need to have those skills. If you're going to contract for those services, your staff will need to be well informed to produce contract specifications, manage the contracts and inspect the work. In any case, citizens will be calling you for information about their private trees or what you're doing about their public trees and to answer them you'll need to be well informed on ash identification, EAB signs and symptoms and EAB management options.

Training is available from UW Extension, DNR, UW and technical colleges, and through professional organizations and on-line resources. Contact your DNR urban forester for information at: http://dnr.wi.gov/topic/UrbanForests/contact.html

e. Prepare specifications, contracts and cooperative agreements for needed resources If you wait until the crisis hits, there likely will be few contractors available, no equipment for lease, few trees for replanting and no community willing to share their over-stretched resources and equipment. Enter into agreements and negotiate contracts as soon as possible before EAB hits, so you'll be first in line to receive the services and equipment you'll need when it does.

The Replant tab of the EAB Toolbox has information of planting specifications at: http://dnr.wi.gov/topic/UrbanForests/EABToolBox.html

2. Reduce the risk of introduction and spread of EAB

a. Educate and involve elected officials, business and private property owners

Your community's residents and power-brokers can be part of the solution such as in early detection, creating cooperative agreements, or supporting budget requests, but they can also be part of the problem – bringing in or moving infested firewood, opposing best management tactics or cutting budgets. Engaging them now will assure you have enough support to succeed and that they have enough information to make informed consumer decisions on their own property.

The Outreach tab of the EAB Toolbox has some ideas for you at: http://dnr.wi.gov/topic/UrbanForests/EABToolBox.html

b. Enact or strengthen ordinances

You will need to have the legal authority to carry out the management strategies you select or deal with the threats you could face. At the very least, dead and dying ash trees will pose a public safety hazard, so you will need the authority to declare infested or dead trees a public nuisance and have that nuisance abated on private property. Other ordinances to consider to reduce introduction and spread include regulating firewood sale and movement, licensing tree service companies, and requiring private property tree removal permits. Ordinances addressing tree preservation and tree planting requirements in developments and reconstruction would help achieve the goals of minimizing EAB impact and preventing future losses. It is important to enact ordinances broad enough to encompass not only EAB, but potential future pests as well.

The Ordinances tab of the EAB Toolbox will help you through ordinance development at:
http://dnr.wi.gov/topic/UrbanForests/EABToolBox.html

c. Facilitate early detection of EAB

Detecting EAB as soon as possible will give you the most options and time to deal with it and slow its spread. New infestations are most often found by informed residents, arborists, and others working in and around ash trees. Work with UW Extension, DNR and DATCP to find training and education so as many people as possible are helping you watch for EAB. However, since early detection methods are not very reliable and trees in new infestations typically don't show obvious symptoms for the first few years, you can't be certain where EAB is until it has already begun damaging a tree. Don't wait until you "see it". Most EAB infestations go undetected for 4 – 5 years, before EAB signs and symptoms become noticeable (even to the trained professional). Experience has taught us to act now if you are looking to selectively preserve high value ash trees in your community.

Information on detection is in the Detection tab of the EAB Toolbox at:
http://dnr.wi.gov/topic/UrbanForests/EABToolBox.html

d. Develop disposal and utilization sites, methods and markets before quarantines are imposed.

Find sites within your county and methods to store, treat, dispose or utilize infested ash wood that minimizes transportation distance. Small communities and those without much ash may want to work with nearby communities, towns or their county for collective wood disposal. Waiting to establish these after an infestation is found will limit options, increase costs and delay destruction of the EAB infested wood, accelerating the insect's spread.

For more information on disposal and utilization see the Wood tab of the EAB Toolbox at:
http://dnr.wi.gov/topic/UrbanForests/EABToolBox.html

3. Minimize the impact of EAB

a. Preserve non-ash large canopy trees

When EAB starts killing your ash trees, the remaining trees that are not ash will become even more important in providing environmental, social and economic services to your community. Large canopy trees provide the most services so it will be critical to protect them while the newly planted

trees grow to fill the gaps. These trees can be preserved through routine maintenance, protection during street reconstruction, home remodeling, or business redevelopment, and preservation during new development. You can accomplish this through community policies, ordinances and public education.

b. Identify large canopy and high value ash for preventive insecticide treatment

Healthy, properly located, large-canopy trees provide the most environmental, social and economic benefits to a community. Preserving these trees as long as possible will do the most to minimize impact of EAB on your community. To help you determine the cost/benefit of treatment versus removal and replacement use the EAB Cost Calculator developed by Purdue University.

When to begin preventive insecticide treatments is open to debate. The official recommendation is to begin treatments when EAB is within about 15 miles of your site. However, since early detection methods are not very reliable and trees in new infestations typically don't show obvious symptoms for the first few years, you can't be certain where EAB is until it has already begun damaging a tree. Available resources, the value of the tree and your tolerance for risk should be considered when you start treatment. With the presence of EAB in the state, contemplate starting treatment now.

More information on insecticide treatment can be found at:
http://www.emeraldashborer.info/files/multistate_EAB_Insecticide_Fact_Sheet.pdf

c. Preemptively remove uninfested ash trees in priority order

This tactic is intended to reduce the peak rate that trees are lost to EAB thereby reducing the impact of EAB on the community's budget and the long-term health of the community's urban forest. Experience in states infested with EAB shows that a community's resources quickly become overwhelmed when EAB starts killing trees. Funds have to be taken from anywhere and everywhere to deal with the public safety threat of standing dead trees. And once the trees are down, there are no funds to replace them. If replacement funding is found, diverse tree species in the quantity needed may not be available. Public pressure to fill those vacant holes with trees could lead to overplanting a few, cheap and plentiful species, setting you up for a future disaster.

The extent to which a community will need to use preemptive removal will depend on the number, size, location and condition of their ash trees and the proximity of EAB. This again shows how an inventory is essential. Communities with large numbers of ash, particularly ones in poor condition need to implement preemptive removal immediately. Communities with few ash may be able to handle the losses with existing resources and won't need preemptive removals.

Of the trees that you have NOT identified for preventive insecticide treatment, use the following in priority order to set a preemptive removal plan:

1. Large, structurally unsound ash in poor condition
2. Smaller ash in poor condition
3. Ash that are improperly placed or are interfering with other infrastructure, for example ash blocking traffic signs or under power lines.
4. If you have not accomplished your goal after completing the first three priorities, continue with this fourth priority. Of the remaining ash trees, annually remove and replace the number of ash

that your budget allows until you reach a total population number that you could handle when EAB starts killing your trees. If EAB is in your community or nearby you should either preventively treat, or remove and replace ash more aggressively, but remember, even if EAB is not yet confirmed in your area, it may already be there.

d. Fill existing vacant planting spaces with diverse tree species

About 40% of possible urban tree planting spaces are vacant according to a statewide estimate. Planting these spaces now before EAB comes to town, will not only give your community a head start on tree replacement, but will give those new trees a chance to grow and spread the age of your urban forest out more evenly.

The reason EAB will be so devastating to your community's urban forest is there are too many ash trees – on average, 20% of community trees are ash. While Dutch elm disease taught us not to plant an entire community to one species, losing 20% of our entire canopy to a catastrophic pest is still too much. The new diversity rule of thumb is to strive for no more than 5% of one species, 10% of one genus and 20% of one family. Even if you followed this rule, a pest like EAB could still kill one-tenth of your trees, so communities should strive for even more diversity while continuing to make sure to use species adaptable to your climate and site. Avoid planting tree genera and species that are already over-represented and encourage your residents to do the same. Maple is the most commonly over-represented species in Wisconsin communities making up 44% of all street trees.

e. Maintain all new and existing trees

As the ash die out, the new and remaining trees will become all the more important. Community trees need care such as pruning, watering and mulching to maintain their health, vigor and structural strength. This will minimize additional tree loss to storms, pests and other damage, increase the value of those trees and prevent trees from becoming a financial and public safety liability. In Wisconsin, studies have shown that every dollar invested in tree planting and care returns $3 in benefits.

For basic information on tree care, see the Tree Owner's Manual at:

4. Prevent future catastrophic losses

a. Don't over-plant any tree species

Dutch elm disease destroyed a huge portion of our urban trees because we over-planted American elm. EAB will wipe out 20% of our urban trees because we over-planted ash. What's next? The "big 4" urban street trees are maple, ash, honeylocust and linden. If Asian long-horned beetle comes to Wisconsin, it could wipe out our maples – almost half of our urban forest! Do an inventory and focus your planting efforts on genera and species that are underrepresented in your community. Strive for the new diversity rule of thumb – no more than 5% of one species, 10% of one genus and 20% of one family.

The uncommon trees are less common for a reason. They may be harder to grow, more expensive or in less demand. This makes them a business risk for nurseries to grow and stock. Work with your nurseries to help them with that risk and assure a steady, long-term supply of less common species. If you wait until all your ash are dead, public demand will require rapid replacement and the only trees available in the quantity you need will be ones you already have too many of.

b. Spread tree planting over time and location

Not only should your urban forest be species diverse, but ideally it should be diverse in age. If you wait to plant until all your ash are gone, all the replacements will be the same age. This means all the trees will require maintenance at the same time and they will mature and die at the same time. Just like payroll deduction to a savings account, planting trees every year will provide you a diversified portfolio of benefits over time with less risk of loss.

Diversifying the distribution of your trees is a harder balancing act. If you plant all the same species of trees all in one area, a pest like EAB would not only wipe out a whole area, but because the trees are close together, the pest will spread faster. If you plant trees randomly throughout the community, no one area will lose all its trees to a specific pest and the pest might spread more slowly. However, the down sides to this are loss of visual uniformity, not every species is appropriate everywhere and tree maintenance may be more expensive and complicated because different species require different maintenance at different times. Many communities compromise between these two extremes by planting the same species on one city block and then vary the species block by block.

c. Design new planting spaces with tree success in mind

It is becoming much clearer to everyone that trees are part of the infrastructure of a community. For trees to thrive and achieve their full potential benefits to the community, new construction needs to be designed to provide sufficient root volume for tree success rather than viewing trees as an afterthought to be fit in wherever some space is available. Work with your community planners, landscape architects, engineers and utilities to include an arborist in the team that designs both new construction and reconstruction. Trees are part of the solution to storm water management, drinking water supply, air quality, energy conservation, business development and property value.

Selecting Management Tactics

Unfortunately, there is no black and white rule on which ash management tactics a community should use. The tactics a community selects to reduce its ash liability will be based on the number, size, condition and location of its ash trees, the value of those trees and the benefits they provide, the proximity of EAB to the community, the funding, staff and resources available, how aggressive the community wishes to protect its urban forest and the public's support for the chosen options.

To best protect your community, be as aggressive as possible and search out creative ways to succeed. In general, the greater the proportion of ash you have and the closer EAB is to your community, the more aggressive you should be. While it would be best if communities implemented all of the ash management tactics, you will no doubt be faced with the tough choice of which tactics you can afford to undertake. Use the following table as a guide to help identify the priority of each action you could or should take based on your situation.

Customizing your priority actions

In the table, go through each tactic one by one and find the situation that best fits your community - high, medium or low priority- and place the selected priority in the "Your Priority" column. Once you've completed this, you will have a listing of your priority actions. It is likely that you will still have more actions than you have the time and funds for, so use the "Rank" column to further prioritize your actions. Actions rated "high priority #1" should be done first and foremost. Actions rated "high priority #2" should be done next and so on until you have an action plan that your community can afford to implement.

Management Tactic:	High Priority Situation:	Medium Priority Situation:	Low Priority Situation:	Rank:	Your Priority:
1. Inventory-based Management Plan:					
a. Inventory your urban forest resource to determine potential impact of EAB	No inventory, inventory is out of date or inventory is insufficient to determine EAB impact	Current inventory of public trees, but have not quantified EAB impact	Current inventory of public and private ash and have quantified EAB's impact	1	
b. Determine costs and resources for treatment, removal, disposal and replanting	EAB response costs and/or sources of needed funds, materials and labor have not been determined	Costs and resources have been assessed for public, but not private property. Public sources of funding, materials and labor established	Costs and resources have been assessed for public and private property and sources of funding, materials and labor established	1	
c. Prepare and implement an EAB readiness and response plan	All communities, all situations should prepare, implement and regularly update an EAB response plan that fits your needs	NA	NA	1	
d. Train staff in needed skills	Insufficient staff with little or no training	Some staff trained in some skills	Sufficient number of existing staff trained in all needed skills	2	
e. Prepare specs, contracts and coop agreements	Few staff and resources, unable to handle expected workload and wood volume	Existing staff or contractors can handle early stages of EAB infestation	Sufficient resources to handle expected workload and volume of wood, &/or specifications, contracts, agreements in place	3	
2. Reduce Risk of Introduction & Spread:					
a. Educate officials, businesses & residents	Elected officials and administrators are not aware of the impact EAB will have on the community. Business and residents aren't aware of how their activities could spread EAB or how they can help protect their ash and the community's forest	Elected officials and administrators are engaged in the EAB issue. The media is covering EAB.	NA	1	

b. Enact or strengthen ordinances	No tree ordinance, or existing ordinances do not provide authority for all needed EAB prevention and response	NA	Up-to-date ordinances that give you all needed authority to prevent and respond to EAB on public and private property	1	
c. Facilitate early detection of EAB	All communities, all situations	NA	NA	1	

d. Develop disposal & utilization sites, markets	No disposal sites in the county, no utilization options or markets	County sites available but far away, few or no utilization options	Various sites available, existing utilization options & markets	1	
3. Minimize the Impact of EAB:					
a. Preserve structurally sound, nonash, large canopy trees	All communities, all situations	NA	NA	1	
b. Identify large &/or valuable ash for insecticide pre-treatment	EAB nearby, large ash a significant proportion of community's tree canopy, large ash in culturally or economically important locations	Community at higher risk of EAB introduction, large ash in culturally or economically important locations	EAB far away, few large valuable ash, no public or private resources or interest to pre-treat large ash	1	
c. Preemptively remove uninfested ash trees	Greater than 20% ash, many large poor condition ash, insufficient resources to handle EAB workload, volume of wood and replanting with diverse species	10-20% ash trees, more large, structurally unsound ash, some resources to handle EAB workload, volume of wood and replanting with diverse species, but insufficient to handle peak load	Less than 10% ash, most ash small diameter, large ash are structurally sound, sufficient resources to handle EAB workload, volume of wood and replanting with diverse species	1	
d. Fill vacant planting spaces with diverse species	High percentage of vacant planting spaces, tree population heavily weighted in 1-4 genera	Moderate number of vacant planting spaces, tree population has 5 to 9 evenly distributed genera	Few vacant planting spaces, tree population has at least 10 evenly distributed genera	2	
e. Maintain all new and existing trees	Trees in poor to fair condition, new trees need structural training, community has public &/or private maintenance capacity	Trees in fair to good condition, community has public &/or private maintenance capacity	Community has no public or private capacity to maintain public trees	3	
4. Prevent Future Catastrophic Losses:					
a. Don't over-plant any tree species	All communities, all situations	NA	NA	1	
b. Spread tree planting over time and location	All communities, all situations	NA	NA	2	
c. Design new planting spaces for tree success	Community plants public trees and has the resources to regulate and inspect reconstruction and development	Community plants public trees, but does not regulate reconstruction and development	Community does not plant public trees and does not regulate reconstruction and development	3	

The advantage of this prioritized list is you can add the next highest action to your plan if your resources increase or you can remove the least important action if your resources are cut. Remember, this is only a guide. Your community may have different combinations of situations and priorities. The final decision is yours to make.

Additional Technical Resources

If you need help using this guide or have other questions about urban ash management or emerald ash borer, please see the following resources:

Contact:	**For:**
DNR Regional Urban Foresters http://dnr.wi.gov/topic/UrbanForests/contact.html	Local government urban forest management and staff training assistance Networking with other managers
DATCP EAB Program https://datcpservices.wisconsin.gov/eab/contactus.jsp	EAB Survey, quarantine and infested materials movement information and training
UW- Extension Statewide: County: http://www.uwex.edu/ces/cty/	Insecticide treatment and EAB biology Homeowner information Public awareness assistance
Wisconsin EAB web portal http://www.emeraldashborer.wi.gov	Wisconsin EAB information and links
National EAB web portal http://www.emeraldashborer.info	National EAB information and links
EAB University http://www.emeraldashborer.info/eab_university.cfm	Web-based EAB training seminars
Commercial Urban Forestry Consultants http://dnr.wi.gov/topic/UrbanForests/consultants.html Certified Arborists for Hire www.waa-isa.org/arborist-for-hire	Contractual technical assistance and service