

**Village of Mount Prospect
Forestry/Grounds Division
Frequently Asked Questions About Emerald Ash Borer (EAB)**

WHAT IS EAB AND WHY IS IT IMPORTANT?

What is EAB?

The Emerald Ash Borer (EAB) is an exotic pest from Asia, first discovered in the U.S. in Michigan in 2002. The first official find in Illinois was in 2006 in Kane County. Since then, this small, green beetle has been found in at least fifteen states and many locations throughout Illinois including Mount Prospect. At last estimate, EAB has killed tens of millions of ash trees in the U.S. and Canada.

What does EAB look like?

The adult beetle is dark metallic green in color, ½ inch-long and 1/8 inch wide. When adults flare their wings, you can see their violet abdomen. Larvae feed in the inner bark between the wood and the rough outer bark; they are flat and cream-colored, and have wide heads and bell-shaped body segments.

When was it found in Mount Prospect?

EAB was first officially confirmed in Mount Prospect on September 7, 2010. It was found by Village arborists and confirmed by the Illinois Department of Agriculture.

How many ash trees are growing in the Village?

When Mount Prospect adopted its Emerald Ash Borer Management Plan in 2009, there were 4144 ashes in Village parkways. Ashes made up nearly 17% of the Village parkway tree population. This meant approximately 1 of out 6 parkway trees was an ash. As of March 2014, roughly 1900 parkway ashes remained in Mount Prospect's parkways.

Note that none of these figures include ash trees located on privately owned parcels; we estimate there are at least as many ashes on private property as on parkways.

Where did EAB come from?

The natural range of *Agrilus planipennis*, the emerald ash borer, is northern China and Korea. It may also occur in eastern Russia, Japan, and Mongolia. Before June of 2002, EAB had never been found in North America or anywhere outside of Asia. It is not a major pest of ash trees in Asia and little was known there about EAB biology or control methods.

How did it get here?

We don't know for sure, but EAB probably arrived in solid wood packing material that originated in China or another Asian country. This could include ash wood used for crating, pallets or stabilizing cargo in ships.

What types of trees does EAB attack?

In North America, it has only been found in ash trees. Ash trees in any setting such as woodlots, forests, hedgerows or landscaped areas in cities have been affected. All sizes and species of North American ash appear to be susceptible, including Green Ash, White Ash, Blue Ash, Black Ash and Pumpkin Ash. European Ashes can also become infested. Note that Mountainash is not a true ash, so it is not affected.

What happens to infested ash trees?

S-Shaped tunnels (called larval galleries) excavated by feeding larvae underneath the bark destroy tissues that conduct water and nutrients. The canopy of heavily infested trees will begin to die, usually near the top of the tree and progressing down the trunk. Sometimes ash trees produce epicormic sprouts or "water sprouts" on the trunk or on large branches where EAB damage is heavy. Bark may crack over

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larval galleries. Adult beetles leave a characteristic "D"-shaped exit hole in the bark, roughly 1/8 inch in diameter, when they emerge starting in May-June. Woodpeckers often attack larvae, especially during the winter. Woodpecker holes are larger and easier to see than the D-shaped exit holes left by EAB.

Does EAB only attack dying or stressed trees?

NO! Although beetles may prefer to lay eggs or feed on stressed trees, healthy ash trees are also susceptible. When EAB populations are high, small trees may die within 1-2 years of becoming infested, and large trees can be killed in 3-4 years.

How is this pest spread?

We know EAB adults can fly at least 1/2 mile from the tree where they emerge. Many infestations, however, were started when people moved infested ash nursery stock, logs, or firewood into uninfested areas. In response to this problem, both USDA-APHIS (a federal agency) and the Illinois Department of Agriculture have established quarantined areas; moving ash products out of these quarantined areas is now either restricted or entirely prohibited. For more details and the specific quarantine boundaries and regulations, see www.illinois.eab.com. Transport of infested firewood remains an ongoing concern. Mount Prospect is asking its citizens to please refrain from moving any ash products in or out of town and to burn any ash wood they may already have before May 1st. Campers are asked to buy their firewood at the camp and burn it there.

What is the life cycle of this borer?

Recent research shows that the beetle can have a one- or two-year life cycle. Adult beetles usually begin emerging in mid to late May with peak emergence in June. Beetles are most numerous in late June and early to mid July. The adults feed on leaves but this causes little damage to the tree. The adults mate, and then females usually begin laying eggs about 2 weeks after emergence.

Eggs hatch in 1-2 weeks, and the tiny larvae bore through the bark and into the cambium. (This is the area between the bark and wood, where nutrients are transported within the tree.) The larvae feed under the bark for several weeks, usually from late July through October. The larvae typically pass through four stages, eventually reaching a size of roughly 1 to 1 ¼ inches long. Most EAB larvae overwinter in a small chamber in the outer bark or in the outer ½ inch of wood. Pupation occurs in spring and the new generation of adults will emerge in May or June, to begin the cycle again.

Can we keep EAB out of the trees?

There is no 100% guaranteed treatment to keep EAB from infesting ash trees. However, entomologists have been studying various insecticidal options to treat ash trees. Note that thus far, most communities battling EAB have found that widespread, ongoing treatment of all public ash trees is cost-prohibitive. Property owners may wish to consider preventative treatment of their private ashes or nearby parkway ashes, if they have the funds to do so.

EAB has been shown to move through an area like a tidal wave, with loss rates building slowly, then exponentially until cresting, and then subsiding. Because of this, some experts predict that frequent aggressive treatment of ash trees may be able to be reduced after ten years or so. However this time frame is far from certain, and Illinois is likely to always have a residual population of EAB insects.

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HOW ARE PARKWAY ASHES BEING MANAGED?

Is the Village treating any parkway ash trees for EAB?

Yes. Insecticide treatments are best used on healthy trees. Several years ago the Village identified a pool of about 800 white and blue ash that were the best species, size, condition and in the best growing locations, and we began treating them annually to try to prevent infestation. (Green ash was not included because they tend to break up in storms more readily than the other ashes.) For the most part, it has been our policy thus far to treat only healthy parkway ashes and not ash trees that are already infested.

Can I treat the ash in my parkway?

This is a personal choice. We are not requesting it, but if a resident wishes, they can treat a healthy parkway tree, at their own expense, by permit. Additionally, in March 2012, the Village Board agreed to allow residents the option of treating infested parkway ashes at their own expense, under certain conditions. The Village does not generally recommend treating infested ashes because the results cannot be guaranteed, the treatments must be repeated for an undetermined amount of time, the level of infestation is difficult to determine, and heavily impaired trees are unlikely to adequately take up the insecticide throughout the tree.

As with all parkway trees, treated parkway ashes will still be the property of the Village and the Village will still have final say on when removal is required. If residents are going to proceed with treatments of healthy trees, we encourage spring treatments. If a resident requests to begin treating an infested parkway ash in order to delay the Village's removal plans, they will be advised at the time of their request of a deadline by which the treatment must be completed.

Residents must receive a permit from Public Works Department before treating a parkway tree. The permit is free, but before issuing the Village will inspect the tree to see if it's already infested or if its condition warrants removal.

What are the current treatment options?

Various insecticides are labeled for use against EAB. Some may be used by homeowners while others can only be legally used by state-licensed professionals. Insecticides that can effectively control EAB can be broken down into four categories: (1) systemic insecticides applied as soil injections or drenches; (2) systemic insecticides applied as trunk injections; (3) systemic insecticides applied as lower trunk sprays; and (4) protective cover sprays applied to the trunk, branches and foliage. Note that Certified Arborists provide expertise in properly treating EAB as well as expertly maintaining the health of ash and other trees.

What are the specific insecticidal controls available?

These are some of the current options available for professional treatments and homeowners:

Professional insecticidal control options:

- Imidacloprid (Merit, Xytect) applied onto or injected into the soil around the tree annually.
- Imidacloprid (Merit, IMA-jet, Imicide, Pointer) or Bidrin (Inject-A-Cide B) injected into the tree annually.
- Emamectin benzoate (Tree-age) injected into the trunk.
- Dinotefuran (Safari) combined with Pentrabark sprayed onto the trunk.
- Foliar and bark sprays of bifenthrin (Onyx), cyfluthrin (Tempo), permethrin (Astro), or carbaryl (Sevin) in both mid May and mid June will control visiting beetles.

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Some homeowner do-it-yourself insecticidal control options: (Note – experts generally recommend that homeowner-applied insecticides be used only for trees that are smaller than 15” in trunk diameter.)

- Bayer Advanced Tree and Shrub Insect Control
- Green Light
- Optrol
- OrthoMax Tree & Shrub Insect Control

Note that pesticide labels change frequently, so the above list may become obsolete at any time. Also note that a pesticide label is a legal document, and neither a property owner nor a licensed contractor is allowed to deviate from the label.

The parkway tree looks so healthy; how do you know it is infested?

After several years of dealing with this pest, and many training sessions, Village arborists have become very good at identifying infestations. There are several symptoms and signs that show us where the pests are. Primary identifiers are split bark, d-shaped exit holes, and woodpecker damage. Bark tends to split on the smaller trees and branches a season after feeding has begun. When the bark splits, you may visibly see the s-shaped larval galleries. While many pests can leave exit holes, adult EAB beetles leave a distinct, 1/8” wide, D-shaped exit hole as they emerge from the tree. Finally, feeding woodpeckers often point the way to EAB-infested trees. As EAB larvae mature, woodpeckers find the larvae irresistible; they feed on these especially during the fall, winter and early spring. Heavily infested trees are riddled with holes from this feeding activity, although only a handful of wounds on a tree can be an excellent identifier of the earliest stage of a big infestation. Heavily infested trees can appear to be perfectly healthy, unless you know for what you are looking.

Will the Village contact me before removing my infested parkway tree(s)?

Yes. When a parkway tree is identified as infested, an orange dot is painted on the tree and an informational letter is placed near the resident's front door. This is done as a courtesy to let the resident know that tree removal is planned. The letter will also provide details about any possible tree replacement programs assuming there is room for a new tree. There is contact information located on the letter, should there be any questions.

How long will it take before my parkway tree is removed?

Once the tree is marked for removal, it usually takes us at least a few days to get the addresses to our removal contractor; then the contractor removes them at their own schedule. The contractor's crew may start immediately, but they have 30 days to complete the list. However, during flight season (generally between May 1 and October 1) they are given a 10 day deadline for each list.

Why does an infested ash tree need to be removed; can we wait until the tree is dead?

When a tree is found to be infested, prompt removal is required in order to prevent the pests from reproducing and increasing the intensity and spread of the problem. Removal and appropriate disposal is consistent with good forestry practice. Additionally, dying ash trees quickly can become brittle and dangerous, presenting serious public safety concerns. If the tree does not present an immediate hazard, exceptions may be made for trees that are already on, or immediately put on, an insecticide treatment program. Removal will proceed if/when the Village determines it is necessary to do so.

Will the Village remove the stump once the tree is removed?

Yes. Stumps are added to a list and contractually ground (removed), either in the Spring or the Fall, depending on the time of the tree removal. Ground areas are restored with topsoil and seed.

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Will the Village plant a new replacement tree in my parkway?

When a parkway tree is marked for removal, the adjacent property owner is informed as to whether or not there is room for one or more replacement trees. New plantings must follow current Village code guidelines in regards to species, spacing and plant quality.

In 2011 and 2012 the Village was awarded grant funding to replace many of the removed parkway ashes. Unfortunately, no grant funding was available in 2013 or 2014. The Village Board did, however, appropriate additional funding for replacing ash trees in the 2013 and 2014 Village budgets.

For 2014, ash replacements will proceed as follows. As long as funds are available, the Village will offer 1½" replacements for removed parkway ashes where there is a suitable planting site at no cost to the adjacent property owner. The Village will select the species and plant trees that are currently underutilized in the Village's urban forest. The free replacement trees will be offered to property owners more or less in order of the ash tree removal dates. Thus, property owners adjacent to ashes removed in summer 2013 will be offered replacements sooner than those where ashes were removed in Fall 2013 or Spring 2014. Once 2014 funds for this program are expended, the ash replacement program will be placed on hold pending new funding in the 2015 budget.

At any time, property owners who don't want to wait for the offer of a free 1½" tree may elect to be placed on the mailing list for our next available "Full Cost" planting program. In this program, property owners with suitable parkway planting sites can order a larger, 2½" diameter replacement tree, but bear the full cost. For this program, you will be able to select from a list of 8-10 tree species. Prices typically range from about \$165.00 to \$285.00 per tree, depending on species, and include planting and a one year guarantee. Deadlines for ordering information are typically March 1 for Spring planting and August 1 for Fall planting.

WHAT ABOUT ASH TREES IN MY YARD?

Can I treat my private ash trees?

Again, this is a personal choice. Regarding private ash trees, we do not have any restrictions on treatments. The trees are your property, so the choice is yours. See treatment options above. However, if we note that the tree is dead or dying from EAB, Village code requires its prompt removal. If the resident promptly provides proof that the tree is being properly treated with an approved pesticide, the removal requirement may be waived until such time that the tree presents a hazard to users of the public right of way or the tree is substantially dead. Interested residents considering insecticide treatments are urged to read a very comprehensive document, "Insecticide Options for Protecting Ash Trees from Emerald Ash Borer," found on the Village's website.

Will the Village inspect privately-owned trees?

Yes, the Village scouts for trees showing symptoms of EAB, throughout the Village and on private property. Village Code allows our arborists to enter private property to confirm a suspected EAB infestation after providing proper notice. If we confirm a private property infestation, a letter will be sent to the property owner, requiring prompt removal of the tree. Also, residents wanting us to check their private property ash trees for EAB can contact the Village and request an inspection.

Will the Village remove my privately-owned tree(s)?

No. Once a private tree has been determined to have EAB, the property owner has 10 days, during the flight season, to have the tree removed. If the tree is identified between September 1 and April 1 the property owner will have 30 days for removal. It is the property owners' responsibility to pay all costs incurred. Ash trees on private property will be considered to be infested, per the Village code, if EAB

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insects in any stage of their life cycle are found in the tree, if the tree is more than half dead, or if any three of the following symptoms are present: woodpecker injury, S-shaped feeding galleries, epicormic sprouting, D-shaped emergent holes, bark splits, or crown dieback.

Can I pay the Village to remove my private ash?

No. Village personnel cannot work on private property and the Village's contractor is under contract to remove only parkway trees. Property owners may attempt to contract directly with Village's contractor, of course, but the contractor may not be interested in private tree removals.

Can the Village help with my tree removal costs?

The property owner is responsible for all costs incurred for private tree removal. We understand that some tree removals can be quite expensive and may be a financial burden for you, and we may be able to offer you a No-Interest Loan Program for the removal of the tree(s). If interested in this program, you will need to contact Public Works for program details. The Forestry Division will initiate the process with the Finance Department and forward an application. Applications must be filled out by the property owner and submitted with financial documentation. Qualifying income requirements are adjusted annually by the Village Finance Director, following the poverty levels established by the U.S. Department of Health and Human Services. Qualifying residents may receive a No-Interest loan from the Village for the required tree removal; to be paid back, interest free, over a one year period. Loans that are not paid back within the required timeframe will be charged interest on the loan.

Can I keep the logs?

No. In order to achieve a high level of sanitation, the prompt removal of all ash wood is required by Village Code. Ash wood and logs can harbor EAB insects and must be eliminated as soon as possible so we may attempt to preserve other Ashes in the Village. In fact, one of the major ways EAB has been spread around the country has been of the movement of firewood.

How do I find a contractor to remove my infested ashes?

The Village has a list of contractors who have worked satisfactorily for us in the past. Feel free to contact us to get a copy of this list. If you would like to find a contractor on your own, we suggest that you hire a Certified Arborist who is properly insured. Additionally, all contractors handling ash wood are required to hold a current Illinois Department of Agriculture Compliance Agreement; this specifies how ash wood must be handled in order to prevent the spread of the insect.

I want to have the wood made into something useful, like maybe a table. Can you offer any ideas?

Sure. We have some lovely projects created out of ash wood on display in our Public Works front office. Feel free to come in and take a look at our benches, table and base boards. We also have a list of contractors who have worked for us on this project.

What kind of replacement tree should I plant in my yard?

Feel free to contact the Public Works Department for information or a brochure on great tree species to plant in your yard. Also there is a link to a comprehensive list of tree species recommended for Northern Illinois at www.mountprospect.org.

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WHAT IF I HAVE MORE QUESTIONS?

For more helpful information, check these websites:

www.illinoiseab.com

www.emeraldashborer.info

www.mountprospect.org

If you need to talk to Village staff, please phone the Public Works Department at the number below. Our office staff will be able to answer most of your questions. However, if you need to speak to an arborist, and no one is available when you call, a service request will be created. An arborist will respond as soon as possible. Please note that the size of our staff is limited, so please be patient as we battle this devastating pest together.

Thank you for your concern for our Village's urban forest!

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