



Emerald Ash Borer

FAQ Update for Saint Paul, MN

Prepared by Saint Paul Forestry, February 16, 2010

What is Emerald Ash Borer (EAB) and why all the fuss?

- EAB is an exotic beetle originally from Asia which was discovered near Detroit, Michigan in the summer of 2002. It has since spread to more than 10 states and Canada killing millions of ash trees. EAB affects only ash trees (*Fraxinus spp.*) and, left untreated, is fatal to all native to North America.
- EAB was discovered in Saint Paul in the South Saint Anthony Park neighborhood in May 2009, the first known finding in the state.
- Minnesota is estimated to have the second largest number of ash trees in the nation at over 930 million! Saint Paul's urban forest is comprised of over 25% ash trees. Thus, EAB poses a devastating economic and environmental threat to both our city and state.
- Adult EAB beetles are bright metallic green, about ½ inch long, and have a flattened back. Because they are so small and generally feed in the upper canopy of ash trees, they are nearly impossible to detect in the early stages of infestation.
- Once EAB mature into an adult beetle, they emerge from the tree through a small D-shaped exit hole typically in June. They live until August feeding on the leaves of the tree's upper canopy with females each laying approximately 80 eggs. Once hatched, they burrow into the tree and feed on the inner bark. Within the tree the larvae grow and complete the metamorphic cycle of turning into an adult beetle.
- It is the EAB larvae feeding off the inner bark that eventually kills the ash trees by disrupting the tree's ability to transport water and nutrients.
- There are currently no known natural predators or controls to stop EAB in North America.



How did EAB get to Saint Paul?

- On its own, EAB is believed to spread less than a few miles a year. However, within the last 10 years, it has spread hundreds of miles through activities such as moving infested ash fire wood, logs and brush, or wood products such as pallets made of ash wood. While no one knows for sure, it is likely how it arrived in Saint Paul.
- Dendrochronology testing by USDA officials suggests the Saint Paul infestation may have occurred in 2006 or earlier while only being discovered in May 2009, highlighting the difficulty in its detection.
- To prevent further movement, both Ramsey and Hennepin Counties, along with Houston County in SE Minnesota, are under state and federal quarantines which make it illegal to move any ash wood or products, and all non-coniferous firewood from these counties. The message for outdoorsmen/campers is to buy firewood wherever you're camping.

How do you identify an ash tree?

- Leaves are compound, 8-12 inches long with 5-11 leaflets with smooth or finely toothed edges.
- Branching/buds: Opposite with a single bud, typically brown, at the end of the branch.
- Bark: Smooth on younger ash trees becoming ridged, diamond-shaped as tree matures.
- For illustrations and more information, please visit the City's Forestry web page at www.stpaul.gov/parks and click on Emerald Ash Borer Information, or <http://emeraldashborer.info/identifyashtree.cfm>

How do you know if an ash tree is infested with EAB?

- It is important to know the difference between signs of an EAB infestation and symptoms affecting the tree. Symptoms can also be related to other environmental factors, whereas signs are generally indicative of EAB.
- Signs of EAB include:
 - Splitting bark and/or small (1/8") "D" shaped exit holes where beetles emerge.
 - Serpentine "S shaped" larval galleries underneath the bark (photo on right)
 - The presence of adult EAB or larvae (these can often be confused with other native insects).
- Symptoms of EAB infestation include:
 - General thinning of canopy and increasing dieback until the tree is bare.
 - Increased woodpecker activity/damage is very common.
 - Sprouting of new growth shoots from the base of the tree.



What should you do if you suspect a tree is infested with EAB?

- Visit the MDA website and follow the “Do I Have Emerald Ash Borer” checklist. If you still think you have found EAB follow the instructions below:
 - For private trees, contact the State’s “Arrest the Pest Hotline” at 651-201-6684.
 - For public trees in Saint Paul, call the Forestry Office at 651-632-5129.
 - Because June-August is the active period for adult beetles emerging from ash trees, it is important to avoid removing or trimming ash trees during this period. Delay any work until fall or winter and have it properly disposed of at the nearest Ramsey County compost site. They are prepared to have the wood processed through brush chipping that kills any larvae that may exist within.
- If hiring a commercial tree service to perform work, make sure they meet the following criteria:
 - They have a good understanding of EAB quarantine regulations and best management practices.
 - They are currently licensed to work in Saint Paul, are bonded and insured.
 - They preferably have an International Society of Arboriculture (ISA) certified arborist on staff.
 - They have State of Minnesota Licensed Pesticide Applicators if using pesticides (see more on this below).

What is the City of Saint Paul doing in response to EAB?

- The Department of Parks and Recreation, Forestry, began partnering immediately with the Minnesota Department of Agriculture (MDA) and United States Department of Agriculture (USDA) to locate and remove infested ash trees. This included removal of 67 confirmed infested trees within two weeks of the initial discovery.
- The Department of Parks and Recreation, Forestry, presented the Saint Paul EAB Management Plan to the City Council in June 2009 to serve as a blue print for action. This plan is available at www.stpaul.gov/parks.
- Forestry continues the search for infested trees and to date has removed about a dozen more confirmed trees.
- Forestry, with its partners, is employing various techniques such as girdled “sink trees” (photo on right) and “purple traps” to attract EAB, and the use of “destructive sampling”, i.e., the removal of random trees to determine the degree of infestation.
- Saint Paul updated its ordinance to include the ability to inspect private property trees for EAB and to order the removal or abatement of the nuisance.
- Saint Paul, along with other entities, submitted a grant request to the State of Minnesota, Forest Protection Reserve based on the Saint Paul EAB Management Plan. It was awarded the single largest grant of all applicants, (\$722,600) which will be coupled with city funds (\$251,000) to begin implementation in February 2010.
- The EAB Management Plan focuses on
 - survey and detection for EAB infested trees
 - prompt removal and disposal of infested trees
 - overall inventory of city boulevard trees to help determine the impacts of EAB and future action plans
 - “structured removal” of non-infested yet declining ash trees
 - reforestation of all removed ash trees



Altogether, the grant proposal calls for removing and replanting a combination of up to 1100 infested or structured removal trees by the end of May 2011.

Why is the City removing non-infested ash trees (“structured removal”)?

- The city has a large number of ash trees in decline even before the advent of EAB, and has been removing, for safety reasons, those with more than 30% decline. While many of these trees may technically be alive, their state of decline will not be reversed.
- Ash trees in Saint Paul are estimated to compose over 25% of the total tree canopy, and over 30,000 on public street boulevards alone. To mitigate the effects of EAB, structured removal of live but declining trees beginning now will reduce the number of dead trees standing in the future; it will also help spread out the cost and effort of removing thousands of trees in a shorter amount of time.
- Logically, declining ash trees throughout the city will be maintained less and removed in the coming years more aggressively than in the past due to the existence and inevitability of EAB.
- Experts predict that EAB will be confirmed throughout Saint Paul within a few years; once infested, it takes 2-3 years for EAB to kill a healthy ash tree. Estimates suggest thousands of dead ash trees citywide within 5-8 years.
- Unlike Dutch elm disease, EAB does not discriminate; it kills all native ash trees.



- Delaying Saint Paul’s effort to slow the spread of EAB and begin managing the ash tree population potentially threatens not only the region but the entire state.

Why can’t the City wait for trees to die before removing them?

- Dying and dead ash trees become brittle and pose a significant hazard and liability from falling limbs and branches. If delayed until all the trees are dying from EAB, potentially there may be thousands of trees needing removal all at once.
- Waiting is not the best management practice nor does it help with the mitigation of EAB spread.
- If delayed until the trees are dead there will be no guarantee as to the timeliness of tree and stump removal, and replanting of replacement trees. It is all dependent upon future, and unpredictable, budget funding.
- When EAB populations increase, it will be difficult to budget enough to mitigate the effects in a shorter period of time which is why beginning and spreading out the process now rather than waiting for trees to die is prudent.
- Based on experience of other states, we will not be able to remove trees fast enough once the infestation explodes.



What about using pesticides to save the ash trees?

- Pesticides to kill EAB are marketed but vary in application, cost, and effectiveness.
- Pesticides have to be re-applied for the life time of the tree, have a limited track record of use for EAB (less than 10 years), and provide no guarantee. However, if a private property owner desires to save their tree using pesticides, it is recommended to begin treatment once EAB is confirmed to be within 15 miles. Individuals would be wise to also consider the possible negative environmental effects of the pesticide before using. To learn more about treatment options and research, visit <http://www.emeraldashborer.info> or <http://www.extension.umn.edu/issues/eab/>
- The city may use EAB pesticides to treat a percentage of select specimen public ash trees on a case-by-case basis. However, few of the declining public ash trees being removed warrant the annual ongoing expense of such treatment.
- Overall, a comprehensive pesticide program for publicly-owned ash trees is not expected because of the ongoing expense of annual or bi-annual treatments, the uncertainty of how well the pesticides will work over the long haul, and concerns about the continual introduction of pesticides into the environment and their possible effects.

What will the City’s actions do to property values?

- EAB is now a reality for Saint Paul that will not go away and implementing the EAB Management Plan is considered a value-increasing opportunity to deal with these doomed or declining trees.
- Beginning the process of reforestation with a new variety of trees sooner, rather than later, provides a head start for a new, healthy, and more diverse urban forest in the future.
- While a definite short-term loss, including less shade/canopy, at least there will be trees.
- New planting techniques, such as sequencing of two different species, provides a start to increasing diversity on boulevards and reduce the chance of whole sale neighborhood tree loss in the future.
- Large dead or dying trees do not increase property values. It is not a question of *if*, the ash will succumb to EAB, but *when*. It may take two years, five years, or ten years, no one knows for sure. However, if replaced now, it is more likely to have a substantial new tree in 10 years rather than a dead ash tree.
- Through this program, stumps will be removed promptly; otherwise, there is a current backlog exceeding 4,000 old stumps to which new stumps would be added in coming years if trees are removed at a later date.

How did the City select areas for structured removal?

- A goal was set to spread the impact of tree removal equitably around the city, so blocks with the worst declining ash trees were identified in each Council Ward.
- Areas scheduled for RSVP street reconstruction are strongly considered wherever the project timing is possible, to take advantage of efficiencies and to avoid tearing up boulevards more than once.
- Forestry began structured removal efforts February 1, 2010, beginning in Ward 7 on the East Side.
- Community meetings are planned and held in advance of Forestry crews beginning work in new areas. Notification of the meetings has been through flyers, District Council communications and various media such as community news papers. (Please see www.stpaul.gov/parks for the times and locations of



upcoming meetings.)

- Structured removal work will avoid summer months, the active period for adult beetles, to reduce the chances of inadvertently spreading EAB to other parts of the city.

Is this a special assessment that residents will be billed for?

- No. Residents will not get an extra bill or assessment for this work.
- The removals and replanting will be funded out of both 2010 city operating funds for EAB along with the aforementioned Forest Protection Reserve grant.

If this is about EAB, then why aren't you removing trees where you know it is located?

- All discovered EAB infested ash trees (80 so far) have been promptly removed to date, all located within 1.5 miles of the original find. Saint Paul will continue aggressive removal of any confirmed EAB infested trees.
- Leaving live, non-EAB, ash trees in the original infested neighborhood of South St. Anthony is a strategy to contain EAB to the area as long as possible. If ash trees are removed, beetles run out of potential food and egg-hatching sites causing them to spread even further.
- Other strategies are also employed (girdling and treatment) to keep EAB in that area as long as possible, though the experts tell us it is unlikely to be contained for very long. Nevertheless, it is imperative to try.

What plan does the City have to address private property EAB-infested ash trees?

- As stated earlier, the city updated its ordinance to inspect private property for EAB, and to order the removal or abatement of such nuisance as needed.
- It remains to be determined how aggressive the city will be regarding private property trees, however, while the infestation is still in its early stages, it is likely that the city will make use of all its ability to slow the spread of EAB, which includes the removal of EAB on private property.
- If a private property tree is found to be infested with EAB, it will be the responsibility, including financially, of the property owner to remove the nuisance. If the owner refuses to comply with an order to do so, the city may abate the nuisance and all associated costs for doing so will be assessed to the property owner. Any such costs can be paid off in a lump sum or spread out over several years per city ordinance.
- All property owners have the right to appeal any such action.

Any parting advice?

- EAB information for Spanish or Hmong speaking citizens is available through the MDA, along with many other excellent documents and pamphlets. Please visit their web site for links and information, at: <http://www.mda.state.mn.us/plants.aspx>
- While EAB will be challenging for all of us in the next decade, it offers an opportunity to create a more diverse and healthy urban forest. Meet the challenge head on by planting a new tree!

