



SMA POSITION PAPER
EMERALD ASH BORER
A PERSPECTIVE ON PLANNING AND
MANAGEMENT

EXECUTIVE SUMMARY

*The SMA believes that every community that includes ash trees (*Fraxinus sp.*) as a component of its urban forest should adopt an EAB management plan. The municipal arborist/urban forester in a community is the best person to lead local planning and management efforts.*

This plan should be in place and updated periodically, whether a local EAB infestation is expected within months or not for decades, because human transported populations of EAB can arrive unexpectedly in even the most geographically isolated community. Prudent canopy conservation, public safety, and fiscal responsibility should be the guiding principles for the management of Emerald Ash Borer in urban areas. The most desirable outcome will be achieved when the most current knowledge and science is combined with local urban forest characteristics, resident values and priorities, and community resources and expectations to formulate a management plan.

History and Background

Emerald ash borer (EAB), *Agrilus planipennis* Fairmaire, is an exotic beetle that was discovered in southeastern Michigan near Detroit in the summer of 2002. It was detected in Windsor, Ontario across the Detroit River shortly thereafter. The adult beetles nibble on ash foliage but cause little damage. The larvae (the immature stage) feed on the inner bark of ash trees, disrupting the tree's ability to transport water and nutrients. Emerald ash borer is native to Asia, and probably arrived in the United States around 1990 in solid wood packing material carried in cargo ships or airplanes. Emerald ash borer was found in Ohio in 2003, northern Indiana in 2004, northern Illinois and Maryland in 2006, western Pennsylvania and West Virginia in 2007, Wisconsin, Missouri and Virginia in summer 2008, Minnesota, New York, Kentucky in the spring of 2009, Iowa in spring of 2010, and Tennessee in the summer of 2010. It continues to spread. Since its discovery, EAB has:

- Killed tens of millions of ash trees in southeastern Michigan alone, with tens of millions more lost in other states as well as in Ontario and Quebec.
- Caused the US Department of Agriculture, the Canadian Food Inspection Agency and other regulatory agencies to enforce quarantines (Michigan, Illinois, Indiana, Iowa, Maryland, Minnesota, Missouri, Ohio, New York, Ontario, Pennsylvania, Quebec, Tennessee, Virginia, West Virginia, Wisconsin, and Kentucky) and levy fines to prevent potentially infested ash trees, logs or hardwood firewood from moving out of areas where EAB occurs.
- Cost municipalities, property owners, nursery operators and forest products industries tens of millions of dollars.

Since its arrival the Emerald Ash Borer has rapidly expanded its range. EAB has killed an estimated 50 - 100 million ash trees so far and threatens to kill most of the 7.5 billion ash trees throughout North

America. The insect threatens the entire North American *Fraxinus* genus, unlike past invasive tree pests, which have threatened only one or a few species within a genus. Green ash and black ash trees are preferred hosts. White ash is also killed rapidly, but usually only after green and black ash trees are eliminated in an area. Unlike most other insect pests, EAB attacks healthy trees just as readily as healthy ash trees.

Management Options

The urban forest of most communities is composed of three classes of trees:

1. Street Trees: These are trees growing within the ROW of public streets.
2. Park Trees: These are trees growing on public park lands and other publicly owned green spaces.
3. Private Trees: These are trees growing on private property and generally form the majority of the urban forest canopy in most locales.

An EAB management plan should address an EAB infestation in all three of these classes, as management strategies and methods will generally differ based on tree ownership and location. A municipality's liability for dead and dying trees will also vary with local laws/bylaws and a state/provincial code, so legal counsel is an essential component of the planning process. This process should also educate the public by providing accurate information based on current science. Although local staff may be very knowledgeable about EAB, bringing in "outside experts" from other agencies or companies can bolster staff efforts, as outside testimony is often perceived as more reliable and objective by a worried or frightened public.

Public outreach during the planning process is also essential if a local plan is to accurately reflect the values and priorities of the community, and those of elected and appointed leaders. Without buy-in from community leaders, even the best plan may fail to attract that will be essential for implementation. Regardless of the precise process used, the municipal arborist/city forester is the best person to lead the planning process. Assistance is available from local non-profits, civic organizations, consultants, local tree boards/commissions, state or provincial forestry programs, or professional organizations such as the SMA.

All EAB management plans will fall somewhere along a philosophical continuum between do nothing and save all ash trees. The three fundamental management options might be best described as:

- Ash extirpation – which is the total removal of all ash trees.
- Ash conservation – which focuses on saving an optimal amount of ash canopy.
- Ash Preservation – which is the non-removal of any ash tree.

Neither of the two extremes (extirpation or absolute preservation) is practical or prudent for most communities. Communities that fail to plan (do nothing) are on the road to disaster, as dead trees come crashing down in unpredictable fashion with injuries, fatalities, and tremendous property damage as probable results. Communities that reach this stage of EAB infestation without a plan in place also risk being overwhelmed by a financial tsunami as they struggle to pay for unprecedented quantities of ash removal within a short period of time. Such communities may take decades to recover financially and ecologically.

Communities that plan to save all local ash trees (preservation) will need to weigh long term issues of treatment costs, materials, and methods, as well as legal right of entry or code enforcement techniques to treat trees on private property. Such an ambitious approach would be a huge logistical and financial challenge, and will not be a realistic option in most cases; nor is every ash tree in a community likely

worth preservation. Most plans will fall somewhere between extirpation and preservation, in the category of ash conservation. There are many management options on the table if the goal is to preserve some ash trees.. Early EAB detection methods can help determine optimal timing for implementation of some protective and control measures, but once a community is within a zone of general infestation, there is precious little time for calm debate about management options. This approach of ash conservation has only been made possible by the relatively new advances in EAB science. Some examples of the ash conservation approach employed by SMA members include:

Grove City, MN
Northbrook, Illinois
Oakville, Ontario

Their EAB management plans are available on-line.

There is no “one size fits all” approach.

Some communities have begun the pre-emptive removal of ashes well before EAB arrives to spread out the removal/replacement costs over a decade or more. Others are treating desirable ash trees with insecticides using city staff or contractors as EAB draws near. The goal of treatment may be long term preservation in some cases, but treatment can also be a valuable short term strategy to spread out the cost of large scale ash removal over a longer budgetary horizon.

A community’s plan should evolve as infestation status changes. Plans will require updating as communities well outside zones of general infestation are eventually colonized, victimized, and ultimately, become communities that have lost most of their ash trees.

Few communities are still planting ashes, and some agencies may wish to consider prohibiting the sale of Fraxinus as a protective action. In addition, most plans should educate residents by strongly discouraging the transport of firewood, and by encouraging efficient utilization or proper disposal of ash wood and biomass from trees as they are removed. While many trees end up as wood chips or firewood, more valuable uses may sometimes be achievable depending on local market conditions.

Some communities have ordinances that condemn dangerous trees on private property, while others leave such matters to civil litigation. Many communities issue permits to allow residents to treat public trees adjacent to their properties. While many plans will have similarities, each will also be unique to a community’s resources, priorities, and values. Such plans are subject to evolution as local conditions change.

An EAB Management Plan should address at least some of the following areas:

1. An Inventory showing the location of the community’s ash trees.
2. The EAB survey and detection methods to be utilized.
3. A discussion on which ash trees will be treated and which ones removed.
4. Treatment options and timings.
5. Wood utilization and waste disposal.
6. The development of a tentative budget.
7. A discussion of the policy for trees on private property.
8. Education and media outreach.
9. Tree planting and replacement.

In addition, SMA has assembled an “EAB Toolkit” to support this Position Paper which it will update from time to time.

We have much to learn about the long term effects of EAB and the methods to battle it. There are many talented researchers studying various aspects of EAB, as well as many urban forestry practitioners who are adding their collective wisdom and experience to our growing body of knowledge about this invasive and destructive pest. It behooves every community large and small to be educated, to be vigilant, and to be ready.

“By failing to prepare, you are preparing to fail”.

-Benjamin Franklin