



SHAKER HEIGHTS

Emerald Ash Borer (EAB) Management Plan December 2006

Executive Summary:

The emerald ash borer (EAB) is a non-native insect that is currently attacking ash trees in Michigan, Ohio, and Indiana. It was first identified in southeastern Michigan in 2002, where the EAB has already killed more than 10 million ash trees in the cities and forests of southeastern Michigan. It has now spread into northeast Indiana and northern Ohio including Cuyahoga County. Currently there are no known means to eradicate the EAB, which means it has the potential to kill literally all of the ash trees in this part of the country. For that reason, the City of Shaker Heights is concerned about the risk that the emerald ash borer poses to our ash trees and has developed this management plan.

This plan outlines the current situation, defines an emerald ash borer, and explains the City's objectives and approaches that will be used to meet the anticipated impact of the EAB. This plan is a blueprint that will provide the City and its residents a high degree of confidence in addressing the EAB problem.

By implementing this management plan, the City is attempting to reduce the devastating impact that will be caused to Shaker's trees by the impending infestation of the EAB. Investigation and research have gone into taking this proactive approach and to addressing public and private needs over the next five (5) years.

A five (5) year plan will manage the costs associated with the removal of ash trees on the public right of way and the planting of replacement trees. It will both reduce the economic impact and also lessen the social and quality of life issues that would be associated with removal of such a large number of trees at one time. As you may know, an article (October 4, 2006) in the Cleveland Plain Dealer announced that the EAB was discovered in Cuyahoga County. Since the EAB is already in Cuyahoga County we must implement our plan now.

Ohio's Current Emerald Ash Borer Situation:

Because of diminishing Federal funds available to address this situation, Ohio's EAB Management Plan program will include fewer eradication projects through the State and more monitoring and regulatory activities. This has two very important consequences for Shaker Heights:

1. The possibility that the State will remove ash trees in our area as part of a statewide eradication project is extremely remote.
2. Because of the reduction in non-local funds Shaker Heights needs to address the EAB invasion with its own resources.

What is an emerald ash borer?

It is important to know what it is we are fighting. The EAB is an insect (adults up to ½" in length) introduced into North America sometime in the 1990s. It was first reported killing ash (genus *Fraxinus*) trees (black, blue, green, pumpkin, and white) in the Detroit and Windsor areas in 2002. Since then, infestations have been found throughout lower Michigan, northwest Ohio, and northern Indiana. Infestations were recently found in the Chicago area and in Cuyahoga County. The EAB probably arrived in the United States on solid wood packing material carried in cargo ships or airplanes originating in its native Asia.

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. Pictures indicate what the larvae tracks and exit holes look like. This is important to know when looking for signs of the EAB in Shaker.

Adult Emerald Ash Borer



Larvae tracks under bark



EAB Exit Holes

Scope of Plan

This plan addresses ash trees which are located on all public properties throughout the City of Shaker Heights, as well as private properties where ash trees may pose a safety hazard to the adjacent public right of way or other public property. Our plan is to address the ash trees located in our park lands in Phase Two of this project (years four and five).

Operational Strategy to Minimize Impact of Emerald Ash Borer

The City considered the following factors:

- The EAB was discovered in Cuyahoga County on October 3, 2006.
- There are no known preventative measures that will control or eradicate the EAB.
- There is no practical, proven insecticide treatment for trees already infested.
- Being proactive will allow the City to have greater control over the situation and minimize the potential impact.
- The elimination of ash trees in a systematic manner will contribute to the overall effort to eradicate the EAB and reduce the impact to the greater community.
- The issue is not if, but when the EAB will arrive in Shaker Heights.
- A five (5) year strategy to selectively remove all ash trees and plant replacement trees was chosen so that no one area would have to remove all its ash trees in a single year.
- The City of Shaker Heights Superintendent of Forestry will oversee this plan and be responsible for ensuring the implementation and compliance with the plan.

Definitions:

- **Public right of way** - Tree lawns, medians, islands and other publicly owned properties.
- **Quarantine zone** - An area designated by the Ohio Department of Agriculture that restricts the movement of regulated items.
- **Regulated items** – All ash wood and all non-coniferous firewood.
- **Compliance agreement** - Official Ohio Department of Agriculture (ODA) and USDA Animal and Plant Health Inspection Service (APHIS) approval for moving regulated items outside of a quarantine zone.
- **Diameter at breast height (dbh)** - the diameter (inches) of a trunk cross section measured at 4-1/2' above the ground.
- **Hazardous tree** – A tree with the potential to fail (structural defects, areas and points of weakness or deformity); an environment that increases the likelihood of failure (storm events, wind, shallow and wet soil, restricted area for root and crown development); and a target (people, property or utility lines) that would be struck if the tree fell.

Removal Plan

The City has conducted an inventory of all ash trees growing in the right of way. It will now inventory all the parks and other municipal properties. The inventory documents the location, size and condition of each ash tree.

The City developed a removal plan that will systematically remove all ash trees in the right of way. The tree removals will be prioritized in the following order:

1. Hazardous trees.
2. Dead, dying or diseased trees.
3. Trees in the public right of way:
 - Medium to large trees (490, more than 10" dbh) removed gradually, 20% per year spread out over the entire area to avoid clear cutting any section of the City. Larger replacement trees (4+" dbh) planted during the next planting cycle (spring or fall) each year.
 - Small trees (1,324, less than 10" dbh) removed over the next two to three years by a hazardous tree removal contractor. Replacements will be planted during the next planting cycle a tree replacement contractor.

Utility contractors will be encouraged to remove all ash trees within their easements as part of their normal line clearance activities. The Superintendent of Forestry will track removal activities for each tree in the inventory database.

Monitoring of Ash Trees

The City will continue to monitor strategically located non-asset ash trees that will be annually selected and prepared as detection trees. These trees will be identified and set up before May 1st and removed for examination in September/October to determine when an EAB infestation arrives in Shaker Heights. This will include a thorough survey of the surrounding area. All ash wood from pruning or removals shall be inspected for EAB by looking for d-shaped exit holes and removing the bark to find larval galleries. The Superintendent of Forestry will monitor all artificial EAB importation into the community such as nurseries, firewood dealers and firewood piles throughout the city.

This plan will be monitored as it is implemented to determine if any mid-plan modifications are needed.

Communication Plan

The City's Communications & Outreach Department will oversee all communications activities associated with the plan. The Mayor, City Council, Tree Advisory Board and Department Directors will receive periodic briefings. The City will communicate with the public via:

- Public meetings
- City website, www.shakeronline.com
- Shaker Life magazine
- E-mail subscription updates

As the EAB Plan is implemented the Communications Plan will be updated as necessary to address the current situation.

Public Education

A tree forum was held to discuss the pending EAB infestation and to provide ash and EAB identification tips (November 8, 2006). Information about EAB will be available and regularly updated using the City's website, www.shakeronline.com, mailings and posters at local businesses/public buildings. EAB education will be available to local tree companies as well.

Tree Replacement and Care

All removed ash trees will be replaced with non-host species that will enhance the planting site and add to the diversity and general health of the Shaker Heights urban forest. Tree caliper size will range from 2" to 4". Ash trees over 10" in diameter will be replaced with 4" caliper size trees. Trees of this size were selected based on their survival rate. Locations such as Shaker Blvd. between Warrensville and Sulgrave, which have monocultures of ash trees, will receive larger caliper plantings. All of the replacement plantings be *in addition to* the annual tree plantings of approximately 480-500 trees.

The cost of these additional replacements of removed ash trees is included in the most recent tree assessment. All ash tree locations will be reviewed to assure proper tree placement in the City right of way. Factors determining proper location will be tree lawn size, adequate spacing between trees, proximity to driveways, utilities (poles and wires) and traffic signals/signs. The following are examples of improper tree locations:



Tree lawn too small



Too close to driveway



Directly under utility wires



Too close to utility poles



Under utility wires and too close to poles



Spacing and too close to pole

These are examples of locations that would not receive replacement trees once the ash tree is removed.

Private Property Ash Trees

The City will create and maintain an EAB informational page on its website, www.shakeronline.com. Residents will be able to learn about all relevant processes in the plan, from monitoring/identification of EAB, to removal and disposal of EAB infected wood, and restoration of removal site and replanting. To assist Shaker residents the City will make the following available:

- A list of qualified arborists for assistance in managing individual ash tree needs.
- A list of commercial companies involved in tree pruning, removal, installation, and wood disposal. The companies will be required to register with the City. The list will be posted on the website and made available through the Public Works office.

Budget for Public Right of Way Trees (Tree lawn/Center strip/Island trees only)

The most recent new tree assessment includes funds for ash tree removal and replacements for the next three years. Beginning in 2007 funds will be allocated as follows:

Annual EAB Costs:

• In-house personnel	\$107,350
• Addition of two ash tree scouts (inventory).....	20,000
• Contractor removal & disposal	43,000
• Replacement trees.....	<u>45,000</u>
Annual Total	\$215,350

At the next triennial tree assessment in 2009, the City will review the costs and impact of the EAB Management Plan. It will forecast the costs for removal and replacements for the last two years of the five year plan and recommend an increase in the assessment if needed. The current assessment is \$1.16/front foot and has been that amount since 2001.