

City of Moraine, Ohio

Emerald Ash Borer Management Plan

I. Introduction

The City of Moraine is home to tens of thousands of trees. These trees come in all shapes and sizes, and in any of a hundred different varieties. Some adorn our parks, while others provide shade along our streets. City staff takes an active role in the care and maintenance of public trees.

This plan deals with a particular threat to one species of tree found in Moraine – the Ash tree. The plan details the scope of the threat posed to Ash trees by an insect called the Emerald Ash Borer, and the steps to be taken by the City to mitigate the potential losses from afflicted trees.

By implementing the provisions in the management plan, the City is attempting to mitigate the disruption of its urban forest caused by the pending infestation of the Emerald Ash Borer. Taking a proactive approach to this problem will enable the City to minimize the risk to public safety while addressing public and private needs in an efficient and effective manner.

This plan is enacted by the **City Manager**, who shall ensure that its provisions are carried out. Departments and Divisions tasked with enacting portions of this plan include the divisions of Building **& Parks Maintenance** and **Streets**, the departments of **Engineering** and **Planning**, and such other departments or divisions as may be assigned tasks falling under the scope of this plan.

II. Scope of Threat¹

Emerald ash borer (EAB), *Agrilus planipennis*, is an exotic beetle that was discovered in southeastern Michigan near Detroit in the summer of 2002. The adult beetles nibble on ash foliage but cause little damage. The threat to Ash trees comes during the beetle's immature, larval phase. The larvae feed on the inner bark of ash trees, critically disrupting the tree's ability to transport water and nutrients. The beetle was discovered in Ohio in 2003.

Extensive research continues on the effects of EAB infestation on Ash trees of various sizes, ages, and conditions. Infested Ash trees will lose 30-50% of their branches within the first year of infestation. In smaller trees, the canopy will die by the end of the second year. In larger trees, the canopy may survive for 3-4 years following infestation. The degree of infestation may also have an effect on the survivability of the tree. In all observed cases to date, however, infested trees are not salvageable.

¹ This section uses data from the Ohio Department of Natural Resources, Division of Urban Forestry; www.emeraldashborer.info

II. Scope of Threat (cont'd)

The specific threats are twofold. First, branches of infested trees may fall easily in heavy winds, as the tree becomes more brittle. This poses a risk to anyone and anything nearby – particularly in the case of trees lining public rights-of-way. Second, the tree itself becomes more likely to fall once the infestation has run its course and the tree has died – again, posing a significant risk to structures and individuals nearby.

III. Objectives

This plan has four Objectives, which are as follows:

- 1. **Inventory** and classify all Ash trees in the City of Moraine.
- 2. **Protect** high-value or high-risk trees with Chemical treatments.
- 3. Remove and replace all remaining Ash trees.
- 4. **Inform the Public** on the threat of EAB, and on ways to deal with the problem

IV. Tree Inventory and Classification

An inventory shall be conducted to determine the precise number and condition of Ash trees in the City of Moraine. Data should be collected on the location, size (height and diameter), and condition of each tree. Structures or roadways within a radius equal to the height of the tree, or within close proximity, should also be noted.

Each tree shall also be classified at one of the following risk levels, based on the danger to life and property should the tree be permitted to die off and fall in an uncontrolled manner.

- 1. **High Risk** The tree is immediately adjacent to or in close proximity to structures, park areas, and/or public rights-of-way. When falling, this tree would cause significant property damage, potentially serious injury, or would partially or fully block a roadway.
- 2. **Low Risk** The tree would cause problems if permitted to fall, but does not otherwise pose an imminent risk to persons or property.
- 3. **No Risk** The tree is located in a well secluded area, or otherwise would cause no damage, injury, or inconvenience whatsoever by falling.

In addition to these criteria, trees included in this inventory may be designated as **High Value** trees. These trees have particular historical or sentimental value, and should be preserved if possible. Due to the nature of the tree, replacement of the tree should only be considered as a last resort. Examples of trees meeting this standard may include memorial trees, entranceway trees, or other types of unique trees.

Action: Inventory and evaluate Ash Trees on Public property and in Right-of-Way

Timeframe: 12 months

Cost Impact: add'l Personnel time logging and inputting data;

Budget Impact: None

Impacted Dept.: Streets Division (Roadways), Maintenance (Parks & Public Property)

V. Tree Preservation

Trees designated as **High Value** trees are so designated because that individual tree is important for reasons discussed in Section IV, above. If the tree is in good health, and shows no signs of infestation, the tree should be preserved and protected against infestation.

In this case, Protection of the tree involves the use of a chemical agent. At present, the chemical of choice is Safari 20 SG Insecticide, manufactured by Valent Corporation. In 2006, the chemical was authorized by the EPA for use in protecting Ash trees against EAB, and has undergone testing by several agencies, including Ohio State University. Several jurisdictions have also used the chemical, including Kettering, with good results. This phase of the EAB Action Plan is predicated on the use of Safari, though any other chemical authorized for use in protection against EAB may be used, provided that the plan is adjusted accordingly.

Application of the chemical involves a Basal Bark Spray mixed with a chemical called "Pentrabark", which aids in distribution of the chemical throughout the tree. One spray takes approximately 21 days to provide protection to every part of the tree. The chemical may not be applied except by a staff member properly certified by the EPA.

Action: Apply Safari (or similar chemical agents) to High Value trees

Timeframe: Chemical treatments must be applied **annually** to continue protection of the tree

Cost Impact: Approx \$30 per tree, average (\$2.15 per diameter-inch)

Budget Impact: \$2,500 (sufficient for approx 80 High Value trees)

Impacted Dept.: Streets Division

VI. Tree Removal

Once infested by EAB, the wood of an Ash tree will become extremely brittle and weak, increasing the chances of a downed limb or catastrophic loss of the tree. The Ohio Department of Natural Resources indicates that the chances of an untreated tree being infested are virtually certain, and that **all** Ash trees should be removed as a result. The state notes that removal of uninfested, healthy trees is much less expensive than the removal of brittle, infested trees. Proactive removal also allows the removal phase to extend over several years, rather than removing all trees in one year due to a massive region-wide infestation.

The immediate course of action must be determined by the tree's designation:

- 1. **High Risk** The tree or its branches will block roads or damage property, and may even cause injury, when falling in an uncontrolled manner. Therefore, it is best to fell the tree in a controlled manner, using staff or professional services. The tree should be **removed**.
- 2. **Low Risk** Action on trees of this type must consider the location and size of the tree. Again, if problems will arise from an uncontrolled fall, the tree should be **removed**.
- 3. **No Risk** The tree is designated no risk because, if it falls, nothing will happen. Therefore, the tree **need not be removed**.

VI. Tree Removal (cont'd)

During removal, infested trees should be given priority over uninfested trees, and high risk trees should be given priority over low risk trees. If funds remain in a given year, the removal of uninfested, high risk trees should commence.

Action: Remove Ash trees

Timeframe: 7-10 years, with some trees removed annually. **Cost Impact:** Variable, depending on size and location of tree

Budget Impact: \$10,000 (\$5,000 per dept., Supplemental to normal removal budget)

Impacted Depts.: Streets Division (Roadways), Building & Parks Maintenance (Public Property)

VII. Tree Replacement

In order to properly maintain our parks and public spaces, trees removed under this plan should be replaced where possible. Replacement trees need not be of the same size as the removed tree, but trees should be planted in such a manner as to replicate or improve coverage prior to the removal. The species of tree should also be taken into account when planting new trees.

For obvious reasons, the planting of Ash trees anywhere in the city, by anyone, for any purpose whatsoever, is to be discouraged in the strongest possible terms.

The Ohio Division of Urban Forestry recommends some of the following as good species of tree to replace Ash trees removed due to EAB: ² (**Pending Urban Forestry List**)

Locust

Other SpeciesOther Species

Other Species

Maple

• Other Species

Other Species

Other Species

Action: Plant Trees to replace removed Ash trees **Timeframe:** 7-10 years, with some trees replaced annually.

Cost Impact: Variable, depending on rate of removals

Budget Impact: \$5,000 (Portion of Existing Capital Forestry budget to be earmarked for EAB)

Impacted Dept.: Planning

August 2007 Draft

² Ohio Division of Urban Forestry, Southwest Ohio

VIII. Public Information

The Emerald Ash Borer infests all Ash trees, whether they are on public or private property. As removal operations begin, and as more cities publicly acknowledge and deal with the EAB threat, more residents will inquire about their trees. They may ask for help in identifying Ash trees and whether their Ash trees are or are not infested with EAB, and may seek advice on possible courses of action.

Threats such as EAB can also create an environment of concern and worry, which may be exploited by unscrupulous contractors. Residents may be told that a tree is infested and must be removed immediately. In other cases, residents in other areas have paid thousands of dollars for "emergency treatments" which amounted to a spray of water. Good public information can be used to prevent these problems. ³

This action plan deals with Ash trees on public property and in the public right-of-way. It does not and cannot deal with Ash trees on private property. However, some steps can be taken to assist private property owners in dealing with the threat.

- 1. Publicly Discuss EAB and how to identify the EAB and Ash Trees in general. Materials printed in the Moraine Report will provide residents with information about the threat, and photos (where possible) will help residents to determine which of the trees on their property might be of the Ash variety.
- 2. **Upon Request, Identify Ash trees for residents On-Site**. A brief visit from staff may keep residents from paying for a costly and unnecessary removal.
- 3. **Warn residents about selecting contractors**. General guidelines should be provided to help residents make informed decisions about who they permit to work on their trees.
- 4. **Establish an Ash Borer point of contact**. Select an individual to field questions about the problem, even if most responses direct the caller to the EAB hotline (888-OHIO-EAB).

Action: Provide Public Information on EAB
Timeframe: Ongoing, beginning January 2008
Cost Impact: Minimal (Cost of flyers / handouts)

Budget Impact: None

Impacted Dept.: Administration (Moraine Report)

August 2007 Draft

³ Notable incidents of fraud include incidents in the cities of Cincinnati, Lebanon, and Wyoming, Ohio.