



Emerald Ash Borer Management Plan

SUMMARY

This management plan has been written due to the pending infestation of the Emerald Ash Borer, an invasive insect that has now been discovered in numerous counties in Wisconsin, including Vernon County and all surrounding counties.

This plan will serve as a recommendation guide for dealing with this insect and dying Ash trees on public City property in future years.

Trees, parks and other green space areas contribute greatly to the quality of life in the City of Hillsboro. Hillsboro's urban forest gives character to our neighborhoods and provides for residents interaction with nature, relaxation, and recreation in ways that enhance our community.

According to our current tree inventory:

- A total of 1,000 trees are currently identified within the City's street trees, right of ways, and parks.
- Approximately 650 trees are street trees or in the right of way.
- Approximately 260 trees are park trees.
- Approximately 90 trees are Mt. Vernon Cemetery Trees.
- A total of 165 publically owned are Ash trees.
- Approximately 16.5% of the City of Hillsboro public trees are Green or White Ash trees.
- Approximately 111 Ash trees are on public streets and right of ways
- Approximately 54 Ash trees are in the parks.
- The average diameter of the ash tree population is approximately 18.35 DBH, which is considered large and makes removal and restoration more costly.

In the event that all of the above ash trees would have to be removed due to extensive invasion of the EAB, the cost associated with this major event would be approximately as follows:

All Ash Trees

- Removal & Restoration \$58,000
- Replanting \$33,000
- Total cost for removal and replanting \$91,000

PURPOSE

By implementing the provisions of this management plan, the City of Hillsboro is attempting to mitigate the disruption of its local urban forest caused by the pending infestation of the

Emerald Ash Borer (EAB). Taking a moderate approach to this pending infestation will enable the City to address the needs in an efficient and effective manner.

The City of Hillsboro must prepare to manage this pest on three fronts: street & right of way trees, park trees and trees on private property. Therefore, this plan will apply throughout the City on all public properties where ash trees are currently growing, as well as on private property where ash trees may create a hazardous condition for public rights-of-way or other public properties (parks).

As per the master tree inventory contained in the conducted in 2013, our public parks and streets ash tree inventory represents about 16.5% or 165 of Hillsboro's urban forest of 1,000 (+/-). Most of the ash tree population is considered medium to large in size (over 12" DBH), with approximately 75 ash trees 20" DBH or larger.

With the discovery of the EAB in Wisconsin and Vernon County, there is an increased need to adequately prepare the City of Hillsboro for possible infestation. A moderate approach to the Emerald Ash Borer Local Management Plan will enable the City to:

- Continue to keep the master tree inventory current.
- Develop an ash tree reduction program.
- Develop tree replanting recommendations.
- Remove ash trees as deemed appropriate and replant trees that are removed.
- Work within the adopted yearly budget relating to forestry initiatives.
- Train personnel and conduct surveys to look for EAB.
- Notify residents whom may have an Ash tree which may cause a hazardous condition.
- Develop and strengthen community education and outreach.
- Keep local authorities updated about the EAB as it is discovered more within Wisconsin.
- To distribute the costs associated with certain and massive tree death over a manageable time period.

EAB INFESTATION

The EAB is an exotic beetle that is tiny, metallic green and bullet shaped from East Asia. In the summer, the adult EAB beetles nibble the leaves of the ash trees, but do little damage. It is the larvae that are responsible for trees' decline and eventual death. Within one to three years, a tree can no longer circulate the nutrients it needs. It appears EAB infestation is always fatal. EAB infestation kills all varieties of North American ash trees

Be on the lookout for any ash tree showing general signs of decline, including:

- Epicormic sprouting (unusual branches produced from the tree's base).
- Dead or dying branches in the upper crown.
- Yellow or off-color foliage during the growing season.
- D-shaped Exit Holes: When EAB adults emerge from beneath the bark, they create distinctive D-shaped exit holes.
- Vertical Bark-splits: The feeding of EAB larvae often causes a 2 to 5 inch split in a tree's bark. In some cases, larval galleries can be seen beneath these splits.
- Increased Woodpecker Activity: Woodpeckers feed on EAB larvae. Woodpecker activity that remove patches of bark may be a sign of EAB infestation.
- Presence of Metallic Green Beetles: Adult EAB beetles are metallic green in color and are 3/8 - 1/2 inch in length and 1/16 inch in width—small enough to fit on a penny. If a

beetle is found that fits this description, collect and preserve it in alcohol for identification. Contact Wisconsin's EAB hotline at 1-800-462-2803.

EAB LOCAL PLAN DEFINITIONS

The following definitions are presented to explain certain terminology within the City of Hillsboro's local management plan:

- **DBH-diameter at breast height** – Represents the diameter in inches of a trunk cross-section measured at 4 ½' above ground level; a basis for estimating or identifying tree volume, value, management needs and costs, utilization options, etc.
- **EAB** – The emerald ash borer insect; as an adult it measures approximately ½" in length by 1/8" wide, is metallic green in color, and somewhat bullet shaped. The larvae can reach a length of a pair of brown, pincer-like appendages on the last segment.
- **Pre-emptive removal** – In the case of EAB, it refers to removing trees prior to them becoming infested with EAB. It does seem reasonable that if a community has ash trees that are declining or are in conflict with buildings or utilities, that instead of performing a remedial pruning, removal may be a strong option.
- **Removal and Restoration** – Removal and restoration refers to the following activities: removal of the tree, stump grinding, clean-up, backfilling with soil, and reseeded. Backfilling and reseeded will not occur if the removal has been chosen at a planting site for a new tree. Removal and restoration is often a time consuming and costly addition.
- **Replanting of Trees** – The replanting of trees will be done as cost effective as possible. It will be the preference of the City to replant trees that are 1.5" – 2" in diameter and placed in planters or burlap. Species diversification, size limitations, and budget allocations will drive replanting decisions. The City shall have ultimate authority as to the placement and species of the replanted tree.

CITY OF HILLSBORO ACTION PLAN – 8 YEAR PLAN

Year 1 and 2 Street & Park Tree Pre-Emptive Removal

21% (Approx. 35) street and park ash trees will be removed to reduce the number of ash trees within the City and will be replanted with a different species of tree. Removals will be based on tree inventory reports on condition, size, and location. Ash trees in very poor, poor or diseased condition will be removed first, followed by Ash trees in fair condition. These trees will be replanted with another species of tree. Average cost for removal of an ash tree is approximately \$350. Cost of replanting a tree is approximately \$200 including the tree and planting costs. Contractor will handle large street and park removals. City crews will handle the majority of park trees.

Estimated Cost:

Removal and Restoration of Ash Trees - \$12,300

Replanting of Trees - \$7,000

Total Cost - \$19,300

Year 3 and 4 Street & Park Tree Pre-Emptive Removal

21% (Approx. 35) street and park ash trees will be removed to reduce the number of ash trees within the City and will be replanted with a different species of tree depending on budget for treatment of Ash trees. Removals will be based on tree inventory reports on condition, size, and

location. Fair and good condition trees will begin to be taken down. Contractor will handle large street and park removals. City crews will handle the majority of park trees. Estimated cost is equal to the Year 1 and 2 estimate.

Year 5 – 8 Street & Park Tree Removals

33% (Approx. 55) street and park ash trees will be removed. Due to the proximity of EAB infestations to Hillsboro, the City anticipates confirmed infestations during this period. This would require the removal of all non-treated Ash trees due to infestation risk and die-off. The priority will be removals with selective replanting during this period due to staff and budget restrictions.

Estimated Cost:

Removal and Restoration of Ash Trees - \$19,250

Replanting of Trees - \$7,200

Total Cost - \$26,500

Chemical Treatments

25% (Approx. 36) street ash trees will begin being treated in 2015 if budgeting allows. The latest treatment will begin in the spring of 2016. Use of chemicals does not guarantee the protection of a tree; however research has shown a 99% success rate with regular treatment. Average chemical treatment costs around \$3.25/inch for the diameter per tree. The average DBH of the trees scheduled to be treated is 18 inches. This is based on one fall treatment annually. Chemical treatments will be evaluated annually to determine if the tree is in need of removal.

Estimated Cost:

Treatment Costs - \$2,100 annually

MONITORING

The City shall have an inspection program to monitor the condition every ash tree on a regular basis. Inspections will be performed twice annually in summer and winter months by DPW staff. City staff will note of any signs of EAB, decline in the tree, and other tree conditions. If conditions warrant, a declining ash tree may be removed ahead of the inventory schedule. The City will also monitor and update the tree inventory annually to reevaluate trees that need to be removed and update the GIS map.

If a resident suspect EAB has infested a tree on either public property (parks/medians) or on private property, they should call the 1-800-462-2803 DNR EAB Hotline number and also call the City at 608-489-2521.

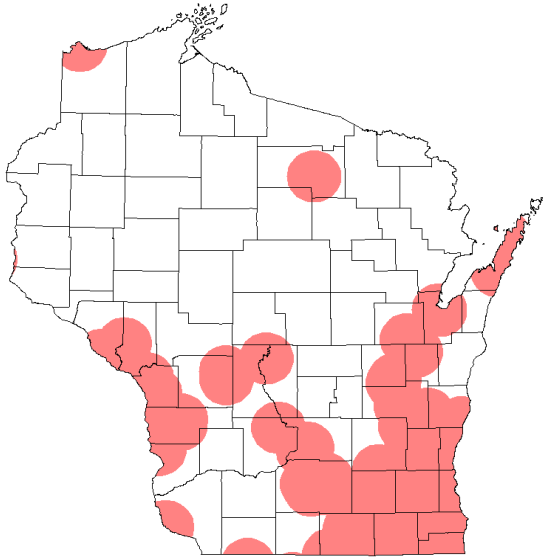
PUBLIC EDUCATION AND COMMUNICATION

In order to assist the residential homeowners of the City, a link to a copy of this Management Plan will be available on the Street Department web page.

When a street Ash tree is to be removed, the City shall notify the property owner of the scheduled removal. This shall be done with either a letter or door hanger. The notification will include information about EAB. The City will also develop a tree replanting program to allow residents to have a tree replanted in the place of a removed Ash tree.

For more information about EAB, residents should visit: www.emeraldashborer.wi.gov.

MAPS



Known EAB infestations with 15 mile buffer from infestations (3/2015).

