

Village of McFarland EAB Response Plan

Executive Summary

Wisconsin's urban ash resources consist of 5.2 million trees lining our streets and in our parks and natural areas. About 20% of all trees in Wisconsin's communities are ash. They have an estimated value of over \$1.5 billion and also provide millions of dollars of environmental, social and economic benefits annually. This valuable resource is seriously threatened by a tiny, metallic green beetle known as the emerald ash borer. The larvae of this insect are responsible for the trees' decline and eventual death. Since its discovery in 2002 in Detroit Michigan, the emerald ash borer has spread its destruction to over 14 states in the U.S. and Canada.

The Village of McFarland, in cooperation with Dane County and Wisconsin DNR, has developed an Emerald Ash Borer (EAB) response plan beginning with the award of a WI DNR Urban Forestry Grant to conduct a tree inventory in 2007. This inventory was completed in the spring of 2008. It will serve as the lead information document on the ash resource located within the Village limits. After further review of the tree inventory, the Village acknowledges the economic value of its ash resource and its importance to residents' quality of life. The purposes of this plan are to educate residents, preserve Village resources, minimize the fiscal impact on village operating budgets and to maintain public safety.

The Village formally recognizes the following major aspects of this plan:

- ▶ The Village endorses a pro-active approach with education and outreach in an effort to manage the urban forest while serving the best interests of its citizens and its environment.
- ▶ The Village will work cooperatively with Dane County, WI DNR and DATCAP to slow the spread of EAB.
- ▶ A tree inventory was completed in 2008. The Village has 3318 trees located in the public right of way and parks; 555 of these are ash. Neither conservancy areas nor private property were included in the inventory.
- ▶ The estimated value of these trees is \$3.2 million dollars (ash \$673,563)
- ▶ The Village recommends near complete removal of ash trees on public lands in the next 5 to 10 years at a potential cost in excess of \$500,000.
- ▶ After careful consideration, the Village does not endorse wide spread use of chemical treatments to preserve the ash population.
- ▶ The Village does recognize the need to preserve certain high value ash trees within the community through chemical treatment.
- ▶ On any given street, the Village intends to remove a maximum of 20% of the ash trees per year.
- ▶ The Village acknowledges the need for additional resources to accomplish this project whether through Village budget, grants or cooperative agreements with other units of local government.
- ▶ This plan will be reviewed and updated yearly as further research and facts are developed about EAB infestations and management.

What is EAB?

EAB (*Agrilus planipennis*) beetles are tiny, metallic green, and bullet shaped. In the 1990's this invasive insect traveled from East Asia to southeastern Michigan, unintentionally concealed within solid wood packing materials routinely used for international cargo shipments. It was first discovered in the Detroit area in 2002. Since then it has spread rapidly and is now found in Michigan, Ohio, Indiana, Illinois, Pennsylvania, West Virginia, Missouri, Minnesota, Iowa, Wisconsin and Canada.

In the EAB's natural habitat, populations are kept in check by predators and pathogens and by the fact that Asian ash trees have developed some resistance to EAB attacks. On the other hand, in North America, the EAB has few predators and ash trees have no natural resistance. While North American woodpeckers and other insectivores have been observed eating EAB larvae, this predation has not had a significant impact on EAB populations. EAB's natural range is limited to several miles per year, but movement of tree stock, fire wood and other commercially developed ash products has enables EAB to expand its range to the entire midwest.

In the summer months, adult EAB beetles nibble the leaves of ash trees, but do little damage. It is the larvae that are responsible for the trees' decline and eventual death. EAB larvae feed on the phloem and xylem, a tree's life sustaining vascular tissue. Within one to three years, a tree can no longer circulate the nutrients it needs. It appears that EAB infestation is always fatal. EAB infestations kill all varieties of North American ash trees (White, Green, Black, and Blue). (Mountain ash is not a "true" ash and is not susceptible to infestation).

An adult EAB beetle is metallic green in color and 3/8-1/2 inch in length and 1/16 to 1/8 inch in width. In its larvae stage, EAB is cream colored and has distinct bell shaped body segments and pincher-like appendages at the end of the abdomen. During this stage, EAB reaches 1-1/2 inches in length and is always found feeding beneath the bark. Larvae pupate and appear in mid-May to June through small D shaped exit holes. They feed up to several months on green leaves of ash trees. During this process adult beetles lay their eggs on the bark of ash trees. The eggs hatch in several weeks' time and immediately bore into the bark and begin feeding. The larvae will survive over winter beneath the bark and continue feeding in spring until they emerge to begin the life cycle again.

What are the Symptoms of EAB?

Be on the look out for the following:

- Dead or dying branches in the upper crown
- Epicormic sprouting (unusual branches produced from the tree's base)
- Yellow or off color foliage during the growing season
- Vertical bark splits
- D-shaped exit holes
- Increased woodpecker activity

If any of the above symptoms are observed, call your local forester, DNR representative or the Wisconsin EAB hotline at 1-800-462-2803.

What is the Village of McFarland doing?

The Village of McFarland has developed an EAB response plan with the following 6 major components:

1. Planning and Preparation
2. Education and Outreach
3. Communication
4. Pre-Event Management
5. Event Management
6. Post Event Management

Overview:

1) Planning and Preparation:

The Village committee designated to oversee policy development is the Natural Resources Committee in conjunction with the Village Forester. This group will gather and review the most current information to develop an EAB response plan to include the above objectives. This process will include opportunity for input and public comment as well as Village Board approval. Assistance from Dane County and the WI DNR will be solicited and included in this plan. McFarland will also adopt Dane County's Emerald Ash Borer and Wood Utilization Strategic Management Plan as part of the Village of McFarland EAB Comprehensive Plan. We wish to acknowledge Dane County's progressive planning process and the materials provided to all local units of government.

The Village completed a tree inventory in spring 2008. The total number of ash trees on public right of way and in parks is 555. This does not include village conservancy areas or private property. Current ash tree population is estimated at 16.72% of total trees in public ownership.

EAB confirmations and quarantines have already taken place on all sides of the Village of McFarland, the closest being Waukesha County. It is the opinion of all forestry professionals that EAB will continue to spread throughout southern Wisconsin. The Wisconsin DNR recommends a proactive approach including developing an EAB management plan, considerations of over all forest health, and ash population reductions.

2) Education and Outreach:

The Natural Resources Committee and Village Forester will conduct educational forums pertaining to EAB. The EAB response plan will include school classrooms visits, civic organization presentations, Village meetings, local newspaper articles, Village web site information and links, Cable TV spots and information at the Municipal Center and

Library. The goals of this process will be to educate Village of McFarland residents on the importance of sound urban forestry practices and the value of ash resources. The information will include ash tree identification, EAB information, methods of early detection, pre-event tree removal and planting, post event tree removal and planting, wood disposal, and contact information for WI DNR and DATCAP. The Village will train its parks' staff and public works employees on ash tree identification and EAB early detection.

3) Communication:

The Village of McFarland will use all available media sources to communicate with and educate residents of the Village of McFarland. The sources that may be used will include but not be limited to printed flyers, Village newsletter, public displays, Village web site, local and regional news media, Cable TV, and public meetings and presentations. It is the intention of the Natural Resources Committee to make current information available to residents as quickly as possible. Village contact information along with copies of the current Village ash tree inventory and Dane County Emerald Ash Borer and Wood Utilization Strategic Management Plan are attached to this plan.

4) Pre-Event Management:

Through effective planning and urban forestry management practices, the Village of McFarland will continue to strengthen and maintain its current urban forest while reducing its urban ash inventories over the next 5 to 10 years. The ultimate goal is to have no more than 5% ash on the public right of way and parks. This will be accomplished through several management practices as follows:

- a. Using current tree inventory condition reports, remove all ash trees that are considered hazard or in decline during 2010 and 2011 growing seasons.
- b. Begin systematically removing young ash trees 6" DBH (diameter at breast height) and smaller. A maximum of 20% removal on any street per year. (see attachment B & C)
- c. Target older growth (larger ash trees) areas with predominantly high ash inventories. A maximum of 20% removal on any street per year. (see attachment B & C)
- d. Begin re-planting felled street trees, paying close attention to urban forest species diversification. The Goal is to replace each tree that was removed during the previous year.
- e. Sponsor an "Adopt a Tree" program, encouraging private citizens to voluntarily remove and replace both private and public ash trees, with authorization for the latter.
- f. Develop an insecticide treatment education program for private home owners with high value trees. (See attachment A). The Village will use pesticides on a limited basis for specially targeted trees only.

Village staff will be proactive in ash tree monitoring, identifying ash trees in decline and notifying DATCAP for follow up inspections.

5) **Event Management:**

Upon confirmation of an EAB infestation within the Village of McFarland or Dane County, the Incident Command System (ICS) will be activated. Primary event management will be conducted by Department of Agriculture Trade and Consumer Protection (DATCAP), Wisconsin Department of Natural Resources, Dane County and Village Staff, with DATCAP being the primary coordinator. Every effort will be made to minimize the effects of EAB on Village residents and Village resources through the use of proper planning and communication (controlling the spread), state and federal grant money, and possible adaptive re-use of the ash resource in harmony with the Dane County Wood Utilization Plan. DATCP will conduct field surveys and establish an action plan. Other methods that may be “considered” or used during a confirmed EAB event will be:

- ▶ Prompt removal of diseased and dead ash trees, including chipping to < 1”
 - ▶ Attract and destroy EAB using lethal traps
 - ▶ Continue to remove uninfested ash trees
 - ▶ Introduce parasitoids*
 - ▶ Treat, dispose of, and/or use infested wood within the quarantine or through compliance agreements
- *An insect that lays its eggs within a host, eventually causing the death of the host.
 - The Village will utilize the eastern portion of Shuetz Park as a marshalling yard for stock piling debris in the event of an EAB confirmation.

6) **Post Event Management:**

The Village of McFarland will assist village residents in reforestation efforts to include possible grant applications, technical assistance and communication with government agencies. The Village will also offer information on tree selection, proper planting and maintenance.

This plan will be reviewed and updated annually to reflect any developments in scientific research that dictate changes in the overall approach to EAB management.

EAB information:

Department of Agriculture Trade and Consumer Protection (DATCAP)
P.O. Box 8911
Madison, WI

Jeff Roe
DNR Urban forester
3911 Fish Hatchery Road
Fitchburg, WI 53711
608-275-3256
Jeffery.roe@wi.gov

WI DNR
1-800-462-2803
www.emeraldashborer.wi.gov

Darren Marsh
Dane County Parks Director
1 Fen Oak Court #234
Madison, WI 53718
608-224-3763
marsh.darren@co.dane.wi.us

Eric Mader
Dane County Parks Invasive Species Coordinator
608-224-3614
mader.eric@co.dane.wi.us

www.emeraldashborer.info

Village of McFarland Point of Contact Information

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Village Forester
Assistant Director of Public Works/Parks Manager
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Attachment A

Pesticide use within the Village of McFarland:

Pesticides are available to control EAB, at least in the short term. They may be a good alternative for individual trees such as in the case of a home owner with one special tree. However, using pesticide treatments on a large scale basis is evaluated as cost prohibitive, since they need to be re-applied annually or biannually for the life of the tree. Scientific research is inconclusive as to the long term survivability from using pesticides, and the negative environmental impacts of introducing EAB pesticides on a large scale are unknown. There is information available, for example, that cites the possible negative non-target effect of pesticides such as Imidacloprid, the key ingredient in many widely used pesticides for EAB. Even so, there will be pressure to “save” existing ash trees. While the immediate cost of chemically treating is cheaper than removal and re-planting, it only delays what has been inevitable tree loss in other communities. As funding is secured for managing EAB, the decision on how best to invest public dollars is between removal and reforestation or a program that attempts to save existing ash trees without any guarantee of success. This management plan directs available resources to reforestation, planting new trees, and diversification of the Village’s canopy.

Regarding residents requesting to treat municipally owned ash trees:

On a very limited basis, the Village will permit residents to chemically treat a public ash tree provided they hire a Licensed Commercial Applicator who is bonded and insured in the State of Wisconsin and is using state approved trunk injections pesticides only. Limiting to trunk injections hopefully reduces pesticide exposure to others and the environment overall. (Note: Chemical treatment would not preclude future removal of said ash tree if deemed necessary.) A permit shall be obtained from the Department of Public Works during regular business hours. A permit fee and follow up inspection fee will apply. The Department reserves the right to deny or reject the permit at any time for any reason. A tree must qualify for treatment at the determination of the Village Forester. It is further understood that the pesticide application(s) may only be effective for one year and that repeat applications will be necessary. The Village assumes no liability for the effectiveness of the pesticide or any cost for materials or labor in the treatment of municipally owned trees.

Permit Application

Pesticide application on publicly owned ash tree(s)
Village of McFarland
5115 Terminal Dr.
McFarland, WI 53558
608-838-7287

Company: _____

Address: _____

City, State: _____

Phone: _____

Applicator Lic. No. _____

Tree Address: _____

Property Owner: _____

DBH: _____

Type of Treatment: _____

Product, Chemical: _____

EPA No.: _____

Application Rate: _____

Date/Time of Application: _____

Signature (owner): _____ Signature (applicator): _____

Please complete and return to Village of McFarland Public Works for consideration:

Authorization: _____ Date: _____

Permit expires on: _____

(Permit may be renewed by the Village Forester at his/her discretion.)

Attachment B

EAB Statistical Overview Questions for consideration

Total Ash tree inventory for streets and parks

3318 total municipally owned trees of which 555 (16.72%) are ash trees

<u>% Ash</u>	<u>Ash Total Remaining</u>	<u>Total Removals</u>
16.72	555	0
15	498	57
14	465	90
13	431	124
12	398	157
11	365	190
10	332	223
9	299	256
8	265	290
7	232	323
6	199	356
5	166	389
4	133	422
3	99	456
2	66	489
1	33	522
0	0	555

1% removal rate equals approximately 34 trees.

Current tree inventory indicates 11 ash trees should be removed due to condition and 28 should be watched or considered for removal.

Dane County Statistical review of McFarland (Dane County EAB Plan)

McFarland encompasses 739 acres

Average number of trees per acre in an urban environment is 63

Average residential ash tree population is 18.2%

Village currently has 555 ash trees inventoried, not including conservancy areas.

Possible total tree population 46,557

Possible Ash tree population 8,473

Attachment C

EAB Replacement Worksheet

Estimated street tree value based on 2008 inventory \$673,563.21

Estimated costs of pre-emptive removal and replacement of all inventoried ash trees.

6" or Less Total 245

7" to 10" Total 56

11" to 14" Total 87

15" to 20" Total 73

21" Plus Total 35

Park Trees Total 86

	<u>Removal</u>	<u>Replacement</u>	<u>Total</u>
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Total

After EAB confirmation

Industry experience estimates removal after trees are infested with EAB can cost as much as 2.5 times the original removal cost (415,950 additional)

NOTE:

Costs are conservative estimates for contracted services (2010 WI State Budget has mandated prevailing wage requirement which could substantially affect planting and removal costs).

Figures have not been figured for inflation over a possible 5 or more year removal plan.

Notes/Recommendations