

Emerald Ash Borer Management Plan

Superior, Wisconsin

January 2014

Background

In August of 2013, an infestation of emerald ash borer (EAB) was confirmed in the City of Superior. The City, in partnership with Douglas County, hosted a press conference on August 15 to alert the public to the problem and to discuss the quarantine of all of Douglas County as a result. The County was quarantined by the state and federal government later that day. The quarantine prohibits the removal of ash wood and ash residue and the movement of all hardwood fire wood outside Douglas County.

EAB is a beetle that destroys all species of ash by boring into the tree, eating the phloem tissue (innermost layer of bark) and disrupting the uptake of nutrients and water. EAB was first found in the United States in Michigan in 2002. Since then, it has migrated to 20 states and two Canadian provinces decimating the ash tree populations wherever it is found. It was first detected in Wisconsin in 2008. When the borer is first identified in a community, it is thought to have been present for 4-5 years. The mortality rate of the ash skyrockets after that with the trees dying in the next 2-4 years.

Purpose

By implementing this management plan, the City is attempting to mitigate the disruption to its urban forest caused by the infestation of the EAB. Taking a proactive approach to this invasion will enable the City to address public and private needs in an efficient and effective manner.

The City will endeavor to distribute the costs associated with certain and massive tree death over a manageable time period, as well as lessen the social and economic impact that such an extensive loss will have on the quality of life in our community.

Administration

The City Forester and the City Arborist, through the Parks & Recreation Division of the Public Works Department, will be responsible for implementing this Plan and seeing that its provisions are carried out.

Ash Removal

In 2009, the City inventoried all of the ash trees located in the public right-of-way, in parks, and at Nemadji Golf Course. The Superior Municipal Forest was not included in this inventory. At that time, the City identified 3,078 ash trees:

- 2,333 Ash Street Trees
- 615 Ash Park Trees
- 104 Ash Golf Course Trees/Stand
- 11 Wisconsin Point Ash Tree Stands (estimated at 222 individual ash trees)

The vast majority of these trees were characterized in good to excellent condition at that time. There are approximately 1,800 ash trees sized 12" diameter or less, and approximately 1200 ash trees sized 12-24" diameter or greater.

In October of 2013, the Common Council approved a plan to remove all ash from City-managed property (excluding the Superior Municipal Forest) over a period of six years (2014-2020). City crews began removing ash immediately after the decision and managed to remove approximately 304 ash trees in 2013, thus placing the City ahead of its targeted schedule.

For urban forestry management purposes, the City is divided into six zones:

- Zone 1 North End
- Zone 2 West End (Billings Park)
- Zone 3 Central Business District/UWS
- Zone 4 Central Park
- Zone 5 South End
- Zone 6 East End/Allouez/Itasca

The ash removal began in the North End of Superior (Zone 1), where the first infestation was found, and will continue in the Central Business District/UWS (Zone 3), as an infestation was also found there. Removal of ash will continue on a systematic basis through each zone until all ash has been removed.

The Common Council also agreed that private residents could treat City-managed ash with insecticides at their own expense (with conditions). The City Forester has been issuing a free tree treatment permit in order to track treated boulevard ash trees so they are not accidentally taken down.

Wood Utilization Disposal

Initially, the City identified a marshalling area at a vacant City-owned lot located at North 7th Street and John Avenue. As the City removes ash trees, it chips them immediately in the field and transports them to the marshalling area for storage. The Common Council has agreed that the ash wood/refuse will not be made available to private citizens, as the end use may bring a modest revenue stream to the City for tree replanting.

The City may have to identify one or more additional marshalling yards for public ash as the ash die off. Potential sites being considered are the City-owned Albany Avenue Tree Dump and a City-owned landfill staging lot located on the west side of Wisconsin Point Road (south of Wisconsin Point peninsula).

In December of 2013, the City entered into an agreement to sell the ash wood chips (beginning in January of 2014) to Minnesota Power Hibbard SE Station in West Duluth. By law, the ash may be transported outside the quarantined area between October 31st and March 31st, provided the proper federally issued compliance agreements are in place. Both the Hibbard Station and any hauler the City contracts with must enter into these agreements with the federal government (i.e., the United States Department of Agriculture).

Minnesota Power will pay the City a variable per ton fee for the chips. The City, in turn, will pay the hauler to transport the chips to Duluth. The City expects to continue the arrangement with Minnesota Power until such time as all City-managed ash has been chipped, transported, and legally disposed of at their facility. Any resulting revenue stream will be placed in the tree fund for new tree planting.

Communications

- The Mayor, City Council, Superior Tree Board, and department heads will receive periodic briefings through normal channels.
- The City's website offers a wealth of information about EAB including links to important detailed information. The website also instructs residents about how they may opt to treat an ash tree in the public right-of-way (with conditions) at their own expense. The treatment temporarily preserves the life of the tree.
- The Parks & Recreation Division, the University of Wisconsin-Extension Horticulture & Agriculture Educator and the Superior Tree Board hosted a public information meeting on November 18, 2013. The City Forester presented information regarding the problem and the City's response. UW-Extension staff provided homeowner information about EAB. A similar public meeting is planned for the spring of 2014.
- The City Forester will be available for individual City Council district meetings (at the request of City Councilors) to discuss the situation, particularly in advance of moving into a new zone for removal.
- The Parks & Recreation Division has developed a power point presentation, which the City Forester will present to community groups upon invite.
- An EAB mailer will go out to all households receiving a storm water bill at the end of January 2014. The mailer has been tailored to encourage residents to plant a tree in the public right-of-way using the free City permit, or to purchase a Tribute Tree.

Canopy Replacement

The City will replace the lost ash according to our planting standards as finances allow. Replacing the ash will be the planting priority beginning in 2014 until such time as they are all removed and replaced with a new species (estimated through 2020).

The planting standards specify that new plantings be positioned 20-35 feet apart, on center, depending on the ultimate size of the tree. This means that the City may not replace the ash on exactly a one-for-one basis if they were originally planted too close to other trees along a boulevard.

The City currently budgets a sum of \$5,000 annually, which provides stock of approximately 100 bare root trees. The Parks & Recreation Division can comfortably plant approximately 250 bare root trees within the spring time frame recommended for bare root stock.

Therefore, the Parks & Recreation Division and the Superior Tree Board will promote the Tribute Tree program to seek additional tree donors. Current corporate sponsors of the program have agreed that their donated trees may be used to replant ash in Zone 1 in 2014.

The City Forester will monitor grant opportunities and make application for tree planting grants when appropriate. The American Transmission Company has granted the City a sum of \$500 to replace ash in Billings Park proper in the spring of 2014.

It should be noted that the City has not planted any ash for approximately 8 years, and will choose a variety of species that are successful in our climate and soils to replace the ash.

Postponed Work

During the course of the ash takedown (2014-2020), the Parks & Recreation Division will have to delay routine zoned pruning and pruning requests in order to conduct the removal. The Parks & Recreation Division will continue to remove any/all hazard trees of other species in addition to its regularly scheduled parks and recreation tasks. Further, the Parks & Recreation Division will conduct a spring tree planting program in order to replace the lost ash.

Private Ash Trees

The Parks & Recreation Division will encourage private property owners to monitor, treat, or remove their ash trees through the communications plan. Referrals to the UW-Extension Horticulture & Agriculture Educator will be made as needed.

The City will not require the removal of ash trees on private property unless an ash should become a hazard to the public. In the event a private ash becomes a hazard to the public, the matter will be dealt with by the Building Inspection Department via code enforcement protocol.

City staff has learned that for every public ash tree in a community, there could be up to 3-4 ash trees on private property. In October of 2013, the Common Council voted in favor of providing one or more marshalling yards to serve as a repository for private ash trees and residue. The City will accept private ash trees at these sites. The City will then seek proposals from the logging industry to chip and haul the ash to a disposal facility. The City Arborist has analyzed the options with assistance from the U.S. Department of Agriculture.

Biological Control

After reading reports of a stingless wasp being released in the fall of 2013 in Minnesota to combat the spread of EAB, the City Forester contacted the Plant/Pest Disease Specialist at the Wisconsin Department of Natural Resources (WDNR) to gather information about Wisconsin's program. The following information came from the discussion:

- Wisconsin, like Minnesota, is partnering with the federal government to conduct the release of stingless wasps in Wisconsin to use natural enemies to bring EAB populations into balance and reduce damage.
- This option can only be applied to forest landscapes (e.g., the Superior Municipal Forest) but are not likely to save street trees.
- Three species, known as parasitoids, have been used in SW and SE Wisconsin, most notably along the Mississippi. Researchers now believe that EAB follows the ash located along tributaries.
- Two of the species attack the larvae under the bark and one of the species attacks the eggs located in bark crevices. One of the three species is not likely to survive the northern Wisconsin climate.

- The parasitoids are approximately the size of gnats and do not harm humans or the environment.
- The way the program works is the US Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) provides the control agents and WDNR monitors the release and results.
- WDNR is VERY interested in the possibility of releasing such control agents in the Superior Municipal Forest due, in part, to its proximity to the St. Louis River. The City Forester expressed interest in offering the Superior Municipal Forest as a potential test release site.
- First steps include formally identifying an EAB infestation within the Superior Municipal Forest as the wasps need something to eat, and providing that documentation of signs and symptoms to the WDNR.
- WDNR indicated that releasing the wasps, which normally takes place in the summer, is not labor intensive. They are scheduled to have a staff entomologist assigned to the Spooner area by the summer of 2014.
- The City will have its staff visually survey the Superior Municipal Forest, as time allows, in the spring of 2014 and report back to WDNR with its findings. If EAB has not reached the Superior Municipal Forest in significant numbers by spring of 2014, there is an opportunity to survey and proceed in the spring of 2015 and into the future.
- Please note that biological control of EAB is new and still being tested with significant unknowns in the equation.