ITEM # 2

Staff Report

EMERALD ASH BORER MANAGEMENT

June 17, 2014

The City of Ames was one of three pilot cities for inclusion in an Iowa Department of Natural Resources (IDNR) grant with the United States Forest Service. This three year grant is providing the City with an opportunity to collaborate with an urban forester to educate the public, build a network of volunteers, develop effective maintenance plans that ensure the health of our forest resources, and review ordinances to ensure protection and enhancement of our urban forest. In anticipation of this grant, City staff completed an inventory of all trees in City rights-of-way, in maintained areas of the City's parks (except Moore Memorial Park), and most City owned facilities. Parks and Recreation staff is currently finishing the inventory to include ash trees along our trail system that could become hazardous.

In conjunction with the IDNR grant, a tree management plan for the City is nearing completion. This document will include goals and recommendations for all City owned trees, which total an estimated 15,000 trees. It will also include detailed information on how to handle the impending Emerald Ash Borer (EAB) infestation. **However, with the imminent threat of EAB, City staff will bring the city-wide tree management plan back to City Council at a later date once the plan for to deal with the EAB is finalized.**

EAB is a very important component of the city-wide plan because EAB is an extremely destructive pest, responsible for the death and decline of over 25 million ash trees. Ash in both forested and urban settings constitute a significant portion of the canopy cover in the United States. Current tools to detect, control, suppress, and eradicate this pest are not as robust as needed. Once an infestation in an area is confirmed, it is anticipated that ash trees will become hazardous within three to five years. The decline of ash trees will be an exponential increase once an infestation is confirmed. The trees become hazardous as they die with branches becoming brittle, creating hazards of dropping limbs or windstorm damage.

In light of this impending infestation, the following options are available to respond to this threat.

MANAGEMENT OPTIONS FOR ASH TREES:

Removals

Ash tree removal will need to be a part of any EAB plan, since ash trees in poor condition are more susceptible to infestation and will become hazardous to the public.

Pre-emptive removals would be removing ash trees in fair or good condition. This is done to remove the trees in orderly fashion and at a potentially lower cost, since it is expected that removal costs will rise once the infestation begins. Using the tree inventory mentioned above, staff has identified City 2,322 Ash trees that will be affected by EAB. **The estimated cost for a tree removal, including stump grinding, is $1,000 per tree, or $2,322,000 for the entire inventory.** This is an average, as smaller trees will cost less and larger trees will cost more. City forces are currently only able to remove trees that are twenty five feet tall or less. This would equate to trees with a diameter at breast height (DBH) of roughly 12 to 18 inches. This category represents approximately 1,500 trees. All trees over this size would need to be removed by contractors. By forming a special team of City staff including Public Works, Parks and Recreation, and other City departments, it is estimated that 50 to 100 trees can be removed each year with City personnel. This would be done over the winter months, and the number would be impacted by weather conditions.

Any removals also raise the need to consider replanting new trees. Over time, this would replace the lost urban canopy of the Ash trees in the City. It could also provide an opportunity to increase the diversity of the urban forest to mitigate the effects of future infestations and diseases that impact other species of trees. **The estimated cost to purchase and replant a tree is approximately $250, or a total of $700,000 to replace the lost ash tree inventory.**

Treatments

Chemical treatments are available that are believed to control EAB. These treatments need to be applied biannually or triennially for the life of the tree, since missing a treatment can rapidly lead to infestation of the tree. Injections into the tree are currently the preferred method as they are less likely to have impacts on groundwater. Costs for these injections are based on the size of the tree, and are estimated at $10 to $12 per inch of DBH. Trees showing canopy die back of over 30% would not be candidates for treatment

It is important to note that these treatment costs do not reflect the benefits of keeping mature trees versus smaller replacement trees. Some cities in the eastern half of the country have used chemical treatments to protect high value trees, to spread out the timing of removals, and/or to allow new trees to become established before removing mature ash trees. Some cities have also allowed property owners adjacent to public owned trees to “adopt a tree”, thus paying for treatment of the ash tree to prevent its proactive removal. The cost of treatment varies with its diameter. For example, **the cost to treat an 18 inch tree would be approximately $200 per application.**

Wood Waste

Currently, wood waste from the trimming and removal of City-owned trees is chipped and made into mulch that is used in City parks and made available for free to the public. That is a very beneficial way to reuse wood waste.

In starting a proactive ash tree removal process, however, this current approach will reach a point where the demand for productive wood waste re-use will not keep up with the supply. Several other options could be considered at that point. Although the Iowa Department of Natural Resources has instituted a state-wide quarantine prohibiting any wood waste from leaving the State, tree waste – including Ash tree waste – may be used within city limits. Hence, the City's existing wood waste operations could potentially be modified to produce firewood for the public as well as mulch. Opportunities could be explored to work with private composting operations. Although a less desirable option, state law was recently changed to allow wood waste to be taken to landfills.

Another unique possibility, in conjunction with the benefit of having the Resource Recovery Plant, is to explore options to dispose of Ash waste as biomass. Resource Recovery and Electric staff are currently exploring options to convert Ash waste into energy through existing or improved processes.

POLICY CONSIDERATIONS:

Financing

The cost of having contractors remove all City-owned Ash trees is estimated at $2,322,000. This cost can be reduced to some extent by utilizing City forces to remove some smaller trees. The current budget includes $75,000 to remove and replace dangerous trees in addition to regular trimming, and a portion of that amount can be applied to Ash tree removal. Replacement costs are estimated at $700,000 if all trees removed are replaced with new trees. These expenses will be spread out over a period of years but will be subject to any confirmed infestation of EAB. As stated earlier in the report ash trees will become hazardous in three to five years after confirmation of an EAB infestation. This means any time frame chosen will have to be reexamined after EAB is found in the community.

Several funding sources can be considered to assist with this increase in costs. Road Use Tax monies can be used for removals and replacements of right-of-way trees. The Local Option Sales Tax Fund, General Fund, and General Obligation Bonds are be potential sources of funding.

In talking to other Iowa cities about potential funding sources, it was found that Des Moines has designated Stormwater Utility funds towards their EAB management funding. It was also discovered that Marion has implemented a monthly Urban Forest Fee of $1.80 per utility account.

Partnerships

One important partnership will be with Electric Services. The City's inventory identified 160 ash trees that show conflict with overhead wires. Instead of trimming these trees, Electric Services could remove them, and possibly replant with under story trees that

would not create future conflicts with electric lines. This approach would affect the current Electric Services budget for trimming and will need to be discussed in more detail. Consideration must also be given to private ash trees that have overhead wire conflicts. That number is likely much higher, and policy should be considered on dealing with the trimming or potential removal of these private trees as well.

Public/Private Partnerships

To help offset the large costs of dealing with EAB, the City should look for partnerships such as planting grants for new trees to replace those that are removed. The recent success of the Ames 150 Legacy Tree Planting shows that establishing a public/private partnership could be possible for assistance in replacing the lost urban canopy. There are several organizations and volunteer groups that could be approached to assist the City in replacing removed trees and increasing our urban canopy.

IMMEDIATE RECOMMENDATIONS:

Regardless of the direction provided on the management of EAB, there are several actions that should take place in the near future to mitigate the effects of the impending EAB infestation within the City. These include the following:

- Remove any ash trees that are hazardous or in poor condition in the right-of-way and City parks. Removals will be prioritized by hazard to the public:
    - First Priority: trees located on arterial and collector streets, and in parks and facilities near structures, playgrounds, and other City facilities.
    - Second Priority: trees located on local streets and alleys, or in parks and facilities with limited traffic
    - Third Priority: trees located in maintained areas of parks with little to no traffic.
    - No Removal: trees located within forested areas of parks unless adjacent to a trail.

- Initiate extensive public outreach regarding EAB and the impact on citizens. This would include how to identify ash trees, removal and treatment options, and how to hire a reputable contractor.

- Modify Chapter 27 of Municipal Code to allow for the pre-emptive removal of diseased trees on City property. This action would eliminate the requirement for the posting of these trees and opportunities for hearing appeals to the City Council.

- Modify the Municipal Code to clearly state that dead, dying, or diseased trees on private property must be removed by the property owner; and that the City will cause any such privately owned dangerous trees to be removed and the costs charged back to the property owner.

It is important to note that these actions are to prevent trees from becoming a hazard to the citizens of Ames. The intent would be to proactively address the danger to the public of dead tree limbs falling or being blown down during storms.

Once clear direction on the City's plan on ash trees is in place, City staff will work to notify residents on the impacts to the trees adjacent to their property.

Since staff already has most City-owned trees in our inventory, we will be able to provide a web-based map that will show where all current City-owned ash trees are located. Staff will also create a detailed process for notifying residents of any removal, replacement, or treatments of these trees, and for providing citizens with information on why the tree removals are needed.

STAFF COMMENTS:

The impending infestation of EAB will clearly have a major impact on the urban canopy within our community. This will impact all ash trees in the City, and will have significant financial impacts for both the City and for private citizens. With a completed inventory of the City trees and the assistance of an Urban Forester, the City can develop a proactive plan to deal with the infestation and to increase the diversity of tree species to lessen future infestation impacts on our urban canopy.

In order to complete an EAB plan for the City, staff needs City Council direction on the potential treatment of ash trees. As is stated above, treatment may be used to protect high value trees, to spread out the timing of removals, and/or to allow new trees to become established before removing Ash trees. Another consideration is whether the City should bear all treatment costs or whether adjacent citizens should bear the cost of treatments through a tree adoption program.

Once direction is given on treatment, a final plan will be developed and brought back to City Council this fall. This plan will include the components listed below.

- Determine how many ash trees can be removed by City forces, and how many need to be removed by contractors.

- Determine a recommended time period to accomplish proactive removals. This timeframe may need adjustment if EAB is found in the community during the removal period.

- Prioritize proactive removals based on the priority stated above for poor condition ash trees.

- Develop plan options for the replanting of removed trees to increase the diversity of City owned trees.

- Identify funding recommendations to meet the above plan requirements.

These plan components will be in addition to the action steps recommended above that can begin before adoption of the final plan.

Preparing for EAB

Shane Donegan
Iowa DNR & Prairie Rivers RC&D
Urban Forestry Specialist

Ash Identification

Do I have an Ash Tree?

- **Opposite Branching**

Do I have an Ash Tree?

- **5 to 7 leaflets on a compound leaf (bud at the base of the stem)**

Do I have and Ash Tree?

Not an Ash

Not an Ash

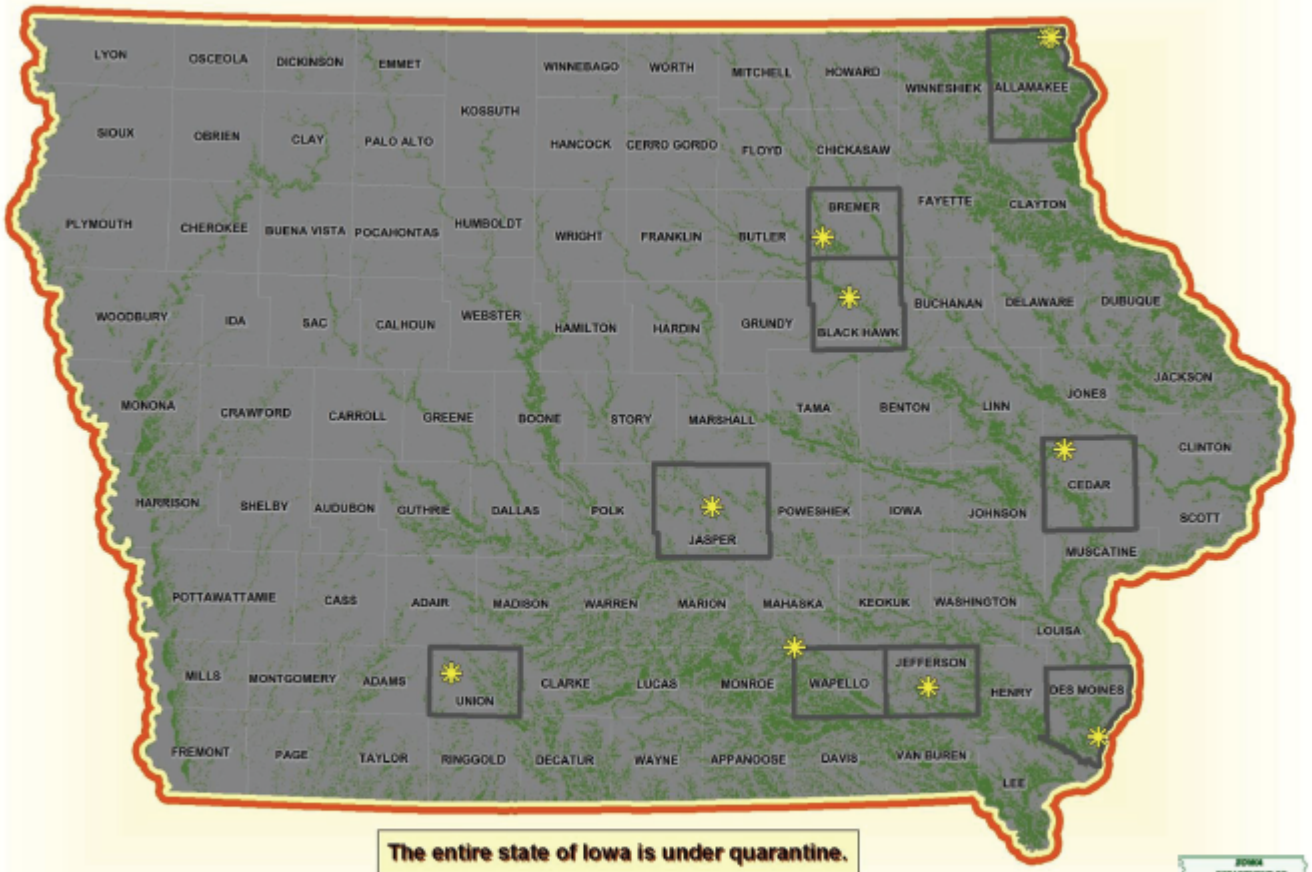
Not an Ash


1980

EAB IN IOWA

- Discovered in 2010
- Not found again until 2013
- Now confirmed in 9 counties
- Closest in Jasper County (Newton)

Iowa Emerald Ash Borer (EAB) Infestation Status

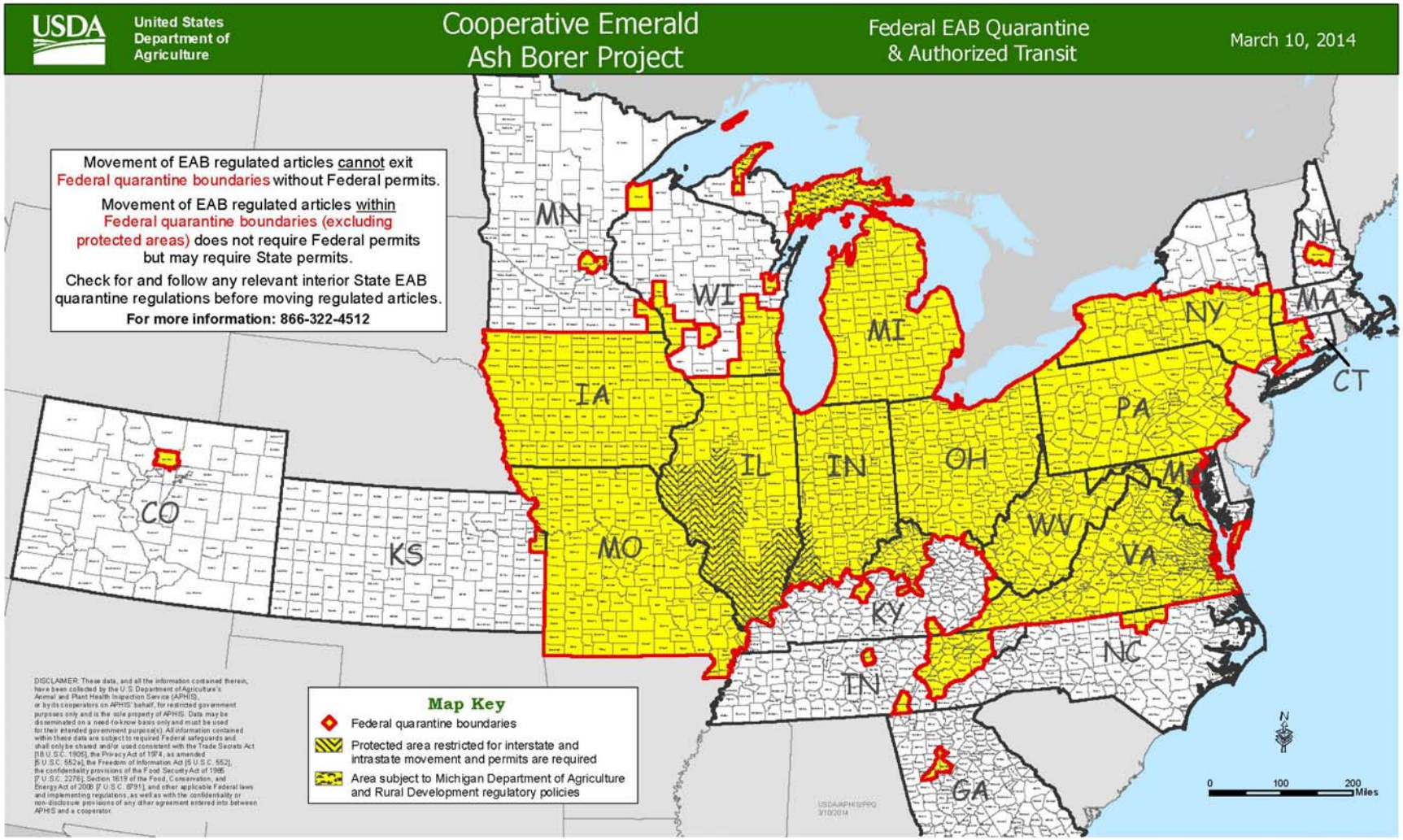


The entire state of Iowa is under quarantine.

Confirmed EAB Infestations

Iowa Department of Agriculture & Land Stewardship, Entomology & Plant Science Bureau, Entomology@IowaAgriculture.gov, 515-725-1470

Updated March 28, 2014


USDA
United States Department of Agriculture
Cooperative Emerald Ash Borer Project
Federal EAB Quarantine & Authorized Transit
March 10, 2014
Movement of EAB regulated articles cannot exit Federal quarantine boundaries without Federal permits.
Movement of EAB regulated articles within Federal quarantine boundaries (excluding protected areas) does not require Federal permits but may require State permits.
Check for and follow any relevant interior State EAB quarantine regulations before moving regulated articles.
For more information: 866-322-4512
MN
WI
MI
IA
IL
IN
OH
PA
NY
NJ
MA
CT
MD
WV
VA
KY
TN
NC
GA
MO
KS
CO
Map Key
Federal quarantine boundaries
Protected area restricted for interstate and intrastate movement and permits are required
Area subject to Michigan Department of Agriculture and Rural Development regulatory policies
0 100 200 Miles
N

Most Common Symptoms


UGA1398093
UGA1460075

City Responsibilities

- **The City inventory of trees identified 2,322 ash trees in right-of-way, city facilities, and parks**
- **Approximately 77% are contained in the right-of-way**

Private Property Owner Responsibilities

- Will be responsible for all trees located on their property
- Could be 2 to 3 times the amount on public property

Removals

- Estimated to cost $1,000 for removal
  - Average cost affected by size and location
- City forces can remove 25’ high and less
- Estimated 50 to 100 trees per year could be removed with City forces
- Replanting estimated at $250 per tree

Treatment Options

- **Chemical Treatments**
  - **Only treat a very healthy tree**
  - **Continue treatments for the life of the tree**
  - **Treatments are recommended when EAB has been confirmed with 15 miles of your location**
  - **Spray treatments don’t work**
  - **Estimated cost is $10 to $12 per inch of DBH**

Wood Waste

- Statewide quarantine makes transporting wood material simpler within the state
- Currently chip for mulch
- State law allows for landfills
- Could modify for firewood
- Explore Resource Recovery Options

Financing

- Contracted removals estimated at $2,322,000
- Replanting estimated at $700,000
- Funding sources
  - Road Use Tax for rights-of-way
  - Local Option Sales Tax, General Fund, G.O. Bonds
  - Other Cities funding mechanisms

Partnerships

- Electric removing ash instead of trimming
  - 160 identified in inventory
  - Does not include private trees
- Public/Private Partnerships
  - Volunteer assistance for replanting

Recommendations

- Remove any hazardous or poor condition ash trees
- Initiate extensive public outreach
- Modify Chapter 27 for diseased trees on City property
- Modify Municipal Code to state dead, dying, or diseased trees on private property will be removed by owner

Staff Comments

- Need direction on treatment of ash trees
- Final plan development
  - Determine City force removals
  - Determine recommended time period
  - Prioritize removals
  - Develop replanting plan
  - Indentify funding

What questions do you have?

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