

## Staff Report

### **EMERALD ASH BORER RESPONSE PLAN - FIVE YEAR REVIEW**

February 25, 2020

#### **BACKGROUND:**

City Council approved the Emerald Ash Borer (EAB) Response Plan in October 2014 and the City is currently in year six of the Plan. EAB was discovered in Story County in August of 2014 and in Ames in May of 2018. **The Plan calls for a formal evaluation of the Management Plan after year five, and this report is intended to provide Council with an overview of that evaluation.**

The Plan specifies the removal of 2,355 ash trees in the City Parks & Cemeteries (563) and City right-of-way (1,792) over a twenty-year period. According to the inventory data, there are currently no ash trees remaining in the mowed portions of the City Park System. There are 29 ash trees in the City cemeteries and 558 ash trees in the City right-of-way (ROW). Due to limitations inherent in the city equipment, contractors will remove right-of-way trees over 18-inches in diameter and the remaining Cemetery trees. City staff will remove trees less than 18-inches in diameter. By Plan Year 10 all removals are expected to be contract removals due to trees growing into or beyond the 18-inch diameter class.

The Plan also involves chemical treatment of specific ash trees to extend their lives over the twenty-year removal period. Treatments have occurred in Plan Year 1 and Plan Year 4. The next scheduled treatment is in Plan Year 7 (FY 20/21). For the most part, treatments have been effective. However, there are areas in town where individual ash trees are declining despite treatment. Specific areas of concern have appeared on Douglas Avenue and in some residential areas in and around Campustown. Declining ash trees in these areas were removed as a public safety precaution. Some treated ash trees are showing woodpecker flecking or blanding (see Attachment A) which is a sign that EAB is present in these trees. There have been no advances in EAB treatment technologies since the drafting of the original Plan.

Replacement tree planting under the Plan has been a one-for-one replacement in the ROW and is augmented by spring and fall volunteer plantings coordinated by City staff and the Ames Foundation. These combined efforts have resulted in planting almost 1,900 trees. These planting programs, which emphasize species diversity, now provide property owners with the opportunity for input on tree species planted in the ROW in front of or adjacent to their property

The original estimated costs for staff time, contract tree removal, contract treatments, contract stump grinding, contract planting, and Ames Foundation plantings for Year 1 through Year 6 were \$1,067,609. Actual costs were \$654,402 (see Attachment B for details). Significant savings were found in removals and in stump grinding costs

through the competitive bid process. Future removal costs (see Attachment C) reflect these lower prices, but also takes into account the differential between the past low bidders and the next highest bid alternative. They also reflect increases in tree growth over the life of the Plan.

**It should be emphasized that the original Plan did not address ash trees on private property. The Plan stated that this “element would be adopted at a later time”. To date this element has not been addressed.** Dealing with this issue is important since untreated ash tree mortality will approach one hundred percent over the next six to eight years (See Attachment D). **If these untreated trees are not removed, some will pose a significant safety hazard for the citizens of Ames.** The City currently has no nuisance/dead tree ordinance (for ash trees or any other tree) that would empower the City to enforce dead tree removals or assess penalties on homeowners who allow standing dead trees on their property if they pose a hazard to the public. **The staff is researching how other cities are handling this issue and will present options for the City Council to consider at a future date.**

Please see Attachment E for lessons learned through the first five years of Plan implementation.

#### **STAFF COMMENTS:**

The current Emerald Ash Borer Response Plan removal schedule has been met with very little citizen concerns expressed over the removal and replacement of ash trees. During the next year, staff will be exploring if accelerating the implementation of the Plan will yield greater overall savings to the City given the lower than anticipated costs to remove, treat, stump grind, and replace ash trees.

## ATTACHMENT A

The flecking or blanding of the bark on this ash tree at 1011 Clark Avenue indicates the presence of emerald ash borer. This tree received treatment in 2015 and 2018. It is scheduled for treatment in 2021 and removal in 2027. If it does not respond to the next round of treatment, removal will occur prior to 2027. This photo was taken in February 2020.



## ATTACHMENT B

Estimated costs of staff time, contract removals, contract treatments, stump grinding and planting for Plan Year One through Plan Year Six:

<b>Year</b>	<b>Estimated Costs</b>	<b>Actual Costs</b>
1	\$263,400	\$121,480
2	\$269,300	\$125,778
3	\$211,900	\$92,318
4	\$141,725	\$122,265
5	\$112,644	\$113,696
6	\$68,640	\$78,865
<b>Totals</b>	<b>\$1,067,609</b>	<b>\$654,402</b>

Year six expenses dropped dramatically due to corresponding drop in the number of tree removals and needed plantings.

## ATTACHMENT C

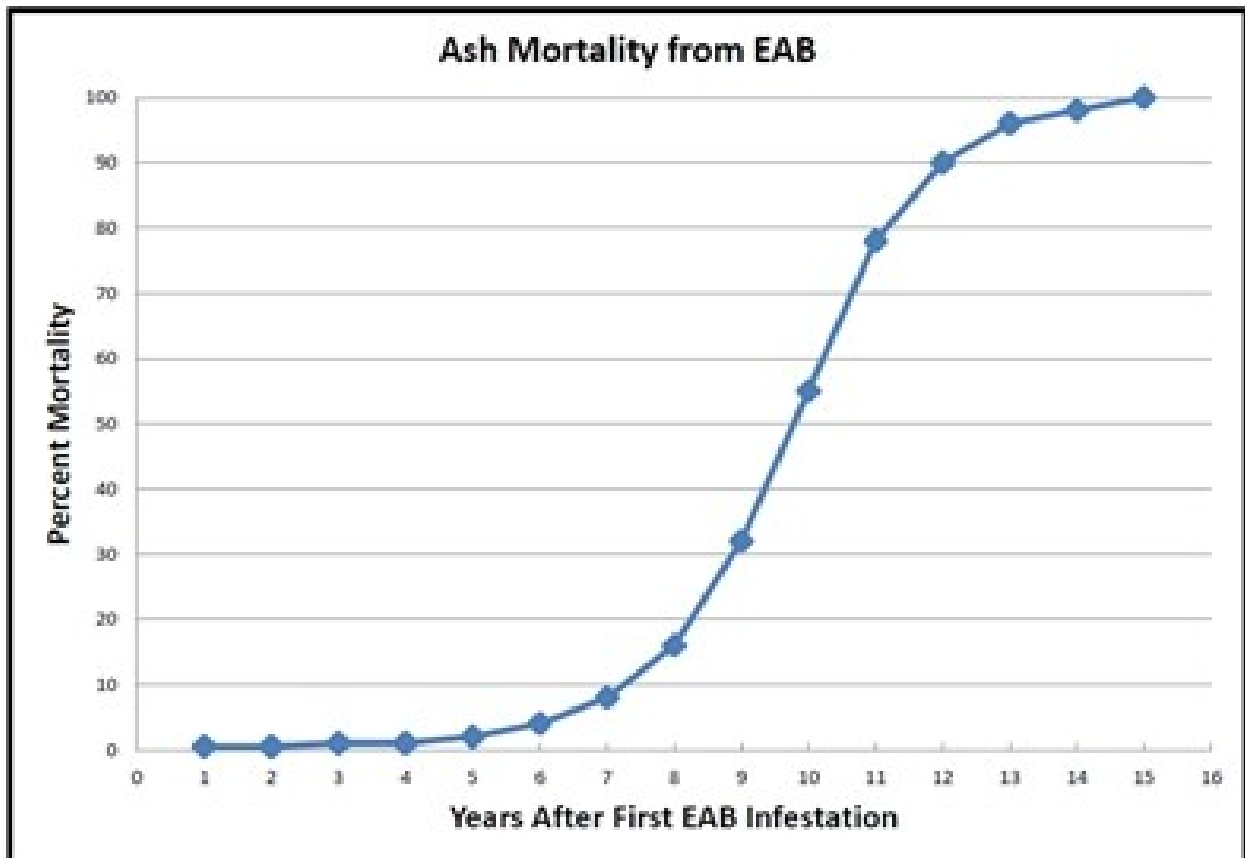
## **Current Schedule & Projected Costs**

The table below outlines current projected contract costs for ash tree removal, replacement plantings (including plantings through the partnership with the Ames Foundation), and treatments for Plan Years 7-20. These figures factor in inflation and account for tree growth. The total projected cost to complete removals, stump grinding, replanting, and treatments is \$1,365,808.

<b>Year</b>	<b>FY</b>	<b># Removals</b>	<b>Removal/Stump Grinding Costs</b>	<b>Planting</b>	<b>Planting Costs</b>	<b>Treatment</b>	<b>Treatment Costs</b>	<b>Total Costs</b>
7	20/21	54	\$35,356	68	\$33,620	423	\$58,537	\$127,513
8	21/22	46	\$37,595	54	\$34,730	0	0	\$72,325
9	22/23	45	\$36,826	46	\$33,940	0	0	\$70,766
10	23/24	41	\$45,709	45	\$33,433	311	\$52,022	\$131,164
11	24/25	42	\$39,472	41	\$32,201	0	0	\$71,673
12	25/26	31	\$36,992	42	\$34,025	0	0	\$71,017
13	26/27	46	\$60,280	31	\$29,482	187	\$38,593	\$128,355
14	27/28	51	\$74,902	46	\$35,750	0	0	\$110,652
15	28/29	23	\$42,952	51	\$38,175	0	0	\$81,127
16	29/30	39	\$73,190	23	\$27,017	0	0	\$100,207
17	30/31	48	\$79,791	39	\$36,980	0	0	\$116,771
18	31/32	46	\$87,274	48	\$38,798	0	0	\$126,072
19	32/33	46	\$80,418	46	\$38,566	0	0	\$118,984
20	33/34	0	0	46	\$39,182	0	0	\$39,182
<b>Total</b>		<b>558</b>	<b>\$730,757</b>	<b>626</b>	<b>\$485,899</b>	<b>921</b>	<b>\$149,152</b>	<b>\$1,365,808</b>

## ATTACHMENT D

The chart below demonstrates the percentage of ash tree mortality following the initial discovery of EAB in a community. EAB was discovered in Ames in 2018. If insect population growth and ash tree mortality in Ames is similar to what other Midwestern communities' experience, we can expect that from 2023 to 2030 almost one hundred percent of existing untreated ash trees will die.



Source: Mississippi River Connection

## ATTACHMENT E

### **Lesson Learned**

The following items have been learned in the first five years of the EAB Response Plan:

1. The bid process has led to significant decreases in projected expenses. However, given the range in bidding, it would be best to continue with current contract expense projections. Should the low-end bidders decide not to bid or to raise prices nearer their competitors, the projected budget could be short.
2. The residual stand of ash trees is growing and moving into the next diameter class. This growth is leading to higher-than-expected charges because tree removal and stump grinding costs increase with increased tree size. It also leads to a higher-than-anticipated number of contract removals due to the limitations of City equipment. To more accurately capture future costs, all ash trees were re-measured in fall/winter 2019.
3. The current model assumes a 24-inch diameter tree will have a 24-inch stump to grind. However, trees often have above-ground roots radiating from the tree. These “runners” need to be ground and that grinding increases overall costs. Stump grinding costs have been adjusted to reflect this reality.
4. Treatments appear to be working. However, there are numerous ash trees that were treated that are showing signs of decline. This could be related to ineffective treatment on those particular trees or some other factor (e.g. girdling roots, ash decline).
5. The overall budget did not factor in the costs associated with tub grinding large diameter trees that will not fit through a chipper. Parks & Recreation is working with a local Ames company to salvage some of this wood and reduce these costs.
6. Ash trees along trails and multi-use paths in wooded areas were not accounted for in the original Plan. These areas will be assessed in 2020, any ash trees that are within sixty feet of the trails/paths will be removed, and stumps will be treated to avoid re-sprouting.
7. Offering homeowners input on species selection for replacement trees in the ROW adjacent their home has been very well received.