

Memorandum

Department of Public Works



TO: Michael O. Geisel, P.E.
City Administrator

FROM: James A. Eckrich, P.E. *JAE*
Public Works Director / City Engineer

DATE: August 6, 2020

RE: Emerald Ash Borer Program and Street Tree Program
Status Report

As you know, the City of Chesterfield City Council adopted the Emerald Ash Borer Preparedness Plan (Plan) on November 16, 2015. The Plan was subsequently revised by City Council on March 15, 2016 in order to clarify and fund the reforestation component of the Plan.

The primary component of the Plan is the implementation of a seven-year program whereby all of the City Ash Trees will be removed. At the time the Plan was created there were 6,709 Ash Trees, comprising 28% of the total street trees. Since that time the City has removed 4,317 Ash Trees, leaving 2,392 Ash trees remaining. All of the remaining Ash Trees are scheduled for removal over the next 29 months, subject to City Council funding.

I have asked City Arborist Geoff Wegrzyn to provide a status report of the Plan, specifically detailing the conditions of the existing Ash Trees and challenges the City may face in removing the remainder of the Ash Trees. In response, Geoff provided the following breakdown. Note the term “dbh” is diameter at breast height, a common forestry designation used to describe the size of a tree.

Poor / Very Poor	75%, or 1,795 trees. 990 of these trees are size 20” dbh or larger. The remaining 805 trees in this condition are predominantly 15” – 19” dbh.
Fair	20%, or 570 trees. 95 of these trees are size 20” dbh or larger. The remaining 475 trees in this condition are predominantly 10” – 19” dbh.
Good	5% or 122 trees. All of these trees are 20” dbh or larger. Six have been treated by a contractor.

Below are photos of typical trees in the conditions described.

75% Poor/Very Poor- thin crown, die-back, severe infestation



20% Fair – thinning crown, branch loss, moderate infestation

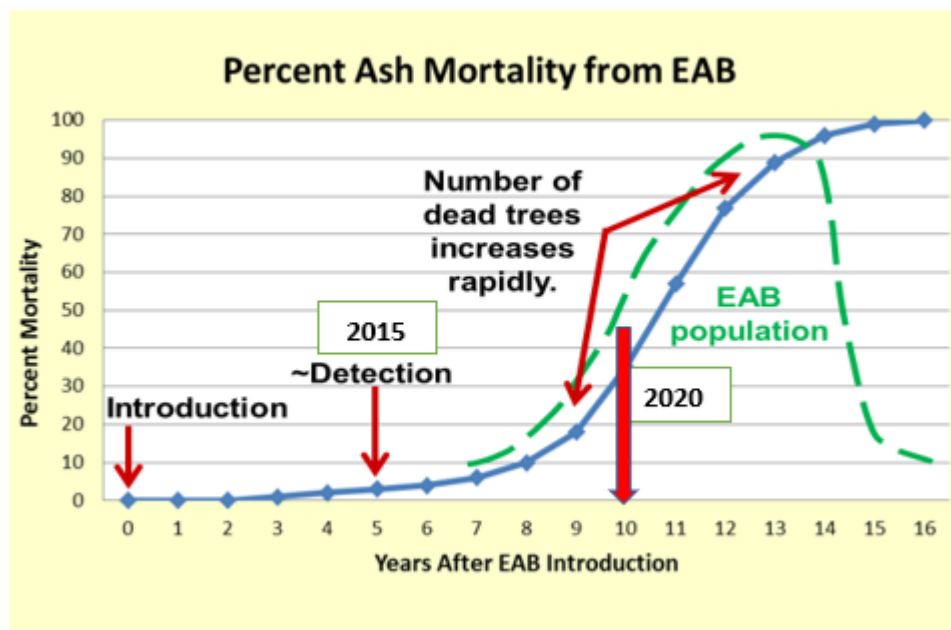


5% Good to Fair condition – Light borer infestation, good color, full crown



You will note in the description above that six of the Ash Trees in “good” condition have been treated. At the time of the implementation of the Plan the City made the decision not to treat its Ash Trees. The reasons the City made this decision were that treatment was expensive, it had to be completed annually in perpetuity, and many experts believed the treatment itself, which is very invasive, would ultimately kill the tree. Nevertheless, many residents are very proud of “their” large Ash Trees, and six of these trees have been treated by the adjacent residents. It is the City Staff’s plan to monitor these trees and remove them as necessary or when the residents decide they will no longer pay to have the tree professionally treated.

While completing this report, the City Arborist consulted with Robbie Doerhoff from the Missouri Dept of Conservation and State Forester Daniel Monchesky. They discussed the current EAB infestation status within the State of Missouri and St. Louis County. Both forestry experts commended the City on the action it has taken thus far, as many cities in the metropolitan area were slow to address the declining Ash and are now scrambling to keep up with rapidly dying trees. In the past two years most area municipalities have moved toward actively managing the Ash Trees by instituting mass removal plans, similar to the City of Chesterfield. Most industry experts agree with the initial EAB infestation assessment, that 99% of all Ash Trees will be killed by the EAB, and that there will be high concentrations of death within a two to three year period. See the chart on the next page.



In most cases, the poor condition of Ash Trees infested with EAB will manifest itself in the late summer. Signs of advanced EAB infestation include:

- D-shaped exit holes begin to appear lower in the trunk as EAB larvae move down the crown searching for more food.
- Ash Trees will experience bark “blonding”, which is caused by birds feeding on EAB larvae. It becomes noticeable when the grey outer bark is pecked off, revealing the white inner bark of mid to upper scaffold branches. Bird foraging holes created in the winter months exacerbate the tree branch decline by gouging out the exit hole and widening the already damaged tissue.
- Many Ash Trees will contain bark that splits. This can sometimes appear as if the branch exploded from the inside immediately over the borer feeding galleries.
- In some cases the tree will make a last ditch effort at survival by producing an abundance of epicormic shoots just below the EAB infested area. Generally, the lower the shoots the worse the infestation.

The City of Chesterfield Ash Trees are experiencing all of these signs and will certainly die, in many cases quickly, over the next few years. The trees that die will become brittle and hazardous to pedestrians, motorists, and property. **Accordingly, it is the recommendation of the City Arborist and me that the City continue its Plan to remove the remaining Ash Trees through 2022.**

As a reminder, the City is removing the vast majority of Ash Trees with in-house maintenance personnel. We did this by purchasing an additional Chipper and Bucket Truck in 2016, each of which were approved as part of the Plan. This

equipment is used by Street Maintenance personnel dedicated exclusively to tree removal. In order to account for the work which would otherwise have been completed by this crew, the City has supplemented contractual sidewalk work by an additional \$300,000 annually. **There seems to be widespread confusion about the additional sidewalk allocation. I want to be clear that the contractual sidewalk work is only related to the EAB Plan in that one of the three in-house maintenance crews is exclusively dedicated to tree removal. That crew would otherwise conduct sidewalk replacement. The sidewalk deficiencies within the City cannot responsibly be ignored. Therefore, this sidewalk work must be contracted, necessitating an additional allocation from City Council each year during the Plan.**

City Staff recommended, and City Council approved, this course of action because we were afraid that tree contractors would be overrun with work, leading to poor service and higher costs. It appears that fear was well founded, as that is indeed what is occurring throughout the St. Louis area. The City Arborist indicated that both of the City’s tree contractors cannot take on additional tree removals. Per the City Arborist, area tree contractors have reported that they are experiencing record numbers of requests for tree related maintenance and removal. Accordingly, it is unlikely that the City would be able to successfully contract for the removal of its remaining 2,392 trees in a timely manner.

The EAB Plan approved by City Council included an estimated annual allocation of \$583,000. With five years of EAB experience we believe that estimate is still good, and that the allocation required over the remaining two years will be approximately \$475,000 per year, or a total of \$950,000 to complete the program. The estimate changed by \$100,000 per year because I have increased the annual allocation for sidewalk replacement within the Capital Projects Fund by \$100,000 to \$300,000. The reason for the change is that our sidewalk needs are substantive and the \$300,000 contractual project (Project A) will be necessary now and after the EAB program is finished. Once the EAB program is completed, the \$200,000 annual project (Project B) will be terminated and that work will move in-house. The adjusted annual breakdown is as follows:

Contractual Sidewalk	\$200,000
Stump Grinding - 1000 per year	\$75,000
Reforestation – 500 trees, including GF	\$95,000
Supplemental Contractual Tree Removal	\$60,000
<u>Temporary Personnel</u>	<u>\$45,000</u>
TOTAL	\$475,000

I realize that these are difficult financial times with the unknowns associated with COVID-19 and future revenues. That said, I simply cannot recommend the postponement or termination of this program at this time given the condition of the remaining Ash Trees.

The most reasonable way the City could reduce EAB expenditures over the next two years would be to reduce or eliminate the reforestation component of the program. This program allows residents to request a street tree in front of their house. The postponement or elimination of this program would reduce tree related expenditures by \$155,000 (\$60k from General Fund and \$95K from EAB program). Additionally, temporary personnel costs could also be reduced by \$45,000 if the reforestation program were eliminated or suspended, resulting in a total savings of \$200,000.

As a reminder, the temporary personnel costs referenced above are for an employee to help the City Arborist administer the EAB Plan. This position was filled by Doug Durham for the first 4.5 years of the Plan. Mr. Durham was furloughed earlier this year and has elected to retire instead of returning to the City in this position. We will not fill this temporary position until a decision is made on the remaining two years of the EAB Plan.

You may recall that the Temporary Forestry Tech position was discussed during the approval of the 2020 EAB Plan allocation. At that time there were questions as to whether the personnel component of the Plan should continue to be funded. As I stated at that time, the City Arborist position is a full-time position absent the EAB Plan. The City Arborist manages all aspects of the City's 18,456 street trees. This includes site investigations, meetings with residents, managing the reforestation plan, maintaining the street tree inventory, and reviewing the tree components of development plans. The City Arborist is certainly capable of managing the tree removals, stump grinding, tree plantings, and the associated resident notifications and discussions associated with the EAB Plan. However, given the magnitude of the EAB Plan he simply cannot do so at the service level we expect when this work is added to his regular workload. Geoff is an excellent employee and he will do his best – but asking him to do this puts him in a position where he is likely to fail, and I do not recommend it. My recommendation remains that we hire an employee to help us during the remaining two years of the EAB Plan, unless the Plan is revised.

The best way I see to reduce EAB expenditures over the next two years would be to temporarily eliminate the reforestation program. As referenced above, doing so could reduce costs by approximately \$200,000 per year. If the reforestation component were removed from the EAB Plan and the General Fund this would allow the City Arborist to take on the additional EAB work. It would push him, but I believe it could be effectively managed for a limited period of time. The major drawback to this action would be that residents desirous of trees could not get those trees replaced, and the City's overall tree canopy, reduced by EAB, would not rebound as quickly. The next page contains a table which shows the trees planted over the last ten years. As you can see, tree planting has increased dramatically since the implementation of the EAB Plan, as many residents desire to replace the trees that are removed due to the disease. The elimination of the reforestation program would certainly been seen as a negative by many residents.

Year	Number of Trees Planted
2010	154
2011	115
2012	134
2013	141
2014	268
2015	130
2016	357
2017	495
2018	521
2019	516

This leads to a larger discussion regarding the reforestation program, which was referenced at a recent PPW meeting. When the EAB Plan was presented to City Council, it included a Staff recommendation that new street trees be removed from the public right of way. Instead, trees could be planted in private front yards near the right of way, with all future maintenance being completed by the property owner. This recommendation was NOT accepted by City Council, who determined that residents desire tree lined streets with those trees being maintained by the City.


Tree maintenance is an expensive endeavor for the City, especially when you consider tree trimming, tree removals, tree plantings, and the damage that tree roots cause to sidewalks. That said, at this point the City is over 30 years old with 18,000+ trees in the public right of way. Any change at this juncture would take decades to become effective. In my opinion “the toothpaste is out of the bottle” regarding this matter, and even if new trees were planted outside the right of way it would not make a significant change due the magnitude of the existing condition. There is simply no way to remove the existing 18,000+ trees from the right of way unless there is another disaster similar to EAB. Hopefully that does not occur, but if a similar crisis were to occur this matter could be revisited at that time.

Action Recommended

It is my recommendation that the City of Chesterfield continue with the remaining two year of the EAB Plan. This will necessitate a supplemental 2021 allocation of \$475,000 from General Fund – Fund Reserves. As described above, that allocation could be reduced to \$275,000 if the reforestation program were to be postponed or eliminated.

This matter should be considered by the Planning and Public Works Committee. If the Committee concurs with Staff’s recommendation it should vote to forward it to City Council. If the Committee desires an alternate course of action it should advise Staff of such.

Please forward to the PPW committee for review and direction.

 2020-8-6