Watertown, SD.
Emerald Ash Borer Management Plan

SUMMARY

The City of Watertown Forestry Department is taking a proactive approach in our efforts to get ahead of the impact of the Emerald Ash Borer. Rather than waiting and being reactive, our forestry crews have already been addressing this pending crisis by removing many ash trees on our city boulevards and in our city parks for the past few years. These efforts are important to help mitigate the impact to our urban forest once EAB makes its arrival in Watertown.

South Dakota has a higher percentage of ash trees than most other states in the country. It is estimated that nearly one third of all public trees in South Dakota are ash trees. The cost for ash tree removal across the state is estimated to range from $18-$43 million dollars. With tree replacement potentially adding another $6 million dollars to that cost.

INTRODUCTION

The Emerald Ash Borer, also known by the acronym EAB, is a green buprestid or jewel beetle native to northeastern Asia that feeds on ash (Fraxinus) species. Females lay eggs in bark crevices on ash trees, and larvae feed underneath the bark of ash trees to emerge as adults in one to two years. EAB most likely entered the United States in packing materials such as wooden crates made out of ash. It is now believed that the emerald ash borer has been in the United States since 1990 or 1991.

The arrival of EAB to Watertown is imminent and will most likely impact our community for at least ten years once it's detected. The purpose of this plan is to achieve three goals: First, is to keep all citizens and visitors to Watertown safe. Second, this plan reduces the effect of EAB on the City's annual budget by spreading the cost over many years. Third, this plan minimizes the effect of EAB on the urban forest.

This plan should achieve these goals by continuing with the preemptive strategies that our forestry crew have already implemented with the continuous removal of "suspect" trees on our boulevards and in our parks. Thus, reducing annual impact to the City of Watertown. This strategy will in many ways mirror how we have dealt with Dutch elm disease trees in Watertown for decades.

ASH TREE POPULATION

Through a software program known as Tree Works, our forestry crew keeps an accurate inventory of all boulevard trees, as well as trees in our city parks.

Currently, we have approximately 21,000 boulevard and park trees, of that total there are approximately 6,400 (30%) ash trees. It is unknown how many ash trees exist on private property; however, an educated guess would put that number somewhere between 7,000 – 7,500 trees. This would put the overall estimate of ash trees city wide, both public and private at roughly 13,600.

EAB MANAGEMENT STRATEGIES

There are two management strategies that we can use to combat EAB. The first being a proactive preemptive approach, which we currently have in place, by reducing the number of ash trees located on boulevards and in our parks. The Parks, Recreation & Forestry Director, along with the Parks & Forestry Superintendent determine trees deemed to be "suspect", due to condition, location and population. These trees are continually being removed in an effort to ease the burden on the City once the EAB infestation takes hold. The second will be a reactive approach that the City will be faced with after the arrival of EAB.

PREEMPTIVE EAB STRATEGY

The purpose and overall goal of a preemptive strategy is to reduce the population of ash trees in Watertown before the arrival of EAB. Thus, spreading out the financial burden on the City for the removal, replacement and treatment over a greater time frame. By preemptively removing ash trees, we will continue to create diversity in our urban forest by planting new species and giving them years of growing time prior to EAB arriving.

REACTIVE EAB STRATEGY

The reactive approach will be very different due to a number of factors. These include time frame in which EAB trees can be removed, whether or not they should be transported to an authorized location and then chipped, or chipped on site and then hauled to an authorized disposal site. Another option is to burn the tree waste at a designated burn site.

Since EAB is very difficult to detect in the early stages of an infestation, officials are reporting that it generally takes three to four years before infestations are discovered. Once EAB becomes established in an area, it will become a permanent part of that ecosystem. The preemptive approach that we currently have in place will considerably lessen the burden that the City will have to endure.

1) DETECTION

Early detection is very important in our community so that EAB does not have as much time to become widespread. Trees affected by EAB and targeted for removal will be marked by the City forestry crews in the same manner they mark trees with Dutch Elm disease. Some trees, in an effort to preserve prominent specimens, will be

tagged and will receive injection treatments. Tags will be visible to inspectors and will be dated for up to 2 years of treatment.

2) PREVENTATIVE TREATMENT

Treatment of ash trees will not take place until after an infestation has been detected within 15 miles of Watertown. Treatment of all ash trees will not be possible, but treatment of high value or important trees is an effective option for the city and homeowners alike. Treatment will be required every two years until infestation has passed. Boulevard trees and the expense associated with the removal will be at the expense of the City. Meanwhile, the treatment and/or removal of private trees will be at the expense of the property owner. The City may elect to allow residents to contract the treatment of their boulevard trees at their expense.

3) MANAGEMENT STRATEGY

Once an EAB infestation has been detected in Watertown, many of these infested trees will need to be removed and many others will need to be treated.

4) ORDINANCE

Quarantine area boundary lines and authorized disposal sites such as the landfill must be put into place to handle and treat large volumes of wood debris. Along with an established protocol when transporting and disposing of ash trees and debris. All ash wood will be disposed of at approved site(s) within the quarantine area.

5) TREATMENT OF REMOVED MATERIAL

Removal of trees infected with EAB should be done between the months of September and May when the adult beetles are not present. The most critical time for the movement of EAB infected trees is during the months of June and July. This is the period when adult beetles emerge from trees, begin feeding, and move to other trees to lay their eggs. It is best to leave these trees standing during these months and not risk the possible spread of EAB by transporting beetle infested wood to other areas.

Trees removed during this period should be chipped on site before transporting. Wood debris needs to be chipped to a minimum specified dimension of one inch or less in any direction to effectively kill any EAB larvae. Another option is to burn the infected wood as weather allows. Ideally these controlled burns would take place in late spring at an approved burn site.

STORM DAMAGE

In the case of storm damage, ash limbs and other ash debris will need to be transported to a disposal site. To reduce the chance of spreading EAB, it's best to chip the material on site before transporting to disposal site.

TRIMMING

Trimming ash trees should be delayed between the months of May and September. If this is not possible, then all branches should be chipped on site before being transported to an approved disposal site.

FIREWOOD

Firewood is one of the primary means of travel for the insect that causes EAB. Restricting firewood movement from an infested area helps slow the spread of EAB. Once EAB has been confirmed in Watertown, firewood will not be allowed to move out of quarantined area. A City ordinance will need to be created prohibiting the movement of firewood from the quarantined area.

RECOMMENDATION FOR PRIVATE TREES

There are approximately 7,200 ash trees on private property in Watertown that will need to be treated or removed once the infestation has set in. A combination of treatment and removal will allow property owners the flexibility to protect high value trees with chemical treatments for as long as they like, or wait and have trees removed that are left untreated and condemned by the City. The forestry department will be responsible for spotting and inspecting private trees, but ultimately, it will be the responsibility of the property owner to pay for the removal of these trees.

A joint effort between City crews and private contractors might be a viable option if the spread of EAB is too rapid to keep up with. This would most likely take place if there are dead or dying ash trees not promptly removed by the property owner that pose a safety concern to adjacent property owners. Dead and diseased trees will be marked for removal following the same guidelines that are currently in place for Dutch elm disease infected trees.

CONCLUSION

Not since the onset of Dutch elm disease in the 1970's has the City of Watertown been faced with something that could be this devastating to the face of our urban tree canopy. Options have been recommended for addressing EAB on all three fronts: Boulevard Trees, Park Trees, and Private Trees. This will no doubt affect the

entire community of Watertown and dramatically change the face of our urban landscape.

There is no question that the arrival of EAB could have a devastating effect on the City's urban forest. By having this management plan in place and using preemptive management strategies, we will continue reducing the population of ash trees and expedite the replenishing of new trees. Thus, ensuring species diversification in the urban forest.

City leadership in cooperation with the entire community will be needed in order to properly manage this challenge.

> *Tree totals do not include shelterbelts, natural areas and trail corridors that are part of the parks system.

Action Items
Preemptive
Continue proactive Ash tree management practices to reduce overall impact.
Monitor EAB trapping results in Watertown and surrounding counties.
Reactive
Establish inspection dates upon EAB confirmation in Watertown County.
Secure and develop disposal/treatment site – Landfill
Add firewood restrictions to current tree ordinance.
Complete development and implement of replacement tree program.
Identify high value trees for preservation treatments.
Secure needed treatment or disposal equipment.