

Emerald Ash Borer Action Plan

Introduction:

Emerald Ash Borer (EAB) is an exotic wood boring beetle from Asia that was most likely introduced to North America in the 1990's. The insect was first discovered in Detroit, Michigan and Windsor, Ontario in 2002. At the time of discovery it was estimated that the insect had been present for roughly five years. Since its discovery, EAB has spread throughout the northeastern US and Canada, killing more than 50 million ash trees. While it has yet to be discovered in Vermont, EAB has been found nearby in the Hudson River Valley of New York, southern Quebec, and most recently in Connecticut, southern New Hampshire and northern Massachusetts. Discovery in Vermont is expected in the very near future.

South Burlington currently has roughly 760 Ash trees along its streets and in its parks, comprising roughly 13% of the cities' street and park tree population. To make matters worse, the vast majority of these trees are located in only 3 neighborhoods, Dorset Farms, Brand Farm and the Golf Course neighborhoods. The mortality of ash tree in these neighborhoods will result in a number of streets with no street trees and the loss of 50-70% of the trees in the neighborhoods.

Discussion:

While there are currently no "cures" for EAB there are a number of strategies South Burlington could use to manage the effects of this exotic pest:

1. Removal and replacement of ash trees in fair to poor condition prior to EAB being detected in Vermont. This has been started in a very limited fashion mainly along Nowland Farm Road, utilizing trees from the TREEage community Tree Nursery as replacements. Removals and replanting can be accomplished by Public Works staff but the city will need to budget for replacement planting stock. Systematic removal and replacement may also be advisable on streets where all the trees are ash. This might involve removal and replacement of every 4th or 5th tree on the street so that there would still be some trees on the street when the ash trees succumb to EAB.
2. Interplant trees where possible on streets that are heavily planted with ash. Prime locations for this type of activity are street entrances and areas along streets where residences are absent and adequate spacing exists to provide a suitable planting site. Midland Avenue and areas along Nowland Farm Road are examples of streets where this strategy might be utilized. Again, Public Works staff can plant the trees but the city will have to budget for planting stock (a limited number of trees from the TREEage Community Nursery could be used for this purpose).
3. Once EAB has been found in the state, suitable ash trees can be injected with insecticides to protect suitable trees from EAB damage. Trees would have to be

treated every 1-2 years one EAB has been detected within 15-20 miles of the city. While this may not be a long term strategy to manage EAB it will provide the city with a longer time frame to implement the previous strategies. It is also possible that this strategy could buy time in the event that other more effective, long term management options are discovered.

Costs:

The primary cost of strategies 1 and 2 would be the cost of obtaining planting stock:

1. Wholesale cost of 2-2.5 inch caliper balled and burlapped trees currently run \$150-200.
2. Nursery stock planted in the TREEage Community Tree Nursery currently cost the city approximately \$20 a piece. These small 4-5 foot trees are then planted in the nursery and maintained for 3-4 years until they achieve a size suitable to transplant onto city streets. Most of the maintenance is provided by volunteers with some advice and assistance from Public Works staff. We presently have the capacity to harvest 50-60 trees a year from the nursery.

The primary cost associated with strategy number 3 is the purchase of pesticides to treat selected trees. There are several pesticides which can be used to control EAB, the most effective being a material called Tree-age (active ingredient emamactin benzoate).

1. Using current pricing, material costs for this option would be approximately \$3-6 per inch of trunk diameter i.e. a 10 inch diameter tree would cost \$30-60 to treat. This treatment would be required every 2 years to ensure control.

All of the above costs are strictly material costs and do not include labor and equipment costs that would be provided by South Burlington Public Works. Contracting any of these services would most likely result in 300-400% increase in the above costs (this is a best guess estimate).

Summary:

In the near future South Burlington will be faced with the prospect of removing and replacing a significant number of street trees due to the infestation of Emerald Ash Borer. Adoption of some or all of the above listed management strategies will enable us to deal with this problem in a proactive manner, spreading costs over a longer time period.