

## Criteria for Identifying Potential Ash Trees for Protection with TreeAzin



The decision to protect an individual ash tree from EAB infestation, or attempt to preserve an already infested tree, will be influenced by various factors. These factors include the tree's location, the cost of treatment versus other management options, the likelihood of success, and the benefits provided by the tree's preservation.

The overall number of trees to be treated on TRCA lands and on individual properties will depend on the resources available. Consideration of the criteria below should both ensure efficient use of these resources and increase the likelihood of realizing treatment objectives. The criteria focus on individual tree management and not forest stand-level objectives.

The decision to treat should be guided by the criteria below, however the weight given to each of the criteria will depend on the site and preservation objectives. In general, treatment will be required every two years while significant EAB populations are present – possibly ten or more years. The final decision to treat will be the responsibility of the appropriate property manager in consultation with forestry staff. The Canadian Forest Service's online "Ash Protection Model" is available to analyze the costs of treatment versus replacement options.

TreeAzin is a systemic insecticide which is injected directly into the tree. Optimal annual treatment timing coincides with initial emergence of EAB adults – in our region typically in late May or early June. TreeAzin's active ingredient is an extract from seeds of the Indian neem tree and it is registered by the Organic Materials Review Institute. It is an Ontario Class 4 Pesticide with a Class 11 active ingredient (permitted for cosmetic use). TreeAzin must be applied by an MOE licensed exterminator.

### Criteria to be considered:

#### 1) Tree Health

- Avoid treatment of trees already in decline from other factors or showing signs of stress
- Treatment of trees already exhibiting signs of EAB infestation should be considered carefully as it is more expensive and less likely to succeed – current research indicates that success rates are low in trees with more than 30% crown dieback

#### 2) Size

- In general, medium-sized and large trees provide more benefits than small trees and are more costly to remove. However, lower treatment costs of small trees especially in the immediate vicinity of other trees already chosen for treatment should be considered

#### 3) Hazard Potential

- Trees whose decline will pose a hazard to individuals or infrastructure will require a management response and represent a non-discretionary demand on resources – treatment cost and benefits should be evaluated against other management options

#### 4) Removal Cost

- In most cases, only hazardous and potentially hazardous trees will require removal
- Removal costs are affected by tree size, form, location, proximity to target (eg power lines), equipment required, and processing & removal requirements for the downed material

#### **5) Replacement Cost**

- Where tree replacement is required or desired, replacement costs should be included in option evaluation - recognizing that the services & benefits provided by medium and large trees will not be offset by tree replacement for many years

#### **6) Treatment Cost**

- Costs are dependent on tree diameter, tree condition, location, and number of trees being treated at a location.
- Treatments are required every 2 years while EAB populations are present – Chemical costs of treatment are \$3.40/cm DBH – incl. tax (\$100 for a 30 cm tree). Preventative treatments of trees <30 cm DBH require less chemical.

#### **7) Amenities Provided by Preservation**

- These are site dependent values such as overall aesthetic value, shade provision, noise and wind buffering, visual barriers, etc. Loss of these amenities could have real costs in terms of the quality of experience for visitors to TRCA properties and the ability to attract visitors

#### **8) Ecological Value Protected by Preservation**

- Ecological values at the individual tree level include genetic and future seed source value
- Treated trees have the potential to act as EAB population sinks following the elimination of the majority of ash trees in an area by attracting egg laying adults and affecting the EAB population's ability to maintain or re-establish viable population levels

#### **9) Cultural\Heritage\Educational Value Protected by Preservation**

- Trees with a significant history, memorial trees, or trees in some settings such as Black Creek Pioneer Village will have tree-specific heritage values
- Some treated trees may provide an opportunity to educate the public regarding EAB and forest stewardship

#### **10) Tree Permanence**

- Property management and future development plans should be considered in choosing trees for preservation