

# **TORONTO** STAFF REPORT

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February 28, 2003

To: Economic Development and Parks Committee

From: Joe Halstead, Commissioner Economic Development Culture and Tourism

Subject: Potential Infestation of Ash Trees in City of Toronto by the Emerald Ash Borer (City Wide)

Purpose:

To provide information on Emerald Ash Borer (EAB), which has infested ash trees in Essex County, Ontario and in southeastern Michigan, as requested by City Council at its February 5, 2003 meeting. In response to the infestation the federal government has recommended a strategy of containment and prevention of the spread in the hope of eradicating the pest. If containment is not successful, the economic, environmental and social costs will be devastating.

Financial Implications and Impact Statement:

There are no requirements at this point for any municipal expenditure associated with this information report. If an infestation of Emerald Ash Borer should be found in Toronto, costs associated with an eradication program will be brought forward at that time.

Recommendations:

It is recommended that:

- (1) the Commissioner Economic Development, Culture and Tourism:
  - (a) continue to monitor the actions being taken by the federal government to control Emerald Ash Borer in Essex County and report back to Economic Development and Parks Committee on the status of the control program in September 2003;
  - (b) identify suitable wood processing sites within each of the four Parks and Recreation Districts so that in the event that a local infestation of this or another invasive pest is identified in Toronto, site are immediately available for wood storage and processing, as required, to contain the pest from further spread;

- (c) prepare a communications strategy to increase public recognition of EAB, reduce the risk of importation of firewood from infested areas and ensure that in the event of EAB being introduced to Toronto, the infested area is discovered quickly; and
  - (d) monitor for Emerald Ash Borer in Toronto with assistance from forestry operations using aerial devices, as required, and report, if necessary, on funding requirements;
- (2) a letter be directed to the Honourable Lyle Van Clief, Minister of Agriculture and Food, responsible for the Canadian Food Inspection Agency (CFIA):
- (a) requesting that the CFIA enter into an agreement with the City of Toronto such that in the event that there is a positive identification of EAB or another alien pest in Toronto leading to a quarantine and eradication program, the CFIA agrees to pay for the cost of ground and aerial surveys and removal of trees that are dead or infested by EAB; and
  - (b) requesting that the CFIA provide additional funding to support all the actions recommended by the Science and Risk Mitigation Committee for eradication of EAB in Essex region of Ontario;
- (3) a letter be directed to the Honourable Yvan Hardy, Assistant Deputy Minister, Canadian Forest Service, to request that funding be provided to municipalities through the Tree Canada Foundation to help with the replanting of street trees where these have been killed by an infestation of alien pest such as the Emerald Ash Borer;
- (4) a copy of this report and the associated resolutions be sent to the Honourable Herb Dhaliwal, Federal Minister of Natural Resources; the Honourable David Anderson, Federal Minister of Environment; the Honourable Jerry Ouellette, Provincial Minister of Natural Resources (Ontario); the Association of Municipalities of Ontario; and the Federation of Canadian Municipalities, urging them to adopt a similar position and to advocate on behalf of municipalities potentially affected; and
- (5) the appropriate City Officials be authorized and directed to take the necessary action to give effect thereto

Background:

City Council, at its meeting on February 5, 2003, adopted a motion recommending that the Commissioner of Economic Development, Culture and Tourism be requested to report to the Economic Development and Parks Committee on the situation with respect to plans to deal with the EAB, since the ash trees in the City of Toronto are potentially at risk.

Emerald Ash Borer is native to Asia and was first detected in Detroit, Michigan in July 2002. It has since been detected in Windsor, Ontario, where the recently established borer is killing over

12,000 public and privately owned ash trees. An administrative quarantine area was put in place on September 17, 2002 (Attachment 1 of this report), but the possibility of EAB spreading in Southern Ontario is very high given the aggressiveness of the alien pest, difficulty in identification during initial infestation, recent drought and lack of natural enemies.

The beetle has a one-year life cycle. It lays its eggs in bark crevices (May-August) and emergent larvae tunnel into the outer stem, feeding underneath the bark. The larvae feed throughout the summer and over winter in the stem of the tree. They emerge as beetles sometime between May and August. Beetles typically spread relatively short distances by flight, although high winds may contribute to longer distances of spread. The greatest risk of spread is when infested wood is transported by vehicle over long distances, such as during the transport of firewood.

It is fortunate that there are few natural forests in the known area of infestation although ash trees, including two provincially rare species, in several ecologically significant areas such as Point Pelee are at imminent risk from attack. Detection and delimitation surveys for the 2003 season are underway by the CFIA and EAB has already been confirmed in two new sites immediately adjacent to the area currently under quarantine. Until such time as the quarantine (regulated area) is officially revised, new sites will be quarantined by the CFIA on an individual basis. Also at risk is the more heavily forested area north of Lake St. Clair, which extends along the St. Clair River to the City of Sarnia. There is significant risk that the beetle will continue to spread in the absence of rigorous control programs and infested wood or nursery stock may still be transported to new areas, including Toronto.

#### Comments:

##### The Importance of Ash Trees in Toronto

Ash trees are fast growing, hardy in a range of site conditions and are relatively long lived. Whereas some species such as oak are known for poor regenerating ability in recent years, ash regenerate readily in natural areas. The most abundant regenerating species in many forested areas is now ash. The loss of ash species in North America would be devastating, especially given the fact that American Chestnut, American Beech, American Elm and Butternut are already rare and disappearing.

With respect to its commercial properties, ash is a strong wooded species that is well known for its superiority in the manufacture of hockey sticks and baseball bats. The wood is also used for flooring, furniture, cabinets and tool handles.

##### Cost of Removing and Replacing the Ash Trees in Toronto

Although EAB has not been found in Toronto or outside Essex County, it is important to look at the potential effect this insect would have if it spread to Toronto.

Six percent of Toronto's street trees are ash (25,000) and there are about the same number of privately owned ash trees. There are many more ash trees in parks and natural forested ravines and woodlots in the City. The cost of removal and replacement during an eradication program,

including effective sanitation, has been estimated to be \$2,475.00 per tree. This operation would be done in local areas and it would probably involve cost sharing with the CFIA. If eradication programs are not successful and all ash trees are killed by the EAB, the estimated price for removal of affected street trees alone is \$8,253,900.00. This price has been adjusted to account for the varying cost to remove trees of different sizes but it does not include transportation, wood disposal and replacement costs. Transport and disposal costs depend on a number of factors but might be \$250,000.00 per year for additional trees. Replacement of ash street trees with calliper trees would require approximately \$8,000,000.00. These costs do not include removal or replacement of trees in parks and ravines, nor does it include the lost environmental benefits (local heating and cooling benefits, habitat value or carbon sequestering) or aesthetic value of mature trees. Normal forestry operations and public service would be affected for up to 7 years with additional maintenance backlogs in order to expedite dead tree removals only. Toronto would also face an increased number of damage claims due to an increased number of standing dead trees.

#### Actions Taken by Federal and Provincial Agencies to Control EAB

Emerald Ash Borer was first found in North America and Ontario in July 2002. On September 17, 2002, CFIA - the federal agency, responsible for regulating introduced Forestry or Agriculture pests established a quarantine that prohibited the movement of ash trees and wood from the Windsor area (City of Windsor, Towns of Amherstburg, Essex, LaSalle and Tecumseh). Similarly, in the United States a State quarantine was put in place in Michigan and may be soon put in place in Ohio. There is no registered pesticide in Canada to control EAB. Sanitation, which includes urgent removal and grinding of infested wood, is the only available option for control.

The CFIA has collaborated with other government agencies, including the USDA, the Ontario Ministry of Natural Resources (OMNR) and the Ministry of Agriculture and Food (OMAF) Natural Resources Canada-Canadian Forest Service, to develop strategies to control the EAB and prevent its spread to other areas of Canada. The following consultative and advisory committees have been formed to provide science-based advice to the CFIA on this issue:

- (1) A Critical Pest Management Council, including the Deputy Minister or designates of the federal and provincial agencies involved. This is the overall decision making body, which has authority to commit resources. The final authority however rests with the CFIA.
- (2) The Federal-Provincial Committee of Directors. This Committee oversees the Science and Risk Mitigation Committee.
- (3) The Science and Risk Mitigation Committee examines the science and recommends actions that should be taken for control, research, and survey. This Committee has government and non-government representatives that act as advisors. There are two subcommittees within this committee: one that focuses on research and the other survey issues.

The Science and Risk Mitigation Committee has presented its recommendations to the Federal-Provincial Committee of Directors. It has been recommended that CFIA undertake a four part program as follows to stop the spread of this beetle and eventually eradicate it:

- (1) Cutting and disposal of infested trees at the leading edge of the infested area to suppress the EAB's population.
- (2) Enforcement of quarantine zone by establishing patrols, inspections, surveillance, roadside signs, disposal bins, marshalling yard, TV and radio ads.
- (3) Conduct detection surveys to identify any populations outside of the current known infested areas; and delimitation surveys to detect infested trees on the leading edge of the infested area.
- (4) Establish a "firebreak" zone of no ash trees, by cutting ash in a line approximately 6 kms. wide, east of the known infestation, from Lake St. Clair to Lake Erie.

The above recommendations have not yet been enacted and are now being reviewed internally by the CFIA. The CFIA has stated that the trees in the firebreak do not have to be removed until the fall of 2003 to be effective. Small-scale surveys have been conducted by various agencies since August 2002 but more rigorous surveys still need to be done. To the best of our knowledge as of February 21, 2003, CFIA has committed close to \$5 million to begin suppression programs in Ontario, although it is unclear whether these funds will support a sustained or a short-term program of control. Windsor has estimated that it will cost close to this amount to remove the 6,000 to 9,000 dead ash street trees in Windsor alone. However the CFIA plan will provide them with little relief since priority is to be given to surveillance along the leading edge of infestation and removal of living but infested trees that are found on the outer edge of the infested zone, rather than the dead trees that no longer contain the beetles. There is also no offer of assistance being extended to the residents that are responsible for approximately the same number of private trees in the Windsor area.

Under the Plant Protection Act the Federal Government can establish quarantines, provide inspection, enter private properties to detect quarantined pests and require that infested material be destroyed. Technically they can require the person who has ownership of a property to have the infested material destroyed at the owners expense. In the past the Federal government has passed specific regulations under the Plant Protection Act to help defray the costs of tree removals, chipping, stump grinding, and disposal should such measures be necessary. In general, it has been a policy of the CFIA to seek to share costs for the eradication or control programs with the other federal government departments or agencies, provincial government and other affected stakeholders. While the CFIA recognizes that removal of dead or dying trees in Windsor and other affected municipalities has merit with respect to the long term management of EAB, its top priority at the present time is the detection and removal of infested trees on the leading edge and further detection surveys of any populations outside the current known infested area. For this reason there is no commitment at the present time to assist Windsor in removing infested or dead ash trees.

## Actions Taken by Toronto Urban Forestry Services to Prepare for Potential Introduction of EAB

The City Forester's office is finalizing an action plan to address a potential EAB infestation. This plan will identify specific actions in the event that a local infestation of EAB is discovered. The plan assumes that some of the roles and responsibilities of various stakeholders would be determined in the event of infestation being found.

The following are some of the steps that have already been taken or are currently underway by the City Forester's office:

- (1) City Council adopted By-law No. 310-2000 to authorize City Forestry staff to enter upon private property to inspect for the presence of Asian Long-Horned Beetles and other alien forest pests and to remove infested trees, on all public and private property, with the consent of the property owner (City of Toronto Municipal Code Chapter 813).
- (2) The hot line that was set-up to report Asian long-horned beetle finds (392-7859) would also be used for reports of EAB finds.
- (3) City Forest Health Care Inspectors met and are in close contact with CFIA staff. They also visited Windsor to meet with that City's foresters and tour the affected areas. Training sessions have been planned for March this year where the Forest Health Care Inspectors will share information on the identification of EAB with appropriate District Parks and Recreation staff and our contractors. By training our staff in the identification of EAB, the chances of finding an infestation at an early stage are greatly increased.
- (4) The City Forester will prepare an article for the forestry web site and upcoming electronic newsletter of the Urban Forest Network. This edition will be dedicated to the issue of EAB and will be shared with hundreds of industry professionals and any interested general public. A public information meeting is also being planned.
- (5) City Forest Health Care Inspectors will work with CFIA staff to conduct a systematic ground survey of the ash tree population in the City for the presence of the EAB. Aerial (tree crown) surveys would be more effective in detecting EAB given that it is known that insect exit holes are sometimes found only high up in trees, with none at ground level. To conduct a full-scale survey/detection program would require designated staff members and special equipment (mobile telescopic lift unit) that are currently not available without special funding being made available.
- (6) In the event of confirming the presence of EAB in a local area of Toronto, designated Forestry staff will, in co-operation with CFIA, immediately undertake to:
  - (i) Arrange for forestry crews and equipment to be available to assist federal/provincial authorities to undertake intensive scouting in the local infested or suspected infested areas. Additional funds would be required if the infested area were already large when the beetle is detected.

- (ii) Identify to federal/provincial authorities the locations for wood holding/processing where destruction of infested wood could take place. The site requirements are currently being investigated. The City Forester will immediately undertake to identify specific sites within each Parks and Recreation District that may be designated for use in the event of an invasive pest outbreak. If Parks and Recreation lands are not suitable, the City Forester will consult with Facilities and Real Estate and report back to Council on the possible use of other City owned lands.
  - (iv) Assist federal/provincial agencies with public consultation.
  - (v) Provide property data maps for portions of the City where federal/provincial authorities have determined that there is an infestation of EAB.
  - (vi) Launch a communication plan to notify residents of the importance of identifying EAB to assist in identifying infested trees and areas; as well as to promote understanding of the need to remove trees to destroy insects and eradicate them or minimize their numbers.
- (7) It is recommended that communications staff assist forestry staff and prepare a communications strategy and allocate associated funds to increase public recognition of EAB. Communication strategies have been developed by the CFIA, including posters and flyers, which help to identify the pest and pest damage. Given the magnitude of the threat, it is recommended that the City initiate its own communication strategy to supplement the efforts of the CFIA. Information on EAB will be published in the Spring/Summer Toronto Fun Guide, will be presented at Canada Blooms and is available on the City's forestry website. Additional methods of educating the public must be identified to reach a broader audience.
- (8) The Commissioner of Economic Development, Culture and Tourism will appoint an official municipal spokesperson for contact with the federal and provincial authorities, media and council.

#### Responsibility for Eradication Programs

The CFIA has the primary mandate in the enforcement and administration of the Plant Protection Act and associated Regulations. In general, it has been a policy of the CFIA to seek to share costs for the eradication or control programs with the provincial government and other affected stakeholders. For example, since spring 2000, the CFIA has collaborated with the CFS and the Regional Municipality of Halifax to implement the brown spruce longhorned beetle eradication program. The Memorandum of Understanding between these groups provides for CFIA and CFS to pay the total cost of surveys, research and tree removal. Halifax provides logistical/technical support in surveys, mapping, accommodation and staffing; and they participate in the task force. The estimated total investment in eradication efforts is between \$7-10 million to-date.

In the greater Windsor area the CFIA has not yet taken responsibility to fund the cost of removing infested or dead trees which are becoming a safety liability. The CFIA mission statement refers to a mandate of preventing the introduction and spread of regulated pests into Canada. It is imperative that the CFIA fulfil their mandate. Delays associated with developing Administrative policies such as quarantines should not reduce their responsibility for reimbursement of municipal costs associated with implementing immediate action in the event of new infestations being detected. The City of Toronto should support Windsor by recommending to the Federal Government that they help to fund the cost of all tree removals within the regulation area, rather than only funding the cost of removing infested trees on the leading edge of the infestation. Special funds, in addition to those provided by the Canadian Forestry Service through Green Streets Canada program, should also be made available through the Tree Canada Foundation to help municipalities pay for the cost of replacing street trees.

### Conclusions:

The introduction of EAB to North America may result in devastating losses to forests in Toronto and Ontario. The Science and Risk Mitigation Committee has recommended that CFIA adopt a full 4 point eradication program but the Federal Government has not yet provided funds to support a full program. If the decision to release almost \$5 million is accurate, it will help to start the suppression effort in the Windsor/Essex area but will not help the City of Windsor to deal with removal and replacement of already dead trees. It will be costly to initiate a full eradication program, but the alternative economic losses that will result from lack of effective action to implement an eradication program is incomprehensible. Action is needed urgently both in Canada and the United States.

If an eradication program is required in Toronto there will be significant immediate costs that should be paid for by CFIA. A memorandum of understanding is required to ensure that the federal government will reimburse funds spent by Urban Forestry Services to increase aerial surveys and remove infested and dead ash trees in co-operation with CFIA. The City of Toronto is prepared to lend technical/logistical support and to provide sites for wood processing but the direct cost of tree removal, transport and grinding should be borne by the CFIA.

If the eradication program in Canada is not successful and the EAB spreads to Toronto, the CFIA is not likely to take any responsibility for tree removal and replacement. In this situation the City of Toronto can expect to have costs of over \$16,000,000.00 for removal and replacement of street trees plus additional costs for park trees. The residents of Toronto can expect to encounter \$8,000,000.00 in additional cost to remove private trees. If they chose to replace these trees they will face additional costs; if they chose not to replace them, the City will lose additional canopy that currently contributes environmental benefit.

The City Forester's office has undertaken many initiatives to prepare for possible introduction of EAB. Regular communications with CFIA, OMNR and City of Windsor staff will be maintained so new findings are immediately taken into consideration in Toronto's Forestry programs. The location of wood holding/processing yards will be reviewed and if suitable sites cannot be identified within Parks and Recreation lands, selection of other City-owned lands will be undertaken with the assistance of Facilities and Real Estate Division. The initiation of dedicated



above-ground surveys would require significant additional funds for dedicated aerial lift equipment and staff. Urban Forestry Services will report back to Council on the status of the EAB spread and control program as the season progresses.

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List of Attachments:

*Attachment No. 1: Emerald Ash Borer – Map of distribution and area of regulation (quarantine) in Ontario, prepared by CFIA Plant Health Survey Unit, dated October 23, 2002.*