

TORONTO STAFF REPORT

June 15, 2006

To: Economic Development and Parks Committee

From: Brenda Librecz, General Manager, Parks, Forestry and Recreation

Subject: Potential Infestation of Ash Trees in the City of Toronto by the Emerald Ash Borer
All Wards

Purpose:

To provide an update on the infestation of the Emerald Ash Borer in southwestern Ontario and the actions being taken by the Federal Government to control the invasive insect spread.

Financial Implications and Impact Statement:

It is expected that when emerald ash borer spreads to Toronto, there will be substantial costs as a result of the need to remove and replace dead trees. These costs are expected to be \$37 million over an approximate five-year time span, for management of street trees alone. If Urban Forestry is to be in a position to manage hazards, liability and provide acceptable service to Toronto residents for tree removal and planting associated with the Emerald Ash Borer management program, the backlog must be retired. This requires that the previous request for addition of \$1.2 million Operating Funds in the Forestry Budget to reduce the tree service delay, approved by Council but deferred to 2007, be approved in 2007.

The Deputy City Manager and Chief Financial Officer has reviewed this report and concurs with the financial impact statement.

Recommendations:

It is recommended that:

- (1) the General Manager, Parks, Forestry and Recreation continue to monitor the actions being taken by the Federal Government to control Emerald Ash Borer in south-western Ontario and report back to the Economic Development and Parks Committee on the status of the control program in spring 2007;

- (2) the General Manager, Parks, Forestry and Recreation continue to not purchase and plant ash trees on City-owned land, and to not approve ash planting as part of landscape plans for private land developments, as has been the policy since spring 2003;
- (3) City Council communicate its concerns about Emerald Ash Borer to the Honourable Chuck Strahl, Minister of Agriculture and Agri-Food and Minister for the Canadian Wheat Board, responsible for the Canadian Food Inspection Agency, and that the Federal Government be requested to provide financial support for an Emerald Ash Borer management program including an effective communication outreach program for Toronto and other Municipalities, and a commitment for compensation to support new tree planting;
- (4) City Council communicate its concerns about Emerald Ash Borer to the Federation of Canadian Municipalities, Association of Municipalities of Ontario and to Landscape Ontario Horticultural Trades Association, with the intent of encouraging other municipalities to adopt similar practices for the restriction of ash tree planting, for monitoring and education to facilitate early detection of outlying populations, and to obtain necessary federal and provincial funds;
- (5) the General Manager, Parks, Forestry and Recreation continue to focus on reducing the current levels of tree service delay, in preparation for the expected increase in tree removal associated with anticipated ash dieback and that this issue be referred to the budget process for consideration with the previous request currently deferred to 2007, of \$1.2 million operating funding for the Forestry Budget to eliminate tree service delays;
- (6) the General Manager Parks, Forestry and Recreation, in consultation with Facilities and Real Estate, report to Economic Development and Parks Committee in the second quarter of 2007 on the issue of available yard space that is needed to service the expected increase in wood waste processing and operations services that will result from Emerald Ash Borer related tree removal;
- (7) the General Manager, Parks, Forestry and Recreation review current practices and policies for planting of native and non-native tree species in Toronto, in recognition of the threat of invasive species and the need to maintain a diverse urban forest, and report to Economic Development and Parks Committee in the first quarter of 2007 providing information and recommendations; and
- (8) the appropriate City Officials be authorized and directed to take the necessary action to give effect thereto.

Background:

This report provides updated information from the last report on Emerald Ash Borer (EAB) adopted by City Council at its meeting held on April 14, 15 and 16, 2003, regarding the infestation in south-western Ontario and its potential impacts on Toronto's urban forest.

It is evident now that the Emerald Ash Borer (EAB) infestation has been established and has spread significantly since the Canadian Food Inspection Agency (CFIA) first detected the beetle and initiated a “slow the spread” program in the Windsor area of Essex County in August of 2002. At the same time, authorities in the United States stated that the EAB infestation was widely established in Michigan. It is estimated that this pest has so far killed or infested in excess of 15 million ash trees in Michigan and other parts of the US and Canada. EAB has also spread to Ohio and Indiana, possibly through the past movement of infested ash forest products, firewood and nursery stock from Michigan. Scientists and regulatory specialists from the United States and Canada (Science and Advisory Panel) have concluded that the EAB is likely to remain a serious pest and spread throughout most of eastern North America’s ash tree stands.

In September of 2003, surveys conducted by CFIA in south-western Ontario confirmed the leading edge of the infestation to be near the eastern border of Essex County (and Chatham-Kent). Based on these surveys, there was no evidence that EAB was established elsewhere in Ontario. To slow the further eastward spread of the beetle from these areas, CFIA initiated a control program aimed at containing and slowing the spread. The program involved the removal of all ash trees in a zone 10 kilometres wide by 30 kilometres long (referred to as the Ash Free Zone (AFZ)), located along the eastern edge of the known infestation. The main objective of the AFZ was to slow the spread of the infestation toward the east by eliminating the beetle’s food source within what was believed to be its flight range. Unfortunately, surveys conducted by the CFIA subsequent to the zone being established detected infested trees in an area of Chatham-Kent to the immediate east of the AFZ

During the late summer and fall of 2004, previously undetected, infested trees were found in Chatham-Kent, likely the result of infested forest products being moved there prior to the establishment of regulatory controls in 2002. In the absence of any pesticide controls and to ensure that the AFZ would continue to provide a barrier to the natural spread of EAB, the CFIA, on the advice of its science committee and Federal and Provincial government partners, elected to remove all known infested trees in western Chatham-Kent as well as ash trees within a 500 metre radius of these. This entailed the removal and destruction of an estimated 50,000 ash trees during the spring of 2005. Unfortunately, surveys conducted by the CFIA in late 2005, and early 2006 confirmed the presence of numerous EAB-infested (but previously undetectable) ash trees, in the area. Based on these results, and on preliminary research conducted by US and Canadian scientists, removal of infested trees is no longer considered a viable option to slow the spread in areas in which EAB is likely to be well established. Early detection of the beetle at low population levels is very difficult and remains the primary challenge for the CFIA and other North American regulatory agencies who are attempting to slow the spread of EAB.

Throughout the summer of 2005, the CFIA continued its surveys throughout south-western Ontario and around other high risk sites throughout the province. These surveys confirmed the presence of EAB along the Canadian side of the St. Clair River in Lambton county (previously determined to be very high risk for the establishment of EAB due to its proximity to heavily infested areas of Michigan), and at an isolated site near the town of Dutton, in Elgin county. While the Lambton county infestation is almost surely the result of natural extension of an established population in Michigan, surveys and research around the Dutton site have confirmed that it is an outlier resulting from a past introduction around a highway 401 Service Centre, at least five years previous.

At the present time, there are no plans by the CFIA to remove infested trees in Lambton County; this has been deemed to be not cost-effective, and of limited potential effectiveness. However, all properties within 5 kilometres of the infested sites have been placed under strict quarantine, and a county wide quarantine is being broadcast by way of Federal ministerial order.

Because the EAB population in Elgin County was thought to represent a true outlier, resulting from a singular introduction in recent years, it presented a unique opportunity for scientific research to be conducted on how EAB disperses and distributes once introduced to a new area. To this end, Natural Resources Canada-Canadian Forest Service (CFS) and the CFIA have collaborated on a research project there during the spring of 2006. A condition of this research was that all 200 known infested trees would be removed and transported to facilities in already infested areas, on which further analysis of the trees could be done.

In the United States, the spread of EAB is now spread in three States. In Michigan, infested areas and known outlying populations are state-wide. In Ohio and Indiana EAB is not yet as widespread, with about 13 and 6 counties respectively under quarantine. It is expected that further spread will not be contained by the quarantines that are in place and that spread across the range of ash in North America will continue rapidly.

The CFIA is currently developing a science-based management plan for EAB, in collaboration with its federal and provincial partners, as well as its Science Committee.

Surveys will continue during the summer and fall of 2006, both in south-western Ontario, and around high risk sites across Ontario, including the Greater Toronto Area. While EAB is not yet believed to be present in the GTA, the area is considered high risk by virtue of the probability of infested ash materials having been brought there in recent years, and the large number of ash trees in natural and landscaped areas.

In all probability EAB will continue to spread. The past rate of spread is approximately 50 kilometres per year, which would suggest EAB could be in Toronto within 5 years. Given the increased awareness and orders to prevent transport, it is possible that natural spread will not reach Toronto for many more years, but this depends on the effectiveness of the quarantines. Natural spread is estimated to be as low as 10 kilometres per year. The beetle population is known to be about 200 kilometres from Toronto at this time. It is very difficult to determine the exact boundary of the infestation with the currently used survey methods. It is also difficult to detect unnatural spread that may have already occurred through transport of infested ash forest products, firewood or nursery stock. The prevailing opinion amongst scientists and regulatory specialists is that it takes four to five years to detect EAB in an area, after its initial introduction there, and that the leading edge of an established population may be 30 kilometres or more beyond where it can be reliably detected. Under this assumption, EAB may already be established in the London area and it is very difficult to say where else it may be found in the next five years.

Comments:

The Importance of Ash in Toronto

Ash trees are an important part of the City of Toronto urban forest landscape as they are commonly found on city streets, parks and woodlots. Six percent of Toronto's recorded street trees are ash (26,786), but many more ash trees exist on streets in industrial areas where records are not current. Attachment 1 shows the known distribution of ash street trees in Toronto. It is estimated that the number of privately-owned ash trees is similar to the number of street trees, and that there are many more ash trees in parks and natural forested ravines and woodlots in the City. The average cost of proper removal, disposal and replacement of street trees with calliper trees is currently estimated to be \$1,405.00. This does not include follow-up maintenance for newly planted tree establishment. Many blocks on Toronto streets are populated with 100 percent ash street trees.

Ash forests provide habitat for numerous animals and birds and are integral to the health of soils and watersheds. In natural forests of southern Ontario, ash trees generally form a high proportion of the young tree population. The loss of ash trees would reduce or eliminate food and shelter sources for wildlife, thereby disrupting the ecology of tableland and valleyland forests. Ash trees are also valued as a street tree, being relatively fast growing and one of the very few species that are tolerant of difficult growing conditions typical in urban areas. The loss of the ash species will limit diversity of the future urban forest. All species of ash play an important role in maintaining the health of the environment in which they are located.

Comparison of EAB to Asian Long-horned Beetle

Emerald Ash Borer, like Asian Long-horned beetle (ALHB), is from Asia. Both species kill healthy trees and pose a great threat to our native forests in North America, but these insect species have differences that affect our ability to implement a successful control program.

EAB feeds on living tissue between the bark and wood. EAB does not bore into the wood as does ALHB. EAB lives in and can kill trees within one year, whereas ALHB can live up to two years in a tree and may take several years to kill it. EAB is a small flat headed borer that tends to disperse great distances especially when caught by high winds. ALHB is a larger, clumsy round headed borer that does not tend to disperse great distances and seeks protective cover during storms.

The numbers of EAB in a local population increase much faster than ALHB, increasing the potential for faster population spread. Detection of ALHB is much easier, given that the egg laying sites and exit holes are readily visible. EAB is much more difficult to detect in the early stages of infestation.

Finally, pesticides applied by stem injection are much more effective for EAB than for ALHB and will be discussed further in the next section of this report.

EAB Control Options

To date, the only control for EAB that is available and has been used in North America is combined tree removal, chipping and grinding of wood waste. EAB does not represent a significant problem in its natural range in eastern Asia, due to various factors holding the EAB population in check including natural predators, pathogens, and tree resistance which have resulted from the co-evolution of the pest and host plant. Scientists in both Canada and the United States are working with Chinese scientists to identify biological control agents in Asia that could potentially be introduced into North America to combat the EAB.

Early detection is essential in order to effectively control the spread of a pest infestation. Currently available survey methods do not reveal the newly-infested trees. The beetles lay tiny eggs in bark crevices, and the entry holes made by the developing larvae are virtually undetectable given their small size and location within the folds of the bark. Infested trees have not been detected until years after trees are attacked and signs and symptoms are expressed. By then the beetle is already well established in the area and control actions would be generally ineffective. Scientists are intensively working on the improvement of detection methods by testing new trapping and diagnostic techniques.

EAB larvae tunnel under the bark and feed in the cambium, between the bark and the wood and are very hard to kill with pesticides applied to the exterior of the tree. To be effective a pesticide must be either absorbed into the tree through the roots or leaves, or injected directly into the active vascular region of the tree and become systemic within the tree. Recent research conducted in Canada and the U.S. has demonstrated that certain pesticides can be effective in either protecting the tree from attack, or killing the larval stage of the beetle within the infested tree. The current pesticide of choice is a chemical called imidacloprid, which is an active ingredient in several commercial products on the market in Canada and the US. Efficacy tests have demonstrated that this chemical can successfully kill EAB in lightly infested trees, when applied annually. The restricted use of a formulation of this product (Confidor®) was approved on an emergency registration basis on May 6, 2006, by the Pest Management Regulatory Agency (PMRA) of Health Canada.

Pesticide application by stem injection is a tool that might be used to protect selected high value ash trees, perhaps protecting them in the hope that a future biocontrol might be found and released to naturally slow or stop the EAB from killing ash trees. This type of pesticide treatment is similar to fungicide injections used to control Dutch elm disease. Pesticides may offer protection for a few trees, but it is not a method of control that will be available to protect large numbers of trees due to the cost, the negative environmental impact of repeated use of pesticides, and due to the incremental harm caused to the individual tree over time, resulting from the injection method. In the event of finding a small outlying population of EAB, pesticide injection will provide a valuable tool for controlling the pest population numbers and spread.

Current Control Actions Taken by Federal and Provincial Agencies

At the present time CFIA is continuing to survey for EAB in south-western Ontario and around high risk sites across Ontario including the GTA. The purpose of these surveys is to detect, where possible, the leading edge resulting from natural spread and any outliers beyond the leading edge that may have resulted from past movement of infested forest products. Five kilometre quarantine zones were imposed by the CFIA around known infested sites in both Elgin and Lambton Counties in 2005, and actions are currently underway to declare these counties as infested. Essex and Chatham-Kent are already regulated under Federal Ministerial Orders. It is believed that these actions, in combination with an effective (and aggressive) CFIA Communications Strategy, will be effective in slowing the natural spread of EAB to other areas of Canada.

The CFIA actively solicits advice on the development of science-based regulatory and surveillance activities from its Science Committee, and all decisions with respect to the implementation of policy are vetted by the Ontario Critical Pest Management Council, comprised of senior management representatives from the CFIA, Natural Resources Canada-Canadian Forest Service, Ontario Ministries of Natural Resources, and Ontario Ministry of Agriculture, Food and Rural Affairs.

The CFIA also spends considerable resources on the development of Communications products which stress the importance of not moving high risk material products such as firewood and protecting Canada's urban and natural forests from invasive, non-native pests such as Emerald Ash Borer and Asian Long-horned Beetle.

The Impact on the City of Toronto

Toronto's Forest Health Care Specialists have trained forestry field staff to identify the symptoms of EAB infestation, and are together monitoring the ash trees in Toronto. In 2006, if surveys detect the presence of EAB in Toronto, as an outlier to the natural spread of the EAB population, it is likely that CFIA would implement an immediate response in Toronto to try to control the spread. The protocol of selecting location(s) for wood disposal/processing, designation of personnel and providing of equipment has been established during the Asian Long-horned Beetle eradication program in partnership with CFIA, and could be considered as a model for dealing with an EAB infestation.

At the present time, the goal of the CFIA is to slow-the-spread of EAB in Canada. This has merit from both a scientific as well as a resource management perspective. While this policy will have only a limited impact on slowing the natural spread of EAB to new areas, it would buy time for the introduction and establishment of any natural predators and parasites, from its native Asian range, and, for the development of new surveillance and control tools, such as traps and pesticides. While the CFIA has implemented a successful tree replacement programme to assist persons who have had trees ordered removed by the CFIA for Emerald Ash Borer, Asian Long-horned Beetle and Brown Spruce Longhorn Beetle, it has not, to this point accepted responsibility for cost incurred by municipalities and others for the removal of trees killed by EAB in south-western Ontario. Should EAB become established in Toronto and dead trees have to be removed, the City can expect to pay more than \$37 million over approximately five years to remove and replace street trees. This would be in addition to the cost of removing and replacing trees in parks and natural areas. Property owners with ash trees would similarly have

added expenses to remove their trees. In addition to the economic cost, many streets will be denuded of trees, resulting in social and environmental impacts.

Once established in an area, EAB typically kills ash trees within two or three seasons and occasionally just one season. Many of the dead trees in public areas would soon become a hazard to the public. Rapid intervention would be necessary to remove the hazardous trees. There is currently a 10 to 12 month service delay on tree maintenance, including tree removals. The current rate of tree removal per year is about 6,387. Assuming a five-year removal program for ash street trees, it will be necessary to remove about 5,357 ash trees each year on streets, plus normal tree removals and additional trees in parks/ravines. To enable quick ramping up of resources, Forestry would use a combination of contractors and city staff, as done for the ALHB eradication program. The City will rely on contractors to assist, but must also be prepared to expand operations as the demand on contractors to conduct private tree removals will, at the same time, expand greatly, diminishing their availability and increasing cost for city work.

It is anticipated that the number of claims for property damage would increase and resident concerns with the delay in Urban Forestry service would also increase.

Currently new street trees are planted by Forestry Operations at a rate of approximately 6,000 to 8,000 per year. Contract planting using capital funds is focused on transportation open space and park planting, adding an additional 26,500 trees/shrubs of various sizes. Staff and volunteer planting in parks, funded through capital programs, adds 20,000 smaller trees and shrubs as well. The normal street replacement program would have to be doubled for five years if the City were to continue replacing all residential trees that are removed, including the ash replacements. It will take many more years to replace ash trees in parks, ravines and on private land.

Urban Forestry Services plan to initiate, within the existing programs for forest management and tree planting, a targeted program to manage streetscapes and forests that are dominated by ash species (e.g. Centennial Park, Scarborough Bluffs, and Brimley Woods), removing some poor quality trees to allow for establishment of a more diverse replacement forest.

In order to be well prepared for EAB related tree removal, replacement and pesticide injection, and to increase public appreciation of Toronto's emergency preparedness, it is critical to eliminate the existing forestry backlog. Urban Forestry Services has requested \$3.2 million in increased operating funds over the last two years and has received about \$2 million. The first \$1 million in 2005 was used to eliminate thousands of work orders dated from 2000 to December 2004. However, current service delays are based on necessary service requested by the public and does not address much needed systematic maintenance of parks, natural areas or street trees.

Recommended Actions

Monitoring

Urban Forestry staff have been and will continue to monitor for EAB in Toronto. In addition, staff will continue to monitor the actions being taken by the Federal government to survey and control EAB in south-western Ontario. Staff have visited the infested areas, can recognize EAB and associated damage, and are kept up-to-date on the efforts taken by CFIA to contain the

spread of the beetle. Forest Health Care staff are participating in a nation-wide survey for introduced forest pests.

Control of EAB if Found in Toronto as an Outlier Before the Expected Natural Spread

If EAB infested trees are detected in Toronto, a determination would have to be made in conjunction with the CFIA, based on survey results and research at the site as to whether the population represented a natural extension of the existing range of EAB, or is an outlier resulting from a past introduction to the area on infested trees or forest products. CFIA policy at present is to not remove trees in generally infested areas, but to evaluate outliers on an individual basis with respect to control actions there. Should EAB be detected in the Toronto area, the CFIA has committed to full consultation with City officials as part of the decision making process. The CFIA should be requested to commit federal funding to the managing EAB in Toronto, including a commitment for compensation to support new tree planting.

Yard Space and Wood Disposal

It is recognized that additional yard space will be needed to service the expected increase in wood waste processing and operations services that result from EAB related tree removal. Compounding the issue are the existing pressures on current yards including Oriole Operations Yard, Unwin Wood Processing Yard, Bathurst Operations Yard and Garrison Tree Storage Yard. Urban Forestry staff have initiated discussion with the Facilities and Real Estate Division, Director of Business and Strategic Innovations to identify possible solutions or costs involved with identifying new service yards and wood processing locations. This issue will be the subject of a report to EDPC in the second quarter of 2007.

Communication Strategy

It is recommended that a communication strategy be prepared to increase public recognition of EAB, reduce the risk of importation of firewood from infested areas and to ensure that in the event of EAB being introduced to Toronto, the infested areas are discovered quickly. Given the success of the publication developed jointly by partners involved in the control of Asian Long-horned Beetle, it is recommended that Urban Forestry staff investigate the options for sharing in the preparation of communication materials to support the required surveillance and future tree removal and replanting programs. Such communications should serve to educate the public regarding their own planting initiatives and future expected costs, and to encourage their support in preventing accidental introduction through transfer of potentially infested firewood or nursery stock. The public can be critical to the success of early detection should EAB be accidentally transported to a new area.

CFIA is responsible for the existing communication program and should be requested to work with Toronto staff to provide additional resources for an effective communication outreach program that supports municipalities.

Purchase and Planting of Ash Trees

Since the spring of 2003, the City of Toronto has elected to not include ash trees in its street plantings, and through the planning process, has also imposed a condition on developers to refrain from planting of ash in private development projects. Given the continued spread of EAB in Ontario and the U.S.A., and the lack of effective controls, it is recommended that Urban Forestry continue to implement controls where possible for planting of ash trees.

EAB can be transported to new areas on infested plant material. The movement of nursery stock is a common method of distribution for pest species. In order to prevent the spread and to provide a healthy future forest through planting of non-host species, municipalities outside of the GTA and landscapers working on private lands in Toronto should receive information that would aid their understanding of the risks associated with continued planting of ash. A communication through the Association of Municipalities of Ontario and to Landscape Ontario Horticultural Trades Association is needed to aid in the delivery of this important message.

Policies for Planting of Non-native Trees in Toronto

Urban Forestry maintains a list of tree species available for planting on street right-of-ways, and from time to time this is updated based on availability and on concerns about performance or balance of diversity. The use of non-native species is limited to areas outside of ravines, and to species that are non-invasive. Over time, the list of native species susceptible to introduced pests has increased to include American elm, ash, butternut, and American beech. A review of the practice and policy governing recommended planting lists would be helpful to determining whether it is possible to include a greater variety of large fast growing species on the lists used to guide planting of trees in Toronto.

Pesticide Use for Control of EAB

Confidor®, containing imidicloprid, has been approved on an emergency registration basis by the Pest Management Regulatory Agency (PMRA) of Health Canada. This product is registered for use in concert with the EcoJect System (BioForest is the holder of the registration and pending patent). Under the current pesticide bylaw, application of Confidor® to prevent the attack of EAB and to kill the beetle in infested trees would be a permitted use of a pesticide under the infestation clause of the pesticide by-law. The CFIA would consider incorporating this into its pest control programmes only if this were to be recommended by their Science Committee. Each new infestation will be dealt with on a case by case basis in full consultation and partnership with Municipalities.

Reduction of Tree Service Delay in Preparation for Expected Increased Service Requirements

Over the last 2 years, Urban Forestry requested an increase in the annual operating budget of \$3.2 million to address the 18 month service delay. In 2005 and 2006, about \$2 million was received, which has been used to reduce the service delay to about 10-12 months. It is important to continue the focus on reducing the service delay, so that in the event of a significant increased demand for service associated with the death of trees caused by EAB, Urban Forestry will be

able to manage hazards, liability and provide acceptable service to Toronto residents. The previous request, supported by City Council but currently deferred to 2007 of \$1.2 million additional operating funds for the Forestry budget to eliminate tree service delay should be referred to the budget process for consideration alongside the issues presented in this report.

Conclusions:

It is clear now that despite massive efforts of governments in the U.S.A. and Canada to contain and slow EAB infestation, efforts to stop the spread have failed. The possibility of this invasive alien pest spreading to the GTA is very high. Given all the factors involved with spread and detection of outlying populations, it is difficult to say when EAB will be in the GTA, or even if it is now here. Using the rate of spread demonstrated by surveys in the past three years, EAB can be expected in the GTA in four to five years. If quarantines are effective, its arrival could be significantly delayed, perhaps as long as 10 years. But EAB will arrive much sooner if the beetles are accidentally introduced through transport of infested ash wood products.

While EAB is considered as a pest of quarantine significance by both Canada and the U.S.A., the nature of any response by the CFIA to a confirmed find of EAB in Toronto will depend on such factors as the degree and intensity of infestation, how long it has been established in the area, and possibly the degree to which Toronto would venture into a partnership with the Agency. Prior to any decision being made on what the appropriate response should be, the CFIA will consult extensively with its Science Committee as well its Critical Pest Management Committee, comprised of senior management representatives from federal and provincial governments. Any response would be done in full consultation with the City of Toronto.

Should the spread be well established by the time EAB is found in Toronto, the CFIA may not provide much assistance to Toronto. Urban Forestry staff will be quickly overwhelmed by the additional volume of work unless additional resources are provided to deliver tree removal and planting services. In this situation the City of Toronto can expect to have costs of about \$37 million spread over five years to pay for the removal and replacement of ash trees on street allowance plus additional costs for trees in parks and natural areas.

Urban Forestry staff must prepare for the likely introduction of EAB by reducing the current service delays for tree maintenance and by working with Facilities and Real Estate to address expected shortages of yard space for forestry operations services and for storage and processing of wood waste. The addition of \$1.2 million is required in the 2007 Urban Forestry Operating Budget, to enable staff to reach their target of reducing the tree service delay to more acceptable 6 month levels. Policy and Finance and Budget Advisory Committee need to be provided with information that identifies the critical nature of expected future increases to tree removal and planting service programs, for consideration of budget allocations in 2007.

This report was prepared in consultation with Public Health Division and CFIA.

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List of Attachments:

Attachment 1 – Distribution of Ash Trees, From Toronto's Tree Inventory