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TO:	MAYOR AND MEMBERS – CITY COUNCIL
FROM:	JOHN FLEMING MANAGING DIRECTOR, PLANNING AND CITY PLANNER
SUBJECT:	REVENUE OPPORTUNITIES TO HELP FINANCE THE EMERALD ASH BORER MANAGEMENT PROGRAM AND POTENTIAL TO ACCELERATE THE EAB PROGRAM BY USING DEBT FINANCING MEETING ON FEBRUARY 28, 2013

RECOMMENDATION

That, on the recommendation of the Managing Director, Land Use Planning and City Planner, with the advice of the Manager of Urban Forestry the following report which considers revenue opportunities related to wood generated through the Emerald Ash Borer management program and the opportunity to use debt financing to expedite tree removals, injections and planting process **BE RECEIVED**, it being noted that Staff will issue a Request For Expression of Interest (REOI) in 2013 for the utilization of wood.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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- 2012-2016 Management of Emerald Ash Borer Business Case
- Report to Strategic Priorities and Policy Committee – February 9, 2012
- Report to Services Review Committee - November 17, 2011
- Council Resolution – October 3, 2011
- 8th Report of the Trees and Forests Advisory Committee – September 28, 2011
- Report of the Community and Neighbourhoods Committee – September 27, 2011
- Emerald Ash Borer Strategy – September, 2011
- 22nd Report of the Committee of the Whole – June 21, 2011
- Emerald Ash Borer Update - Report to the ETC - July 19, 2010
- 2nd Report of the Trees and Forests Advisory Committee - February 25, 2009
- Emerald Ash Borer Strategy - Report to the ETC - May 26, 2008

BACKGROUND

Table 1 below shows the Council - endorsed EAB management strategy and associated implementation budget.

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I. Listar:

YEAR	Treatment*	Removal (Streets and Manicured Mark Areas)*	Removal (Wooded Park Areas)*	Inventory and Survey (Wooded Park Areas)*	Risk Inspections (Wooded Park Areas)*	Restoration and Rehabilitation (Wooded Park Areas)#	Plant 2:1 (Streets and Manicured Park Areas)#	Coordination, Administration & Education#	TOTAL
2012		184	145	50			715	100	1194
2013	109	187	145	50		30	751	100	1372
2014		191	145		20	30	828	100	1314
2015	115	195	145		20	30	828	100	1433
2016		199	145		20	30	869		1263
2017	122	203	145			30	912		1412
2018		207	145			30	1007		1389
2019	130	211	145			30	1005		1521
2020		215	145			30	1056		1446
2021	137	219	145			30	1108		1639
2022									0
2023	146								146
2024									0
2025	155								155
TOTALS	914	2011	1450	100	60	270	9079	400	14284

*Risk related activities

#Restoration related activities

London’s Ash Population and Implications for Management

There are approximately 110,000 ash trees on City property of which 96,000 are in woodlands and the the rest on boulevards and manicured portions of parks. Based on our inventory from 2011, 80 percent of the boulevard and park trees are too small to be merchantable. Many of the larger trees have structural defects so cannot produce high value end products such as furniture. These larger trees often have hidden, overgrown, embedded objects that pose a hazard to tree workers and sawmills and therefore command lower sale value. Trees in woodlands vary in size and condition and staff do not have reliable statistics on their condition for individual woodlands. Removals of ash trees from woodlands require detailed long-term management plans and associated budgets and carry a high risk for damage to residual trees and understory vegetation. Depending on the status of the infestation and stand conditions removal of trees and merchantable volumes may be severely limited, such as Helen Mott Shaw Park, while in others, such as Westmount Park, removal of the ash may be a viable option. The development of management plans for woodlands, including identifying potential revenue from ash removals is a high priority for 2013.

London’s Current Utilization and Cost Recovery From Forestry Related Operations

All funding for Forestry related operations associated with EAB management are from approved operational or capital project funds. There are currently no outside funding sources available to support the implementation of the management strategy.

All the wood removed is recycled at no additional cost to the program and wood products support internal programs in other Divisions, an established small business firewood industry, local tree care companies, community programs and individual residents.

Chips When trees are removed, the smaller woody material is chipped on site and used to build chip trails in parks, as the top dressing in our dog parks and as fill for the W12A landfill site. These represent tens of thousands of dollars in cost savings to parks and environmental programs as the chips would otherwise have to be purchased. Chips are also provided free-of-charge to schools and for community planting projects. Any minor amounts of remaining chips are taken to TRY Recycling facility for processing at no cost to the program.

Larger Woody Material Although there is no direct cost recovery from the sale of the wood, there are significant impacts in terms of cost savings to the program due to reduced hauling, storage and disposal costs associated with other utilization options. There are also significant benefits to residents, small business and institutions.

The larger woody material from removals is often left on-site at the request of residents who use it for firewood. The City also provides firewood for free to firewood cutters in and around the City. Through a permitting process firewood cutters request wood and suitable wood is delivered to approved yards within 5 kilometers of City limits. The Forestry program currently

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I. Listar:

supports a dozen established firewood cutting businesses that rely on City wood and dozens of smaller operators and residents who request wood throughout the year. Wood is delivered directly from the worksite to the nearest approved firewood yards to minimize operational costs. Almost all the larger woody material is disposed of in this manner. A minor amount of wood not suitable for any of the above programs is stockpiled until there is sufficient woody material to economically and efficiently chip and recycle as chips.

On request, the City provides larger tree trunks to schools and other institutions to be used for playground, or landscaping fixtures. Bark from trees have also been donated to artisans who carve it and donate a portion of the proceeds to cancer research.

Trees that are removed as a result of City construction projects are taken by the contracted tree care company and disposed of or recycled.

Trees that are cut by London Hydro are removed and recycled by City Forestry operations as noted above.

Trees that are cut down in wooded areas of parks and in Environmentally Significant Areas (ESAs) are bucked into smaller sections and left on the forest floor to rot. This provides coarse woody debris as wildlife habitat and long-term nutrient cycling.

Harvesting Trees in Parks and Woodlands

To date there has been only one woodland that has been logged where the operational costs have been offset by revenues from the merchantable wood.

Westmount Park was identified as a high priority for ash removals due to the stand conditions and proximity to schools and residences. An RFQ was issued that included a provision for identifying revenue from the sale of merchantable wood. Although there were no direct revenues from the wood, all the proponents included an offset in harvesting cost for any merchantable wood that they could harvest.

Few woodlands offer the combination of access, merchantable volumes, and other site conditions that provide a potential for recovering value from the wood that is harvested. We will continue to assess individual woodlands and recover value as site conditions, budgets and resources permit.

Previous Sources of Funding and Revenues That Have Been Explored

Approximately 12 years ago, the City issued a Request For Proposal (RFP) for the disposal of wood. There were no successful applicants. The wood was stored at the St. Julien operations yard and residents were allowed on-site to take the wood. This posed unacceptable liability issues for the City and the yard was closed to the public for this purpose. The wood that remained was chipped and recycled in 2007.

Further attempts to sell the wood were not successful. The City hired staff to also split some of the wood in order to sell it. This program cost more than the program recovered and was discontinued. However, when the current firewood program that provided a free source of wood to specified locations of the firewood cutters choice was established, it was successful in removing and recycling the woody material at no cost to the City.

The City removes approximately 1400 trees per year from Forestry related operations. This does not include the additional ash trees that will be removed as part of the EAB management program. There is a market for ash and other species such as oak and maple by sawmills to produce high quality products such as flooring, furniture, moulding and sporting goods such as baseball bats. However, City trees are not suitable for producing high quality products. Many of the trees that the City removes are dead or have structural issues that greatly reduce utilization potential and suitability for these products. They also contain buried material such as nails and rocks that damage sawmilling equipment and create worker safety issues. Wood that would be purchased by the sawmills would have a high risk associated with it and would bring low purchasing costs compared to high quality wood from other private sources. The closest sawmills are in Tillsonberg, Bedford, and Waterloo, and the combination of trucking costs and small amount of suitable high quality wood are economically prohibitive.

An option to purchase and mill City wood into products, such as park benches, picnic tables or wood for boardwalks and wood chips for park landscaping projects, which are currently purchased by other internal programs, was reviewed. Initial start up costs of the purchase of a mill, an operator and associated equipment was estimated at \$160,000 with an annual operational cost of approximately \$120,000. Additionally the wood would require a suitable shelter to be built in order to properly dry or season prior to milling. The amount of suitable product that could be produced was considered to be cost prohibitive. Parks Operations

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currently spends approximately \$15,000 per year to purchase wood chips for landscaping projects. The chips currently produced from our forestry operations are too coarse for these landscaping projects.

In 2012, London issued a Request For Expression of Interest (REOI) for the utilization of landfill gasses from W12A, other organic products and trees. There was some interest in biomass feedstocks but no conclusive interest specifically for the tree component from this initiative. A more specific REOI for the use of municipal wood may identify an untapped opportunity for revenue.

Emerging technology using biomass and trees to produce high value bio-oils, bio-char and bio-gas for energy are currently being developed by University of Western Ontario and the Institute for Chemicals and Fuels from Alternative Resources (ICFAR) and by other European firms. The process uses woody and agricultural plant material to create biologically derived oil as an alternative to non renewable petroleum products, charcoal as high quality fertilizer and gases suitable for fuel (biooil, biochar and biogas respectively). The technology includes superheating wood chips with hot sand and then extracting gases, chemical compounds and charcoal from the sand in order to further refine them. This process is similar to creating oil sands, but in minutes rather than millenia. Discussions in 2012 and 2013 between City and UWO/ICFAR staff indicate that this technology and cooperation/partnership may have mutual benefits. However, additional equipment development is necessary before any long term value could be obtained from such an initiative. Additional discussion and research will be conducted to assess the full potential and impacts of using this technology to utilize wood in a leading edge program that could also generate additional income to fund London's Forestry program.

OTHER MUNICIPALITY COST RECOVERY INITIATIVES

Staff from the municipalities of Toronto, Ottawa, Oakville, Burlington and Kitchener were canvassed to identify current initiatives and opportunities for wood utilization and cost recovery. Most of the municipalities have a program that allows individual residents to take the wood from a removed boulevard tree for their own use. All the municipalities fund their EAB management operations from operational or capital budgets and continue to explore options for higher value end uses and opportunities for other funding sources recognizing there are limited opportunities. No municipality surveyed has identified any significant or positive cost recovery initiative. Some have experienced higher than normal operating costs due to additional transportation, storage, handling and disposal associated with managing log yards.

Toronto

Chips from on-site operations are taken to transfer stations to be composted by a private vendor. Larger wood is taken to holding yards where it is tub ground under contract into chips. Some of the chips are taken by the contractor, some are used for park trails and top dressing for dog parks. Some chips are sold to the Toronto District School Board and revenues from the sale is used to offset the tub grinding costs.

In 2011, Toronto issued an Offer to Purchase wood at four holding yards. Bids were received for a minor amount of wood at only one holding location and the total generated revenue was approximately \$10,000. Additional costs will be incurred to tub grind and dispose of the remaining wood.

The results of the Offer to Purchase showed there was a limited demand and lack of interest in ash wood.

They are continuing to explore options for higher end uses and have issued a proposal to investigate potential uses of urban trees.

Ottawa

Ottawa issued a Request for Proposal in 2012 to purchase wood. There was little interest for most of the material. Handling and processing was a challenge because more than 75% was unmerchantable.

They currently have a contract with a local sawmill to dispose of their larger material regardless of the quality of the wood. The City pays a tipping fee to the contractor (which is @ 30% less than the tipping fee for their City landfill sites). The sawmill recoups any value and is required to report on the products and markets from the wood. Although there is no direct revenue, there are savings in operating costs from reduced tipping fees.

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I. Listar:

Oakville

Oakville has completed an Ash Wood Utilization Study and has identified seven ash-dominated woodlands which are planned for harvesting under a pilot Woodland Conservation Project. On the woodlands currently being harvested, the management costs are higher than the revenue being generated from the purchase of the wood by the contractor (\$200 per thousand board feet). There is limited opportunity for harvesting other woodlands due to site and stand conditions.

Kitchener

Kitchener received two informal enquires but consider that there would be no revenue gains from these initiatives. They are considering issuing a Request for Expression of Interest for their ash trees in the future.

Burlington

Burlington has a very limited area of woodlands and do not have any revenue generating initiatives a this time.

POTENTIAL FOR DEBT FINANCING

Financial Planning and Policy staff reviewed the potential for funding the EAB management program through debt financing and obtained a legal opinion from Borden Ladner's Group (BLG). BLG concluded:

*“We however understand that the EAB Management Strategy is a ‘standalone’ project that relates solely to trees and which includes tree related activities beyond the planting of trees, i.e., inoculating trees and removing dead trees. As set out above, we have assumed that the EAB Management Strategy involves **no** elements that would constitute a tangible capital asset as described by the PSAB standards in respect of which debentures can be issued. It is not accordingly in our view clear that the EAB Management Strategy constitutes a capital work within the meaning of Section 408(2.1) of the Municipal Act.”*

Some potential options that could be considered where debt is a source of financing for the EAB management program include:

1. Issue only the component related to the acquisition of tree removal equipment which meet the PSAB definition of tangible capital assets,
2. EAB Strategy can be properly characterized as a local improvement project,
3. Where the EAB costs can be deemed to be an incidental and ancillary component to other enduring capital works that fit within the PSAB definition of tangible capital assets, and
4. The city may want to raise this issue with the Ministry of Municipal Affairs and Housing, in order to look at changing legislation noting that section 63 of the Nova Scotia Municipal Government Act, SNS 1998, c. 18 provides municipalities the ability to finance such initiatives by borrowing.

SUMMARY AND CONCLUSIONS

All funding for Forestry related operations associated with EAB management are from approved operational or capital project funds. There are currently no federal or provincial funding sources available to support the implementation of the management strategy.

All the wood removed from the ash and tree maintenance programs, with the exception of woodland harvesting, is recycled at no additional cost to the program. Wood products support internal programs in other Divisions, an established small business firewood industry, local tree care companies, community programs and individual residents. Current practices result in an overall net savings of thousands of dollars to Forestry and other Divisions' programs.

There are limited opportunities to recover revenues from street trees and woodlands. Revenues from salvaged ash in woodland harvesting operations are insufficient to fund the long term management requirements of the woodlands. There are limited resources available to manage

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I. Listar:

additional programs such as third party removal and processing contracts in order to recover minimal, if any, revenues.

Other municipalities are funding their EAB management through capital and operational budgets. They have identified limited opportunities for additional revenue from other sources. Municipalities are experiencing additional operational costs that are directly attributable to the extra handling and storing costs associated with selling the wood.

All municipalities are struggling to fund their EAB management programs as there is no financial support from Federal or Provincial governments.

As trees are not considered Tangible Capital Assets, the options for debt financing are severely limited.

Staff will continue to explore potential alternative sources for revenue and partnerships recognizing that there are limited opportunities. Staff will issue a Request For Expression of Interest (REOI) in 2013 for the utilization of wood.

The current funding level of \$400,000 per year for 2013 and beyond is not consistent with the EAB management strategy and is insufficient to address the management issues in either the short- term or long- term.

Staff will re-assess the strategy and provide a report to Council in 2013 outlining an assessment of the progress to date and recommendations for the coming years.

Acknowledgement: The following staff assisted with the development of this report - Jay Stanford, Director - Environmental Programs & Solid Waste; John Parsons, Division Manager - Transportation and Roadside Operations; Ian Collins, Senior Financial Business Administrator; Rick Brown, Division Manager - Finance.

SUBMITTED BY:	RECOMMENDED BY:
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