



**STAFF REPORT
ACTION REQUIRED**

Wood Waste – Opportunities for Cost Recovery

Date:	September 26, 2012
To:	Parks and Environment Committee
From:	General Manager, Parks, Forestry and Recreation
Wards:	All
Reference Number:	P:\2012\Cluster A\PFR\PE16—101512-AFS#15457

SUMMARY

As a by-product of tree maintenance operations, Urban Forestry produces a large volume of wood chips, as well as tree limb and stem wood. This report outlines the nature of these by-products, current uses, recycling and disposal practices, as well as options for potential revenue generation.

RECOMMENDATIONS

The General Manager of Parks, Forestry and Recreation recommends that:

1. this report be received for information.

Financial Impact

There are no financial implications resulting from the adoption of this report.

DECISION HISTORY

The Parks and Environment Committee, at its meeting held on November 22, 2011, requested that the General Manager of Parks, Forestry and Recreation provide a report on the tree removal sequence, notably the course of action for removal and disposal of wood and any potential opportunities for cost recovery from wood sales.

Parks and Environment Committee Decision Document PE9.5
<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2011.PE9.5>

COMMENTS

As a by-product of tree maintenance operations such as pruning and removal, Urban Forestry produces both wood chips and stem and limb wood. Smaller branches are processed through an on-site brush chipper, producing wood chips. Stem and limb wood are cut into manageable pieces by staff equipped with chainsaws. With the exception of work being conducted in natural areas, all woody debris is removed from the site.

The vast majority of the wood chips produced by on-site brush chippers are taken to transfer stations operated by the Solid Waste Management Division. Solid Waste, through a private vendor, processes the wood chips, along with leaf and yard waste, producing compost.

Stem and large limb wood is taken by Urban Forestry to temporary holding locations where the wood is later tub ground into chips by a contractor. A tub grinder is a machine which is able to pulverize wood into small pieces. The current contract allows for the resultant wood chips to be left on site, or has the vendor remove the wood chips. The latter is at a lower unit rate cost. The contractor removes the bulk of the wood chips produced as part of the terms of the contract. The remaining chips are used in a variety of ways. Urban Forestry uses some of the chips produced as mulch placed around newly-planted trees and commercial trees in open planting beds. Wood chips are also used by the Parks Branch on trails and in dog off-leash areas. Chips are also used by the Toronto District School Board. In this instance, costs associated with tub grinding are recovered from the School Board. The Toronto Catholic District School Board has made inquiries about entering into a similar arrangement.

Typically, Urban Forestry only removes trees that are either dead, in a state of severe and irreversible decline, or are structurally unsound. The majority of the waste wood that is generated comes from the removal of large open-grown deciduous street trees. Unlike a commercial logging operation, due to site constraints, most trees in the urban environment have to be removed in sections in order to allow for their safe removal. Site restrictions commonly include above ground utility lines, houses, cars, sidewalks and roads. Site conditions dictate the cut length of the sections. These factors, combined with the diversity of the resource itself, result in stem and limb wood that is highly variable in length, diameter, species and quality in terms of the presence of cavities or decay. Much of the wood is irregular in shape and some urban trees have imbedded metal, such as nails, staples, and other foreign objects.

End Use Options

A variety of cost recovery options have been explored for the use of waste wood. Urban Forestry staff have contacted various saw mill operators and producers of veneer to determine if there is an interest in obtaining stem and large limb wood generated by regular operations. As these mills are typically located a significant distance from Toronto and require straight wood of specific species and length that is solid and free of metal, there has been no interest thus far.

Another potential end use for the stem and large limb wood is for firewood. Firewood has a much reduced value as compared to hardwood veneer or lumber and as such, handling and transportation costs become major factors in the financial viability of its sale.

Wood working artisans commonly desire very small quantities of specific species. Often of interest is wood that has character flaws or irregularities such as burls. The operating costs to find, extract, and make available such rare wood structures would exceed the potential revenue generation.

A 2011 Offer to Purchase resulting in generating \$70 in revenue, with a corresponding reduction in tub grinding expenditure of \$4,200. Another Offer to Purchase was just recently awarded, which is projected to generate \$10,000 in revenue by year end, with a corresponding reduction in tub grinding expenditure of \$5,920. Bids were only received for one of the four wood holding locations, and no bids were received for the one location that holds only ash wood.

The results of these Offers to Purchase have demonstrated that while there is some demand for Urban Forestry's stem and limb wood, that demand is limited and may remain specific to a few local companies. It further demonstrates a lack of specific interest in ash wood. Urban Forestry is generating large volumes of ash wood as a result of the Emerald Ash Borer infestation.

Urban Forestry continues to explore options for higher end uses for its wood by-products that could generate greater amounts of revenue, while giving due consideration to any associated City operating and capital costs. This review includes consulting with other municipalities, and the wood products industry.

CONTACT

Jason Doyle, Director, Urban Forestry, Tel: 416-392-1894, Fax: 416-338-2434, Email: jcdoyle@toronto.ca

Dean Hart, Manager of Forestry Operations, Urban Forestry Branch, Tel: 416-394-8549, Fax: 416-394-8935, Email: dhart@toronto.ca

SIGNATURE

Jim Hart
General Manager, Parks, Forestry and Recreation