

Commercial Tree Removal, Replacement and Maintenance

Date:	May 17, 2007
To:	Parks and Environment Committee
From:	Brenda Librecz, General Manager, Parks, Forestry and Recreation
Wards:	All
Reference Number:	

SUMMARY

This report provides information about the City's commercial street trees (trees set into the sidewalk or in a raised container) and their unique benefits and maintenance requirements. These trees are predominantly located in commercial business and restaurant areas, and with appropriate maintenance, add greatly to the aesthetic appeal of the streetscape, attracting residents, tourists and investment.

Current resources do not allow for adequate maintenance of these trees, including removal and replacement of the hundreds of trees that die each year, and the associated maintenance of tree pits and containers. As part of the 2008 budget process additional operating and capital funds are being requested to greatly enhance the maintenance of commercial trees.

RECOMMENDATIONS

The General Manager of Park, Forestry and Recreation recommends that an additional \$0.958 million in Operating Budget funding and \$0.445 million in Capital Budget funding for the maintenance of commercial trees be included in the 2008 Parks, Forestry and Recreation Operating budget submission and that this report be referred for consideration to the 2008 operating budget process.

Financial Impact

The following chart shows the additional Operating Budget requests that are planned and the Capital request to be considered within the overall 2008 Parks, Forestry and Recreation Submission. Funding for this proposed expansion of Commercial Tree

maintenance is not yet approved and must be considered during the 2008 Financial Planning process.

EXPENDITURES	2008	2009	Total
Capital Budget	\$445,000		\$445,000
Operating Budget	\$721,517	\$236,133	\$957,649
Permanent Staff	1 Supervisor, 6 Arborist 3s	Includes the remaining ¼ of the funding for the 1 supervisor and 6 Arborist 3s	

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

DECISION HISTORY

At its meeting held on September 25, 26, 27, and 28, 2006, City Council adopted the Economic Development and Parks Committee Report 6, Clause 19, entitled Tree Maintenance – Planting Programs (All Wards). The report recommended among other things that the General Manager of Parks, Forestry and Recreation report in time for the 2007 Operating and Capital budget processes on addressing replacement of dead commercial street trees. That budget submission made it only part way through the 2007 budget process.

Economic Development and Parks Committee R. 6, Cl. 19:

<http://www.toronto.ca/legdocs/2006/agendas/council/cc060925/edp6rpt/cl019.pdf>

ISSUE BACKGROUND

The presence of healthy, well-maintained trees in the business and restaurant areas significantly contribute to the aesthetic appeal of these areas and attracts residents and tourists. The opposite is true when the trees are not properly maintained. The appeal of commercial and retail areas is vastly reduced when trees in tree pits or containers are dead, or have dead branches or low hanging branches in need of pruning.

Commercial street trees have a very harsh environment in which to grow. Their crowns commonly have limited space to grow due to the close proximity of buildings, store fronts and overhead wires. These trees are subjected to high temperatures as heat is collected and radiated from the surrounding hard surfaces. Their roots are covered with hard surfaces; limiting water and oxygen availability and the soils in which they grow are commonly poor, being highly disturbed and compacted. To grow in such unnatural conditions, intense maintenance is required which includes regular application of compost tea, mycorrhizae and periodic pruning. As a result, newly-planted trees in commercial locations have a high mortality rate and where they do become established, they have a short life span. While the number of commercial trees continues to increase, no additional funds have been allocated to maintain and replace these trees since amalgamation. Prior to amalgamation, cutbacks in the former Toronto Parks and

Recreation, Forestry budget resulted in virtual elimination of resources for commercial street tree maintenance which is manifested today by many dead and missing trees and many more in poor condition.

In addition to physical maintenance of the trees, Urban Forestry also maintains the tree pits and containers. Most of the tree pits have a surface of pavers resting on granular material. In order to avoid trip hazards, these pavers must be regularly levelled. Most of the raised tree containers are over 25 years old and are in a state of disrepair. Many are in such advanced disrepair that their replacement is the only viable and appropriate action.

COMMENTS

The harsh and unique growing environment of street trees that are set in sidewalks results in a corresponding need for more intensive maintenance than is required for trees grown in turf or other soft conditions.

In order to improve tree survival rates, only the most hardy and drought tolerant tree species are used. The more costly larger calliper balled and burlapped trees are planted as they are less prone to vandalism and have a higher initial canopy that does not impede pedestrian traffic. Balled and burlapped trees can also be planted over an extended period of time in the spring and fall seasons which is advantageous from an operational perspective. The advantages of having a longer planting season in part relates to the number of crane trucks available to move these larger trees and access difficulties along major commercial streets.

A mobile watering program that concentrates on both established and newly-planted commercial trees is in place. The water used in the watering program contains biological additives that improve the soil structure and the ability of trees to uptake water and nutrients.

In addition to the watering program, there are on-going efforts to improve the growing environment for commercial trees with the aim of improving their survival rate, life span and mature size. Current tree planting design efforts center on increasing the volume of soil that is available for root growth and the selection of sites for new plantings that provide sufficient space for canopy growth. Most new installations of commercial street trees that incorporate the improved designs are completed when sidewalks are being substantially reconstructed. There is an ongoing need to plan for and fund new and or enhanced commercial tree planting locations as part of capital projects when ever sidewalks are being substantially reconstructed in restaurant and business areas. Planting in turf or other more natural settings for trees is preferred, but seldom an option in such areas.

Where commercial trees exist in areas where sidewalk is being reconstructed, there remain challenges in successfully improving their growing environment without adversely affecting existing trees. Established trees in such circumstances have adapted to their location, and any excavation and other surface disturbance in their immediate

vicinity results in irreversible root damage which usually results in extensive maintenance and tree replacement requirements for which there is currently no funding.

As noted previously, the above-ground growing space for commercial street trees is very limited. A tree crown that is too low will block pedestrian and vehicular traffic. As the tree grows it can often come into conflict with over head utility wires, streetlights, and obscure business signs. In order to maintain required clearances, an intensive pruning cycle needs to be in place. Since cutbacks prior to amalgamation, no such program has been in place. As a result, all commercial tree pruning has been complaint driven and is totally inadequate to sustain trees in these harsh urban conditions.

Trees under stress are the most susceptible to the adverse impacts of climate change, such as drought, and extreme temperatures which in turn result in disease or insect infestation. Correspondingly, commercial trees are showing their susceptibility in terms of decreasing survival rates, and poorer overall health and vitality. The commercial areas in the downtown core have the greatest heat island affect and have average canopy coverage of less than 3 % in this land use category.

There are approximately 15,000 commercial street trees across Toronto. Approximately 3,000 of these trees were established after 1996 through development. In the existing growing environments the mortality rate is such that many of the trees die within the first 5 years after being planted. Many of the other commercial street trees are in a state of significant and perpetual stress.

Urban Forestry re-established a Special Services section, with their primary function being the maintenance of commercial trees. This section had existed in the former City of Toronto prior to amalgamation and was re-established with existing resources approximately three years ago. This year round operation has approximately 10 staff. Under the current level of service provision, it takes several years for a dead commercial tree to be removed and replaced, with trees being pruned on a request basis approximately every 9 years.

The provision of the requested additional resources will provide for the hiring of a supervisor and six additional arborists. A supervisor is required to improve work planning and co-ordination, and communications with individual businesses and Business Improvement Areas. The current supervisor is currently performing double duty and also oversees a regional tree pruning, removal, and residential tree planting operations.

Requested operating funding would also provide for some contracted services, and material purchases. Most of the material purchases will be for tree stock, and tree pit and tree container replacements. The additional staff and contract resources may be shuffled between several different functions associated with commercial trees, based on the current needs, seasonally based functions, and priorities. The following provides an example of the expected annual results: replace 40-60 severely damaged tree containers, level tree pit pavers at 2000 locations, prune 2700 trees, and remove and replace 500 trees.

The capital portion of this request relates to the purchase of three additional fleet units. A crane truck will be used to transport balled and burlapped trees for planting, assist with removal of dead commercial trees, and for the removal and installation of tree pit caps and tree containers. A hydro-vac truck will be used to facilitate the removal of dead commercial trees. This specialized piece of equipment facilitates removal of the tree stumps/root balls in these highly confined spaces which are often in close proximity to underground utility lines. When the hydro vac unit is not being used to remove and replace commercial trees, it will be used to increase stump removal productivity in residential street and park locations. Such a unit removes stumping debris at a much faster rate than can otherwise be achieved. The last unit is a pick-up truck for the supervisor.

Based on the current number of commercial trees, the enhanced service level should provide for:

- a five-year pruning cycle;
- replacement of dead commercial trees within a year of being identified as such; and
- prioritized replacement of 40-60 damaged tree containers each year, based on container condition.

CONTACT

Richard Ubbens, R.P.F., Director, Urban Forestry, Tel: 416 392-1894, Fax: 416 392-1915, Email: rubbens@toronto.ca

SIGNATURE

Brenda Librecz
General Manager, Parks, Forestry and Recreation