

Tree Planting

Date:	June 19, 2007
To:	Parks and Environment Committee
From:	Brenda Librecz, General Manager Parks, Forestry and Recreation
Wards:	All
Reference Number:	

SUMMARY

The purpose of this report is to identify the resources Urban Forestry requires to accommodate the current front yard tree planting requests and park tree planting requests. In addition to updating Council on these tree planting activities, this report addresses the question of whether staff resource or budget are limiting the ability of Forestry to get more trees planted in fall of 2007.

Most of the residential planting scheduled prior to mid-January for spring 2007 planting has been planted. Requests received after mid-January have been scheduled for the next planting season. The funding that is currently available in 2007 for additional planting will be committed in purchase orders and contracts in the budget term. Delays in setting up the spring contracts may result in the need to carryover some funding to spring of 2008 for planting. If additional funds are made available for more tree planting in 2007, Forestry does not have adequate staff resources to facilitate increased plantings in this calendar year.

To increase the number of tree plantings in 2008 and beyond, Forestry requires a new planting program. Urban Forestry is proposing a Planting Partnership Program that would enhance tree planting with a goal to plant an additional 10,000 calliper trees annually on City and private or government owned lands. The implementation of this program requires an additional \$4.12 M in 2008 Urban Forestry Operating Budget and a one time capital investment for fleet of \$688,000.

With this additional funding, Forestry could plant about 5,000 calliper trees on city-owned lands, and school board lands annually. In addition there are currently opportunities to work with communities and other organizations to assist in planning for an additional 5,000 calliper tree plantings on lands not owned by the City.

If additional resources were provided and staff were hired in early 2008, there could be a significant increase in planting in spring 2009 and future years. However, if the issues of tree service backlog and effective tree protection remain unresolved, the benefits of the enhanced planting program would be compromised by an inability to adequately maintain our current Urban Forest and in particular an inability to address issues that may arise during community consultations.

Financial Impact

Funding requirements to implement an expanded tree planting program will be considered within the overall 2008 operating and capital budget requests.

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

DECISION HISTORY

The Parks and Environment Committee, at its meeting of May 8, 2007, requested the General Manager, Parks, Forestry and Recreation to report on the budget requirements that would allow Urban Forestry to accommodate the current front yard tree planting requests and park tree planting requests; and at its meeting of June 6, 2007 requested a report on the possibility of expediting fall 2007 tree planting.

ISSUE BACKGROUND

Tree planting is a vital component in mitigating the impact of climate change. Toronto has set a goal to increase existing tree canopy from 17% to 30-40%. To successfully achieve this target, Urban Forestry is required to maintain and protect existing trees, as well as significantly increase tree planting on all types of land in the City. An enhanced program is needed to facilitate tree planting of all city lands.

A report titled “Tree Maintenance – Planting Programs” was submitted to Economic Development and Parks Committee September 12, 2006, to provide information about Urban Forestry’s various planting programs. This report builds on the information provided in that report to describe tree planting programs.

COMMENTS

Existing Planting Programs

The current tree planting mandate of Urban Forestry relates to street right-of-ways and to parks. Tree planting activities associated with Urban Forestry arise from the following different sources.

- a) Bare root trees are planted free of charge in residential areas to replace trees that have been removed or to respond to a resident request for a tree on the street right-of-way portion of residential yards. Bare root trees range in size from 30-40 millimetre calliper and are of variable height ranging between 1.5 meters and 2.5

meters. The window of opportunity for planting bare root trees is only a few weeks long, and for some species, planting is only done in the spring. Most of the bare root planting scheduled prior to mid-January for spring 2007 planting has been completed. Requests received after mid-January are scheduled for the next planting season. Forestry occasionally works with community groups to actively solicit planting sites, but our resources to review the requests and to plant additional sites that arise through such programs are limited.

- b) Urban Forestry plants larger balled and burlapped (B&B) trees on major arterial roadways or when residents request and pay for larger sized trees. The size of trees purchased annually varies depending on market availability. B&B trees range in calliper with 50-60 millimetres being the standard size. B&B trees can be planted in leaf-out condition for 6 months of the year from April to July and from September to November. Most plantings of this type are currently installed by contractors who have the necessary equipment for this work. Transportation Division provides capital funds to Forestry for street tree planting along roads that have been reconstructed. At the time of writing this report, \$27,373 of the \$650,000 Transportation budget is not yet committed to planting.
- c) Requests for planting in parks generally arise from park development, including the addition of playgrounds and pathways, where trees are added to enhance the park improvement project. These trees are generally B&B plantings. Consultation with Parks Planning and Parks and Forestry Operations staff is generally done to assess potential conflicts before proceeding with such planting.

The Tree Advocacy Program and the Toronto Water Division capital budget also fund planting in parks, planting both B&B trees as well as smaller stock in naturalized areas. Contractors are used to install much of the planting done under these programs. At the time of writing this report, about \$119,000 of the \$1.285 M Tree Advocacy budget is not yet committed; and \$87,458 of the \$1 M Toronto Water budget is not yet committed. As additional revenues are received for TAP, funds will be committed for more tree planting.

- d) The commemorative tree program enables planting of individual B&B trees in parks, on request from residents. This program operates on a full cost recovery basis and is delivered through the Parks Development & Infrastructure Management Branch.
- e) Tree planting in ravines and woodlands is often associated with forest management programs. The management programs may be initiated by staff or by community interest. Fulfillment of such requests is subject to availability of resources, both staff time for developing plans and completing consultation with Councillors and community partners, and of funding for site preparation and other management activities.
- f) Volunteer tree planting is initiated both as a result of community requests for events and as a result of scheduled activities. The Natural Environment and Community

Programs section of Urban Forestry plans for numerous tree planting events with volunteers. Trees planted are typically grown in 1 gallon pots, 60-100 cm height. Mulch, rodent guards and brush blankets are placed around the plants on the day of planting. Sites may be prepared in advance when soils are compacted, to make it easier for participants to dig.

These events have enabled planting of thousands of small trees and shrubs in Toronto parklands, as well as community and corporate participation in park stewardship activities. Most plantings are done on weekends, organized by a small group of staff responsible for developing community programs through capital funding initiatives or through projects funded by donors and funding agencies.

The City also gives permission to qualified private companies that work with community clubs like the Rotary Club, to organize planting events in parklands, and to maintain such sites as showcases for such groups to return year after year to increase the overall planted area.

- g) Tree planting is often required on private property as a condition of tree permits, issued under the tree bylaws. The private tree bylaw requires planting of one or more trees for every one removed. Requirements under the ravine protection bylaw vary, depending on the site, but often include forest management in addition to tree and shrub planting. Planting and management are the responsibility of private landowners.
- h) Tree planting requirements sometimes arise from the conditions of front yard parking permits, infill housing development or committee of adjustment severance approval. Such requests are funded by applicants and typically are installed by the applicant.
- i) Street and private tree planting is secured through development approval processes, sometimes as a condition of tree cutting permits. Trees planted as a result of these processes are typically planted by developers or their agents.

How Trees Get Planted

Forestry Operations - The current planting rate by Forestry Operations is close to the rate of tree removals. The focus of their work is residential street tree planting of bare root stock. This is done at a cost of about \$150-200 per tree and is dependent on homeowners to help with maintaining the tree through protection, weeding and watering.

Operations staff plant about 6000 trees over two to three weeks, starting in April-May and in October. Occasionally service delays in tree removal or stumping cause unplanned planting delays.

Volunteer Planting – Each spring between April and June, over 35 volunteer tree planting events are arranged. In the fall, a smaller number of events are planned for

September/October. The Tree Advocacy Capital program provides \$225,000 to organize and supply stock for these events, adding to other funding sources including capital funds or revenues that are generated through fund raising activities.

Contractor Planting - The bulk of the tree planting done by Forestry is installed by contractors planting larger B&B trees. The number of B&B trees planted annually by contractors exceeds 10,000 per year. Forestry staff is responsible for site selection, consultation with Park Supervisors or land managers from other divisions, and for assessing potential conflicts with, amongst others, future recreation or stormwater management plans. Contractors are responsible for completing utility locates, and the wait time for such clearances can be several weeks especially during spring construction start up periods.

Ideal timing of tree planting is governed by weather, stock availability and type. The actual timing of planting will affect the health of planted stock. Effective use of contractors depends on timely issuance of contracts. In order to provide contractors with more lead time to purchase appropriate stock, hire staff and obtain utility locates, Urban Forestry staff recommend that funds for planting be pre-approved so that contracts can be set up earlier in the year to provide for spring planting. In 2007, the contracts for plantings were set up too late in the season and contractors had to delay plantings as a result of hot weather that would otherwise result in poor establishment of new stock. It is anticipated that Capital funds for 2008 will be approved in December 2007, which will enable an earlier start for Forestry and Purchasing and Materials Management Division staff to set up contracts, providing for more effective use of contractors to plant trees.

The funding that is currently available in 2007 will be committed in purchase orders and contracts in the budget term. Delays in setting up the spring contracts may result in the need to carryover some funding to spring of 2008 for planting. If additional funds are made available for more tree planting in 2007, forestry does not have adequate staff resources to facilitate increased plantings in this calendar year.

Potential Tree Planting Partnerships

Urban Forestry has an opportunity to increase tree planting through additional partnerships with other divisions and agencies, affiliated boards and organizations. There is also a tremendous need to respond to initiatives proposed by community groups such as ratepayer groups or residents associations, to assist residents in understanding the urban forest in neighbourhoods, and to assist in developing plans for inventory or planting. The ability to respond to communities and to take advantage of the opportunities to partner with large landowners in Toronto can be achieved with the approval of a Planting Partnership Program. Additional staff will be able to identify and assess candidate sites, obtain approvals for planting and provide information to facilitate better maintenance of trees.

The approval of the Planting Partnership Program would allow Urban Forestry to further explore and capitalize on partnerships including:

- a) Neighbourhood-based Community Partnerships – Residents Associations have demonstrated interest in assessing trees in their neighbourhood and promoting planting. Staff can provide street inventories, guidelines for selecting planting locations, assessment of the vulnerability of the neighbourhood forest and other information that will assist in developing a plan to protect the vitality of the urban forest in a neighbourhood. Community partners in turn can provide funds, and develop initiatives, appreciation and understanding of the needs of the trees in their neighbourhood. A successful example of such a community project is Grassroots Albany, where the community hired a forester to assess trees in their neighbourhood, resulting in the findings that 75 per cent of trees in their neighbourhood were on private land, and that many young trees were non-native ornamental trees such as crab apple or other small-diameter blossoming fruit trees. This caused the community to promote private tree protection and planting of large growing trees. Urban Forestry could serve as a resource for communities to develop successful initiatives that enhance the urban forest.

- b) Planting on City Property, Local Board and Agency Property – There are opportunities for Urban Forestry to develop partnerships with agencies such as the Toronto Parking Authority, Toronto Library Board, Toronto Museums and the Toronto Economic Development Corporation. The Toronto Parking Authority currently contributes to the Tree Advocacy Program, but staff would like to work with them further to develop perimeter plantings around the parking lots they maintain. Toronto Museums such as Todmorden Mills and Historic Fort York have opportunities and interests in planting trees, but would benefit greatly from Forestry assistance.

- c) Universities, Colleges, Public and Private Schools – Urban Forestry staff would like to work with the TDSB and TCDSB and other educational institutions, both public and private, about opportunities for greening of lands. University of Toronto, York University, Branksome College and Upper Canada College all have significant forested lands that require management to maintain health. Proactive discussion and assistance with developing terms of reference or specifications to do tree planting, maintenance and forest management would help to ensure the future health of these forested areas in the city.

- d) Industrial/Commercial Lands - The employment lands in Toronto are very tree-deficient. There is a need for tree planting to attenuate precipitation and reduce runoff from the prevalent hard surfaces, and to improve the aesthetics of these areas. Working together, Urban Forestry staff and commercial land owners could develop planting plans for both public and private lands, plant the street allowances with city funds, and encourage commercial land owners to plant more trees on the privately owned lands.

- e) Hydro and Railway Corridors - Urban Forestry has worked with Hydro One to review the requirements for tree cutting in the HydroOne owned power corridors in the City, as well as plan for replacement planting with appropriate species. There is

additional opportunity to develop planting plans using compatible tree/shrub species, to expand on the projects that have been done. In addition, there may be opportunities to plant on railway lands, similar to that which was recently done north of the CP line between Rathnalley Avenue and Gange Avenue.

- f) Provincial Lands - Ontario Ministry of Transportation (MTO) maintains significant lands beside the 401, 404 and 427 highways in Toronto. MTO are doing a lot of tree planting, but Forestry staff are not involved in reviewing species or opportunities for additional plantings. Forestry staff could work with MTO to capitalize on the opportunities for tree planting in Toronto on Provincial lands.

Funding Requirements and Potential Deliverables

With current staff resources, Urban Forestry is not able to enhance our current planting program. The development of a new program to enhance tree planting in the City of Toronto through partnerships as described above would require additional funds for staff to engage in planning and consultation, contract setup and supervision, and maintenance of new plantings on streets and in natural areas. Approximately 10% of any planting budget is necessary to fund staff resources to identify tree planting sites, consult with staff, Councillors and communities in areas of tree plantings, develop planting plans, set up contracts and oversee the contracts. If the goal were to plant 10,000 more trees annually, the total cost for a program including 7 full time staff and \$2.32 M for purchase and installation of trees, is estimated to be \$4.1 M in operating funding and a one time capital investment of \$688,000 for vehicles and other related office equipment. This can be broken down as follows:

- 13% for Urban Forestry Planners and Landscape Architects assigned to developing plans and partnerships in consultation with community, Councillors and other stakeholders;
- 10% for a Natural Resource Specialist, an Arborist Inspector and a support assistant to establish and supervise contracts, inspect planted stock and provide for data retention;
- 56% or \$2.32 M for installation of 5000 trees; 4000 units of 50-70 millimetre calliper and 1000 units of 30-40 millimetre calliper bare root stock;
- 20% for maintenance of newly planted trees;

If the City is able to generate the proposed partnerships to establish 5000 trees on lands not owned by the City including private gardens, Hydro One and Railway lands, and if the City pays to plant 5000 trees on City-owned lands and school board lands, the cost to the City per tree planted would be \$412. In such a program, it would be possible to plant 10,000 calliper sized trees. The actual planting component of the program could begin 6 months after the hiring and training of new staff. If new staff is hired in 2008, Urban Forestry would generate a significant increase in planting starting in spring 2009.

The development of a new planting program would generate additional planting and maintenance of new trees and significantly contribute to increasing the tree canopy. It

should, however, be noted that if the issues of tree service backlog and effective tree protection remain unresolved, the benefits of the enhanced planting program would be compromised by our inability to adequately maintain our current Urban Forest.

The request to fund a full planting program including full time staff needed for implementation will be reported to budget committee for their consideration along with other forestry operating budget requests.

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SIGNATURE

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