
Memorandum

To: Budget Standing Committee

From: Phil Cristi, Acting Director
Parks, Recreation and Culture Services

Date: April 12, 2017

Subject: Tree Management Framework - Private Tree Program Information

At its meeting on March 20th, Council referred the report PRCS “Tree Management Framework” to the Budget Standing Committee. Further, Councillor Siscoe requested that additional information be shared with the Budget Standing Committee regarding the following:

1. Information package for residents on how to take care of their purchased tree

Although not yet ready for distribution, a “Tree Care Guide” will be provided to residents who purchase a tree through the Trees for Tomorrow program. The Guide will provide information related to but not restricted to the following topics:

- Tree planting guidelines
- Mulching, watering, staking and siting your tree
- Damage prevention (attachments etc.)
- Tying or attaching things to trees
- Managing impacts of chemicals such as salt, fertilizers
- Disease identification and treatment
- Common pests and organic controls

In addition, PRCS staff will be contacting the DSBN and NDCSB to propose presentations and workshops to primary and elementary classes regarding the importance of trees. PRCS will target 1 school per month per school board.

2. Examples of programs from other municipalities (and how they work)

Research conducted by PRCS staff revealed that many municipalities are involved in some form of tree planting initiatives on private property; however, these programs almost exclusively deal with seedlings or small saplings. There are very few

municipalities that offer trees of size to private property owners but in the cases reviewed, these programs have been highly successful.

Municipality	Program	Cost	Type	Who?	Impact?
GTA (Toronto, Ajax, York Region)	Backyard Tree Planting program	\$150- \$220/tree	5-8 ft trees	Local Enhancement and Appreciation of Forests (LEAF)	1300 – 1400 trees / year
Mississauga, On	One Million Trees	Free (Adopt a Tree)	Sapling/Whip	City of Mississauga and partners	241,369 trees since 2013
London, On	Million Tree Challenge	Free	Sapling	Reforest London	300,000 trees since 2011
Niagara Falls, On	Annual Tree Seedling Sale Day	\$5/seedling	Seedlings	City of Niagara Falls	n/a
Wellington County (Guelph, Minto, Erin)	Municipal Green Legacy Tree Distribution Days	Free	Seedlings	Region, Local	n/a

3. An application

Residents who wish to receive a voucher with a predetermined dollar value towards the purchase of a tree will be asked to provide the following:

- Name
- Address
- Phone number
- Email address (proof of residency may be required)

The application form will be made available online, at PRCS facilities and City Hall.

4. Information on expanding the 3.5% mentioned in the report to 5%, 7% or 10%.

Staff are recommending that 3.5% (or \$12,250) of the \$350,000 planting budget be allocated for the Trees of Tomorrow program. Based on a proposed voucher value of \$25 per resident (maximum 1 voucher per address) it is projected that 490 trees will be planted on private property within City limits.

Staff are recommending that this approach be used as a trial and that first year results be evaluated. Adjustments will be recommended as required to respond to feedback

and uptake from the program so as to maximize participation and benefits to the regeneration of the urban forest for future years.

If the budget were to be increased, the impact to the inventory of trees on private property would be as follows:

% of \$350,000 Budget	3.5%	5%	7%	10%
Trees of Tomorrow Budget	\$12,250	\$17,500	\$24,500	\$35,000
# of Trees	490	700	980	1400
# of Public Trees	1450	1427	1396	1351
Total Trees Planted	1940	2,127	2,376	2751



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At the meeting of March 6, 2017, this report was deferred to the meeting of March 20, 2017.

Corporate Report

Report from Parks, Recreation and Culture Services, Parks, Cemeteries, Forestry and Horticulture

Date of Report: January 6, 2017

Date of Meeting: March 6, 2017

Report Number: PRCS-052-2017

File: 68.31.192

Subject: Tree Management Framework

Recommendation

That Council direct staff to implement a two year pilot project that will make trees available to the public at reduced rates, set to maximize program participation; and

That Council direct staff to implement a year round communication and partnership strategy to increase public awareness and stakeholder participation in the stewardship of private trees; and

That Council direct staff to prepare a comprehensive tree by-law that addresses trees on public property based on the framework presented within this report; and

That Council direct staff to explore the costs to partner with a service provider to engage private tree owners and other stakeholders to create and maintain an inventory of trees on private property (staff to report back to Council in Q2 of 2017; target start date is Q1 2018); and

That Council direct staff to report back on the findings of the private tree inventory, monitoring and analysis regarding the number of trees that may potentially be affected by a proposed private tree by-law based on the framework presented within this report.
FORTHWITH

Summary

This report summarizes the City's current tree management practices regarding tree protection and tree removals on both private and public lands and also provides recommendations for a framework to develop a comprehensive public and private tree protection strategy. If approved, staff will continue to work with the Green Advisory Committee and other community partners, to implement the recommendations of this report.

Background

On May 10, 2015, Council approved:

"That staff be directed to prepare a report on Private and Public Tree Management and balance the protection of the City's tree canopy with the

management objectives of property owners; ensuring they can continue their expected level of enjoyment of their property and the promotion of best practices through proactive education and helpful information to private property owners”, and;

In addition, on August 17, 2015, Council approved:

“That staff report on how the City will address trees that are on private property that are dying, dead, or ones posing a danger to people or property (i.e. ash trees, affected by the EAB, and look at ways to make it easier and/or economical for residents to have the trees removed.”

On March 28, 2011, Council approved the [Urban Forestry Management Plan](#) (UFMP) through the [Strategies to Address Preservation and Management of the Urban Tree Canopy](#) report.

The UFMP made 15 recommendations, including the following which are further explored through this report:

- Develop a private property tree bylaw to govern the removal of specific trees on private property.
- Update the inventory of trees on municipal lands and undertake a study of trees on private property.
- Manage the urban forest as a continuous resource regardless of property boundaries.
- Create community stewardship and education programs to assist with protecting and preserving the urban forest.
- Access all available opportunities to plant trees.

The canopy cover goal for the City of St. Catharines, which is referenced in the UFMP, is 30%, which is the minimum standard recommended by the International Society of Arboriculture and adopted by the Region of Niagara for overall coverage in the Region. Currently the estimated canopy coverage for St. Catharines is 14% to 16%, which is approximately 2% less than in 2011 due almost exclusively to the impact of the Emerald Ash Borer (EAB).

In 2010, an overview of the forestry strategies and budgets indicated that the City could not reach the 30% proposed canopy target at the current rate of tree plantings versus tree removals. To sustain the urban forest, the City committed to a more robust tree planting strategy. This would include tree conservation initiatives on both public lands and private property to ensure meeting target goals for canopy cover. Currently, over 66% or nearly 200,000 of the trees within our urban boundary are located on private property.

On January 30 and February 6, 2014, the Urban Forestry Advisory Committee (UFAC) held two public meetings and conducted a survey for the purpose of consulting with the public regarding the implementation of a private property tree by-law. The meetings were well attended and 321 surveys were completed. The committee also provided the

opportunity for comment through an online survey. The feedback received at the meetings and the online survey indicate that those that participated or attended were not in favour of a private tree by-law, but favoured education and replanting as strategies moving forward.

In response to the motion made by Council on May 10, 2015, and based on the feedback from the public meetings, the Green Advisory Committee (GAC) developed recommendations to regulate the removal of the following trees on private property:

- Any tree from the significant tree list (see Appendix 1 for list developed by the GAC)
- Trees with greater than 36" girth except those on the undesirable list (see Appendix 2)
- Specific trees that have been nominated as significant trees

These recommendations are further detailed within the Protection section of the report.

Report

Staff have been directed by Council to “prepare a report on Private and Public Tree Management and balance the protection of the City’s tree canopy with the management objectives of property owners; ensuring they can continue their expected level of enjoyment of their property and the promotion of best practices through proactive education and helpful information to private property owners”.

In response to the Council’s direction, staff have prepared the Tree Management Framework (TMF). The proposed Tree Management Framework (TMF) aims to provide the City with a plan to increase and maintain the City’s canopy cover by deploying programs and services from four categories, each dealing with a significant part of the lifecycle of the city’s tree canopy.

The four categories are:

1. Tree Stewardship
2. Inventory
3. Regeneration
4. Protection

Tree Stewardship (Communication and partnership strategy)

A communications strategy will be developed, with the following objectives (at a minimum):

- Increase awareness of the benefits of trees
- Increase awareness of how to properly care for trees
- Increase awareness of what activities can damage trees
- Increase awareness of property owner’s responsibility with respect to tree maintenance
- Explain the process for reporting City trees that have health or safety concerns
- Increase awareness of how to identify a hazard tree
- Increase awareness of how to identify a tree with Emerald Ash Borer
- Explain the process for reporting private property trees that are a hazard

- Explain the new by-law and associated fees
- Increase awareness of significant trees
- Encourage the public to report cases of damage to City trees
- Foster community stewardship of trees
- Encourage the public to participate in tree inventories

This communications strategy would be implemented using existing staff resources, however may require additional funds, such as to cover printing costs. The communications strategy might utilize the following modes of communication; these would be confirmed following the development of the communication strategy:

- City's website
- City social media channels and Ping Street
- Articles in the Garden City Current
- Media releases
- Door hangers
- Handouts (e.g. at Planning and Building Services counter)
- Presence at community events (e.g. Earth Day)
- Letters or communication with property owners in areas where damage to City trees is more common

An important component of the communications strategy will be to develop relationships with organizations to further awareness. Examples of the organizations that may be included are:

- Green Advisory Committee
- Friends of Malcolmson Eco-Park
- Friends of Walker's Creek
- Port Dalhousie Beautification and Works Committee
- Niagara Peninsula Conservation Authority
- Niagara Region
- School boards
- BIAs
- Nurseries and Greenhouses
- Niagara College Horticulture Program
- Environmental non-profits

Current Practice: Limited scope

Recommendation: Staff to implement a year round communication and partnership strategy.

Cost: Current staffing resources will be used; additional funding may be required for printing and online presence.

Inventory

In 2015/2016 Forestry Services completed an inventory of trees on municipal boulevards. This inventory is an important building block in our canopy initiatives because it supplies the data necessary to effectively manage our urban forest. However

trees on other municipal lands (parks, watercourses, road allowances, etc.) and private properties have not been identified. To move forward and adequately meet our canopy goals it is recommended that the City work in partnership with other organizations, involve volunteers in data collection and engage the community at large. This strategy has been successful in other municipalities, particularly New York City, where a volunteered-powered campaign surveyed more than 600,000 trees since its inception.

Staff have met with representatives from treeOcode Niagara, a community engagement initiative developed in partnership between [Geospatial Niagara](#) and [Public Service Request Inc.](#) to crowd-source data about the Urban Forests of Niagara's 12 municipalities. This organization is an example of a potential partnership that the City could leverage to further the development of a complete tree inventory.

Staff Recommendation:

1. Develop educational campaign for the public highlighting the importance of a tree canopy and urban forest
2. Develop partnerships with the private tree owners and organizations
3. Engage volunteers in data collection
4. Maintain inventory and report back on success and impact

Current Practice: Inventory of trees on boulevards cannot be fully maintained until the City procures asset management software; limited current inventory of trees in parks and other city locations, no inventory of trees on private property.

Recommendation: Partner with a service provider to engage private tree owners and other stakeholders to create and maintain an inventory of trees on private property (staff to report back to Council in Q2 of 2017; target start date is Q1 2018).

Cost: Staff estimate minimum cost of \$5,000; if supported, staff will explore costs further and report back to Council.

Regeneration

The primary objective of the UFMP is to increase the number of trees planted each year and ultimately to reach the 30% canopy cover goal. To reach these objectives the management plan addressed two major issues:

1. 'Complete Our Streets' – Continue to maintain the core objectives that have served as the foundation of our tree planting initiatives – beautify and fill our public boulevards with trees.
2. Increase Our Canopy Cover – Initiate tree planting programs on public lands and private properties to meet our target goals.

Tree removals due to EAB have negatively impacted the city's overall tree canopy. Currently, the boulevard tree planting initiative is on target, with 1200-1500 trees being planted each year. In order to meet the long term canopy goals, it is important that this initiative continues.

In order to increase tree planting on private property, staff are recommending a regeneration strategy consisting of the following:

- Establish Partnerships with local business to provide trees at reduced rates to St. Catharines property owners (reduction will be set at a level that is expected to maximize participation)
- Use 3.5% (\$12,250) of tree planting budget (\$350,000) to purchase trees from local businesses to support the reduced rates program above; therefore, no additional budget required for the first year
- Develop homeowner education materials on how to plant , obtain locates, etc. and care for trees throughout their lifecycle
- Leverage current City and community events such as Earth Day, Water Barrel sale, community garden kickoffs, etc. to attract residents and encourage participation

Current Practice: No programs in place

Recommendation: That staff implement a two year pilot to determine participation and report back to Council.

Cost: Pilot to be funded by the proposed re-allocation of 3.5% of the annual tree planting budget (\$350,000 = \$12,250) for each year of the pilot.

Protection

Based on the recommendations of the Green Advisory Committee a comprehensive tree by-law can be developed that protects trees on City property and provides protection of some trees on private property. The by-law would be further developed based on the following framework:

Trees on City property

City-owned trees are currently protected under By-law 70-57 the “By-law to Regulate Public Parks in the City of St. Catharines” (the “Parks By-law”). This by-law was approved in 1970 and staff recommend that protection of trees on City property be included in the new comprehensive tree by-law. This by-law would apply to all trees on City property, including City streets, parks, watercourses, natural areas and property owned by City boards and commissions and would improve upon the existing protection by better reflecting the current practices of Forestry Services and incorporating new powers provided for under the Municipal Act, 2001, S.O. 2001, c. 25.

The by-law would uses a broad definition of activities that can “injure a tree” in order to provide greater protection for City trees, establish new minimum fines, make improvements to the penalty section, and explore opportunities for the City to recover costs for remedial work or tree replacement.

Trees on private property

The UFMP provided recommendations that were the result the City’s need to protect our urban forest. One of the major issues indicated in the UFMP was that ‘a majority of the trees within the urban boundary are located on private property but there are no policies for the conservation of these trees.’

Based on the recommendations of the Green Advisory Committee permits would be required to remove:

- Any tree from the significant tree list (see Appendix 1 for list developed by the GAC)
- Trees with greater than 36" girth except those on the undesirable list (see Appendix 2)
- Specific trees that have been nominated as significant trees

Considerations for review of an application would take into consideration the species, size, and health of a tree, property limitations, the number of trees on site, the context of the site and the owner's reasons to remove the tree. Approval will typically be issued for dead or dying trees that may be a hazard. A permit would not be required for emergency work.

Typically a replacement tree would be required to be planted on the property for every healthy or non-hazard tree removed. In cases where planting space is unavailable on the property site funds equal to the cost of the replacement tree will be charged to the property owner and deposited into the City's tree planting program for planting on municipal property

Municipalities such as Brantford and Ajax have by-laws that protect trees of size. Municipalities such as Markham and Brant County have similar programs that protect specific species trees. Information on municipal comparator's tree by-laws is provided in Table 1.

Table 1: Tree by-law information for municipal comparators

Municipality	Private Tree By-law	By-law No.
Barrie	Yes (only trees in woodlots > ½ acre)	Private Tree By-law: 2014-115 Public Tree By-law: 2014-116
Guelph	Yes (trees >10 cm in diameter on lots > ½ acre)	Tree By-law: 2010-19058
Kingston	Yes (distinctive tree species and trees > 12 cm in diameter; does not apply to residential properties)	Tree By-law: 2007-107 (currently under review)
Kitchener	Yes (trees > 10 cm in diameter on properties >1 acre)	Property Standards By-law Private Tree Chapter: 692
Thunder Bay	No	Public Tree By-law: 008-2005
Windsor	No	Public Tree By-law 135-2004
Cambridge	No	Public Tree By-law: 71-06
Niagara Falls	No	Public Tree By-law: 2015-58

Oshawa	No	Public Tree By-law: 78-2008
Waterloo	No	Public Tree By-law: 2014

Staff do not currently have the data required to determine the number of trees that would be protected by the by-law recommended by the Green Advisory Committee. The proposed private tree inventory and information derived from ongoing monitoring and analysis of this report would support the development of a business case for possible future private tree protection policies, enforcement and associated costs.

Current Practice: Requests to remove trees are only reviewed through planning applications, including applications for site plan, subdivision, official plan/zoning by-law amendments, and certain committee of adjustment applications. Tree removal and protection is not reviewed for building permits, pool permits, and driveway requests (i.e. curb cuts).

The Green Advisory Committee has recommended the creation of a by-law that would require a permit to injure or remove certain trees on private property with dedicated enforcement and administration resources.

Hazard trees

Council directed staff to report on trees on private property that are dying, dead, or ones posing a danger to people or property ("hazard trees"). Trees on private property are the responsibility of the property owner to maintain and remove. Until 2014 the Property Standards By-law required that "all yards be kept clean and free from objects or conditions that might create a health, fire or accident hazard"; this clause had been used to require the removal of dead trees or branches that were at risk of falling. When the new Property Standards By-law was approved this clause was not included

A comprehensive Tree By-law could include a clause that requires property owners to remove trees that are dying, dead, or posing a danger to people or property. This is would be very similar to property owner's responsibilities and enforcement of the long grass and weeds by-law. Given existing resources staff are not currently be able to enforce such a by-law, however this could be accommodated by the 1 FTE identified to enforce trees on private property (see Trees on Private Property section). In lieu of this by-law staff recommend that the communication and partnership strategy include education on the identification of hazard trees and the associated responsibilities of property owners.

Current Practice: None.

Recommendation: That the communication and partnership strategy include hazard trees; that future consideration of a comprehensive tree by-law require property owners to remove hazard trees.

Cost: No additional costs for education.

Financial Implications

If the recommendations in this report are approved by Council, it is anticipated that the Parks, Recreation and Culture Services operating budget will be impacted in the following ways:

\$1,000 - \$2,000	Printing and online asset content and ads (annual costs will be lower than initial costs)
\$5,000 - ?	Development of a volunteer driven tree inventory database (projected annual costs)

Relationship to Strategic Plan

This report is related the environmental sustainability goal to lead in the protection of our environment for future generations and the action item to continue to achieve the tree canopy targets identified in the Urban Forestry Management Plan.

Conclusion

Caring for the city's overall tree canopy requires a balanced approach to manage trees on public and private property. The proposed framework within this report makes several recommendations which can be implemented together as one overall approach or as separate programs which can be implemented in stages or as resources are made available. The recommendations will provide greater value to the regeneration of the urban forest canopy through more strategic use of planting program resources (ie whips vs caliper trees on private vs public property) and will generate much needed data on the make-up and rate of change in the private precincts of the urban forest upon which to base future management policy recommendations.

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Significant Trees

In considering which trees on private property within St. Catharines are important for improving the health, vitality and sustainability of the urban forest, the Urban Forestry Advisory Committee (UFAC) has taken many factors into account. It was decided that there are essentially two ways for a tree to be considered “significant.” 1) Trees are considered significant if they belong to one of the *species* that UFAC has identified to be significant to the urban forest owing to their importance to the city’s tree canopy in an effort to conserve them whenever possible. 2) Trees not on the species list can be designated as significant *specimens* by virtue of possessing characteristics of historical, cultural or scientific interest to the community. These *specimen* trees are nominated and evaluated. Few trees will meet such criteria.

UFAC Significant Tree Species List

- Tamarack
(*Larix laricina*)
- Eastern Hemlock
(*Tsuga canadensis*)
- Butternut
(*Juglans cinerea*)
- Hickory species
(*Carya species*)
- Hop Hornbeam
(*Ostrya virginiana*)
- Yellow Birch
(*Betula alleghaniensis*)
- Sweet (Cherry) Birch
(*Betula lenta*)
- Beech species
(*Fagus species*)
- Oak species
(*Quercus species*)
- White Elm
(*Ulmus americana*)
- Slippery (Red) Elm
(*Ulmus rubra*)
- Hackberry species
(*Celtis species*)
- Cucumber Tree
(*Magnolia acuminata*)
- Tulip Tree
(*Liriodendron tulipifera*)
- Kentucky Coffee Tree
(*Gymnocladus dioica*)
- Sugar Maple
(*Acer saccharum*)
- Black Maple
(*Acer nigrum*)
- Blackgum
(*Nyssa sylvatica*)
- Eastern Flowering Dogwood
(*Cornus florida*)

The tree *species* on this list, all together, constitute less than 10% of the St. Catharines urban forest canopy. They are all species native to eastern North America and capable of thriving in the St. Catharines area. They are therefore a necessary requirement to maintain, restore and enhance the ecological health, integrity and biodiversity of the core natural heritage system and its contributions to a healthy landscape. Many such as hemlock, the hickories, the oaks and tulip tree are long-lived, which helps to maintain the canopy. They are free of such nuisance characteristics as suckering, weak structure, or release of chemicals inhibitory to the growth of other plants that can mar a neighbourhood’s enjoyment of their environs. Five of the species, Butternut, Sweet Birch, Cucumber Tree, Kentucky Coffee Tree and Eastern Flowering Dogwood are presently on the provincial Species at Risk list.

Prohibited or Undesirable Trees

- Northern Catalpa (*Catalpa speciosa*)
- Horsechestnut (*Aesculus hippocastanum*)
- Manitoba Maple (*Acer negundo*)
- Sycamore Maple (*Acer pseudoplatanus*)
- White Mulberry (*Morus alba*)
- Tree of Heaven (*Ailanthus altissima*)
- European Birch (*Betula pendula*)
- Scots Pine (*Pinus sylvestris*)
- White Poplar (*Populus alba*)
- Carolina Poplar (*Populus X canadensis*)
- Spindle-tree (*Euonymus europaeus*)
- White Willow (*Salix alba*)
- Crack Willow (*Salix fragilis*)
- Hybrid Willow (*Salix X rubens*)
- Goat Willow (*Salix caprea*)
- European Mountain Ash (*Sorbus aucuparia*)
- European Ash (*Fraxinus excelsior*)
- Showy mountain-ash (*Sorbus decora*)
- American Mountain Ash (*Sorbus Americana*)
- European Aspen (*Populus tremula*)
- Bird Cherry (*Prunus avium*)
- Perfumed Cherry (*Prunus mahaleb*)
- Russian Olive (*Elaeagnus angustifolia*)
- Apples, Flowering Crabs (*Malus spec.*)