



**SUBJECT: City-wide private tree bylaw implementation**

**TO: Committee of the Whole**

**FROM: Roads, Parks and Forestry Department**

Report Number: RPF-18-19

Wards Affected: All

File Numbers: 820-01

Date to Committee: December 2, 2019

Date to Council: December 16, 2019

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**Recommendation:**

Approve proposed City-wide Private Tree Bylaw XX-XXXX, Appendix 'A' to report RPF-18-19 and repeal existing bylaw 43-2018 Pilot Private Tree Bylaw, effective April 1, 2020; and

Approve the proposed operating and capital budget impacts for the administration of both public and private tree bylaws, through the budget processes (Business Case 2020-003 and VE-VN-1956); and

Amend rates and fees by-law #52-2019 by replacing page 38 of Appendix A effective April 1, 2020; and

Direct the Director of Roads, Parks, and Forestry to develop a program for tree planting incentives on private property within the City of Burlington.

**Purpose:**

This report outlines the options to consider in following the Vision to Focus plan and the City's declared climate emergency:

- Focus Area 3: Supporting sustainable infrastructure and resilient environment
  - Increase the tree canopy City-wide
  - Promoting and working towards a lower carbon footprint community
  - Promote the development of trees to provide improved air quality; carbon uptake; cooling effect for urban heat islands; shade from UV rays; storm water uptake; wildlife habitat; and psychological well-being benefits for residents.

## **Executive Summary:**

Report RPF-15-19 was tabled at the October 10<sup>th</sup> Committee of the Whole meeting which recommended the implementation of a private tree bylaw City-wide. Staff committed to reporting back to members of council with a draft bylaw and include additional information in a follow up report based on questions raised at committee.

The information contain within this report should be read in conjunction with information contain within the previously submitted report, RPF-15-19.

This legislation will help to protect and grow the urban forest as a long-term community resource while respecting homeowner rights. This bylaw will also provide mechanisms to incentivize private landowners to actively participate in the continued preservation and growth of the City's Urban Forest through subsidized planting opportunities.

Staff recommends Option 4 for implementation, which prohibits the removal of a tree greater than or equal to 20 cm diameter at breast height, and more than 5 trees between 10 and 20 cm in diameter in a calendar year. This option provides a high level of protection for private trees City-wide.

If approved, implementation of this program will take approximately 4 months.

## **Background and Discussion:**

### **1.0 The Proposed Private Tree Bylaw at a Glance**

The proposed City-wide Private Tree bylaw will apply to the injury or destruction of:

- a) Any tree greater than 20 cm in diameter
- b) More than 5 trees in one calendar year with a diameter range between 10 cm and 20 cm
- c) Heritage Trees under the Ontario Heritage Act, 1990 are protected
- d) Trees classified as endangered, threatened, or at-risk species, as defined by the Species at Risk Act, 2002.

The application of the bylaw would apply to all trees located on private property within the geographic boundary of the City of Burlington.

The Halton Region Woodlot Preservation Bylaw 121-05 would supersede the City-wide Private Tree Bylaw.

There are exemptions under the bylaw to allow for residents to be able to sufficiently manage risk and maintain trees in good health on their property. The following exemptions are proposed and consistent with other municipalities:

- a) Pruning in accordance with good arboricultural practice
- b) For emergency work (e.g., work of an urgent nature, i.e., utility repairs)
- c) For an imminently hazardous tree
- d) If the tree is classified under the Invasive Species Act, 2015, or listed as a noxious weed defined by the Weed Control Act, 1990. (e.g., European Buckthorn)
- e) Other aspects of provincial legislation supersede the private tree bylaw which are discussed in Section 3.0: Applicable Legislation.

This bylaw does apply in the following scenarios, without a permit fee:

- a) If the tree is dead (verified by City of Burlington Forestry staff)
- b) If the tree is terminally diseased, i.e., Emerald Ash Borer
- c) If the tree is within 2 m of an occupied dwelling

It is of important note that the private tree bylaw cannot prevent or restrict the approval of development applications, however, its intended application is to:

- 1) Encourage homeowners and developers to give tree removal a sober second thought through consultation with City staff. This lends the opportunity for staff to educate applicants on the importance of trees and work with them to consider tree-friendly construction methods and techniques in a collaborative way.
- 2) Ensure that if trees are to be removed on private property, they are replaced either through replacement plantings or by compensation as cash in lieu of replacement.

If an applicant intends to remove tree(s), they would be required to submit a tree permit application to the City's Forestry section for review and approval.

Compensation for tree removal would be calculated according to an Aggregate Caliper Method, detailed below. Replacement planting on site, cash-in-lieu of replacement, or a combination thereof, would be evaluated as part of the application process. The average cost of \$700 per replacement tree is currently recommended. It is preferred that trees are replaced on the subject property by the applicant.

The proposed process is consistent with the site plan application process in terms of permitting and compensation calculations.

## **2.0 Application Process & Associated Fees**

It is critical that the administration of the private tree bylaw be incorporated into existing development processes already in operation within the City. The Forestry section has been actively participating in the Development Application Process (DAP) Review, and the recommendations herein are consistent with this review.

Figure 2 below identifies the process by which an applicant would follow and the associated time for a Forest Protection Officer to review.

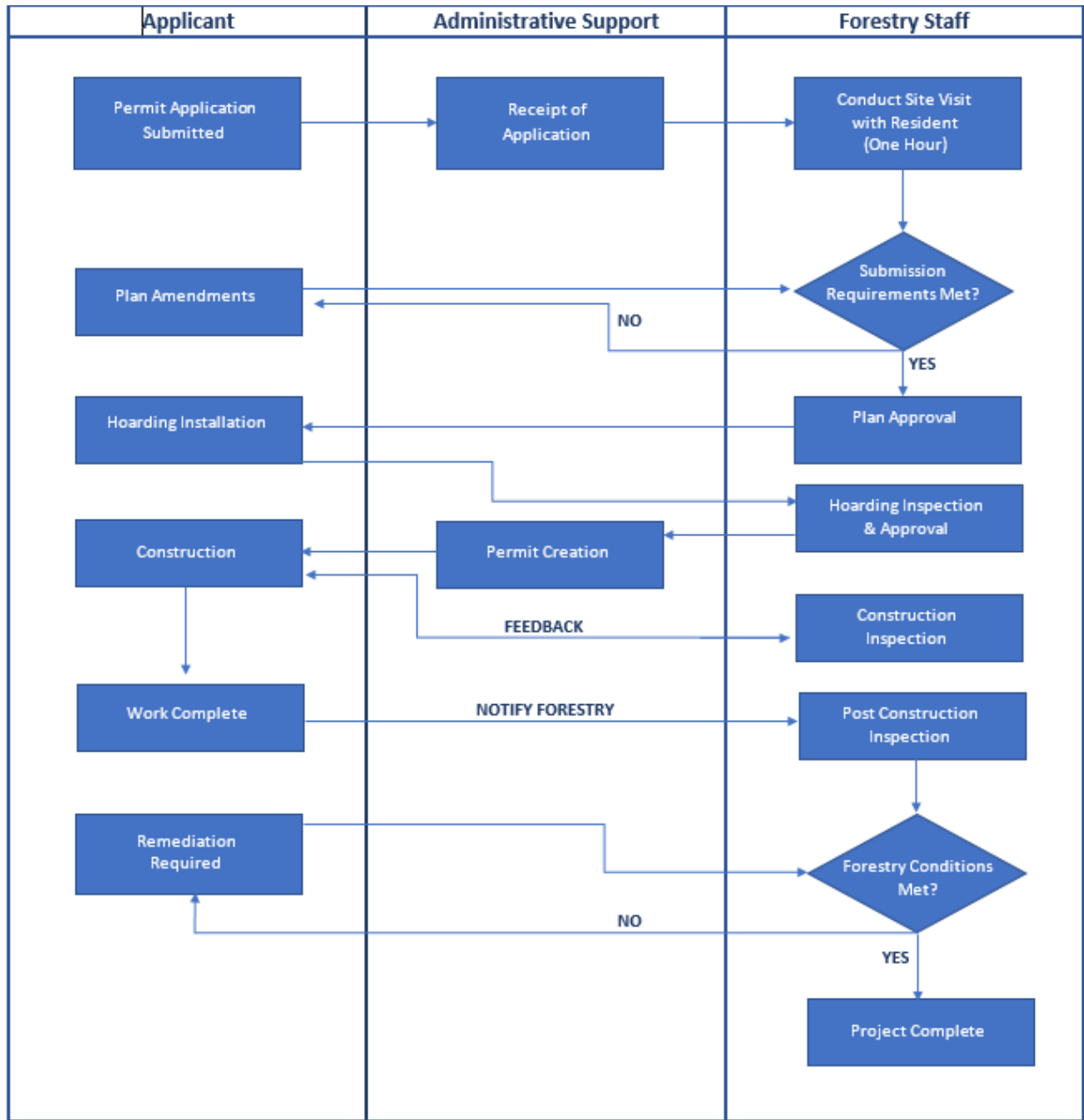


Figure 1: Development related application Process Map

Non-development related applications would follow a similar process for permit review, with fewer steps:

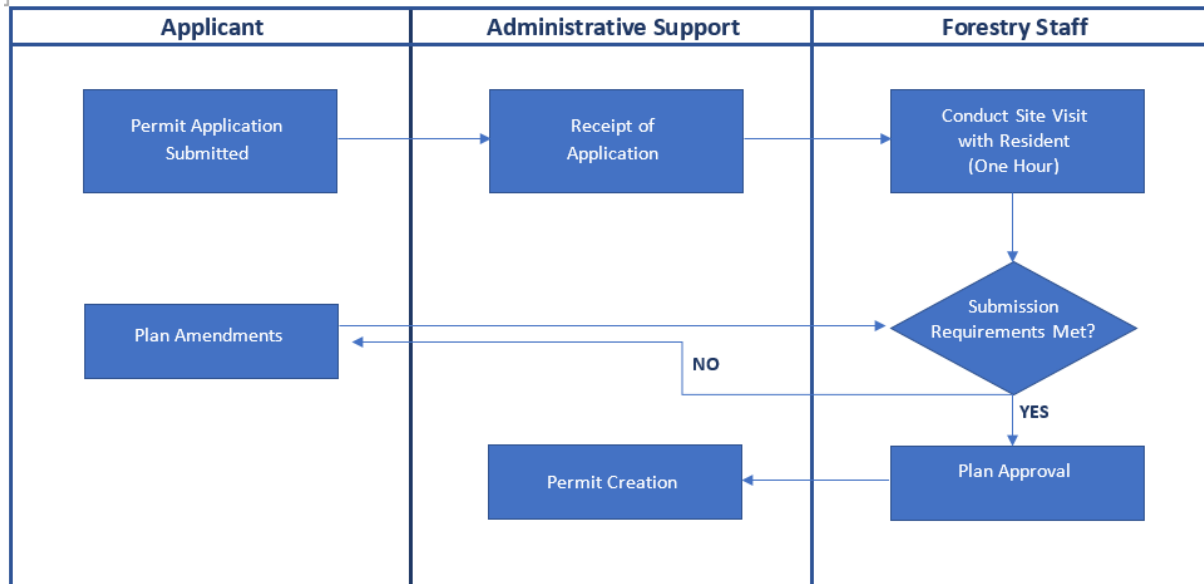


Figure 2: Non-development related application Process Map

**Permitting:**

The Forestry section recommends amending the existing Forestry permit fee within the Rates and Fees Bylaw to fully compensate for the time required for application review for both development and non-development applications. The same fees would apply to both Public (068-2013) and Private Tree Bylaws. Each of these permit application fees would apply for both the injury or destruction of a tree. The compensation fee would differ according to the Aggregate Caliper Replacement Method.

Development related Tree Permit Applications per property: \$680

Non-Development related Tree Permit Applications per property: \$390

**Tree Replacement Compensation:**

Staff recommend using the Aggregate Caliper Method for calculating compensation for tree removal. This method requires the user to replace the equivalent cm diameter of the removed tree with the equivalent cm of replacement trees. This method also considers the condition of the removed tree and construction risk factor in the calculation. Examples are noted below. Replacement trees are required to be 50 mm caliper deciduous trees, or 200 cm conifers (considered the equivalent to a 50 mm deciduous tree), both in wire baskets, or cash in lieu of replacement of \$700 per replacement tree. The City reserves the right to hold securities on replacement trees for a 2-year warranty period to ensure replacement trees are growing in good health. After the warranty period is complete, the applicant can apply for a release of securities.

*Example 1:*

30 cm Norway Maple, Fair condition (70%). **Removal**

$(30 \text{ cm} \times 70\%) = 21 \text{ cm}$ .

Construction Risk Factor: 100 % (removal)

$21 \text{ cm} / 5 = 4.2$ .

4 replacement trees would be required, or cash in lieu of \$2,800.00 payable to the City of Burlington Forestry Section.

*Example 2:*

30 cm Norway Maple, Poor condition (55%). **Injury**

$(30 \text{ cm} \times 55\%) = 16.5 \text{ cm}$

Construction Risk Factor: 20% (root impact; tree retained)

$16.5 \text{ cm} \times 20\% = 3.3 \text{ cm}$

$3.3 \text{ cm} / 5 = .66$

1 replacement tree would be required, or cash in lieu of \$700.00 payable to the City of Burlington Forestry Section.

Using the Aggregate Caliper Method, it is estimated that on an annual basis, approximately 735 trees would be replaced on private property, either through replacement, cash in lieu, or a combination thereof.

**Investing in the Urban Forest:**

Funds that are received as cash-in-lieu of replacement are recommended to be re-invested into planting initiatives on **private land**. Some examples of programs are:

- 1) Free tree giveaways with tree planting workshops
- 2) Discounted rates for homeowner tree purchases at participating nurseries
- 3) Caliper tree planting on private land through a third-party vendor
- 4) Subsidized naturalization planting initiatives for rural property owners
- 5) Grant programs in participation with environmental groups and local school boards.

**Violations:**

Violations under the bylaw would be covered with 3 mechanisms that may operate independently or combined, depending on the scope.

- 1) **Contravention Fine:** This fine would apply to an individual on site found to have contravened any section within the bylaw, i.e., placing soil within a tree preservation zone.
- 2) **Contravention Fee:** Part of the Rates and Fees Schedule, a contravention fee would be applied to the property owner. This fee would cover the additional staff time required to conduct an assessment of trees on site that have been impacted. If the fee is not paid, it would be incorporated into the property owner's annual tax roll.

- 3) **Provincial Offences Act:** In some cases, pursuit of fines through a Part III summons under the Provincial Offences Act is desirable.

Each Forest Protection Officer would have the authority and discretion to utilize one or all of these measures under the bylaw which would be evaluated on a case by case basis.

### 3.0 Applicable Legislation

The implementation of a private tree bylaw by a municipality is governed by section 135 and sections 139 to 141 Municipal Act, 2001.

Section 135 (12) identifies exemptions from tree bylaws as a result of existing provincial legislation which includes the Planning Act, among others.

The following table provides additional details regarding these exemptions as it relates to development:

**Table 1: Tree Bylaw Exemptions under the Municipal Act, Sec. 135 (12)**

Existing Provincial Legislation	Application Type	COB Applicable Guidelines	Tree Related Guidelines	Notes
Planning Act, Sec. 41	Site Plan (Multi-unit residential and commercial)	City of Burlington Site Plan Guidelines	Section 9.0: Tree Saving Plan	- All trees greater than 10 cm identified on plan - Permit Fee of \$208 (applies to public tree bylaw only) - Private trees serving a deemed purpose that are removed or do not survive, are to be replaced using an aggregate caliper formula.
Planning Act, Sec. 51	Plan of Subdivision	N/A	N/A	-no specific applicable guidelines/policies related to tree removal. -general guidelines encouraging tree replacement if removed.
Planning Act, Sec. 53	Consent	N/A	N/A	-no specific applicable guidelines/policies related to tree removal. -general guidelines encouraging tree replacement if removed.
Electricity Act, Sec. 2	N/A	N/A	N/A	Owners of a transmission and/or distribution network would be exempt of the bylaw for the injury or destruction of trees to maintain their network.
Aggregate Resources Act/Planning Act, Sec. 34	N/A	N/A	N/A	the injuring or destruction of trees undertaken on land described in a license for a pit or quarry.

				<p>AND</p> <p>In order to lawfully establish and operate or enlarge any pit or quarry on land on which a pit or quarry is a permitted land use under a by-law passed under section 34 of the Planning Act</p>
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The proposed official plan will include a chapter on Urban Forestry and a more comprehensive guideline pertaining to tree replacement, including the use of the Aggregate Caliper Replacement method.

Although there are exemptions from a private tree bylaw under specific sections of the Planning Act, it is important to recognize the extent the private tree bylaw would have over low density residentially zoned areas within the City. Low density residential does not fall under site plan control and the private tree bylaw would apply. As a result, it is anticipated that a minimum of 250 development related applications will be received on an annual basis.

#### 4.0 Private Tree Bylaw & Canopy Growth

It is estimated that the canopy cover within the urban boundary of the City of Burlington is approximately 15%. The 2010 Urban Forest Management Plan estimated a 17% canopy cover within the urban boundary (pg 6). The decline is due mainly to the impacts of Emerald Ash Borer (EAB) over the last 10 years to both private and publicly owned trees. Several studies have confirmed that urban forests contribute to mitigating the effects of climate change as well as providing countless additional ecological benefits (Foster, Lowe, Winkelman, 2011; Safford et. al, 2013).

Urban Forest Canopy Cover is a two-dimensional metric that is used to quickly and easily gain a general understanding of the overall condition of an urban forest.

A more accurate measure is to calculate changes in leaf area, as this allows the long-term impacts of tree removal to be evaluated. This can also be a useful measure to evaluate the positive impacts of tree planting through a restoration process.

Using an estimate of 175 development related private tree removals annually (70% of the total 250 applications received), an average diameter of 30 cm per tree was assigned to calculate the leaf area impact from tree loss over a ten-year period. There are two measures the City can take to recover the urban forest through tree replacement initiatives, either replacing on a 2:1 replacement ratio, or via the Aggregate Caliper Replacement Method.

Given the leaf area of the subject tree, replacing using a 2:1 ratio will not sufficiently replace the canopy loss in year one, nor will it recover over a ten-year period. Replacement of trees using this method will continue to reduce the urban forest aggregate leaf area and overall canopy cover percentage.



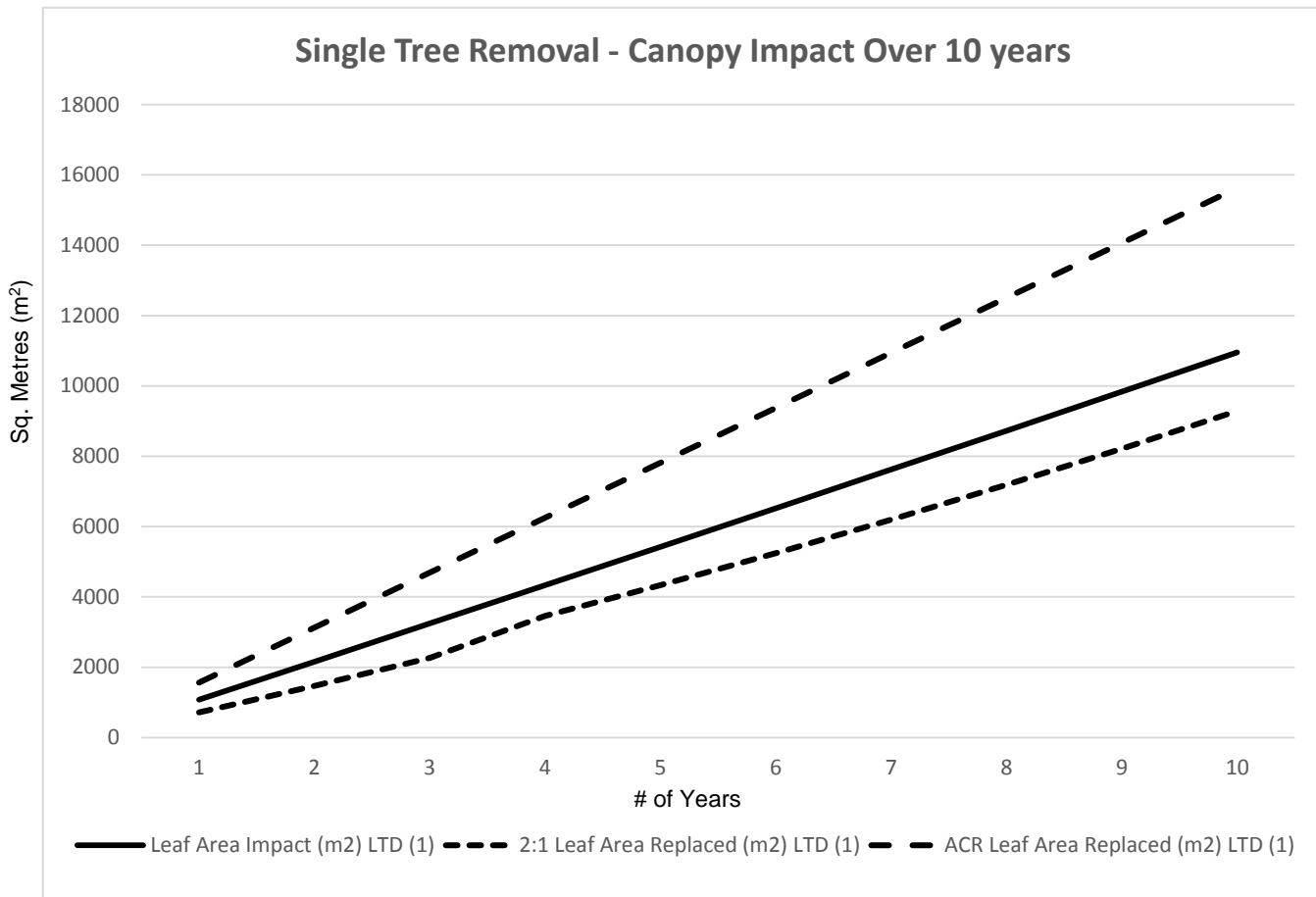


Figure 3: \*The analysis of 175 trees is an estimate of development related tree removals on an annual basis. It assumes a 'Fair' tree condition and considers an average of 4% mortality for all trees replaced.

By replacing trees using the aggregate caliper method, leaf area can be replaced in year one and exceed the ten-year target by a factor of more than 6,000 m<sup>2</sup> and contribute to canopy growth on private property.

### 5.0 Staffing Requirements

The role of the Forest Protection Officers will be to administer both the public and private tree bylaws. Their responsibilities will be:

- 1) Educating residents and developers as to the nature of the bylaw and the importance of trees
- 2) Plan review as part of the development process and liaising with homeowners as a valued partner in the discussion of tree preservation within the City
- 3) Conducting ongoing tracking and analysis as to the effectiveness of the bylaw and providing residents and members of council with these metrics on a regular basis. This would be the role of both the protection officers and the Supervisor.

- 4) Ensuring permit conditions and all other aspects of both the public and private tree bylaw are adhered to and administer fees and fines as required.

#### **Development Related Applications:**

Forestry staff estimate that a minimum of 250 applications per year would require a permit under the combined administration of the proposed Private Tree Bylaw and existing Public tree bylaw (68-2013). Development related applications are considered as those requiring approval from Committee of Adjustment, and/or obtaining a Zoning Clearance, Grading and Drainage Clearance certificate, or a building permit.

#### **Non-Development Related Applications:**

It is estimated an additional 750 'non-development related' applications will require review and subsequent permitting under the bylaw. Non-development related permits are considered minor landscaping, pool installations, outbuilding construction, and other removals of healthy trees due to maintenance concerns. This value is consistent with other surrounding municipalities.

Applications received by the Forestry section that aren't related to a development would be able to be processed in less time due to a simpler process, as shown in Figure 1.

## **6.0 Implementation**

If the private tree bylaw is approved, a detailed implementation plan will be required to successfully execute it. This includes a comprehensive communications plan, updating policies and procedures for the new bylaw, hiring and training of staff. Given the amount of preparation, it is recommended the bylaw become effective April 1, 2020.

Communications Plan: Q1 2020

To successfully implement the new private tree bylaw and educate all stakeholders on its administration, several open houses are recommended to be hosted City-wide. Additional information will be posted onto the Forestry web site and shared with other media partners.

Policies & Procedures: Q1 2020

At present, the Forestry section relies on the Tree Protection and Preservation Specification SS-12A for the administration of both public and pilot private tree bylaw. To communicate the application process and associated permit fees, the Forestry section will need to conduct a significant review of this document to incorporate the new specifics of the City-wide Private tree bylaw including but not limited to - new permit fees; method for calculating compensation; tree preservation plans; and general specifications for working around trees during the construction process.

In addition, collaboration with the Legal Department will be required to develop short form wording for submission to the province for approval of standard fines.

Internal & External Process Development: Q1/Q2 2020

As part of the roll out of the new private tree bylaw, the Forestry section will liaise with other city departments that would be affected by the change to ensure processes are efficient and understood.

Human Resources: Q1/Q2 2020

Time is needed to post and fill new jobs, provide training and prepare for the bylaw implementation.

### **Options considered**

#### **OPTION 1:** Status quo

A status quo approach was considered as part of this report. This would allow the current Pilot Private Tree Bylaw in Roseland to run the original 2 years.

Pros: Allows for more time to evaluate the pilot.

Cons: This does not consider the implications of a declared climate emergency, and delays protection of trees citywide.

#### **OPTION 2:** Bylaw approval with staffing; no increase to rates and fees

Approval of the bylaw with no increase to the existing \$208.00 permit will require additional funding from the tax levy, consistent with the submitted business case 2020-003.

Pros: Addresses climate emergency declaration and investment in the urban forest

Cons: Increased financial burden to the Tax Levy

#### **OPTION 3:** Invest in tree planting; no private tree bylaw

Invest the equivalent value into tree planting initiatives on private and public land with no private tree bylaw approval

Pros: Addresses climate emergency declaration and investment in the urban forest

Cons: Does not allow for any formal mechanism for private tree protection or compensation City-wide.

Increased financial burden to the Tax Levy

Additional staffing resources will be required to administer additional planting.

#### **OPTION 4:** Repeal the Pilot Private Tree Bylaw and approve a City-wide private tree bylaw

Pros: This option provides the highest level of protection by including the entire city.

Cons: Increased resource requirements in both operating and capital budgets.

## Financial Matters:

Staff recommend amending the existing rates and fees bylaw to represent the true cost of permit application review. In addition, a dual stream fee structure is recommended for development and non-development related permit applications, below:

Development related Tree Permit Applications per property:	\$680
Non-Development related Tree Permit Applications per property:	\$390

## Total Financial Impact

**Option 1** – No impact

**Option 2** – The annual operating impact of \$520,000, and one-time capital funding of \$220,000, will be subsidized by approximately \$200,000 annually at the current permit rate. The remaining operating costs will need to be recovered through the tax levy (\$320,000). In addition, approximately 735 trees could be planted on private land annually.

**Option 3** – Invest the equivalent shortfall amount of \$320,000 as estimated from Option 2 into tree planting, an additional full-time employee would be required inclusive of vehicle and external costs (\$135,000). This staff member would be tasked with developing a program which focuses on developing partnerships with several public and private partners to facilitate tree planting operations City-wide. The remaining funds, \$185,000, would fund 470 caliper tree plantings City-wide, annually, based on current contracted planting rates.

**Option 4** - Pending amendments to the rates and fees bylaw, the bylaw administration as proposed is estimated to cover 80-100% cost. Staff estimate an annual revenue of \$170,000 for development related permit applications for both public and private tree applications (250 applications @ \$680.00/application), and an additional \$290,000.00 for non-development related permit applications (750 applications @ \$390/application). Total revenue: \$460,000. **This means a net cost of \$60,000 funded through the tax levy.** The one-time capital funding request of \$220,000 will require funding through the tax levy (refer to VE-VN-1956). In addition, approximately 735 trees could be planted on private land annually.

## Source of Funding

The Private Tree Bylaw will be funded through both the operating and capital budget, and a business case has been prepared for consideration in the 2020 budget process: 2020-003 (operating). This program is estimated to recover 80 to 100% of annual operating costs through the administration of development and non-development related permit fees, approximately \$460,000.00. The remaining annual cost of \$60,000.00 would be funded annually through the tax levy. Bylaw contravention fees through site inspection would be an additional recovery. This cost recovery is contingent upon approval of the amended fees.

## **Other Resource Impacts**

Additional resources, and advanced training through the Municipal Law Enforcement Officers Association, are included in the business case for consideration. A one-time capital purchase of 5 electric vehicles will be required (refer to VE-VN-1956).

## **Connections:**

Burlington's 2010 Urban Forest Management Plan (UFMP) included a recommendation to complete a detailed study to evaluate the appropriateness of a private tree Bylaw for Burlington.

Committee report, RPF-15-19 presented to committee on Oct. 10<sup>th</sup>, 2019, aligns with the recommendations within this report

## **Vision to Focus:** Focus Area 3

Supporting Sustainable Infrastructure and a Resilient Environment; Supports commitment #5 - increasing the tree canopy City-wide; supports the initiative "Use the results and outcomes of the Roseland Private Tree Bylaw Pilot to determine where tree Bylaws are appropriate."

## **Red Tape Red Carpet and Development Application Process**

The development of a Forest Protection Branch within the Forestry Section will improve the service delivery for residential construction by providing more resources and improving coordination with site engineering and zoning staff. Similar discussions related to amending existing permit fees have been discussed as part of the Development Application Review Process. Recommendations made within this report are consistent with the DAP Review.

## **Environmental Impact**

The proposed program as presented aligns well with the City's Climate Action Plan. All vehicles to be purchased for this program would be fully electric cars.

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## **Public Engagement Matters:**

Public engagement was managed and reported on in Report to Council, RPF-15-19. No additional formalized community consultation was conducted after the October meeting to council.

## **Conclusion:**

The proposed City-wide Private Tree Bylaw will help to protect the urban forest as a community resource while respecting homeowner rights. This bylaw will also provide incentives to private landowners to actively participate in the continued preservation and growth of the City's Urban Forest through subsidized planting opportunities. Staff recommends Option 4 for implementation, with regulating removal of one tree greater than or equal to 20 cm diameter at breast height, and no more than 5 trees between the diameter of 10 and 20 cm being allowed to be removed in one calendar. All compensation would be used for investing in tree planting initiatives on private land. This option provides a high level of protection for private trees City-wide.

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Respectfully submitted,

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## **Appendices:**

A. Draft City-wide Private Tree Bylaw (to be distributed under separate cover)