

## **Actions to Reaffirm Toronto's Tree Canopy Target**

**Date:** November 18, 2021

**To:** Infrastructure and Environment Committee

**From:** General Manager, Parks, Forestry and Recreation

**Wards:** All

### **SUMMARY**

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Toronto's urban forest is a critical component of the city's green infrastructure. Trees provide a range of environmental, ecological, physical and mental health, social, cultural and economic benefits, and contribute to climate resiliency as recognized in the City's TransformTO Net Zero Strategy. In addition to enhancing city streetscapes and providing habitat within parks, ravines, and natural areas, the urban forest provides valuable ecosystem services that improve the quality of life in the city. Some services include carbon sequestration, pollution removal, energy savings and avoided runoff, worth an estimated \$55 million annually.

At its meeting on January 29, 2020, City Council adopted the 2018 Tree Canopy Study. This report responds to various motions adopted by City Council since that time, including addressing tree canopy at the neighbourhood scale; canopy expansion on private land; strengthening tree protection, monitoring LDD moth (European gypsy moth) and a reaffirmation of Toronto's canopy cover target of 40 per cent by 2050 to align with the City's TransformTO Net Zero Strategy. It also outlines a process for the creation of Toronto's first arboreal emblem using public feedback.

Urban Forestry's mandate is to maintain, protect, plant and plan for Toronto's urban forest. Through the analysis and use of data and evidence based decision making, action is being taken across the city to address the challenges underscored in the 2018 Tree Canopy Study. The introduction of a tree equity approach to planning and service delivery at the neighbourhood scale will help to address inequitable distribution of the urban forest. Ongoing investments that are being made in tree planting and stewardship will support canopy expansion on private property through the Urban Forestry Grants and Incentives program, since the greatest potential for canopy expansion exists on private land. The use of fees and fines to address compliance with the City's Tree By-laws, as well as public and industry education, are important components of a successful tree protection model. Updates on Compliance and Enforcement inspection fees and response times as well as enhanced educational materials are presented in this report. A status update on LDD moth monitoring and management is also provided.

The creation of an arboreal emblem to add to the City of Toronto's family of official symbols will underscore the significance of trees in Toronto and reaffirm our commitment to grow, enhance and protect the urban forest. Parks, Forestry and Recreation will support the City Clerk's Office and Strategic Public and Employee Communications to undergo public engagement and consultation with Toronto's diverse communities to determine a tree best suited to represent Toronto and to be included as one of Toronto's Official Symbols.

## **RECOMMENDATIONS**

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

1. City Council reaffirm Toronto's target of 40 per cent tree canopy cover by 2050 to align with the City of Toronto's TransformTO NetZero Strategy.
2. City Council authorize the General Manager, Parks, Forestry and Recreation, to commission and select an official arboreal emblem for the City of Toronto in partnership with the Chief Communications Officer for Strategic Public and Employee Communications and the City Clerk's Office, following public engagement.

## **FINANCIAL IMPACT**

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

Any future capital and operating funding needs will be addressed as part of future year budget processes for City Council approval.

## **DECISION HISTORY**

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At its October 1 and 4, 2021 meeting, City Council adopted item MM36.31, Strengthening Tree Protection. City Council requested the General Manager Parks, Forestry and Recreation to undertake actions to prevent the unauthorized removal of trees which included providing residents the information necessary to report Tree By-law contraventions.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.MM36.31>

At its July 14, 15 and 16, 2021 meeting, City Council adopted item IE23.22, LDD Moth (European Gypsy Moth) Infestation. City Council directed Parks, Forestry and Recreation to increase efforts to address and assess the LDD Moth infestation across the city.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.IE23.22>

At its January 29, 2020 meeting, City Council adopted item IE11.2, Enforcement of Tree Protection. City Council directed Parks, Forestry and Recreation to report back to Council on Compliance and Enforcement inspection fees and response times.  
<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.IE11.2>

At its January 29, 2020 meeting, City Council adopted item IE11.1, 2018 Tree Canopy Study which provided an update on the current state of Toronto's urban forest and how it has changed since the previous assessment undertaken in 2008.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.IE11.1>

At its February 20, 2013 meeting, City Council adopted item PE18.4, Toronto's Strategic Forest Management Plan, a 10-year road-map that has guided Urban Forestry's planning and decision making since 2012 and included the adoption of a city-wide target of 40 per cent canopy cover.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.PE18.4>

## **COMMENTS**

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The 2018 Tree Canopy Study provides an update on the current state of the urban forest and how it has changed since the previous assessment, undertaken in 2008. The Study presents an analysis on the distribution, composition and influencing factors that affect the size and quality of the urban forest. Since publication of the 2018 Tree Canopy Study, minor edits including an expanded glossary of terms and additional text to improve understanding and interpretation of the Study's methodologies and findings were made. There is no impact to the Study's key findings. The CanopyTO summary (Attachment 1) and revised Technical Report (Attachment 2) are attached.

### **Implementing a Tree Equity Approach**

Urban Forestry was directed to consider approaches to address canopy changes at the neighbourhood scale based on findings presented in the 2018 Tree Canopy Study. As such, Urban Forestry is implementing a new approach, developed by American Forests, to address canopy distribution across the urban landscape. American Forests is a not-for-profit organization with a goal to create healthy and resilient forests that deliver essential benefits for climate, people, water and wildlife.

American Forests developed a tree equity approach to manage the inequitable distribution of urban forests and to mitigate the impacts on the health and well-being of urban residents by focussing on neighbourhood-scale responses. The tree equity approach uses land cover classification data together with demographic and socio-economic data to identify opportunities for canopy expansion at the neighbourhood scale. The tree equity score is a metric that helps cities assess how well they are delivering equitable tree canopy cover to all residents. It is an indicator of whether the neighbourhood has the right number of trees so all people can experience the benefits that trees provide. Tree equity analysis produces scores ranging from 0 to 100. A lower

tree equity score indicates a greater priority for closing the tree canopy gap in that neighbourhood. A higher tree equity score, closer to 100, indicates that the neighbourhood has good tree equity.

Urban Forestry performed a tree equity analysis for Toronto's neighbourhoods. While almost half of Toronto neighbourhoods (67 out of 140) have a tree equity score of 100, there are ten neighbourhoods with low tree equity scores. These scores range from 55 to 78. Recognizing that Toronto's ravine systems contribute significantly to the city's urban forest, as they represent 38 per cent of the city's tree cover, an additional tree equity analysis was performed excluding Toronto's ravine systems. This analysis resulted in seventeen neighbourhoods with a lower tree equity score, with scores ranging from 48 to 79. See Appendix 1 for a list of neighbourhood tree equity scores.

Urban Forestry applies its four service pillars of maintaining, protecting, planting and planning city-wide. Addressing equity is critical for meeting tree canopy targets and complements Urban Forestry's ability to take priority action to address inequitable distribution of the urban forest. The analysis of tree canopy gaps with an equity approach goes beyond city-wide canopy estimates and looks at actual access and interaction with the tree canopy, experienced at the neighbourhood scale. Toronto will be the first municipality in Canada to utilize a tree equity approach to prioritize canopy growth at the neighbourhood scale.

### **Investing in Canopy Expansion on Private Land**

The 2018 Tree Canopy Study determined that the greatest amount of potential space for canopy growth exists on private land, confirming that a strategy is needed to grow the canopy on private land. Toronto's Tree Planting Strategy, completed in May 2018, serves as a blueprint that outlines future actions and investments to grow the urban forest on private land through tree planting, stewardship, education, leadership and innovation.

As part of the development and implementation of the Tree Planting Strategy, the Urban Forestry Grants and Incentives Program was created to assist residents in expanding the tree canopy on private land through subsidized grants or tree giveaways. Between 2017 and 2020 Urban Forestry invested over \$4 million and leveraged over \$9 million in matching funding from external sources in support of tree planting and stewardship on private land through the Urban Forestry Grants and Incentives Program. This resulted in the planting of over 53,000 trees and shrubs and the engagement of over 150,000 people. In total, 132 projects have been funded across all 25 wards in Toronto, including in 23 of 31 Neighbourhood Improvement Areas. The Tree Planting Strategy and the Urban Forestry Grants and Incentives Program Impact Report, summarizing the results and accomplishments from 2017 and 2020 can be found in Attachment 3 and 4.

### **Strengthening Tree Protection**

Urban Forestry regulates the injury, destruction or removal of trees on City and private property through several Municipal codes; Chapters 658, 813, 608, known collectively as the City's Tree By-laws. The Compliance and Enforcement Unit within Tree Protection and Plan Review was established in 2016 with an overall objective to enforce

the City's Tree By-laws and initiate appropriate actions when contraventions are committed.

Contravention inspection fees are determined in accordance with the City of Toronto's User Fee Policy. Fees charged are specific to recover costs associated with the service being provided. Beginning in Q1 2020, the application of Contravention Inspection Fees was expanded from use on the initial inspection only to also being applied for follow-up inspections where compliance had not been achieved on-site and a second site inspection was required to be performed.

In 2020, the Compliance unit collected \$0.47M in compliance fees associated with 488 infractions. In 2021, (to the end of Q3), \$0.60M in fees were collected associated with 485 infractions. Between 10 per cent and 20 per cent of the above noted fees are associated with follow-up inspections; sites that require a second visit because compliance had not yet been achieved.

Increasing fees to dissuade potential owners or developers from contravening the City's Tree By-laws (initial or for second inspections) is not in keeping with the City's User Fee Policy. However, Urban Forestry will recommend any fee increases related to service cost recovery through the annual operating budget process.

Once Compliance and Enforcement staff confirm that a contravention has occurred a Contravention Inspection Fee, an Order to Comply and Stop Work Order (if applicable) are subsequently issued. Orders to Comply outline precise bylaw provisions that were contravened, provide a detailed description of how it was contravened, provide clear direction for correction and a deadline date on when this work is required to be completed. Stop Work Orders are also used on site to immediately demand the discontinuation of work taking place within a tree protection zone, associated with trees that have not been permitted for injury or removal.

The use of prosecution is undertaken primarily for sites where contraventions are significant in nature and where there is no work that could remedy the infraction (e.g. a severely injured or removed tree). Strong and sufficient evidence is required in order to pursue prosecution. Charges may result in fines or settlements levied against offenders. Part 3 Summons are typically issued to all parties involved with a contravention, with multiple summons issued based on the number of charges and offenders found. Toronto's Tree By-laws currently provide the maximum fines allowable under the City of Toronto Act (COTA) including a minimum \$500 per tree up to \$100,000 per tree and a special fine of \$100,000. The fine that is ultimately levied in a successful prosecution is determined by the courts. Contravention Inspection fees are also charged in these instances.

Between 2019 and 2021, over 200 charges were laid with 43 convictions, 10 suspended sentences, 35 charges withdrawn, and the balance remaining under consideration and before the courts. Total fines levied as a result of convictions between 2019 and Q3 2021 is \$143,500. Note that court hearings were impacted during the COVID-19 pandemic in 2020-2021.

Urban Forestry has implemented strategies to respond to at least 50 per cent of service requests within 24 hours. On average in 2021, approximately 30 per cent of initial contravention inspections associated with high priority service requests were completed within twenty four hours of being reported and 45 per cent were completed within 48 hours. Current response times are being achieved with a staffing complement of 11 Standards Officers and one Supervisor.

In September 2021, the unit implemented changes to its work distribution model to provide enhanced flexibility to assign service requests and ensure efficient staff deployment to address compliance issues. Two service regions, each comprised of two operational areas have been established to equally distribute service requests amongst staff and reduce travel time. A second Supervisor was also reallocated from existing resources to improve oversight of staff, work delegation and respond to complaints that arise through enforcement related activities. In addition two temporary Arborist Inspector positions were added in Q2 2021 to assist with improving responses and follow-up work. The additional staffing and updates to priority work coordination is anticipated to reduce response time and will be actively monitored into 2022 to ensure productivity and efficacy.

Education and awareness are key components in an effective and successful bylaw compliance model. Urban Forestry's web content has been updated to include clear information on how residents can make a complaint regarding a possible infraction through 311, as well as tips for residents to obtain the supportive evidence necessary to help with investigations. Information relating to the issuance of stop work orders, work to correct contraventions, compensation ratios, fee collection and use of City vendors to correct work has been added. Finally, consequences of a prosecution as well as the range of possible fines and tree planting relating to infractions or failure to comply with the City's Tree By-laws have also been included.

Urban Forestry is also developing educational materials to be proactively distributed to various industry stakeholders, such as the real estate, building and development and arboricultural sectors. Presentations for key decision making bodies such as Toronto Local Appeal Body and Committee of Adjustment are being delivered in Q4 2021 and into 2022. Work to refine the Tree Declaration Form and Committee of Adjustment submission requirements is underway in collaboration with Toronto Building and Legal Services.

### **Managing LDD Moth**

LDD moth is an introduced, invasive species that has caused defoliation damage to trees in Toronto for more than thirty years. In the past few seasons, LDD moth populations have not only been on the rise but they have also been moving into new areas of Toronto (as well as other parts of Ontario). High LDD moth populations can cause serious damage to tree health and can lead to the decline and death of tree species such as oak and some evergreen trees. Aerial sprays help reduce LDD moth populations and protect valuable tree canopy and are reserved for areas where there is no other Integrated Pest Management (IPM) Strategy control option available that would reduce LDD moth populations to meet acceptable levels. Aerial spraying has proven in the past to be very effective in lowering LDD moth populations over large areas.

In 2021, LDD moth outbreaks were located in small, isolated areas primarily in the north and east parts of the city and therefore Urban Forestry did not undertake an aerial spray by helicopter. Aerial sprays are not annual events and are only one approach to LDD moth management. Urban Forestry undertook focussed integrated pest management work in 2021, which included:

- Over 30,000 inspections of City-owned trees
- Egg mass removal for 4,387 trees
- TreeAzin injections for 493 trees
- Ground spray for 83 trees

Urban Forestry is currently concluding defoliation and egg mass surveys to assess the impacts that LDD moth had on trees in Toronto in 2021. Surveys are being conducted in parts of the city with historic infestations, in areas identified with moderate to severe defoliation and in new areas where residents have reported LDD moth sightings. These surveys allow City staff to delineate the infested areas and to forecast population levels for the following year. This necessary work will inform the 2022 treatment plan, which will be submitted in a report for consideration at the Infrastructure and Environment Committee in 2022.

### **Aligning with TransformTO**

Urban Forestry staff have collaborated with the Environment and Energy Division (EED) as part of the TransformTO Consultation Network in the delivery of the NetZero Strategy. To date, Urban Forestry has provided ecosystem services data and feedback in the development of technical modelling for greenhouse gas emission reduction pathways. In doing so, Urban Forestry's input has contributed to the development of climate resilience actions including expansion, protection and maintenance of the tree canopy to maximize the carbon sequestration and storage contribution to the City's net zero targets.

Expansion and maintenance of the Toronto's tree canopy, including street trees is critical for climate resilience. The presence of healthy trees and a growing tree canopy helps to mitigate local heat island effects, improves air quality and provides shading and cooling, which is especially felt at the neighbourhood scale. Street trees in residential areas and adjacent to transportation corridors play an important and unique role in climate resilience. Street tree condition in Toronto has improved significantly from 49 to 74 per cent; translating to a 25 per cent increase in a tree condition rating of good/excellent. Street trees represent 19.4 per cent, or \$1.363 billion, of the total \$7.04 billion structural value of the urban forest, while making up only 5 per cent of the total urban forest population.

Healthy street trees maximize the ecosystem services, including pollution removal, avoided runoff, and carbon sequestration. Advancements in street tree quality are a testament to Urban Forestry's continuous improvement in proactive maintenance programs and the City's consistent investment in urban forest expansion through tree planting and stewardship. The NetZero Strategy recognizes that greenspaces, including street trees, as well as trees in parks, ravines and natural areas, provide natural carbon

storage and removal (sequestration), and physical and mental health benefits, thus creating a liveable and healthy city.

## **Reaffirming Toronto's Canopy Target**

Toronto's Strategic Forest Management Plan, adopted by City Council in 2013, recognizes that its strategic goals can only be achieved in partnership and cooperation with other City divisions, the community at large and through Urban Forestry's core programs and functions of tree maintenance, planting, protection, and planning. Through the adoption of the Plan, the City also set a target of 40 per cent canopy cover.

The Strategic Forest Management Plan has guided Urban's Forestry programs and services since 2013. Investment in Toronto's urban forest has grown from an annual budget of \$31.1 million gross in 2008 to \$68.7 million in 2018. This investment in Toronto's urban forest is critical in contributing to the city's climate resiliency, has supported Toronto's canopy growth from 26.6 - 28 per cent to 28.4 - 31 per cent over ten years, and resulted in the improved condition of Toronto's street trees.

Through the dedicated advancement of Urban Forestry's mandate to maintain, plant, protect and plan for the urban forest, along with continued full investment, Urban Forestry recommends the reaffirmation of Toronto's tree canopy target of 40 per cent by 2050. Creating a healthy, equitable, and sustainable urban forest will contribute to better quality of life for all Torontonians and is vital to support resilience and recovery.

## **Creating an Official Arboreal Emblem for the City of Toronto**

The City of Toronto recognizes the importance of trees in shaping Toronto through key City strategies such as the Official Plan, Strategic Forest Management Plan, Ravine Strategy, Biodiversity Strategy, and most recently through its commitments to TransformTO. The City Clerk's Office has proposed that the City of Toronto declare an Official Arboreal Emblem representing a tree as part of Toronto's symbols. By selecting an Official Arboreal Emblem that represents a native tree, that is easy to identify, and can be found across Toronto, the City has an opportunity to raise awareness about our diverse urban forest, strengthen our connection to nature, and reaffirm our commitment to grow, enhance and protect Toronto's urban forest.

Parks, Forestry and Recreation will be supporting the City Clerk's Office and Strategic Public and Employee Communications to undergo a public engagement campaign with Toronto's diverse communities to determine a tree best suited to represent Toronto and to be included as one of Toronto's Official Symbols.

## **CONTACT**

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## **SIGNATURE**

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Janie Romoff  
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## **ATTACHMENTS**

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Attachment 1: CanopyTO, *Revised*

Attachment 2: 2018 Tree Canopy Study - Technical Report, *Revised*

Attachment 3: Tree Planting Strategy

Attachment 4: Urban Forestry Grants and Incentives Program Impact Report

## APPENDIX 1: Lowest Tree Equity Scores by Neighbourhood

**Table 1: Neighbourhoods with Ten Lowest Tree Equity Scores**

Neighbourhood	Tree Equity Score (1-100)
West Humber-Clairville	55
Yorkdale-Glen Park	65
Wexford-Maryvale	67
Islington-City Centre West	68
Humber Summit	71
Weston-Pellam Park	72
Milliken	72
York University Heights	74
Briar Hill-Belgravia	74
Agincourt North	78

**Table 2: Neighbourhoods with Seventeen Lowest Tree Equity Scores Excluding Ravines**

Neighbourhood	Tree Equity Score (1-100)
West Humber-Clairville	48
Thorncliffe Park	63
Islington-City Centre West	65
Wexford-Maryvale	65
Yorkdale-Glen Park	65
Humber Summit	65
Victoria Village	68
York University Heights	68
Weston-Pellam Park	70
Beechborough-Greenbrook	70
Milliken	72
Briar Hill-Belgravia	74
Rouge	74
Humbermede	75
Glenfield-Jane Heights	76
Agincourt North	77
Elms-Old Rexdale	79