

Town of Whitby Staff Report

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Report Title: Urban Forestry Update – Spring 2023

Report to: Committee of the Whole

Date of meeting: June 5, 2023

Report Number: CMS 07-23

Department(s) Responsible:

Community Services Department
(Operational Services)

Submitted by:

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Community Services

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1. Recommendation:

1. That Report CMS 07-23 be received as information.

2. Highlights:

- Over 11,000 trees on more than 234 streets were pruned and inspected over the 2022/2023 winter season as a part of the Block Pruning Program;
- A total of 1,845 tree related service requests were received in 2022, including general tree maintenance, storm damage, and wasp nest removal. This is a 14.0% increase over 2021, and a 23.4% increase over 2020;
- In May of 2022, a severe storm known as a derecho resulted in the loss/damage of approximately 417 municipally owned trees within the Town. Stump removal and replacement planting of affected trees will continue in 2023;
- 659 municipal trees were removed in 2022, due to adverse weather (including the derecho in May), disease, poor tree health, poor tree structure, motor vehicle accidents, vandalism and/or infrastructure projects;
- 300 trees were planted by Town of Whitby Forestry staff in 2022;

- In 2022, the presence of *Lymantria dispar dispar* (LDD moth), formerly the gypsy moth, resulted in minimal defoliation in the Town. Into 2023, it is anticipated that the population of this moth will decrease further and is unlikely to cause any substantial defoliation in the Town;
- The Town established a new partnership with LEAF (Local Enhancements and Appreciation of Forests) in 2022 and will continue this partnership in 2023 hosting two community tree planting events. Additional tree planting initiatives include the Scout tree planting, which is returning in 2023 after a hiatus during the COVID-19 pandemic and a possible partnership with the Region of Durham and neighbouring municipalities for an application to the 2 Billion Trees Program (2BT);
- It is projected that there will be a 20% increase in the inventory of maintained trees by 2025. These numbers will continue to increase as additional development occurs in Brooklin. Continued development within the Town of Whitby, including West Whitby and Brooklin, will require additional resources to maintain current service levels.

3. Background:

Section 270(1) of the [Ontario Municipal Act](#) required municipalities to adopt a policy prior to March 1, 2019 which set out the manner in which it will protect and enhance their tree canopy and natural vegetation.

In 2019, [Public Works Report PW 06-19: Ontario Municipal Act – Tree Canopy Policies](#), [Tree Canopy Policy \(MS 380\)](#) was approved by Council (Resolution #59-19) and the following recommendation was made:

- That the Public Works Forestry Group provide semi-annual updates to Council on the status of Forestry, and its related tree management programs.

4. Discussion:

Community Services Forestry staff maintain approximately 53,000 municipal trees within road allowances, parks and other Town owned property and manage trees and other vegetation in woodlots and natural areas.

Forestry staff consists of seven (7) staff year-round, all of whom are fully certified arborists. They are augmented through the year by additional staff including: one (1) Labourer position, two (2) students in the summer, two (2) temporary workers in the fall and three (3) additional full-time staff reassigned from other Parks sections in the winter to assist with the Block Pruning Program. In total there are 10.16 FTEs, which is consistent with the 2022 staff complement.

Forestry programs and services that are undertaken each year to maintain tree assets include:

- Proactive block pruning on a five (5) year cycle;

- Response to residential requests for tree maintenance outside of scheduled block pruning;
- Response to emergency calls due to adverse weather events;
- Tree removals;
- New tree planting and establishment;
- Mature tree inspections;
- Pest management;
- Surface root treatments.

Other activities and projects include the development of the Urban Forest Management Plan (UFMP) and participating in tree planting and other forestry related events.

Block Pruning

The Block Pruning Program involves pruning and inspecting all residential street trees on a five (5) year cycle. The purpose of pruning is to produce safe, healthy trees. Pruning undertaken under the Block Pruning Program involves removing branches that could fall and cause injury or property damage, removing branches that interfere with lines of sight and clearances on streets, sidewalks and/or driveways, removing insect or disease infested wood and removing crossed and rubbing branches.

Pruning is also used to encourage trees to develop a strong structure and reduce the likelihood of damage during storms. A reduction in tree failures during extreme weather events also translates into fewer disruptions in hydro service and property damage claims.

During the 2022/2023 winter season, over 11,000 trees on more than 234 streets were pruned and inspected by staff, reducing potential maintenance requests from residents. Pruning was undertaken in Forestry Zones 2, 5, 8 and 9 (see Attachment 1 – Forestry Zones). Five (5) year pruning cycles continue to be maintained.

Block Pruning for the 2023/2024 season will be focused in Forestry Zone 6, which includes the area bounded by Rossland Road to the north, Anderson Street to the east, Dundas Street to the south, and Cochrane Street to the west. Any outstanding streets or trees that were not completed in 2022/2023 will also be addressed. The program generally begins in November and continues until April. A list of streets to be pruned is posted on the Town's website each year in October.

Response to Resident Requests for Tree Maintenance

In 2022 Forestry staff received 1,355 resident calls for general tree maintenance requests. As of the end of April 2023, approximately 150 of those service requests remain open.

Outside of the regular Block Pruning Program residents can call the Town to request maintenance of municipal trees adjacent to and/or affecting their property, along boulevards and in woodlots and open spaces. Trees are inspected by a

certified Arborist and work is prioritized based on level of risk. Where efficiencies can be achieved, structural pruning is incorporated into the season's Block Pruning Program.

Naturalized wooded areas contribute to the Town's overall tree canopy cover, provide vital habitat for wildlife within the urban environment, as well as corridors that connect areas of habitat and as such are left in their natural state and are not manicured. When residents request maintenance of trees in woodlots and ravines, an inspection is completed by staff who assess the overall health and structure of the tree(s) in question and determine the appropriate action to reduce the risk of personal injury and/or property damage on public and private property. Brush and wood resulting from tree maintenance or removal remains on site to decompose naturally. If there is potential for brush to interfere with the effective functioning of a watercourse, Forestry staff consult with Central Lake Ontario Conservation Authority (CLOCA) staff to determine the best course of action.

Emergency Calls and Weather Events

Extreme weather events primarily occur in the summer months when thunderstorms and high winds are more frequent. Emergency calls are inspected immediately, and if assessed as an imminent public safety risk, are addressed promptly. In 2022 Forestry staff received 417 emergency service requests.

On May 21, 2022, parts of Ontario and Quebec, including the Town of Whitby, were hit by a severe storm called a derecho. The extreme winds and thunderstorms associated with this storm left a path of destruction across the Town.

In Whitby, 472 municipal trees were damaged or uprooted, blocking roads, sidewalks, and driveways, disrupting power to homes and businesses and causing damage to cars, houses, fences, and other structures. In the first week alone, there were 372 calls received regarding tree damage from the storm.

The response by Operations staff, led by the Forestry team, was three-fold. The immediate response included providing access for emergency services and residents by clearing roads, driveways, and houses, as well as assisting in tree removals to facilitate the restoration of power. This was completed in just over a week. The secondary response was longer term and included additional clearing of fallen trees in backyards (over 60 locations), over walkways and in parks, as well as the collection of brush, branches and logs from private trees put to the curb by residents. Reassessment of affected trees was also undertaken to determine any follow up work required. This stage went well into the fall. Finally, stump removal and replacement planting of affected trees will continue in 2023. All stages of the response have been undertaken by a mix of Town staff and contracted services. Additional emergency funds were added to the 2022 to cover the cost of the incremental work resulting from the storm, including tree removals and replacement planting.

Tree Removals

Tree removals are scheduled in keeping with operational efficiencies and are prioritized by the level of risk present. In 2022, 659 municipal trees were removed by the Forestry section due to adverse weather, poor tree health, poor tree structure, disease, damage due to motor accidents, vandalism and/or infrastructure projects. This number is higher than a typical year, as it includes those trees that were removed as a result of the windstorm in May.

Tree Planting

Each spring and fall Forestry staff undertake regular tree planting programs. This involves planting trees at new locations in parks and in road allowances and/or replacing trees that have been removed. Stumps remaining from tree removals are also removed at this time. While the goal is a replacement ratio of 1:1 with removals, this is not always possible when conflicts with utilities and other infrastructure are present. Where the opportunity exists, replacement trees will be relocated to another location within close proximity of the removal, or additional trees will be planted in communal areas such as parks and open spaces.

In 2022 Forestry staff planted 300 trees during the spring and fall replacement planting programs, which is on par with previous years. There will be an increased number of trees planted in 2023, up to as many as 600, as replacement planting of trees damaged in the windstorm last May are undertaken.

New Tree Establishment

Trees are classified as a “new planting” for two (2) years following their planting date and are placed on a tree maintenance program. This includes:

- Watered a minimum of three (3) times per growing season;
- Inspected twice to determine pruning requirements to promote proper structure;
- Support stakes removed;
- Mulch replenished;
- Assessed for insect and disease damage.

This program is delivered primarily by two (2) Forestry Summer Students from May to August each year.

Mature Tree Inspections

Mature trees located in the Whitby and Brooklin downtown areas, which fall outside of the regular block pruning program, are assessed annually to monitor any changes in their condition and to determine their risk level. If required, mitigation measures are recommended and implemented to reduce the risk of personal injury and property damage while promoting the health of the tree to extend its longevity.

Forestry staff continues to maintain this annual inspection cycle, inspecting 298 trees over the year in 2022.

Pest Management

Trees are maintained with pesticides only as necessary to ensure tree survival and are not treated for aesthetic or nuisance issues. Forestry staff, through the use of contracted services, also responds to concerns about wasps' nests in trees that pose a danger to residents. There were 73 requests for the removal of, or treatment of wasp nests in 2022.

Staff continue to monitor data and information provided by the Ontario Ministry of Agriculture, Food and Rural Affairs, the Ontario Ministry of Northern Development and Mines, the Canadian Food Inspection Agency, Natural Resources and Forestry and the Canadian Ministry of Environment and Climate Change regarding ongoing and emerging tree pests, including *Lymantria dispar* (LDD moth), and Hemlock Woolly Adelgid (HWA). Furthermore, the Town has implemented preventative measures to address the threat of tree pests and diseases, such as Oak Wilt, which has a high risk of introduction to Canada.

Outbreaks of the LDD moth are cyclical, typically occurring every seven (7) to ten (10) years. The most recent outbreak peaked in 2021 and was the largest on record. There was minimal, localized defoliation due to the LDD moth in Whitby in 2022. Based on egg mass surveys completed in Ontario in the fall of 2022, it is anticipated that populations will contract again in 2023, with no significant infestations or defoliation in the Town.

Hemlock Woolly Adelgid (HWA) is an insect that poses a severe threat to hemlock trees, leading to significant damage or even the death of the tree if not addressed promptly. As such, Forestry staff has initiated measures to protect these trees from this pest by monitoring the Town's hemlock inventory and reporting any detected HWA infestations. While there have been no HWA infestations reported in the Durham area to date, the Canadian Food Inspection Agency has confirmed HWA's presence within close range including Grafton, Ontario in August 2022, and the Royal Botanical Gardens in Burlington in March 2023.

Although Oak Wilt has not yet been identified in Canada, it occurs in 24 U.S. states near Ontario posing a serious threat to the Town's oak trees, which are a valuable part of our landscape. Therefore, Forestry staff has adopted preventative measures to help protect oak trees from this deadly disease by pruning them during low-infection periods (August to March) and keeping up to date with Oak Wilt developments.

Surface Root Treatment

Resident requests regarding exposed surface roots are inspected and addressed if a safety issue is present, but not for aesthetic reasons alone. Roots may be removed by stump grinding or other means, such as covered with topsoil and grass seed, or other treatments as recommended by the Forestry Foreperson. These issues are generally addressed with stump grinding operations during spring and fall tree planting.

Urban Forest Management Plan

In February of 2023 a Request for Proposal (RFP) for the Urban Forest Management Plan (UFMP) was issued, with a closing date of April 28. The

proposals that were received have been evaluated by staff, and it is expected that an award will be made by early June. It is estimated that, once awarded, it will take up to eighteen (18) months to complete.

The UFMP will guide efforts to create, protect and maintain a healthy, safe, and sustainable urban forest that reflects the needs of the community. A healthy and resilient urban forest can mitigate the effects of climate change, improve local air quality, reduce the speed and volume of storm water runoff, decrease residential energy costs, provide habitat for local wildlife, mitigate the risk of property damage and personal injury, and contribute to an aesthetically pleasing and healthy community.

Tree Planting Event Partnerships

Forestry staff normally provide support for numerous community tree planting events each year. Events have been suspended or substantially reduced in scope since 2020 as a result of the COVID-19 pandemic. In the spring of 2022, there was a successful community planting event hosted by the Town in Peel Park. In the fall of 2022, as part of the new Community Greening Pilot Program approved by Council in September 2022 ([CAO Report 25-22](#)) the Town partnered with [LEAF](#) (Local Enhancements and Appreciation of Forests) to deliver a community tree planting in D'Hillier Park. The event involved approximately 70 volunteers who assisted with planting and mulching 450 trees to help increase and enhance Whitby's urban forest. Once again in 2022 the annual Scout tree planting was cancelled, but plans are in place to hold it on May 6 this year.

The Town's partnership with LEAF will continue in 2023, with two planting events planned. Once again, the spring event will take place in D'Hillier Park, and will expand the planting site from last fall. In addition to the planting events, there will also be a maintenance event to promote survival of plant material within previous tree planting areas.

Town staff are also actively exploring the opportunity to partner with the Region of Durham, neighbouring municipalities, CLOCA and LEAF, co-ordinated by [Trees for Life](#), to submit an application to the [2 Billion Trees Program \(2BT\)](#), as offered by the Government of Canada. The 2BT initiative is meant to motivate and support new tree planting projects across Canada. Eligible projects include those that create new forest cover, regenerate existing forests that have been damaged and restore forest habitat.

Educational Partnerships

The Town maintains an ongoing partnership with the [International Society of Arboriculture \(ISA\), Ontario Chapter](#) to support and provide educational and training programs held in the Town of Whitby. The Town is recognized as a training hub among arboriculture peers and has won awards in previous years recognizing this collaboration.

In 2022 the Town hosted multiple recertification courses that maintain the professionalism and safety of the industry. These courses included Tree Risk Assessment Qualification (TRAQ) and Tree Worker Climber Specialist from ISA

and Chainsaw Operations and Maintenance from the Infrastructure Health & Safety Association (IHSA).

Each spring, Forestry staff provide a one day pruning demonstration program for students in the Durham College Horticulture Technician Program. This year Forestry staff hosted the event at McKinney Arena on March 15, marking the sixth year that this event has taken place. It is a highlight for staff and students each year.

The Town continues to partner with the University of Toronto in a study aimed at comprehending and effectively managing the social and ecological effects of tree loss in the community. Forestry staff look forward to planning the Town's future urban forest and better communicate the benefits of trees from the results of this study.

In house, there are a number of initiatives that staff will be taking on this year to build a more resilient urban forest. Buckthorn is an invasive species that outcompetes native trees and is difficult to manage and control. To help restore areas with large infestations, Forestry staff will be conducting a trial of a biological herbicide called Lalcide Chondro to prevent resprouting and regrowth of the plant, eventually eliminating it. This treatment is a more environmentally conscious option over the use of chemical herbicides.

With soil compaction being one of the main causes of tree decline, another exciting treatment Forestry staff will trial involves worms and a technique called vertical mulching to improve soil conditions. This treatment will be used in highly compacted areas to encourage healthy growth and resilient trees. One potential location for the first trial of this initiative is Majestic Park, where there is a large mature Catalpa tree that has been negatively affected by soil compaction during development.

Future Urban Forest Update reports will provide information on the success of these initiatives.

Awards and Recognition

Once again for 2022, the Town of Whitby has been recognized as a [Tree City of the World](#). The application for this designation was led by Sustainability and supported by Planning and Development, Community Services – Parks Planning and Development and Operational Services.

5. Financial Considerations:

There will be an increase of tree assets added to the Town's tree inventory over the next several years due to the continued development of West Whitby and Brooklin. It is projected that there will be 5,167 boulevard and park trees added to the Town's tree inventory in 2024, as new subdivisions are assumed. A further 6,050 trees are anticipated to be added in 2025. Overall, this is roughly a 20% increase over the current inventory of maintained trees in the next two years. These numbers will continue to increase as additional development occurs in Brooklin. To maintain current service levels additional resources will be required.

The resources will be included in the Town's Work Force Plan and future budgets for Council consideration.

6. Communication and Public Engagement:

Community Services Forestry staff continue to work with Communications staff to identify opportunities to improve engagement and proactive communication with residents, through the Town of Whitby's website as well as other social media platforms.

Impacted residents are regularly provided notice of tree removals and tree planting for trees on the boulevard adjacent to their property. Notice of the annual block pruning program is posted on the Town of Whitby website each fall, listing streets that are scheduled for the upcoming season.

Development of the Urban Forest Management Plan will involve extensive engagement with Town staff, Council, the public and other stakeholders.

Forestry staff, along with staff from Parks Planning and Development and Sustainability, regularly engage with the public through tree planting events and education and information sessions.

7. Input from Departments/Sources:

Forestry staff regularly communicate, collaborate and partner with other staff within the Town, regarding the protection, maintenance and promotion of municipal tree assets and the urban forest. This includes Sustainability, Planning and Development, Asset Management, Parks Planning and Development, By-Law, and Engineering.

8. Strategic Priorities:

The arboriculture industry is continually updating its best management practices based on scientific research, technological advancement, climate change and laws and regulations. Through partnerships with outside agencies, Town of Whitby Forestry staff have been able to capitalize on these innovations and improved processes, balanced with the needs of the community. This continues to increase the efficiency and effectiveness of the Forestry section, along with the services it delivers to its customers.

Community Services Forestry staff establish, review and update service levels, aligning with the customer service strategic policy. Service levels are well defined, are consistent and Forestry staff are often praised by residents for their knowledge, dedication, and professionalism. Forestry staff are regularly engaged and empowered, through the partnerships they maintain, through continuing education and through internal research, development, and innovation. This increased engagement further enhances and promotes positive interactions with residents and other clients.

Sustainability:

A healthy and resilient urban forest supports the Town's declaration of a climate change emergency by:

- Sequestering carbon dioxide emissions, reducing the main driver of climate change in the atmosphere;
- Improving and regulating air and water quality;
- Reducing the impacts of water runoff and flooding caused by more frequent and intense rainstorms;
- Reducing the impacts of drought;
- Reducing the heat island effect;
- Increasing energy efficiency;
- Providing habitat for local wildlife;
- Promoting local and sustainable food through enhancement and protection of pollinators.

Accessibility:

Communications and information regarding tree maintenance activities are provided to customers in accessible formats, providing transparency, accountability, and inclusion. Tree pruning near sidewalks and walkways is

undertaken in a manner to provide proper clearances for people of all abilities, including those utilizing mobility devices.

9. Attachments:

Attachment 1 – Forestry Zones