

Subject: 2022 Tree Maintenance Program and July 20, 2022 Storm Summary Report

Recommendation:

BE IT RESOLVED THAT Council receive Report #2022-0272 – 2022 Tree Maintenance Program and July 20, 2022 Storm Summary report for information.

Background:

In 2021 Council approved the Tree Maintenance Policy S802-01 to provide a process that addresses the maintenance and use of trees in municipal parks, municipal rights-of-way and other municipal owned lands with a goal of promoting a healthy and robust tree canopy within the Town of Pelham.

This report serves to fulfill the requirements of the Policy S802-01 to annually inform Council of the results of the Tree Maintenance program including the status of tree works and pruning programs, tree removals, tree planting, opportunities and emerging issues.

Analysis:

Tree Maintenance Operations

In 2022 the total approved Operating Contracted Services Budget for Tree Maintenance in the Town of Pelham is \$307,500. The two largest components include \$150,000 allocated to the Spongy Moth Management Program, and \$125,000 allocated to Tree Maintenance which includes: planned pruning, tree removals, stump grinding, ISA tree inspection, and emergency response. The remaining \$32,500 is allocated to tree planting. The total Beautification budget for 2022 is \$1,018,720 of which 30% is directly related to tree maintenance.

The Town of Pelham's contracted service provider completed the pruning of one hundred thirty six (136) boulevard trees predominantly on College Street, Emmett Street and Maple Street.

A total of forty nine (49) International Society of Arboriculture Tree Risk Assessment Qualification inspections (ISA TRAQ) were completed throughout the municipality based on resident requests.

Municipal staff completed three hundred twenty-three (323) resident pruning requests, as well as completing the elevation pruning on Leslie Place, Longspur Circle, Willowdale Court, and the Steve Bauer Trail between Highway 20 and Hurricane Road. Other works by municipal staff included stump grinding at thirty (30) locations, as well as completing 2/3 of the urban tree inventory utilizing an ArcGis data collector application.

Twenty three (23) municipal trees were removed in 2022. Fourteen (14) of the trees removed were 900mm in diameter at breast height or greater. Eight (8) of the trees removed were between 400mm and 900mm in diameter at breast height, the remainder were under 400mm. The total number of trees required to be planted according to the Tree Maintenance Policy S802-01 based on their diameter is eighty two (82).

At the time of authoring this report one hundred thirty three (133) trees have been planted in 2022. Seventy seven trees (77) were planted beside the multi-use path along Rice Road, north of Port Robinson Road. Public Works staff planted fifty six (56) trees throughout the municipality, which includes the twenty five (25) trees previously reported to be planted at the end of 2021, depending on weather, through Public Works Report #2021-0207.

Trees removed during construction projects are not included in this report and are replaced as part of the capital project as per contract.

In 2023, tree pruning will focus on Section 7, of Schedule-A, in accordance to Policy S802-01. This is generally the North/East corner of Fonthill. Streets include, but not limited to, Chestnut Street, Elm & Burton Street, and Stonegate Place.

Threats to the Urban Canopy

The periodic Spongy Moth infestation continues to threaten the tree canopy within the Town of Pelham. The results of upcoming egg mass surveys and 2023 defoliation forecasts will be communicated to Council as per Policy S802-03.

Oak Wilt is an emerging potential threat to the Town of Pelham's urban forest and rural woodlots. Although it has not been linked to tree loss in Canada, the Canadian Food Inspection Agency has confirmed that insect samples taken near the Ontario/USA border have been found carrying Oak Wilt DNA.

Oak wilt is a vascular disease affecting oak trees, caused by the fungus, *Bretziella fagacearum*. The fungus is spread by insects, such as bark or sap beetles,

which carry the fungus spores on their bodies and contact wounds on healthy trees. The fungus may also travel from infected trees to healthy trees through interconnected root systems. The fungus grows on the outer sapwood of an oak tree, restricting the flow of water and nutrients through the tree and causing the foliage to wilt. While some trees can recover from the infection, the fungus can also eventually cause the tree to die.

There is no cure for oak wilt-infected trees. Prevention measures to control the spread of oak wilt include a moratorium on pruning oak trees between April and August, as this is the most vulnerable time for overland spreading of spores. Identifying and removing diseased trees immediately, and severing root connections between diseased and healthy ones are also effective measures to reduce the spread of the disease.

Similar to the integrated pest management approach employed to reduce tree mortality caused by the spongy moth infestation, staff will continue to monitor the spread of disease, as well as guidance and information provided by the Invasive Species Center of Ontario.

Extreme weather and high wind events continue to pose the most significant threat to the urban canopy in Pelham. The majority of large-diameter tree removals were the result of a severe weather incident on July 20, 2022. Response to the severe weather incident placed significant pressure on the Beautification Operating Budget. Although the incident was concentrated on a relatively small area of Pelham, the cost of the cleanup to date has totaled \$120,000. Some minor works that remain outstanding at the Hillside Cemetery are to be completed in 2023. A summary of the storm's intensity and damage, undertaken by the Niagara Region Community Emergency Management Coordinator has been attached to this report as Appendix A.

Pelham Urban Area Tree Canopy Evaluation Study

In May of 2022 the Town of Pelham engaged GM BluePlan Engineering Limited to provide an estimate of the total tree canopy coverage within the Town's Urban Boundary Areas in Fenwick and Fonthill.

Both satellite and elevation information were combined with Niagara Region and Town of Pelham data to perform a complex calculation, resulting in the production of two GIS files representing the approximate tree canopy coverage complete with area information in meters squared. The technical memo explaining the study methodology is attached to this report as Appendix B.

The area of the Fonthill Urban Boundary under study was 7,889,916m². The canopy cover determined through GIS data analysis is 2,461,000m². The Fonthill Urban

Boundary tree canopy cover is 31.2%. The map Fonthill showing tree canopy area is shown in Appendix C.

The area of the Fenwick Urban Boundary under study was 2,513,242m². The canopy cover determined through GIS data analysis is 885,000m². The Fenwick Urban Boundary tree canopy cover is 35.2%. The map of Fenwick showing canopy area is shown in Appendix D.

Combined, the canopy cover within Pelham's urban boundary is 32.2%. Rural areas of Pelham were not included in this study. Land in agricultural production, although critical to society, may not necessarily add to the tree canopy as they tend to have lower tree coverage in favour of open fields for crops or agricultural buildings.

A significant amount of the urban tree canopy in Fonthill and Fenwick is due to the presence of urban street trees. When new subdivisions are approved, the Town requires developers to plant a minimum one street tree per lot and a minimum of two street trees per lot on corner lots. In addition, when commercial and institutional developments are approved, landscaping requirements are part of those approvals which includes tree plantings. The tree planting requirements from developments help to maintain and improve the Town's urban tree canopy cover. Landscaping in the urban environment is an important aesthetic that contributes to our sense of place and the urban tree canopy provides a number of environmental benefits including contributing positively to carbon sequestering and minimizing the impact of the urban heat island effect.

Financial Considerations:

There are no financial considerations attributed to this report.

Alternatives Reviewed:

No alternatives were considered in the authoring of this report. The requirement to prepare an annual information report to Council outlining the results of the Tree Maintenance Program is dictated in section 4.7 of the Tree Maintenance Policy S802-01.

Strategic Plan Relationship: Strong Organization

The tree canopy within the municipal boundary is vital to the high quality of life within the Town of Pelham.

Consultation:

GM BluePlan Engineering Limited provided the Pelham Urban Area Tree Canopy Evaluation report and maps.

The Niagara Region Community Emergency Management Coordinator provided the Pelham Severe Weather Incident Summary Report.

The Director of Planning contributed to the drafting of this report.

The Supervisor of Beautification contributed to the drafting of this report.

Other Pertinent Reports/Attachments:

Appendix A – Canopy Study Technical Memo

Appendix B – Map of Fonthill showing canopy cover

Appendix C – Map of Fenwick showing canopy cover

Appendix D – Severe Weather Incident Report – Niagara Region CEMC

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