



SUBJECT: 2020 Emerald Ash Borer Management Program Update

TO: Environment, Infrastructure & Community Services Cttee.

FROM: Roads, Parks and Forestry Department

Report Number: RPF-27-20

Wards Affected: All

File Numbers: 820-01

Date to Committee: October 5, 2020

Date to Council: October 19, 2020

Recommendation:

Receive and file roads, parks, and forestry department report RPF-27-20 regarding an update on the 2020 Emerald Ash Borer management program.

PURPOSE:

The purpose of this report is to provide an update as to the status of the council approved 10-year management program for emerald ash borer (EAB) infested trees to date and provide a high-level overview of how the program will be administered to 2024.

Vision to Focus Alignment:

- Increase economic prosperity and community responsive city growth
 - Support sustainable infrastructure and a resilient environment
 - Building more citizen engagement, community health and culture
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Background and Discussion:

City staff has been actively engaged in planning and management of Emerald Ash Borer (EAB) since 2009, as the invasive pest continues to create devastating forestry losses of hundreds of millions of trees to date throughout Ontario, Quebec and the United States.

The program is currently in its eleventh (11th) year (year 6 of the council approved EAB management plan). As part of the Council approved program, an annual operating budget of \$861,000 (funded from the tax base), has been committed to manage the removal, treatment, stumping, and replacement tree planting within the municipal road allowance and manicured parks. This program is expected to conclude at the end of 2024. Naturalized areas and woodlots were not within the scope of the original management plan. Favourable contract pricing and cost savings that have been realized have been allocated toward mitigating risks along property boundaries and maintained trails of City-owned naturalized areas (creek blocks) and woodlots.

Forestry staff identified peak infestation of the pest and subsequent tree decline within 2019 and continuing into 2020. All funds have been committed to tree removal over replacement planting in 2020, in the interest of risk mitigation. The Forestry section has a commitment to replace each removed tree on a one to one basis and will nearly achieve this goal by the conclusion of the program in 2024.

Key program successes to date include:

- At year-end 2020, approximately 8,500 ash trees will have been removed along City streets and 1,000 trees removed within manicured parks since the program start in 2014. The majority of street side ash tree removals will be completed by end of 2021 and park trees by end of 2022.
- At year-end 2020, 4,150 trees will have been replaced as part of the EAB program. *Wherever possible 2 trees are being planted for every 1 removed to align with Vision to Focus plan.
- The removal of all EAB infested ash trees within the rural north road allowances (not budgeted for and outside of the original project scope)
- Continual injection of approximately 200 ash trees located across the City – Average size of treated trees is 67cm DBH – these are large specimens well worth maintaining as long as possible due to the ecological and aesthetic value they provide residents and the role they play in the urban forest.

Key program plans to 2024:

- 550 trees are scheduled to be planted in 2021 (in addition to the annual planting program with separate budget), and an average of 1,625 caliper trees are being replaced annually from 2022-2024
- Majority of stumps to be removed by year end 2022.
- Approximately \$50,000 committed annually to EAB removals in naturalized areas and woodlots in 2021 and 2022 due to favourable contract pricing
- Approximately \$75,000 (average) committed annually to EAB removals in manicured parkland 2020 – 2022

Key Program Liabilities:

- As shown, there is a total program shortfall of replacement trees from EAB losses of 1,049 trees (combined roads and parks). Total cost is estimated at \$445,000. Given the increase to the section's base budget for tree planting over the last two years (\$200,000 cumulative increase), some of this shortfall can be covered over the next several years.
- Ash removals in naturalized areas, woodlots and trails have yet to begin in earnest as they were not within the scope of the original management plan. The updated Urban Forest Master Plan will include information and costing on this matter.

Figure 1, 'Multi-year Budget and Quantities', shows annual budget and quantities for the EAB management program, forecast to 2024.

2020 Multi-year Budget and Quantities

Total EAB Program Costs and Forecast

	2014-2018	2019	2020	2021	2022	2023	2024	Total Cost
	Actual \$	Actual \$	Forecast \$	Forecast \$	Forecast \$	Forecast \$	Forecast \$	-
Injections	\$1,417,016	\$56,974	\$56,044	\$53,242	\$50,580	\$48,051	\$45,649	\$1,727,556
Removals (Urban and Rural Streets & Parks)	\$1,285,696	\$495,457	\$662,800	\$410,096	\$77,736	\$2,677	\$2,619	\$2,937,081
Removals (Woodlots)	\$337,694	\$71,992	\$0	\$50,000	\$50,000	\$0	\$0	\$509,686
Stumping	\$463,889	\$148,494	\$140,000	\$126,435	\$120,288	\$4,841	\$4,399	\$1,008,346
Planting	\$1,041,313	\$405,561	\$0	\$221,505	\$562,079	\$805,390	\$807,548	\$3,843,396
Various	\$479,608	\$14,207	\$17,690	\$0	\$0	\$0	\$0	\$511,504
Subtotal	\$5,025,215	\$1,192,685	\$876,534	\$861,279	\$860,682	\$860,959	\$860,216	\$16,943,349
Budget			\$861,000	\$861,000	\$861,000	\$861,000	\$861,000	\$4,305,000
Variance (Subtotal - Budget)			-\$15,534	-\$279	\$318	\$41	\$784	-\$14,670

Total EAB Program Quantities

	2014-2018	2019	2020	2021	2022	2023	2024	Total Quantity
Injections ¹	5668	230	225	214	203	193	183	6916
Removals (Urban Street & Park) ²	7918	727	926	833	386	10	10	10809
Removals (Woodlots)	1731	0	0	417	417	0		2564
Stumping (# of Trees)	4570	914	1020	600	458	17	15	7594
Planting	2888	1247	0	550	1355	1885	1835	9760

1) Injection quantities from 2014 - 2018 are approximate
2) Removal quantities do not include rural removals

Strategy/process

The administration of the EAB Management Plan is part of a ten-year council approved program. Staff conduct annual inspections of ash trees in the interest of risk mitigation.

Options Considered

Not applicable

Financial Matters:

Total Financial Impact

Remaining program costs from 2020 to 2024 (5 years) are \$4,320,000, with \$861,000 annually within the Forestry base budget. As planned, this program is intended to conclude by year end, 2024.

Source of Funding

The EAB Management Plan has an annual operating budget of \$861,000. This is funded through the tax base.

Other Resource Impacts

Not applicable.

Climate Implications

The climate implications of invasive species are long-lasting and far-reaching. One of the greatest challenges posed by EAB is the effect on the urban tree canopy and native biodiversity. One of the long-term effects of the borer is the severe loss and dieback of 5 species of trees and one entire genus. This is an ecological tragedy and a contributing factor to the current climate emergency.

Ash trees play a significant role in the hydrological mitigation in lowland swamp environments and their dieback has already affected water retention, storm water management, and erosion. Furthermore, woodlot areas that have lost the majority of their canopy due to EAB, are now facing a follow up invasive threat – European buckthorn, a thick growing shrub introduced from Europe that outcompetes native understory vegetation (such as the endangered flowering dogwood) and creates a dense thicket that prevents the growth of native tree species.

Given that trees play a significant role in mitigating climate change, and the ecological importance of managing the loss of mature ash in woodlots, the efficient replacement of trees through replanting programs is the single most effective way to address the climate impact of this invasive species catastrophe.

Engagement Matters:

Typically, public engagement around emerald ash borer has been based in communication around treatment of EAB infected trees, removal of street-side trees based on health and dieback, through the use of doorhangers and at community planting events such as Burlington Green spring plantings. The Forestry section also updates the EAB webpage on an annual basis.

It is important to note that the effect of EAB and the replacement plantings that have been occurring as a result are interconnected. Although public involvement is not necessary, the high profile and political nature of tree removals means public education through planting programs is an excellent way to communicate with members of the public, the long-term program goals of EAB management within the City.

Conclusion:

EAB is a devastating invasive species that affects not only the environment, but also adds to risk management concerns throughout the municipality. The Forestry section continues to mitigate the risk of dead and dying ash trees by prioritizing their removal, as well as planning for replacement trees over the ten-year council approved management plan.

Respectfully submitted,

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Report Approval:

All reports are reviewed and/or approved by Department Director, the Chief Financial Officer and the Executive Director of Legal Services & Corporation Council.