



# Council Report

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**Report Number:** RD2024-009  
**Meeting Date:** August 27, 2024  
**Title:** **Brushing Program Overview**  
**Description:** Providing Council an overview of the roadside brushing program including rationale and impacts.  
**Author and Title:** Chris Porter, Manager of Roads Operations East  
Thomas Hopper, Manager of Roads Operations West

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**Recommendation(s):**

**That** Report RD2024-009, "Brushing Program Overview", be received.

**Department Head:** \_\_\_\_\_

**Financial/Legal/HR/Other:** \_\_\_\_\_

**Chief Administrative Officer:** \_\_\_\_\_

## **Background:**

This report is being presented for educational purposes for Council and the public to help clarify the brushing program.

In the City of Kawartha Lakes, mechanical roadside brushing consists of the management of trees, bushes and general overgrowth along assumed public roads maintained by the City. Roadside brushing differs from roadside mowing. Mowing is cutting of vegetation (grass, weeds) on the immediate shoulder of the road, while brushing is removal of shrubs, small trees and branches of larger trees that are growing within the road allowance, up to the property line.

Staff use a variety of equipment with mechanical brusher heads to carry out this work. Staff plan the areas that will be brushed based on alignment with the 5-year roads plan, feedback from patrol / frontline Staff and concerns from the public. Mechanical roadside brushing work is completed from January to late April and late August to December with a break in between due to restrictions placed on specific activities for migratory bird nesting season. If brushing is required during migratory bird nesting season, a Certified Biologist can complete a "bird nest sweep" to ensure compliance with the Migratory Bird Convention Act (Act) but otherwise, brushing is prohibited during this time. For our area (C2 as defined in the Act), the restrictions are in place from early April until late August annually. More information can be found at the following website: <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html>.

Mechanical roadside brushing is an essential part of preventative maintenance that ensures protection of the roadway and increases operational efficiency in both the summer and winter. In the summer, brushing allows for increased sightlines for motorists using the road systems, provides greater visibility of any signage, it creates space in the right-of-way that assists operations such as culvert installation or ditching and helps with drainage by limiting obstructions in the ditch line. In the winter, it exposes the road to more sunlight and airflow to aid the overall health and drying of the road as well as providing greater snow storage which helps reduce drifting snow.

## **Rationale:**

As noted in the background section, roadside brushing has numerous benefits that are covered below in more detail:

1. **Protecting the Road:** When overgrown brush and trees are removed from the right of way, additional sunlight and airflow aid in the drying process during spring freshet and following rain periods. This reduces slippery conditions and potential ice buildup

and helps to prolong the roads' lifespan. Also, when roads dry faster, they become less prone to damage such as potholes, cracks and other surface defects. This reduces repairs related to road deficiencies and as a result, claims the City receives for them.

2. **Improved Sightlines:** when left unmaintained, overgrown brush and trees can negatively impact the visibility for road users by obstructing their view of pedestrians, oncoming traffic, wildlife and road signage. By removing the obstructions, road users have improved sightlines which results in safer roads.
3. **Snow Storage:** with less roadside brush taking up space within the right-of way, mechanical brushing creates additional space for snow storage during the winter months. This helps ensure winter maintenance operators can keep roads from narrowing in due to a lack of space. This also assists in preventing drifting snow.
4. **Efficiency of Summer Operations:** The same additional space for snow storage creates efficiency for summer operations. The main benefiting operations are ditching and culvert maintenance. With the additional room, operators can work without being hindered by brush being in the way of the respective operation.
5. **Less Damage to Equipment:** Brushing creates a road platform that reduces the amount of equipment damage by clearing overgrowth and tree limbs that may strike equipment.
6. **More pleasant appearance:** After regrowth occurs in the springtime, mechanical brushing provides a more pleasant appearance of the roadway. By clearing brush within right-of-way, it also allows staff to more readily identify issues within the roadway.

Concerns have been raised in the past about the use of mechanical brushers in residential areas due to the aesthetics. While the activity may generate some unsightliness initially, within a few weeks, the area will begin to naturalize again. Within 6 months to a year, the area appears natural again. Attached to this report are several photos of Salem Road in Little Britain depicting conditions pre and post brushing that occurred in 2023 (appendix A). There are also photos of Martins Road pre-brushing (appendix B), Irwins Road post-brushing (appendix C) and Cedar Glen Road post-brushing (appendix D). The photo of Martins Road shows the impact of overgrown brush. The brush is tight to the edge of the road creating poorer sight lines, there is no ability to see or complete ditch/culvert maintenance without brush hindering the operation and the road is heavily shaded which causes the drying process to take longer. Brushing is planned for this road in late 2024 or early 2025. The photos of Irwins Road and Cedar Glen Road demonstrate the benefits of brushing. Both roads

have better sight lines, the ditch can be seen to identify drainage issues or to complete general maintenance and additional sunlight/air flow is able to hit the surface of the road to aid in the drying process. Both of these roads were brushed in the spring of 2024 and you can see that regrowth has already begun.

Ultimately, Council could opt to provide direction on how this program is implemented with consideration of a cost/benefit analysis. Direction to manually brush will significantly increase the required operational budget to align with the capital program.

### **Other Alternatives Considered:**

The only alternative to mechanical brushing is manual (hand) brushing. In comparison to mechanical brushing which only requires one person and the respective piece of equipment, manual brushing requires a minimum of two Staff as Public Works will not allow employees to use a chainsaw alone for safety. In both cases, traffic control may be required due to site conditions and as such, additional Staff would need to assist the operation to meet that requirement. Staff do not have extensive data on the production output of a manual brushing crew because mechanical brushing has been the primary means to complete this operation for at least a decade.

As a comparison example, approximately 6.4 km of manual brushing was completed on Sandhill Rd. from Glenarm Rd. to Woodville Rd. in Fenelon Depot Operating Area. The work was completed without mechanical assistance due to an equipment breakdown. The crew consisted of three Equipment Operators, one Heavy Equipment Operator, a one-ton crew cab truck, a wood chipper and a backhoe. The total time required to complete the brushing manually was seven days. After considering labour costs and equipment charges, the total cost per kilometer was approximately \$2,200/km using 2023 labour and fleet charge out rates. This can be compared to contracted mechanical brushing work completed by Jim Kerr Excavating totalling 8.5 kilometres on Fish Hawk Rd., Omega Rd. and Otter Rd. which totalled \$5,950 for a total cost of approximately \$700/km.

The above are examples of such activity, but they cannot be used to generate finite figures to predict future manual brushing costs. For instance, the contracted service would provide full cost recovery and profit, while City costs do not include those costs. With the above noted, the examples do illustrate an approximate cost for manually brushing in comparison to mechanical brushing. In addition to this, this specific example outlines a higher staff and equipment requirement for manual brushing that takes resources away from Minimum Maintenance Standards (MMS, O.Reg. 239/02) operations and other critical operations such as ditching or culvert replacements. This

could impact the City's compliance with the MMS, potentially increasing liability exposure to claims.

## **Alignment to Strategic Priorities**

Good Government: The City has an obligation to ensure that municipal assets such as roads are well maintained and managed. By utilizing mechanical roadside brushing, Public Works-Roads ensures that the road network is being maintained in the most cost effective and efficient manner.

## **Financial/Operation Impacts:**

There are no financial impacts with continuing to complete mechanical brushing as it is an operation that is currently budgeted for.

Should Council direct Staff to complete brushing manually instead of mechanically, within residential areas, brushing these areas would cost 214% more based on the example in the "Other Alternatives Considered" section example. When assessing the workload required to support the City's projected 5-year urban/arterial resurfacing, rural resurfacing, and capital gravel program, up to 140km of roads could require brushing yearly depending on the current condition. If directed to complete the residential areas of this total manually, it would take 2.3 times longer than if it were completed mechanically.

## **Consultations:**

Director of Public Works

Treasurer

## **Attachments:**

### Appendix A – Salem Road Brushing



Salem Road Pre &  
Post Brushing

### Appendix B – Martins Road Pre-Brushing



Martins Road  
Pre-Brushing

## Appendix C – Irwins Road Post-Brushing



Irwins Road  
Post-Brushing

## Appendix D – Cedar Glen Road Post-Brushing with Ditching



Cedar Glen Road  
Post Brushing with I

**Department Head email: [brobinson@kawarthalakes.ca](mailto:brobinson@kawarthalakes.ca)**

**Department Head: Bryan Robinson**