

DATE: May 4, 2026

REPORT NO: I-10-2026

SUBJECT: Winter Operations Summary Report

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OVERVIEW:

- The 2025–2026 winter season included a range of weather conditions typical of variable Ontario winters.
- These conditions required repeated winter maintenance responses across both urban and rural areas, placing sustained demand on staff, equipment, and material resources throughout the season.
- While overall service levels were maintained, the season identified opportunities to improve operational resilience, particularly related to rural snow drifting, staffing and call-in coverage during peak periods, and material supply pressures during periods of high demand.
- Winter operations were delivered in accordance with the Municipal Maintenance Standards, and no Significant Weather Events were declared during the 2025–2026 season.
- This Report provides a summary of key winter metrics, outline the primary operational challenges experienced, and present recommended improvements to enhance service reliability and preparedness for future winter seasons.

RECOMMENDATION:

1. That, Recommendation Report I-10-2026, titled “Winter Operations Summary Report”, dated May 4, 2026, be received; and,
2. That, Administration develop a snow fence program for consideration in the 2027 Budget; and,
3. That, Council approve an amending By-law such as the one attached as Schedule “B” to authorize the Director, Infrastructure to declare and terminate Significant Weather Events.

ALIGNMENT TO STRATEGIC PLAN:

Theme # 1

- **BUILD** – a safe, connected, caring and active community

Theme # 4

- **ADVANCE** – organizational capacity and effectiveness

BACKGROUND:

The purpose of this report is to provide Council with a summary of winter operations for the 2025 – 2026 season, highlight key operational challenges, and outline recommended improvements to enhance service delivery, risk management, and operational readiness for future winter seasons.

CURRENT SITUATION:

1. Overview of 2025-2026 Winter Season

The 2025 -2026 winter season was characterized by a total of 51 winter events, including snow accumulation events, freezing rain, and drifting / blowing snow conditions.

Key Metrics:

- Total Winter Events: 51
- Total Snowfall: 140cm
- Number of Plow Deployments: 12
- Salt Usage: 1100 Tonnes
- Sand usage 6200 Tonnes

Total Winter Events:

- Represents the total number of individual weather events that required a winter operations response. A winter event is defined as any occurrence of snow accumulation, freezing rain, or significant drifting/blowing snow conditions that necessitate deployment of staff and equipment to maintain safe road and sidewalk conditions. Multiple precipitation periods within a short timeframe may be grouped and recorded as a single event where operational response is continuous.

Total Snowfall:

- Represents the cumulative amount of snow (in centimeters) recorded over the winter season. Snowfall totals are based on available meteorological data from nearby weather stations and/or Township observations and provide an overall indication of winter severity and workload.

Number of Plow Deployments:

- Represents the total number of full deployment cycles where snowplow operators

and equipment were mobilized to respond to winter conditions. A deployment typically includes dispatching all or a majority of available resources to clear roads and maintain service levels in accordance with the Township's Minimum Maintenance Standards. The Township is broken up into different plow routes, as shown in Schedule A.

The Township applies two forms of winter control materials. These include Road Salt (sodium chloride) and Sand/Salt mixture of 5 parts sand to 1 part salt. Road Salt is used strictly within the urban area of Smithville, due to higher traffic volumes and higher expectations of road conditions. The Sand/Salt mixture is used in the rural areas due to lower traffic volumes, open areas susceptible to blowing/drifted snow, and potential salt vulnerable farming areas.

During this winter season the province experienced a salt shortage, making it difficult for municipalities to retain salt stocks even while under a formal contract with a supplier. The Township worked alongside the other municipalities throughout the Region to share supplies when able, to ensure every municipality could meet minimum maintenance standards this winter season.

Winter events were generally concentrated in the months of December to March, with notable impacts from high winds contributing to drifting snow conditions.

2. Operational Challenges

2.1 Blowing and Drifting Snow

A significant operational challenge this season was blowing and drifting snow, particularly in rural and open areas. High wind conditions resulted in repeated accumulation on cleared roadways, increasing the frequency of required plowing and extending response times.

These conditions can reduce roadway visibility, create hazardous driving conditions, and increase operational costs due to repeated mobilization of staff and equipment.

Proposed Solution – Snow Fence Program (2027 Budget Considerations)

To mitigate the impacts of blowing and drifting snow, Administration are proposing the future implementation of a snow fence program, to be considered as part of the 2027 Budget process.

Snow fences are an effective option to:

- Reduce snow drifting onto roadways
- Improve visibility for motorists
- Reduce the frequency of plowing operations
- Enhance overall road safety in rural areas

Administration will undertake a review to identify priority locations and develop cost estimates for Council consideration as part of the 2027 Budget process.

2.2 Staffing and Coverage

Maintaining adequate staffing levels during peak snow event periods, particularly in the month of December, was identified as a challenge. Competing demands, holiday schedules, and workforce availability created gaps in call-in coverage during critical response periods.

Administrative Response – Overtime Bank Process Improvements

To address staffing challenges, administration will be making changes to the overtime bank/call-in process to ensure consistent and reliable winter operations coverage.

Key objectives include:

- Ensuring sufficient on-call staff availability throughout the winter season
- Strengthening coverage during high-demand periods (particularly December)
- Providing operational flexibility to respond to prolonged or consecutive winter events

Any necessary overtime bank process improvements will be implemented administratively as deemed appropriate and incorporated into the Collective Bargaining Agreement, where required.

2.3 Material Supply and Salt Shortages

During the 2025-2026 winter season, the availability of road salt presented a potential operational risk, particularly during periods of high demand and regional supply constraints.

The Township currently applies winter materials based on road classification and service levels. In urban areas, straight salt is primarily used to achieve rapid melting and maintain bare pavement conditions in higher traffic environments. In rural areas, a sand/salt mixture (typically 5:1) is applied. This approach provides improved traction on lower-volume roads while reducing overall salt usage, managing costs, and limiting environmental impacts.

Proposed Solution – Material Application Flexibility

To mitigate the risk of salt shortages, administration will implement a flexible material application approach during salt supply-constrained periods.

Key objectives include:

- Reducing reliance on straight salt during shortage conditions
- Maintaining safe driving conditions through increased use of sand/salt mixtures
- Prioritizing available salt supplies for critical routes and high-volume urban areas

In the event of a salt shortage, operations will transition to a sand/salt mixture within urban areas as necessary to extend available inventory while maintaining acceptable levels of service.

2.4 Gravel Road Conditions During Spring Thaw

Seasonal frost thaw conditions presented operational challenges on the Township's gravel road network. As frost exited the ground, increased moisture levels resulted in saturated road surfaces and weakened granular structure.

Under these conditions, standard grading operations are significantly less effective. Grader equipment is unable to properly reshape and compact the road surface when the material is saturated, often resulting in limited improvement and, in some cases, further disturbance of the roadway.

This led to the formation of potholes and surface irregularities that could not be fully corrected through conventional grading practices during the thaw period.

During periods of high saturation, operations staff focus on mitigating road deterioration through interim measures, including:

- Adding granular material to fill potholes and improve drivability
- Conducting limited grading where feasible to address the most severe surface issues

While these measures help maintain minimum service levels, they are not considered a long-term or efficient solution, as proper grading and compaction can only be achieved once the road base has sufficiently dried.

Proposed Solution – Post-Thaw Rehabilitation

To improve overall gravel road performance, administration will continue to prioritize:

- Monitoring road conditions during thaw periods to identify high-risk locations
- Scheduling comprehensive grading and reshaping activities once moisture levels allow
- Optimizing the use of granular material to minimize waste during saturated conditions

This approach recognizes the operational limitations during spring thaw while ensuring that resources are deployed effectively once conditions are suitable for proper road rehabilitation.

During spring thaw conditions, the Township typically experiences an increase in service requests and complaints related to gravel road conditions. Both Administration and Members of Council receive inquiries regarding potholes, rough driving surfaces, and the timing of repairs. While these concerns are understood, it is important to recognize that

operational effectiveness is directly influenced by ground and moisture conditions. As such, permanent and more effective repairs can only be completed once roadways have sufficiently dried to allow for proper grading and compaction.

3. Municipal Maintenance Standards (MMS) & Significant Weather Events

Under Ontario's Municipal Maintenance Standards (MMS), municipalities have the ability to declare a "Significant Weather Event" when weather conditions meet defined thresholds.

A Significant Weather Event declaration is a formal notification that:

- Current or forecasted weather conditions (e.g., heavy snowfall, freezing rain, high winds) are expected to impact roadway maintenance standards
- The municipality is temporarily unable to meet prescribed maintenance timelines due to those conditions

This declaration does not reduce the standard of care, but rather:

- Acknowledges the severity of conditions
- Provides transparency to the public
- Allows municipalities to continue operations without being deemed non-complaint during extreme conditions

The Township did not declare a Significant Weather Event during the 2025–2026 winter season. While several municipalities across Niagara Region and the Greater Toronto Area exercised this provision in response to challenging conditions, staff were able to continue operations and respond within the requirements of the Municipal Maintenance Standards.

Proposed Solution – Delegated Authority

To strengthen administrative clarity and ensure alignment with legislative and governance best practices, it is recommended that Council amend the Director of Infrastructure Delegation of Authority By-law to explicitly include the authority to declare and terminate Significant Weather Events in accordance with Ontario's Municipal Maintenance Standards.

Providing this delegated authority will:

- Ensure clear and documented authority for operational decision-making during time-sensitive and evolving weather events
- Support timely and consistent declarations without requiring Council involvement during emergency or after-hours situations
- Align the Township's governance framework with practices adopted by other municipalities
- Reduce potential legal ambiguity by formally identifying the responsible authority within the organization

Establishing this authority is considered a proactive measure to support operational

readiness, transparency, and risk management in the event it is needed in the future.

FINANCIAL IMPLICATIONS:

The financial impact of winter operations varies annually based on weather severity, frequency of events, and material usage. To date, the 2026 winter season has resulted in typical expenditures related to labour, equipment operations, and winter materials, including salt and sand.

Currently, the winter control budget stands at 85% usage of its total amount. Administration feel that the remaining budget will be sufficient for any future winter control events that take place in 2026. Any budget pressures experienced during the season were managed within the existing winter operations budget through standard monitoring and operational adjustments.

The proposed snow fence program will have future financial implications and is expected to require capital and/or operating funding beginning in 2027. Administration will report back with a budget allowance as part of the 2027 Budget process.

The recommended administrative improvements related to staffing and material application are not anticipated to have any direct financial impacts but rather are intended to improve operational efficiency and mitigate potential cost escalations during high-demand periods or material shortages. The proposed amendment to the Delegated Authority By-law has no financial impact.

INTER-DEPARTMENTAL COMMENTS:

This report was reviewed by the Corporate Services Department, CAO, and the Clerks Office.

CONCLUSION:

The 2025-2026 winter season highlighted both the strengths of current operations and areas of improvement. By addressing challenges related to drifting snow, staffing coverage, salt and/or material shortages, and regulatory tools such as Significant Weather Events, the Township can continue to enhance service levels, improve public safety, and ensure operational resilience.

SCHEDULE(S)

SCHEDULE A – Township Plow Route Map

SCHEDULE B – Draft Amendment - Delegated Authority By-Law for declaration of Significant Weather Event

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