Winter Control and Spring Cleanup 2025

Presented To:	Operations Committee
Meeting Date:	August 11, 2025
Type:	Correspondence for Information Only
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Recommended by:	General Manager of Community Infrastructure

Report Summary

This report provides information regarding winter maintenance activities for the 2024-2025 winter control season including the 2025 street sweeping program.

Relationship to the Strategic Plan, Health Impact Assessment and Climate Action Plans

This report refers to operational matters and has no direct connection to the Community Energy & Emissions Plan.

Financial Implications

This report provides the estimated financial results for the period ending June 30, 2025. The estimated result for June 2025 is an over expenditure of approximately $3,579,000 when compared to the 2025 year-to-date budget. The actual year-to-date result may differ from these estimates as certain estimates were necessary to account for outstanding invoices. As per the Reserves and Reserve Funds Bylaw, any winter control over expenditures may be funded from the Roads Winter Control Reserve Fund.

Background

This report is intended to provide a summary of winter maintenance activities for the 2024-2025 season including the 2025 street sweeping program, along with a final financial position.

The City of Greater Sudbury maintains approximately 3,600 lane kms of roadway and 350 kms of sidewalk which are to be cleared and passable within 24 hours after the end of a winter storm. To accomplish this, the City deploys over 80 pieces of City owned and contracted equipment during a storm.

In the spring the City sweeps approximately 2,800 lane kilometers of curbed and curbless road. The City also sweeps approximately 425 kilometers of sidewalk. This sweeping is typically completed over an eight-week period and the City utilizes over 60 pieces of City owned and contracted equipment to complete this program.

During the 2024-2025 winter control season there were 11 winter events that required the full deployment of City crews and subcontractors.

This report provides financial results for the entirety of the 2024-2025 winter control season including the 2025 street sweeping program. The results for the 2024-2025 winter control period are an over expenditure of approximately $3,763,000. The estimated result for the year-to-date period ending June 30, 2025, is an over expenditure of approximately $3,579,000 when compared to the 2025 year-to-date budget. As per the Reserves and Reserve Funds Bylaw, any winter control over expenditures may be funded from the Roads Winter Control Reserve Fund.

Weather Statistics

Overall, the 2024-2025 winter control season had less snow than the 10-year average. The average temperature for the winter control season was relatively on par when compared to the 1991-2020 climate normals.

Climate normals, as described by Environment Canada, are used to summarize the average climatic conditions of a particular region. These climate normals are calculated at the completion of each decade using the climate data from stations with at least 15 years' worth of data.

Figure 1 depicts the statistical information for the 2024-2025 winter season, including the 10-year average (2014-2023) for snowfall. This winter season had approximately 22 per cent less snow than the 10-year average of 3.12 metres or 10.2 feet.

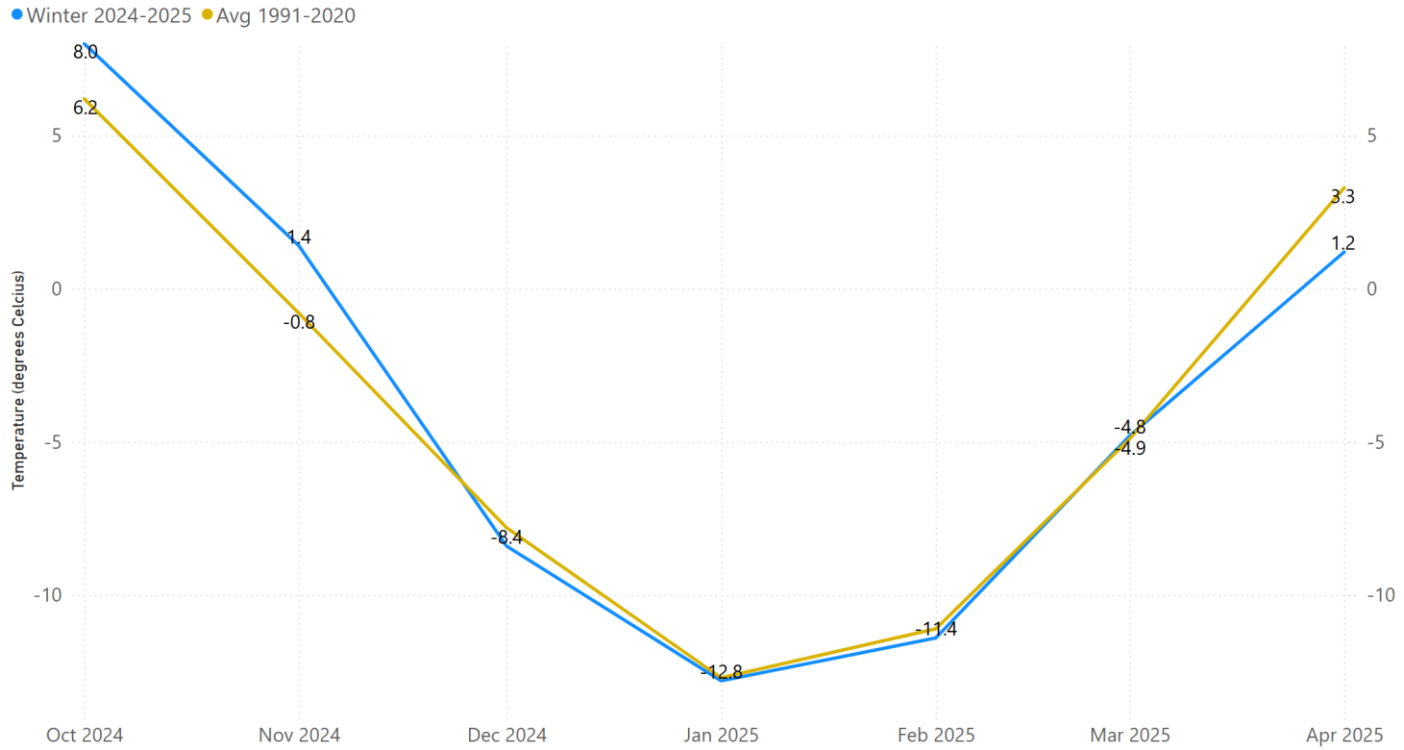
Figure 1 – Winter Control Snowfall Statistics (June 2024 through May 2025)

Month	Snow Accumulation (cm)	10 Year Average (cm) (2014-2023)	Percentage Increase/(Decrease) Compared to 10-Year Average	Snow Events	Rain/Freezing Rain Events
Jun-Sep	-	-		0	0
Oct	1.40	6.60	-79%	0	0
Nov	20.10	38.41	-48%	1	0
Dec	63.70	60.02	6%	3	0
Jan	49.40	72.98	-32%	1	0
Feb	47.60	67.90	-30%	3	0
Mar	38.50	38.60	0%	0	2
Apr	21.60	27.70	-22%	1	0
May	-	-		0	0
Totals	**242.30**	**312.2**	**-22%**	**9**	**2**

Note: All weather data taken from Environment Canada website for weather station Sudbury A.

The average temperature (monthly) this winter season was comparable to the 1991-2020 climate normals. Figure 2 portrays the average monthly temperature taken from the 1991-2020 climate normals and compares that to the average monthly temperature experienced during the 2024-2025 winter season. As depicted, average temperatures were observed during the months of December, January, and February. The month of April was slightly colder than average while the months of October, November and March were slightly warmer than average.

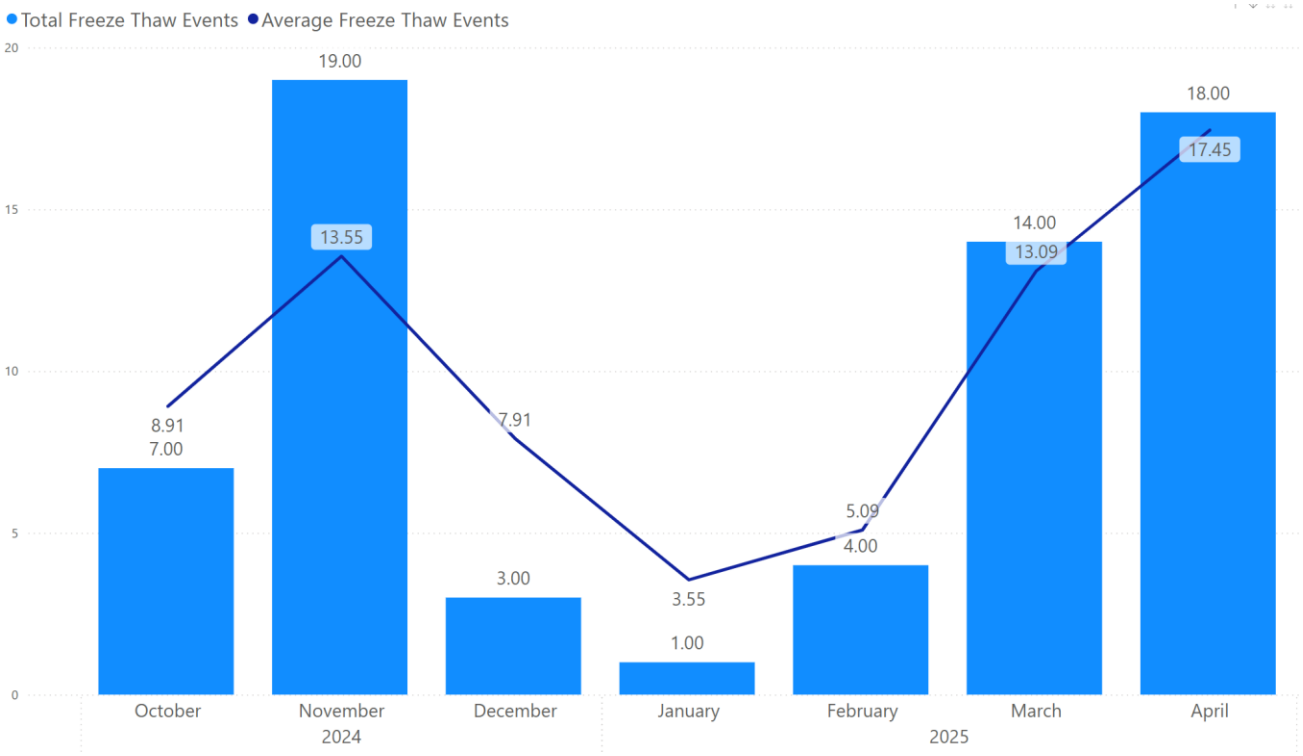
Figure 2 – Winter 2024-2025 Average Temperature vs 1991-2020 Climate Normals



Note: Climate normals from Environment Canada website for station Sudbury.

Staff also summarized data on the number of freeze thaw cycles compared to the 10-year average. For the purposes of this report a freeze thaw cycle is defined as having a daily minimum temperature below 0 degrees Celsius and a daily maximum temperature above 0 degrees Celsius. Figure 3 depicts the 2024-2025 winter season freeze thaw events per month as compared to the monthly average over the last 10 years.

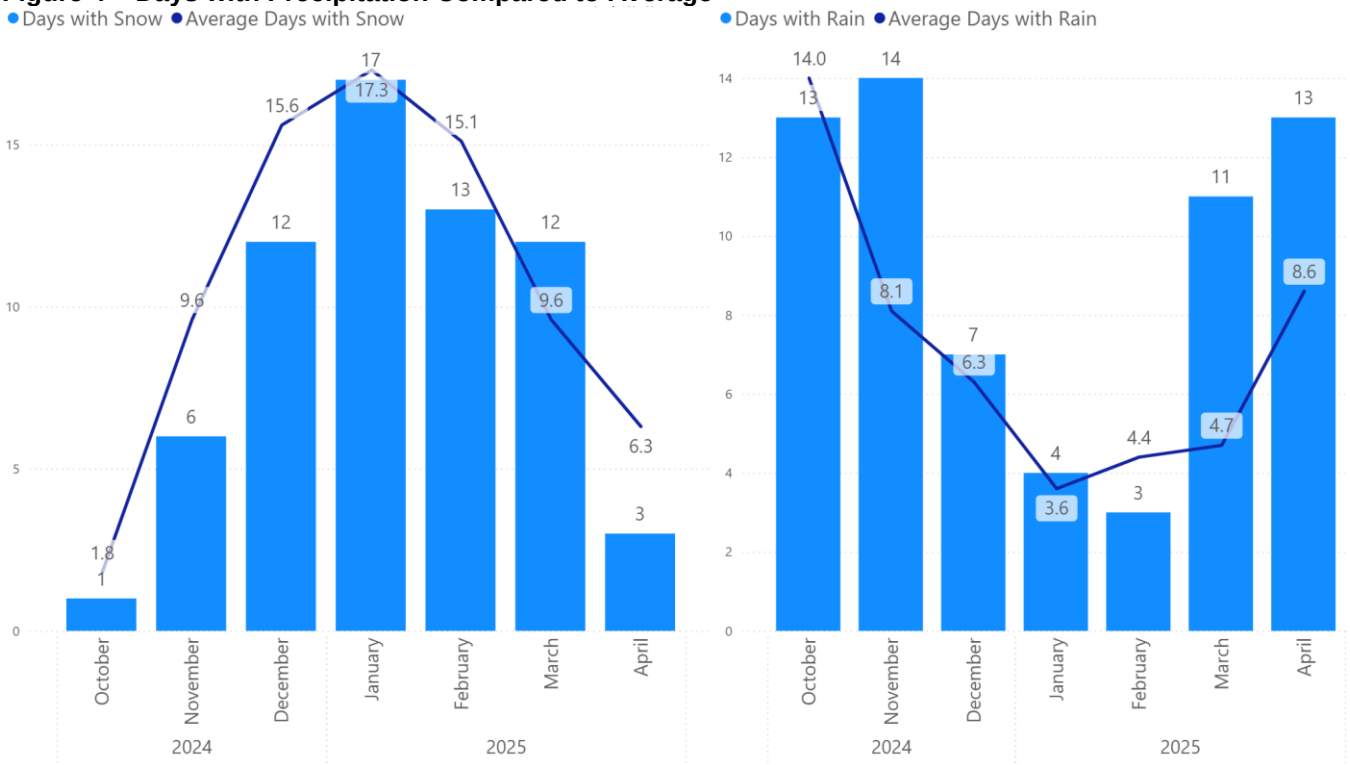
Figure 3 – Winter 2024-2025 Freeze Thaw Events Compared to Average



Note: All weather data taken from Environment Canada website for weather station Sudbury A.

Summarized in Figure 4 is the number of days with precipitation. This displays the number of days during the month in which we received snow or rain as compared to the 10-year average.

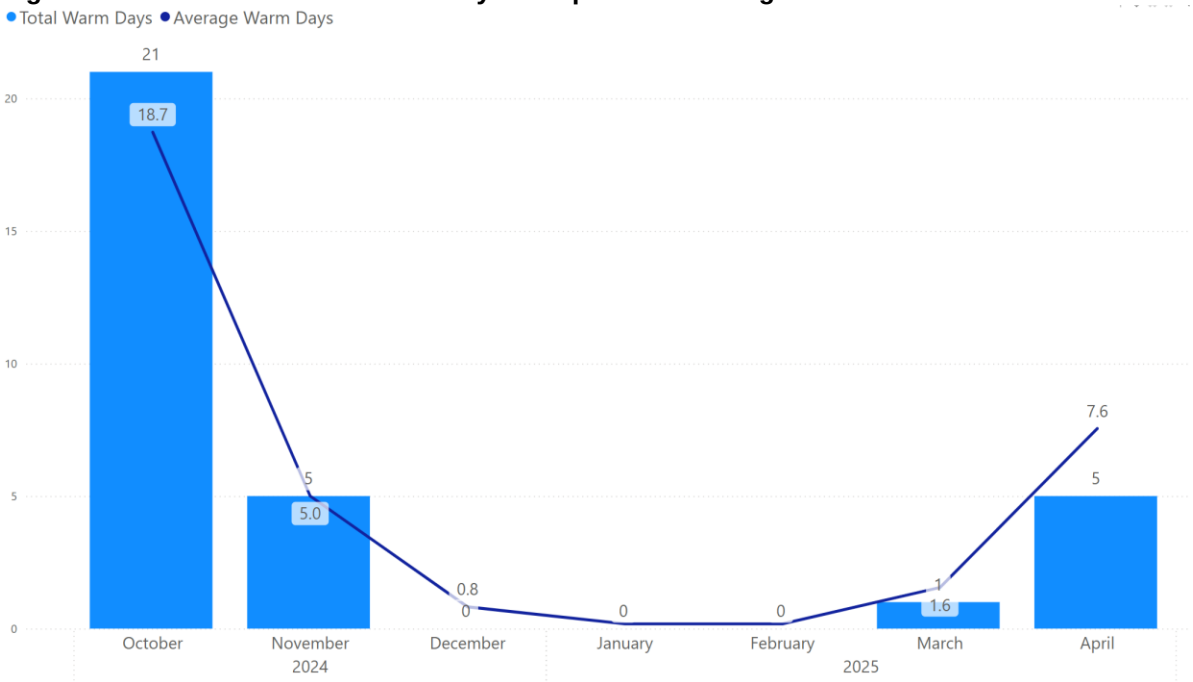
Figure 4 – Days with Precipitation Compared to Average



Note: All weather data taken from Environment Canada website for weather station Sudbury A.

Staff also reviewed temperature data to determine the number of warm days compared to the 10-year average. For the purposes of this report a warm day is defined as having a daily minimum temperature above 0 degrees Celsius and a daily maximum temperature above 0 degrees Celsius. In other words, a "warm day" is a day where the temperature never drops below 0 degrees Celsius. Figure 5 depicts the 2024-2025 winter season warm days per month as compared to the monthly average over the last 10 years.

Figure 5 – Winter 2024-2025 Warm Days Compared to Average



Note: All weather data taken from Environment Canada website for weather station Sudbury A.

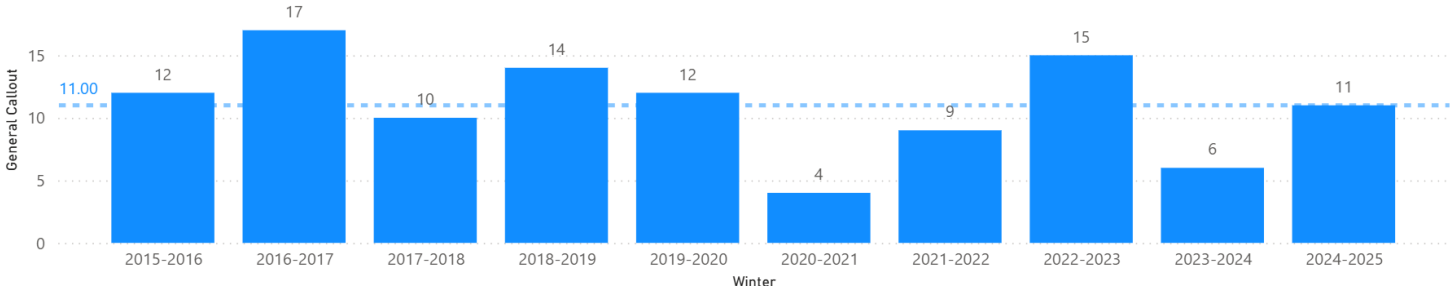
This weather information forms the basis for the remainder of the report. Although there was less than average snowfall as compared to the 10-year average, the 2024-2025 winter season was a more “normal” winter with 11 general callouts, which is the average from the last 10 years. This includes two significant weather events due to freezing rain in March and one significant weather event due to snow in April.

General Callouts

For the 2024-2025 winter season there were 11 general callouts. Nine of these events were snow events totaling approximately 120 cm of snow. Two of the events were due to freezing rain for which we had approximately 13 mm of rain.

This winter season also had the declaration of three significant weather events. One snow event received greater than 17 cm of snow and the two freezing rain events received approximately 13 mm of rain. As a comparison, over the last 10 years, the average is 11 general callout events per winter season.

Figure 6 – Number of General Callouts Compared to Average

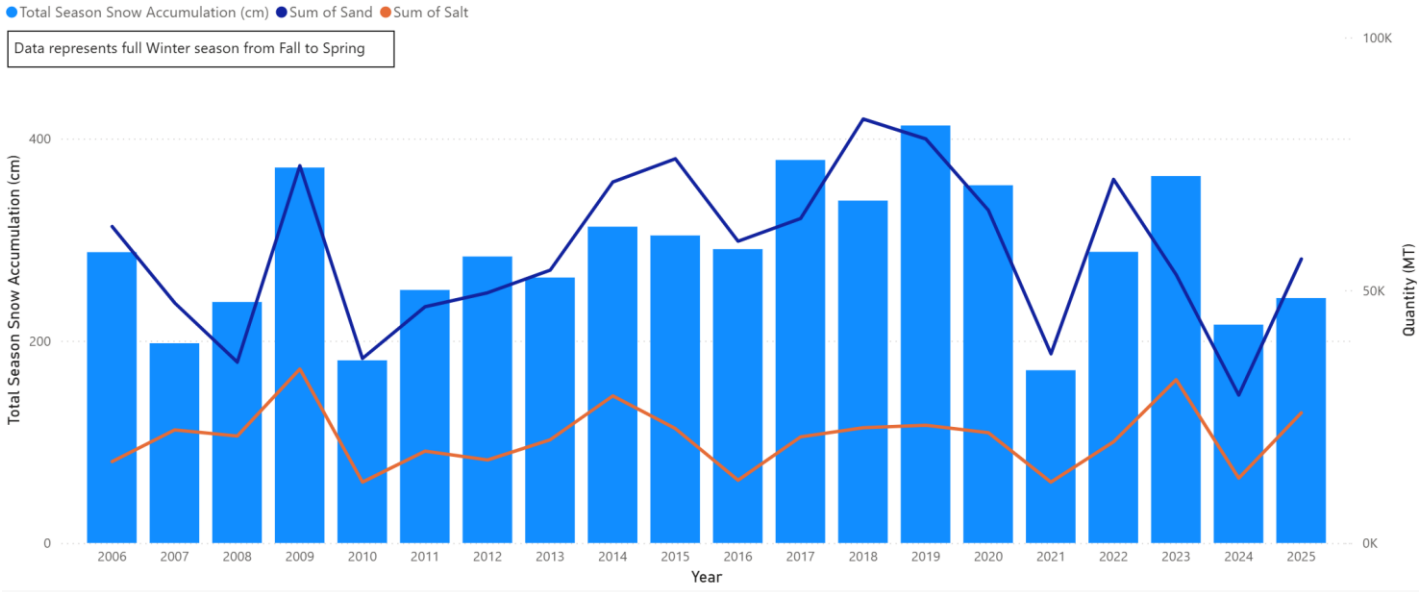


Material Usage

To maintain the road and sidewalk infrastructure during the winter months the City utilizes both sand and salt (sodium chloride). The application of sand and salt is intended to reduce slippery conditions on both roads and sidewalks. The determination of when to use salt or sand is based on weather conditions and road classification. When the temperature is between zero to -12 degrees Celsius, salt is utilized. When the temperature falls below -12 degrees Celsius sand is utilized since salt is no longer effective. This is also dependent on road classification. Roads classified as class 1-3 receive salt and sand depending on weather conditions mentioned above, while class 4-6 roads only use sand. Further information can be found on the city’s website (https://www.greatersudbury.ca/live/transportation-parking-and-roads/road-maintenance/salting-and-sanding/).

As depicted in Figure 7, a more “normal” winter resulted in higher than average usage of salt and a slightly lower than average usage of sand. The 2024-2025 winter control season had an increase of salt usage by 26 per cent and a reduction of sand usage by 3 per cent as compared to the average from 2006-2024.

Figure 7 – Snow Accumulation (cm), Total Salt and Sand Quantities (MT)



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Snow	288	198	238	371	181	250	283	263	313	304	291	379	339	413	354	171	288	363	216	242
Salt	16,112	22,383	21,148	34,414	12,047	18,175	16,430	20,433	29,109	22,625	12,417	20,991	22,800	23,287	21,831	12,040	20,013	32,314	12,829	25,763
Sand	62,607	47,500	35,779	74,646	36,507	46,748	49,504	53,981	71,420	76,012	59,706	64,205	83,880	79,939	65,834	37,438	71,942	53,103	29,262	56,187

Figures 8 and 9 provide a monthly breakdown of salt and sand usage, respectively. Figure 8 shows above average salt usage for all months with the exception of October and November. Figure 9 shows below average sand usage for all months with the exception of March and April.

Figure 8 – Salt Usage (MT) by Month for the 2024-2025 Winter Season Compared to Average since 2016

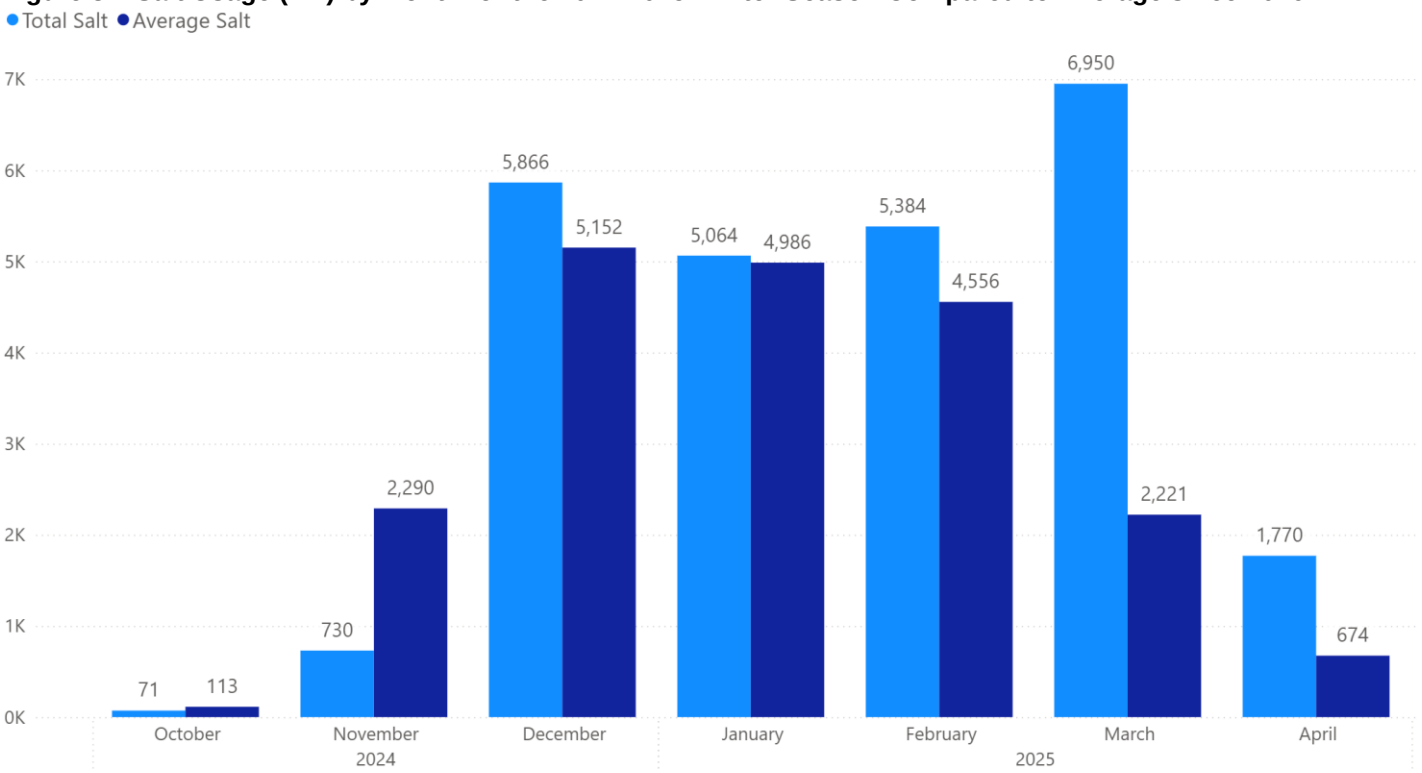
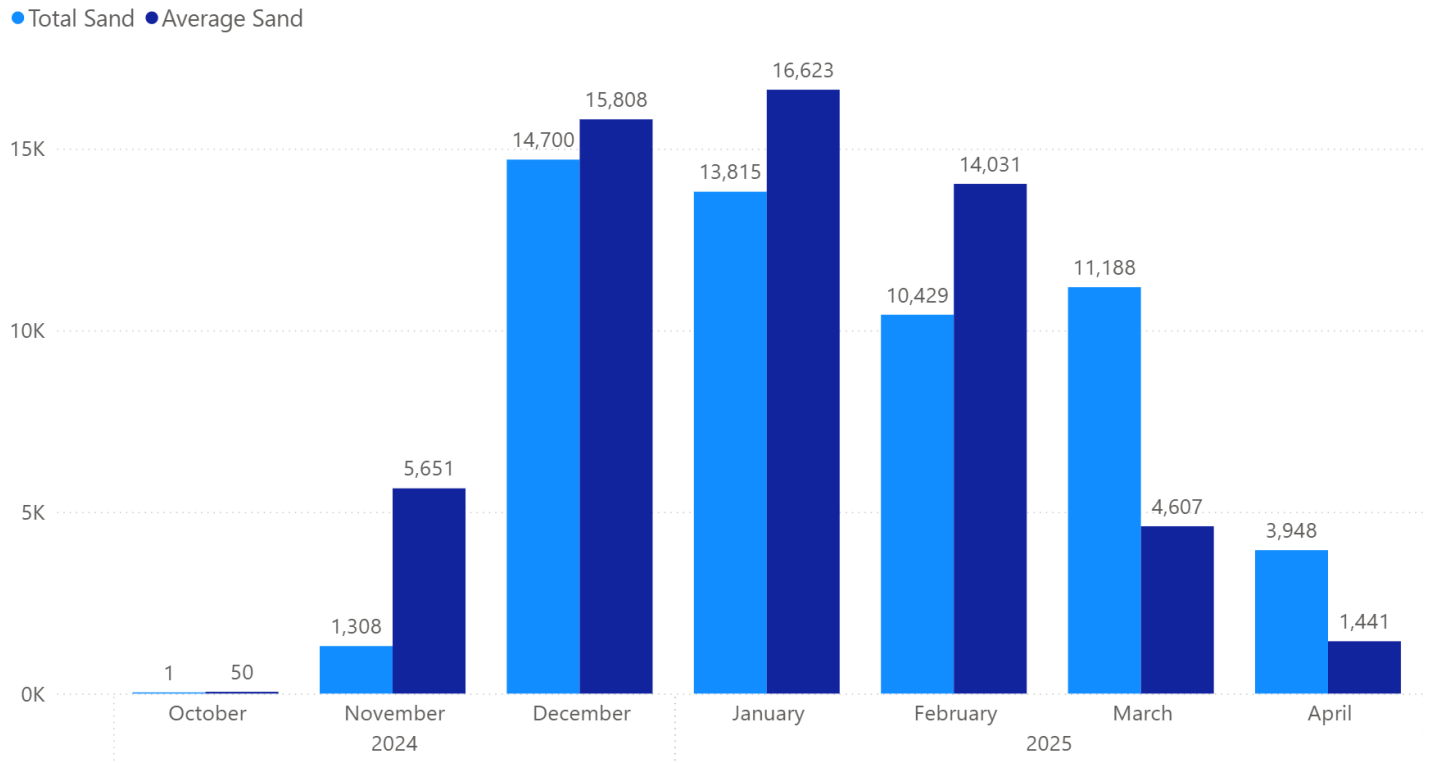


Figure 9 – Winter Sand Usage (MT) by Month for the 2024-2025 Winter Season Compared to Average Since 2016

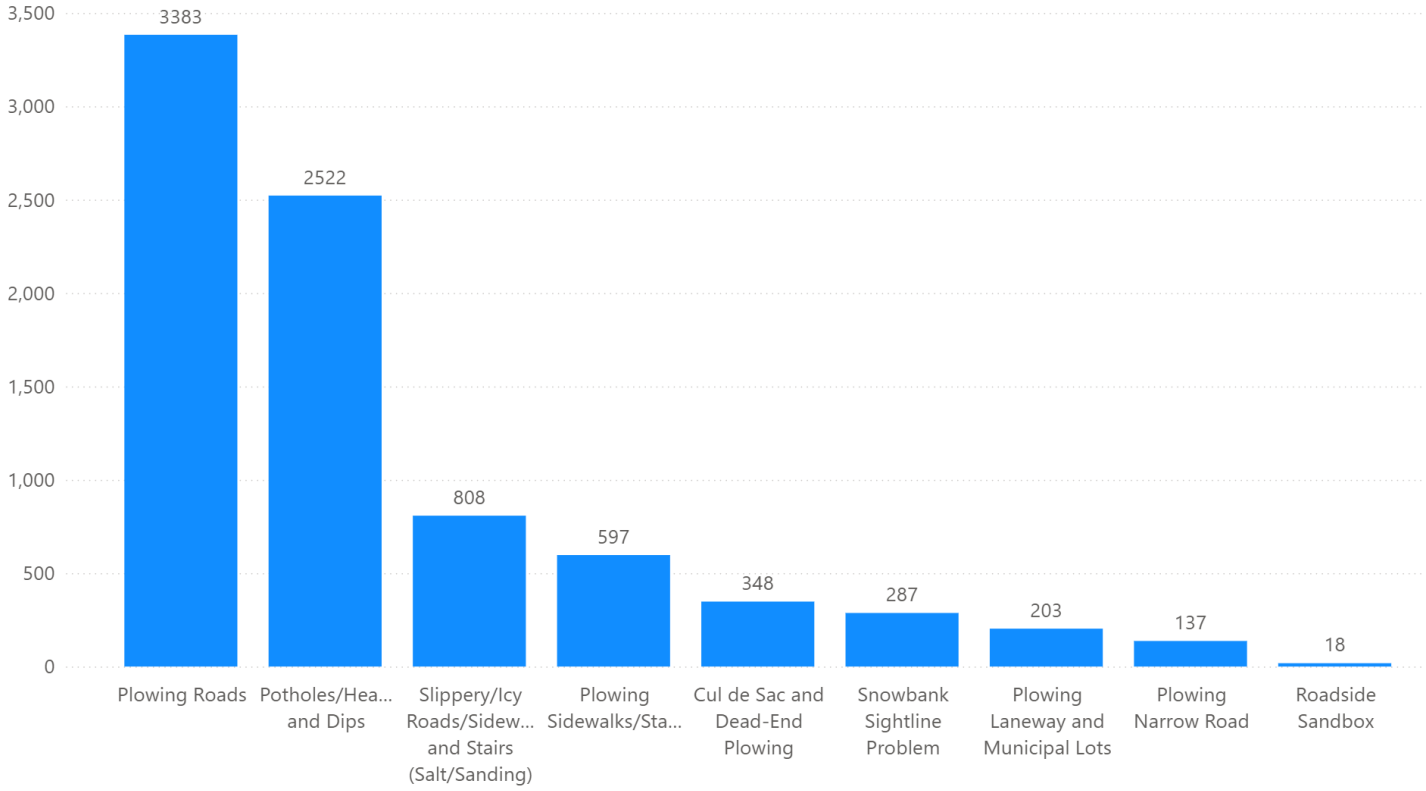


Placing particular focus on the months of March and April which had drastically higher than average use of salt and sand. The month of March had close to average temperature but had higher than average freeze thaw cycles and had higher than average rain and snow days. All combined with two significant weather events due to rain, led to an increased usage of both salt and sand. Similarly, the month of April was below average for temperature, had higher than average freeze thaw cycles and had higher than average rain. Combined with a significant weather event due to snow, this led to an increase usage of both salt and sand which are key contributors to the over expenditure seen in the “Snow Plowing/Sanding/Salting” line item.

311 Calls

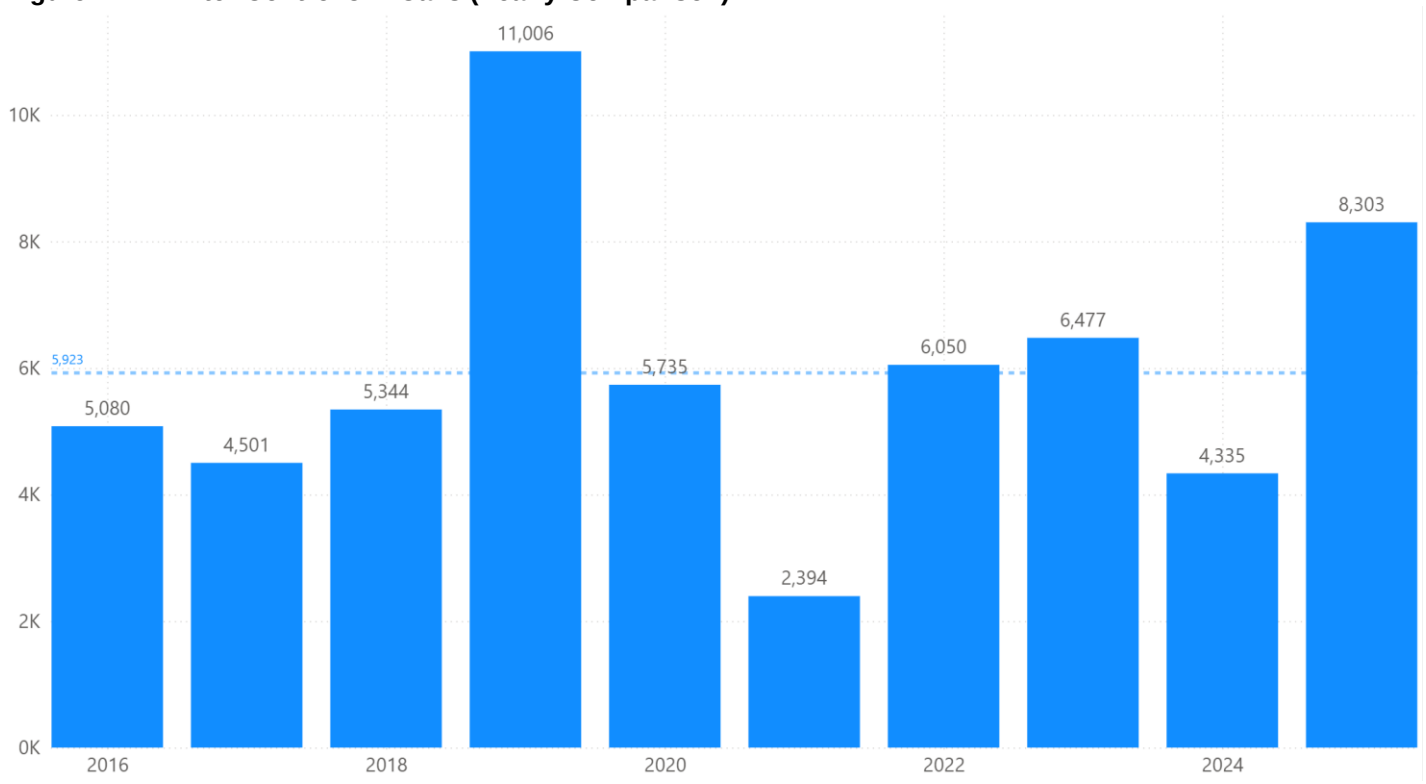
Figure 10 is a breakdown of the calls received by 311 throughout the 2024-2025 winter season. As depicted in the chart “Plowing Roads” had the greatest number of calls, followed by “Potholes/Heaves and Dips” and “Slippery/Icy Roads/Sidewalks and Stairs (Salt/Sanding).” This ranking of 311 calls is fairly consistent throughout the years dating back to 2016 with the exception of “Plowing Roads”. Normally this category ranks second behind “Potholes/Heaves and Dips.” The winter event on February 24, 2025, coupled with above freezing temperatures created a situation that led to snow and ice chunks being deposited at the end of driveways throughout the community. This generated a large amount of service requests with residents stuck in their driveways, which took several days to resolve. This event alone accounted for over 1,500 calls in a four-day period.

Figure 10 – Winter 2024-2025 311 Calls



As depicted in Figure 11, the 2024-2025 winter season had higher than average calls to 311. This winter had an average number of general callouts but also had 3 significant weather events. As mentioned above one general callout event generated over 1,500 calls to 311.

Figure 11 – Winter Control 311 Calls (Yearly Comparison)

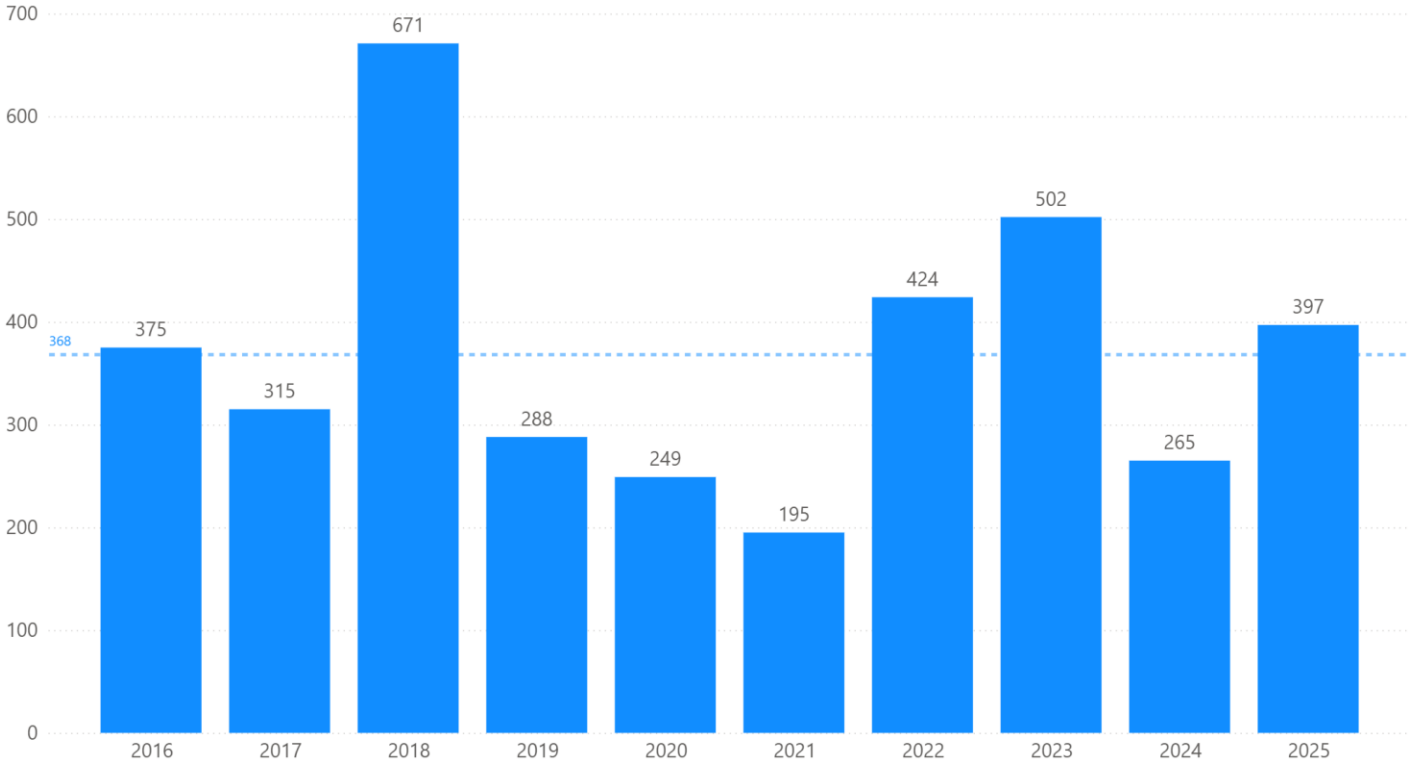


Note: First Call Resolution tracking was introduced in May 2021. Data represents a full winter season from Fall to Spring.

Street Sweeping Program

This year introduced changes to the street sweeping program in the form of a “street sweeping train” as presented at the April 23, 2025, Operations Committee meeting. Changing the way the City has historically delivered its street sweeping program. The change in operations resulted in the sweeping program completing in just over 6 weeks. As a comparison, the street sweeping program in 2024 was completed in 8 weeks with half the amount of sand being used that winter season. This change coupled with the introduction of the public facing map resulted in an average amount of 311 calls regarding street sweeping despite the change in approach and an average year for sand usage.

Figure 12 – Sweeping 311 Calls (Yearly Comparison)



Note: First Call Resolution tracking was introduced in May 2021

Public Facing Maps

This year two new public facing maps were introduced: one for plowing status and one for street sweeping status. These tools provide information to the public with regards to the City’s operations with the goal of improving transparency into the work that is delivered. As depicted in Figure 13, the plowing map was utilized by residents mostly following general callouts. This is expected behaviour since residents are more likely to inquire about the status of their streets during a winter event. Figure 14 displays the usage of the street sweeping map. This usage is also typical since residents want to know when their street will be swept at the start of the street sweeping program. Since the sweeping train stayed fairly close to the original schedule there is little reason for residents to return once they have their projected start date.

Figure 13 – Plowing Map Page Views

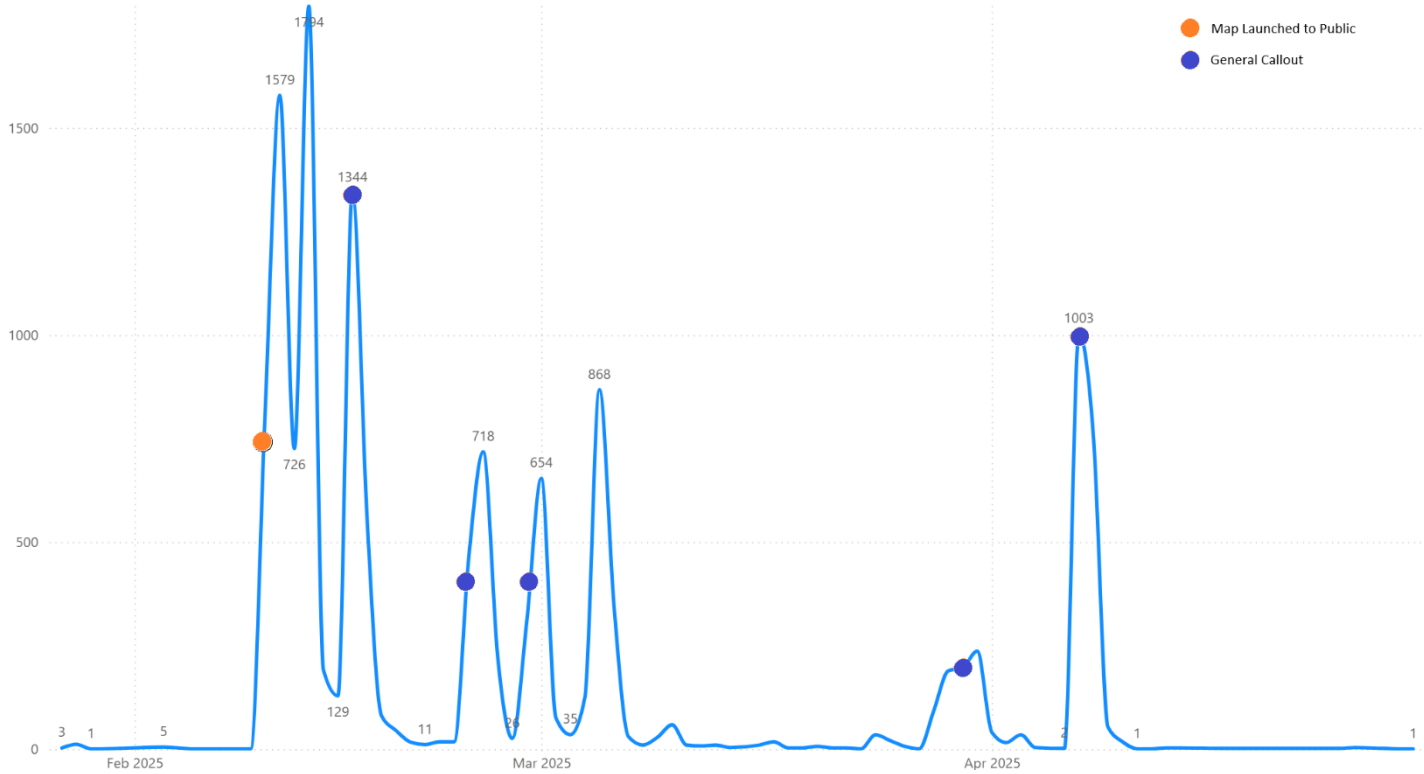
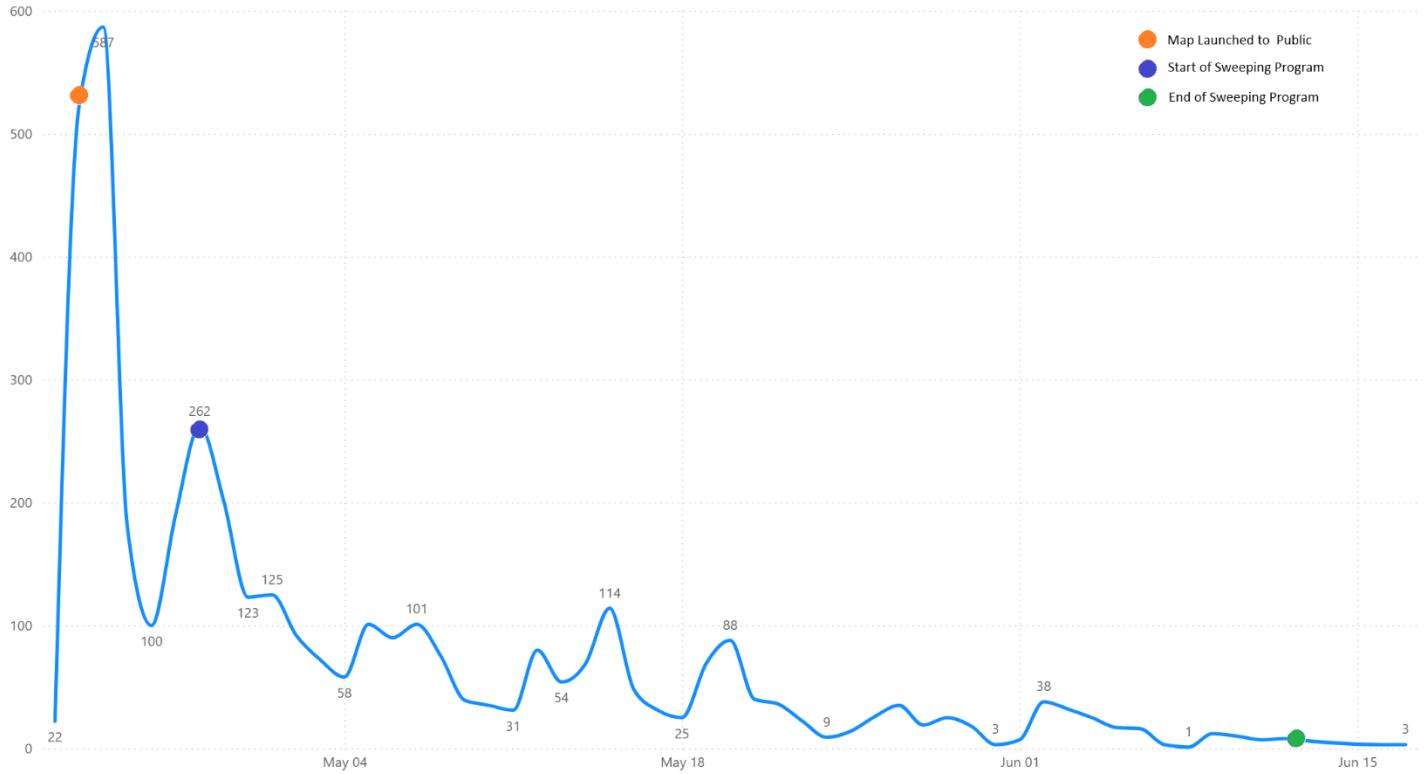


Figure 14 – Sweeping Map Page Views



Financial Results

The estimated financial results for the period ending June 30, 2025, are summarized below. As shown in Figure 15, June 2025 is estimating an over expenditure of approximately $3,579,000 when compared to the 2025 year-to-date budget. The winter control surplus/deficit will form part of the year-end position.

Figure 15 – YTD Financial Results

2025 Winter Summary As of June 30, 2025						
	Annual Budget	2025 YTD				
		Budget	Risk	Actual	Variance	% Spent YTD
Snow Plowing/Sanding/Salting	8,705,770	5,725,553	(325,000)	7,733,321	(2,332,768)	143%
Snow Removal	1,304,046	1,009,790		1,524,551	(514,761)	151%
Winter Sidewalk Maintenance	1,423,640	925,366		997,124	(71,758)	108%
Snow Plowing - Graders/Loaders/4x4s	1,866,543	1,367,759		1,088,452	279,307	80%
Winter Ditching/Spring Clean Up	3,981,244	3,929,898		4,067,398	(137,500)	103%
Asphalt Patching Winter	1,667,680	1,167,376		2,003,684	(836,308)	172%
Miscellaneous Winter Maintenance	7,415,926	4,653,906		4,618,628	35,278	99%
Total	26,418,420	18,779,649	(325,000)	22,033,159	(3,578,511)	119%

Figure 16 portrays the end results for the 2024-2025 winter season which shows an over expenditure of approximately $3,763,000.

Figure 16 – 2024-2025 Winter Season Financial Summary

2024/2025 Winter Season Summary As of June 30, 2025				
	Season Budget	Risk	Season Actual	Variance
Snow Plowing/Sanding/Salting	8,654,343	(500,000)	11,125,559	(2,971,216)
Snow Removal	1,297,727		1,716,074	(418,347)
Winter Sidewalk Maintenance	1,437,324		1,463,085	(25,761)
Snow Plowing - Graders/Loaders/4x4	1,902,792		1,480,841	421,951
Winter Ditching/Spring Clean Up	3,981,561		4,132,413	(150,852)
Asphalt Patching Winter	1,587,145		2,436,358	(849,213)
Miscellaneous Winter Maintenance	6,827,884		6,597,084	230,800
Total	25,688,776	(500,000)	28,951,414	(3,762,638)

Summary

As depicted in the report, this winter season had lower than average snowfall and temperatures that were closer to the climate normals. Despite the lower than average snowfall, this winter received 11 general callouts which is in line with the 10-year average. This winter had a few challenges which ultimately led to the financial deficit presented in this report.

The winter event on February 24, 2025, coupled with above freezing temperatures created a situation that led to snow and ice chunks being deposited at the end of driveways throughout the community. This generated a large amount of service requests with residents stuck in their driveways, which took several days to resolve. This type of event creates delays to preventative maintenance such as winter ditching and catch basin clearing. This event alone accounted for over 1,500 calls in a four-day period.

In addition, the months of March and April in particular had some unique challenges. As mentioned above, these months were at or below average for temperature, above average for freeze thaw cycles, had more days with precipitation than average and had combined three significant weather events. All these factors combined generated a much higher than average usage of salt and sand for the months of March and April which is one of the contributing factors to the over expenditure.

These factors combined with an average winter with regards to general callouts are the contributing factors for the financial position reported.

Resources Cited

1. 2025 Street Sweeping Program Presentation
https://pub-greatersudbury.escribemeetings.com/FileStream.ashx?DocumentId=56930

2. Snow Clearing Activities Interactive Map Presentation
https://pub-greatersudbury.escribemeetings.com/FileStream.ashx?DocumentId=56207

3. Canadian Climate Normals 1991-2020 (SUDBURY)
https://climate.weather.gc.ca/climate_normals/results_1991_2020_e.html?searchType=stnName_1991&txtStationName_1991=sudbury&searchMethod=contains&txtCentralLatMin=0&txtCentralLatSec=0&txtCentralLongMin=0&txtCentralLongSec=0&stnID=203000000&dispBack=1