

Winter Control Update – April 2020

Background and Summary

This report is intended to provide a summary of winter maintenance activities for the month of April 2020, including financial variances. It is important to note that due to normal lags in receipt of costs related to these activities, final costs for this period may vary from the information reported at this time.

The City of Greater Sudbury's winter maintenance service levels are defined in Council approved winter control service policies as well as guidelines within the Minimum Maintenance Standards (MMS), O.Reg. 239-02.

During the month of April, there were favorable weather conditions that allowed Roads maintenance staff to focus on the spring cleanup program. Warmer temperatures in late March and throughout April resulted in less pothole issues.

Again this month, snow accumulation was less than the averages for the same period of time, resulting in less expense than budgeted for this period. The overall expenditures for fiscal year 2020 are now only slightly higher than projected for the first four months of 2020, estimated at approximately \$290,000 over budget.

Weather Statistics

As shown on table 1, from January to end of May there has been six major snow events and one freezing rain event that have required deployment of all available City and Contractor snow plowing equipment. Furthermore, table 1 highlights the statistical information for the 2020 winter season from Environment Canada including the 30 year normal (1981 – 2010) for snowfall. The total snow accumulation for the 2020 calendar year to date is 6.7 feet or 2.04 meters. The 30 year normal for the same period is 5.4 feet or 1.65 meters. This represents a 23.8% increase. The total snow accumulation for the 2019-2020 winter season, up to and including May 2020, is 11.4 feet or 3.47 meters compared to the 30 year normal of 8.6 feet or 2.63 meters. This represents a 31.9% increase. The statistical summary for the month of April shows snow accumulations less

than the 30 year normal averages while the snowfall for May reflects a higher than 30 year normal value.

Table 1 – 2020 Weather Statistics

Month	Snow Accumulation (cm's)	30 Year Normal (cm's)	Increase/(Decrease) Compared to 30 Year Normal (%)	Snow Event	Rain/Freezing Rain Event
Jan	70.8	59.5	19.0	2	1
Feb	78.2	51.7	51.2	2	0
Mar	30.8	34.9	(11.7)	1	0
Apr	7.9	16.9	(53.3)	0	0
May	16.4	1.9	76.3	1	0
Jun-Sep					
Oct					
Nov					
Dec					
Totals	204.1	164.9	23.8	6	1

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

Winter Control Service Categories

1) Roadway Snow Plowing/Sanding/Salting

Includes work activities such as plowing, sanding, salting, anti-icing roads and winter stockpile management.

Status Update

For the April 2020 reporting period there was minimal snow resulting in less than normal plowing/sanding/salting through the month. The under expenditure highlighted in table 3 for this category is the result of less utilization of both Contracted and City plowing services since the beginning of the year (approximately \$222,000 for April alone). The winter event on May 7th and 8th resulted in an over expenditure of \$46,000 which is not shown in table 2 but will be included in future financial summaries.

Challenges

No significant challenges in this reporting period.

2) Snow Removal

Includes work activities such as bus stop clearing, snow removal with loaders, snow dump operation and snow bank removal in the downtown centres.

Status Update

There was minimal snow removal performed in the month of April. The majority of the over expenditure this year is associated with the snow removal with a loader activity which happened earlier in the winter season.

Challenges

There were no significant challenges during the April reporting period.

3) Winter Sidewalk Maintenance

Includes work activities such as sidewalk plowing and sanding.

Status Update

There was minimal winter sidewalk maintenance performed in the month of April. The majority of the over expenditure this year is associated with the additional requirements for sidewalk plowing/scraping/sanding due to weather conditions.

Challenges

There were no significant challenges during the April reporting period.

4) Roadway Snow Plowing with Graders/Loaders/4x4s

Includes work activities such as snow plowing with graders, 4x4s and loaders, municipal parking lot maintenance and snow fence maintenance.

Status Update

There was minimal snow plowing with Graders/Loaders/4x4's during the month of April. The majority of the over expenditure in this category for this year can be attributed to additional costs associated with the ice scraping with grader activity which happened earlier in the winter season.

Challenges

There were no significant challenges during the April reporting period.

5) Winter Ditching/Spring Clean Up

Includes work activities such as winter ditch maintenance and spring clean up with sweepers/flushers on roads and sidewalks.

Status Update

There was significant work within this category during the month of April amounting to a year to date over expenditure of approximately \$95,000. The sidewalk and street sweeping programs were in full force during the month of April. The contracted portion of the sweeping program was completed by the second week of May with the in-house portion of the program set to end around the end of May.

Challenges

No significant challenges in this reporting period.

6) Miscellaneous Winter Maintenance

Includes work activities such as property restoration (plow damage), pothole patching, winter road patrol, employee standby, equipment standby, health and safety training (snow school), fringe benefits and tool repairs.

Status Update

Pothole patching is the only activity that has had any notable changes under this category during this reporting period. During the month of April, the temperatures were favorable and traffic volumes lower which resulted in the requirement for less pothole patching. This combination of effects resulted in an 82% decrease of 311 resident pothole complaints in April this year compared to April 2019. It also resulted in 36% fewer potholes compared to the same month last year.

The City placed over 1,770 tonnes of asphalt as of the end of April which would equate to 44,250 potholes filled assuming 40 kilograms of asphalt was placed into each pothole. Traditionally the City fills approximately 55,000 potholes annually.

Challenges

No significant challenges in this reporting period.

ACR Statistics

As noted in table 2, the number of resident related issues recorded in the ACR system during the month of April was significantly lower in all categories except for spring cleanup. Overall there was a 71% reduction in the number of ACR calls associated with winter control services when comparing our April 2020 values to the average April values (2016 – 2019). It is likely that the change in call volume for winter control issues is associated with two main factors; firstly, the favorable weather during the month of April and secondly, the reduction in traffic volume due to the global Pandemic.

Table 2 – ACR Statistics

ACR Category	Average April Call Volume (2016-2019)	April 2020 Call Volume
Potholes	447	112
Spring Cleanup	30	49
Roadway - Plowing	62	4
Roadway - Salting/Sanding	23	4
Sightlines	5	0
Cul de Sac - Plowing	9	0
Sidewalk/Stair - Plowing	9	0
Sidewalk/Stair - Sanding/Salting	4	0
Totals	589	169

Financials

The estimated financial results of the 2020 winter roads operations up to and including the month of April, 2020 are summarized below. As depicted in Table 3 below, the estimated results for the first four months of 2020 is an over expenditure of approximately \$290,000. Any over or under expenditure in winter control will form part of the year end position.

Table 5 describes a summary of Winter Maintenance Activities for the 2019/2020 winter, showing an over expenditure of approximately \$1.66M. It is important to note that all activity costs before January 2020 have been included in the 2019 fiscal year and have been accounted for in the 2019 year end position.

Table 3 – Financial Results

2020 Winter Summary					
As at April 30, 2020					
	Annual	2020 YTD			
	Budget	Budget	Actual	Variance	% Change YTD
Snow Plowing/Sanding/Salting	7,823,358	5,138,929	4,413,764	725,165	86%
Snow Removal	871,321	702,406	1,267,932	(565,525)	181%
Winter Sidewalk Maintenance	1,124,424	730,876	775,612	(44,736)	106%
Snow Plowing - Graders/Loaders/4x4s	933,969	716,195	935,762	(219,567)	131%
Winter Ditching/Spring Clean Up	2,279,958	1,822,624	1,917,589	(94,965)	105%
Miscellaneous Winter Maintenance	7,350,517	4,413,217	4,503,740	(90,523)	102%
Totals	20,383,547	13,524,248	13,814,400	(290,152)	102%

Table 4 – Miscellaneous Winter Maintenance Budget Breakdown

2020 Miscellaneous Winter Maintenance	
Expense Type	Annual Budget (millions \$)
Employee Benefits	1.57
Asphalt Patching	1.36
Internal Recoveries (HR, Finance, IT)	0.73
Standby (Contractor Services)	0.73
Health & Safety	0.17
Other (Road Patrol, Emergency Response, Tool Repair, Property Restoration, etc.)	0.58
Administration & Supervision	2.21
Total	\$ 7.35

Table 5 – 2019/2020 Winter Season Financial Summary

2019/2020 Winter Season Summary			
October, 2019 to April, 2020			
	Season Budget	Season Actual	Variance
Snow Plowing/Sanding/Salting	7,637,499	8,031,217	(393,718)
Snow Removal	931,577	1,428,019	(496,442)
Winter Sidewalk Maintenance	1,105,054	1,235,642	(130,588)
Snow Plowing - Graders/Loaders/4x4s	932,380	1,543,841	(611,461)
Winter Ditching/Spring Clean Up	1,846,021	2,032,071	(186,050)
Miscellaneous Winter Maintenance	6,620,006	6,463,700	156,306
Totals	19,072,537	20,734,490	(1,661,953)

Note: Of the \$1.66 million season-to-date deficit, \$1.37 million is attributable to 2019 and \$0.29 million is attributable to 2020.

Conclusion and Next Steps

The January through April 2020 period has presented relatively few challenges in the delivery of winter control services. The City had approximately 2.3 feet or 0.7 metres less snow this year over the same period last year which resulted in the need for fewer full call outs of City/Contractor staff to address snow accumulation on our roadways and is reflected in the under expenditure for snow plowing/sanding/salting category.

Through the month of May staff changed their operational activities from the winter program to the summer program. The summer program includes the following maintenance categories;

- Road Patrol – performing routine patrols to identify deficiencies (annual program)
- Road Surface Maintenance – examples; Asphalt Patching, Large Asphalt Patches, Gravel Patching, Gravel Grading and Dust Control for Roads
- Roadside Maintenance – examples; Gravel Grading for Shoulders, Tractor Mowing and Brushing and Curb and Sidewalk Maintenance
- Drainage and Structure Maintenance – examples; Roadside Culvert Installation, Driveway Culvert Installation, Storm Sewer Repairs, Storm Structure Cleaning and Storm Structure Adjustments
- Traffic and Safety Devices – examples; Line Painting, Traffic Sign Manufacture, Traffic Signal Maintenance, Railroad Crossing Maintenance and Street Lighting
- Forestry – examples; Tree Planting, Tree Pruning, Tree Removal and Stumping

At this time staff has commenced work within many of the maintenance categories listed above most notably line painting, tree planting, gravel grading and large asphalt patches.

The impact of the global pandemic has resulted in the need to make some modifications to the approach used on many of the work activities completed by personnel working in Linear Infrastructure Services. Regardless of these changes, at this time, staff plan on completing work in all maintenance categories this summer.