

**Report to
Rapport au:**

**Transportation Committee
Comité des transports
2 December 2015 / 2 décembre 2015**

**and Council
et au Conseil
9 December 2015 / 9 décembre 2015**

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**Submitted by
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Ward: CITY WIDE / À L'ÉCHELLE DE LA VILLE File Number: ACS2015-COS-PWS-0036

SUBJECT: 2015-2016 Winter Operations Update

OBJET: Mise à jour sur les opérations hivernales 2015-2016

REPORT RECOMMENDATIONS

**That the Transportation Committee and City Council receive this report as
information supplemental to the 2016 Draft Operating and Capital budgets.**

RECOMMANDATIONS DU RAPPORT

Que le Comité des transports et le Conseil municipal prenne connaissance de ce rapport en tant que complément d'information sur les Budgets préliminaires de fonctionnement et d'immobilisations de 2016.

BACKGROUND

The Roads Services Branch of the Public Works Department is responsible for providing safe and passable roads, sidewalks and cycling facilities by reducing the hazards resulting from snow and ice accumulation. The Branch provides winter maintenance for 12,254 lane kilometres of roadways and 2,195 kilometres of sidewalks with an annual budget of approximately \$60 million. Snow and ice control operations are carried out 24/7 subject to weather conditions, in a manner that will enable the City to achieve its Council approved Maintenance Quality Standards with available resources.

Ottawa can experience variable weather conditions from year-to-year, which has a correlating effect on the winter operations budget as harsh winters can result in increased expenditures to ensure the Branch continually provides safe and passable roadways, sidewalks, and cycling facilities. From January 1, 2015 to April 1, 2015, Ottawa experienced harsher-than-average temperature patterns and winter weather. As a result, the Roads Services Branch ended the early winter season with a deficit of \$13 million. The harsher-than-average winter weather included an increase in the number of winter storm events, prolonged low temperatures, and above average snow on the ground due to a lack of periodic thawing. Of the winter storms experienced early in 2015, five were significant resulting in winter overnight parking bans and over half (54%) of the winter event hours fell outside of regular work hours resulting in overtime expenditures. From January 1, 2015 to April 1, 2015, the following weather was experienced:

- 150 centimetres of snow fall
- 66 winter events
- 29 hours of freezing rain

While weather variability is the largest factor in determining winter operations expenditures, the Roads Services Branch recognizes the need to ensure its operations are as efficient and effective as possible in an effort to reduce operational costs without impacting levels of service.

The Roads Services Branch is conducting a thorough internal review and analysis of its winter operations factoring in various operational, performance measurement, and financial considerations. The Branch has also retained the services of an external firm that is supplying project management functions (including external project capacity), serving as a neutral advisor, and providing validation of the Branch's internal findings and potential recommendations. A comprehensive report outlining the recommendations of the full-scale review will be tabled at Transportation Committee and Council in Q2 2016.

While the full-scale report and subsequent recommendations have yet to be finalized, several service initiative savings to help contain costs that do not alter existing Council service standards will be implemented for the 2015-2016 winter season.

DISCUSSION

The winter operations service initiative savings outlined in the 2016 draft operating budget will generate savings of approximately \$2.71 million. These savings will primarily be achieved through an improved on-call and overtime policy and procedure, an enhanced salt management tracking and training program, and strict adherence to the Council approved standards for snow removal and winter maintenance of Class 4 surface treated roads. These initiatives are aimed at minimizing costs with no impacts to Council approved service levels. As with all Winter Operations, these targeted service initiative savings are dependent on weather conditions, as actual winter weather conditions (temperature, snowfall, rain, etc.) can impact the Branch's ability to realize cost savings.

Improved On-Call and Overtime Policy and Procedure

Effective immediately, the Roads Services Branch has implemented enhanced management controls to contain costs related to overtime and on-call requirements for winter operations.

As a result, the Overtime and On-Call Policy and Procedure has been updated to specifically prescribe the number of supervisory and operational staff required for a specific type of weather event, in addition to the number of supervisory staff in a particular area that are required to be on-call to monitor weather and roadway conditions. Under these enhanced management controls, the current Council approved Maintenance Quality Standards for roadway and sidewalk conditions will be consistently met throughout the city.

As part of these controls, enhanced reporting has been developed for management that will enable them to monitor and track overtime and on-call costs on a weekly basis; as a result, should these specific costs begin to increase, they can be mitigated accordingly in a timely manner.

Enhanced controls, monitoring and reaction of this nature will ensure that variable costs, such as overtime and on-call, is being managed consistently across the Roads Services Branch and will also provide a proactive approach to contain costs related to overtime and on-call.

Improved Salt Management Tracking and Training

While salt is effective at preventing and disrupting the bond of snow and ice from the roadway, the Roads Services Branch is aware of the significant impact of salt on the winter operations budget and has put in place a number of initiatives to manage salt usage over the last number of years. These initiatives include the usage of a material application policy, pre-wetting salt, calibration of salt controllers, and the use of GPS units to track salt application. These initiatives resulted in savings of \$1-million annually and an equivalent base budget adjustment as of 2010. Roads Services intends to continue to refine and expand its efforts to find additional savings and ensure the operations are as efficient as possible.

For instance, the practice of pre-wetting salt reduces salt usage by 20% as a result of mixing dry salt with a prescribed liquid to reduce scatter and accelerate the activation of salt. This reduction is programmed into the salt controllers and therefore is an automatic reduction. The pre-wetting of salt, combined with a City-wide calibration process to ensure computer controllers are accurately dispensing material, will work towards reducing overall salt usage.

While GPS units have been installed on all roadway salting units for a number of years, this winter, an enhanced tracking initiative will be used to ensure adherence to material application policy. These enhancements include additional training and reinforcement of application policies and procedures for operators, since where salt is applied on the road is as important as how much salt is applied. This enhancement can also be used to monitor any issues with the trucks that may impact the amount of salt being applied. Enhanced monitoring and tracking will also be in place for this winter to ensure any deviations from material application policy are investigated and corrective action is taken.

Adherence to Council Approved Standards for Snow Removal

The removal of snow banks (snow removal) is currently tracked by a program that was developed in-house. This program currently focuses on streets that generally meet the requirement for snow removal over the winter season.

Although a snow removal scheduling program has been in place for a number of years, not all snow removal is entered into the current program. This program will be expanded for the 2015-2016 season to ensure that there is consistent tracking of all snow removal City-wide to ensure adherence to the snow removal standards outlined in the Maintenance Quality Standards. Broader use of the snow removal scheduling program will also result in better tracking and a harmonization of service levels for snow bank removal. Table 1 provides a breakdown of the Maintenance Quality Standards for snow removal.

Table 1 - Maintenance Quality Standards (MQS) for Snow Removal

Road Maintenance Class	Road Type	Minimum Cleared Width
1	High Priority Roads	No encroachment onto travel lanes
2	Most Arterials	Encroachment not to reduce width of any travel lane less than 3.3 m.
3	Most Major Collectors	<ul style="list-style-type: none"> • Where a parking lane is provided, a clear width of 2.2 m is to be maintained. • Streets with high parking permit demand, or with meters or taxi stands on both sides are to have two parking lanes with a clear width of 2.2 m each. • Roads with ditches and no curbs that have posted speeds greater than 60 km/hr are to have two parking/shoulder lanes with a clear width of 2.2 m each, where possible.
4	Most Minor Collectors	<p>Encroachment not to reduce clear width less than 6.0 m (2 lanes of 3.0 m).</p> <ul style="list-style-type: none"> • On streets with high parking permit demand, or with meters or taxi stands on both sides, the clear width is to be 8.2 m.

Road Maintenance Class	Road Type	Minimum Cleared Width
5	Residential Roads and Lanes	Encroachment not to reduce clear width less than 5.0 m (2.8 m travel lane plus 2.2 m parking lane). <ul style="list-style-type: none"> On streets with high parking permit demand, or with meters or taxi stands on both sides, the clear width is not to be less than 7.2 m (2.8 m travel lane plus 2 parking lanes of 2.2 m each).
		Encroachment not to reduce clear width less than 2.5 m. (residential lanes)

Salt Application for Class 4 Surface Treated Roads

All City roads are divided into five classes. Road classification is determined based on functional classification (arterial, major/minor collector or residential road), posted speed and traffic volumes. Standards for winter maintenance are determined based on road classification.

Class 4 or minor collector roads outside of special designated areas and without the presence of essential services and schools are to be winter maintained to a centre bare standard (or in the case of gravel roads - a snow packed condition), and salt is to be applied at a prescribed application rate that meets the Council approved Maintenance Quality Standards. Through analysis and observation, staff were able to determine that Class 4 roads are often treated similar to Class 3 (major collector) roads in terms of salt application because they are maintained on the same beat (route) with the same truck and operator, and often times, the operator does not alter the rate of salt applied throughout the beat. This not only contributes to additional salt and unnecessary usage but it can also contribute to the deterioration of surface treated roads. For the winter of 2015-2016, these surface treated roads will be identified to operators through a salt application procedure and will be monitored to ensure that salt is applied at a rate that will meet the Maintenance Quality Standards, and avoid excessive deterioration of the roadway surface, specifically the edges of the pavement.

The \$2.71 million of Winter Operations service initiative savings identified above will be implemented for the 2015-2016 winter season and do not impact the level of service outlined in the City's Council approved Maintenance Quality Standards.

The Roads Services Branch has included a total of \$3.5 million of service initiative savings within the 2016 draft operating budget, \$2.71 million of which is a result of the winter operations service initiative savings outlined above. Additional measures include contracting out iron works, freezing discretionary spending, and realigning funding for services provided on behalf of other internal branches.

RURAL IMPLICATIONS

This report has city-wide implications.

CONSULTATION

No consultations or public notifications were required as there are no changes to current standards.

ADVISORY COMMITTEE(S) COMMENTS

No Advisory Committees were consulted as there are no changes to current standards.

LEGAL IMPLICATIONS

There are no legal impediments to receiving this report for information.

RISK MANAGEMENT IMPLICATIONS

Risks associated with this report and its recommendation have been identified and explained in the report and are being managed by the appropriate staff.

FINANCIAL IMPLICATIONS

The financial implications are as outlined in this report and as outlined in the 2016 draft operating budget.

ACCESSIBILITY IMPACTS

There are no accessibility impacts associated with this report.

TERM OF COUNCIL PRIORITIES

This report aligns to the 2015-2018 City Strategic Priority – Financial Sustainability, specifically Strategic Objective FS1 Demonstrate Sound Financial Management. This report also aligns to the 2015-2018 City Strategic Priority – Transportation and Mobility, specifically Strategic Objective TM4 – Improve Safety for all Road Users.

DISPOSITION

The Public Works Department will implement the identified initiatives during the 2015-2016 winter season.