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**Item No. 4**  
**Halifax Regional Council**  
**September 30, 2008**  
**Committee of the Whole**

**TO:** Mayor Kelly and Members of Halifax Regional Council

**SUBMITTED BY:**

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Dan English, Chief Administrative Officer

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Wayne Anstey, Deputy Chief Administrative Officer - Operations

**DATE:** September 5, 2008

**SUBJECT:** Review of 2007/2008 Winter Works Program

**ORIGIN**

Staff

**RECOMMENDATION**

It is recommended that Regional Council approve:

1. The withdrawal of \$2,100,000 from the Snow and Ice Reserve (Q309);
  2. The withdrawal of up to \$2,325,000 from the Operations Stabilization Reserve (Q308),
- as per the Budget Implications section of this report.

## **BACKGROUND**

The “Winter Works” operation season spans from November to April each year. This past year’s program ran from November 11<sup>th</sup>, 2007 to April 7<sup>th</sup>, 2008.

## **DISCUSSION**

Winter Works comes into effect on the second Friday in November each year, and is comprised of three (3) levels of priority tasks. Priority 1 entails all snow and ice removal and control activities for streets and sidewalks; Priority 2 activities include regular (non-snow related) streets, roads, and sidewalk maintenance and; Priority 3 activities are those performed by Municipal Operations staff on behalf of areas outside of their reporting structure, ie: Halifax Forum, Metro Transit.

As outlined below, snow events were significantly above average for the 2007/2008 year, resulting in an over expenditure of \$9,146,568 (which includes all winter works activities).

Staff are recommending the use of funds from both the Snow and Ice Reserve and the Operations Stabilization Reserve to help underwrite a portion of the 2007/2008 winter works over expenditure which is consistent with the Reserves’ business cases.

### **Priority 1**

Priority 1 Winter Works tasking include all activities involved with the direct handling and removal of snow and ice from HRM’s streets, sidewalks, crosswalks, parking lots and bus stops.

The winter of 2007/08 was very active in terms of snow events. Many of these events were accompanied by rain followed by hard freezes, which made for extreme ice conditions. In addition, only two (December 22/23 and February 23/24) of the 22 weekends in the winter season were clear of active weather.

<b>Weather Events</b>	<b>Budget</b>	<b>Actual for 2005/06</b>	<b>Actuals over Budget 2005/06</b>	<b>Actual for 2006/07</b>	<b>Actuals over Budget 2006/07</b>	<b>Actual for 2007/08</b>	<b>Actuals over Budget 2007/08</b>
Major snowfalls (over 15 cms)	4	3	-1	2	-2	8	4
Average snowfalls (5 - 15 cms)	8	4	-4	6	-2	13	5
Minor snowfalls (1-5 cms)	9	12	3	14	5	12	3

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Freezing rain events	3	1	-2	4	1	8	5
Salting events (freeze/thaw, frost, runoffs, blowing snow)	40	33	-7	46	6	43	3

**Cost Analysis**

The budget for the 2007/08 Winter Works Season was \$13,519,346 with gross expenditures of \$22,665,914 representing a \$9,146,568 deficit. The principal cause of the over expenditure was the number and type of weather events during the winter. In summary the expenditures for winter works are broken down as follows:

Priority 1 tasks - snow and ice removal	\$ 21,582 K
Priority 2 and 3 tasks	<u>\$ 1,083 K</u>
07/08 Winter Works Costs	\$ 22, 665 K

The following table indicates snow and ice removal costs (Priority 1) for 07/08 as compared to previous years:

<b>Year</b>	<b>Priority 1 Costs</b>
2007/08	\$21,582,710
2006/07	\$11,060,822
2005/06	\$9,350, 450
2004/05	\$13,237,258
2003/04	\$13,203,694
2002/03	\$13,626,403
2001/02	\$11,251,157

**Service Standards**

There were 24 events for which Service Standard Reports were produced for this season (please refer to Attachment "A"). With the exception of the December 16<sup>th</sup> storm that had 20 cms of snow followed by 2" of rain with hard freeze, staff were able to meet the service standards, and in most cases exceed them. Exceeding the Service Standards ultimately adds to the overall cost per km. Staff will be making a continual effort to utilize resources efficiently while still meeting the standards.

Seniors and Person with Disabilities Snow Removal Assistance Program

This program has been operating for 10 years and received a major increase in funding in 2005 from \$60,000 to \$360,000. Currently, the program provides for snow removal to qualifying residents for walkways, front and back steps, path to oil tank and sidewalk (where applicable). In addition, the program acts as a referral for residents (private clients) to make arrangements with HRM contractors for these services through a direct pay system. This year saw a substantial increase in the number of subsidized clients that registered for the program.

Year	Total Registered	Subsidized Clients	Private Clients
2002/03	122	45	77
2003/04	143	48	95
2004/05	241	75	166
2005/06	288	95	193
2006/07	558	247	311
2007/08	882	452	430

There were also an additional 200 residents who were placed on a waiting list for this year. However, due to the growth and popularity of the program and associated administration demands, HRM will not be able to provide referral service to the private clients.

Covenco Report

HRM commissioned an external report on its Winter Works Operations, which was completed in June 2008. The report involved validating and measuring the various cost drivers in HRM's winter operations and identifying progress that had made since the 2004 report. The report also focussed on recommendations that would ensure service delivery met service standards, while reducing costs up to 15%.

Staff believe that with the tools (initial performance contracts, structural changes to collective agreement, and recapitalized fleet) already in place, combined with the recommendations in this most recent report, that continued improvement in the winter works program will be realized.

Improvements that were identified as having a positive outcome in service delivery included:

1. Collective bargaining negotiations resulting in more equitable agreement with additional changes planned for the future.
2. New shift scheduling being implemented with the objective to reducing the impact of overtime on operations.
3. Hours spent on Priority 2 and Priority 3 tasks increasing, which results in better utilization of resources during non events.
4. Some qualitative standards in place and being measured.
5. Performance based contracts being developed and designed to improve the service supplied by third party service providers.

6. Absenteeism being reduced resulting in lowered costs.
7. Service Delivery and Quality Improvement Section being created to assist with increasing effectiveness.

The Report has identified continued areas for improvement as follows:

1. *Improvements in use of performance measures:*

Over the past couple of years an emphasis has been placed on more consistent reporting of post-event performance against the established standards. The winter works budget needs to be restated and performance criteria against the restated budget needs to become the practice. Therefore the next step is to establish a second tier of performance measures including: cost per lane kilometer per route; volume of salt per route per event type; gross volume of salt per event type; operating cost per service kilometer; cost per event per route; and actual dollars per event versus target dollars per event. This will be brought forward as part of the 2009/10 Business Plan and Budget.

Utilized on a timely basis, performance measurements will assist management and supervisors to effectively measure the performance of those divisions in both a quantitative and qualitative method.

2. *Salt Management:*

Improvements in salt management is one area of significant opportunity. This can be enabled through a more disciplined approach to the application of salt, recording of usage, and improved training. Strategies here will help reduce costs and have a positive effect on the environment.

3. *Use of Contracted Equipment:*

Performance measurements need to be put in place to ensure HRM is receiving value for money and protocols established to ensure over-servicing is not an ongoing factor. In fiscal year 2009/2010 most of the contract equipment service contracts will be up for renewal. This upcoming fall, staff will be reviewing the nature and extent of the use of contracts for snow and ice control. Any changes proposed will be brought forward in the 2009/2010 Business Plan and Budget deliberations. Staff intend to increase performance based contracts and set stronger performance measurement guidelines in contracts to ensure value for money.

4. *AVL Equipment:*

AVL equipment has recently been installed to assist in tracking utilization of equipment. Staff will utilize AVL equipment to track equipment usage, and verification of service standard compliance. A business case will be presented during the 2009/10 budget process for the AVL equipment for the balance of HRM's and contracted snow equipment.

5. *Management Operating System: An effective management operating system manual should be developed:*

Staff will be enhancing the Winter Works Operations Manual that clearly defines tasks to be completed, and translates those tasks into required resources.

6. *Training: The report identifies deficiencies in HRM's technical and supervisory training:*

Changes are now being made in HRM's training strategies including developing a master schedule and capacity plan to ensure that staff are trained to complete their tasks. Salt management will also be a strong component in HRM's training.

An integral component of the Winter Works training will be to upgrade the skill sets of the Winter Works Supervisors. Supervisors will be given training to ensure that planned work is executed in a manner which meets the service standards, ensures the safety of the employees, and is undertaken in a cost-effective manner.

### Priority 2 and Priority 3 Tasking

Priority 2 tasks are the regular (i.e., non snow related) street, sidewalk, parks and sportsfield related maintenance activities that continue throughout the winter months. Generally speaking, Priority 2 tasks include leaf pickup, asphalt patching, litter cleanup fencing repairs, shouldering, graffiti removal, street cleaning, playground and trail maintenance and all other maintenance activities for which Municipal Operations is normally responsible. Because of the increased demands on Priority 1 tasking, less time was spent on Priority 2 and 3 tasks this year. Costs for Priority 2 and Priority 3 tasks for 2007/08 were \$1,083,204. In comparison, in 2006/07 the costs for priority 2 and 3 tasks were \$3,280,000.

Municipal Operations, along with the C.U.P.E. Local 108, jointly developed a Memorandum of Understanding with respect to night shift employees that was incorporated into the Collective Agreement. This Agreement allows for more flexibility in having night shift employees work the day shift when not involved in Priority 1 snow tasking.

<b>Work Order Breakdown - Priority 2 &amp; 3 Tasking (2 Year Comparison, 2007 - 2008)</b>		
<b>Task</b>	<b>2007 (Hours)</b>	<b>2008 (Hours)</b>
Asphalt / Grading / Walkway Repairs	614	1,337
Asphalt Patching	8,851	10,012
Bleachers/Benches	815	148
Dumpsite (Depot) Maintenance	0	214
Fencing / Guardrail / Retaining Walls / Bridges	108	132
Flood Control	0	2,344
Graffiti	929	806
Ice Thickness Testing	0	902
Litter / Garbage	20,376	12,502
Leaf Collection	21,492	7,106
Parks General Maintenance	0	3,036
Playground Equipment	3,849	1,926
Shoulder Repairs / Washouts	0	1,604
Sidewalks / Concrete, Brick	455	204
Signage	1,395	0
Sport Courts / Skate Parks	299	439

Sport Fields / Diamonds	1,820	2,538
Trails Maintenance	0	2,024
Trees / Pruning / Horticulture	2,025	1,689
Training, Vacation, Sick Leave etc.	28,394	25,360
Priority 3 (Facilities / Special Events)	8,943	513
<b>Total Priority 2 and 3</b>	<b>100,365</b>	<b>74,836</b>

**BUDGET IMPLICATIONS**

The report requests the transfer of \$4,425,000 from the Snow and Ice (SNIC) Reserve fund and the Operations Stabilization Reserve (OSR) fund. These funds will then have a balance of approximately zero at the end of the fiscal year March 31, 2008.

The approved 2008/09 reserve budget includes a contribution to the SNIC Reserve fund in 2008/2009 of \$1,500,000 and staff will seek opportunities through out the year to find funds to supplement the OSR fund so as to mitigate risk of deficit.

**FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN**

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Capital budget, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation. If approved this report will change the approved Operating and Reserve budgets.

**ALTERNATIVES**

There are no recommended alternatives.

**ATTACHMENTS**

Attachment A: Snow & Ice Control Service Standards

Additional copies of this report, and information on its status, can be obtained by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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## **Attachment A**

# **Snow & Ice Control Service Standards**

Updated Dec 04/07

### **Introduction**

The Transportation & Public Works is responsible for all aspects of the Snow & Ice Control Program. It is a seasonal operation that has significant impact on HRM during winter conditions.

It is the intent of this document to identify the Service Standards which will be maintained by HRM. At the same time, it is not the intent to identify how the Snow & Ice Control Program will be managed.

The goal is to set an attainable standard which align the levels of service with the financial constraints of the HRM budget.

### **Objectives**

The key objectives of the Service Standards are:

- To reduce the hazards of ice and snow conditions to motorists and pedestrians
- To minimize economic losses to the community and industry
- To facilitate the handling of emergencies by fire, hospitals and police officials.

### **Classification of Routes**

In order to set effective priorities for snow and ice activities within the region, the routes must be classified as to their impact on the overall transportation system.

For the purpose of these standards the HRM has classified all of the routes and will service them (salt, sand and plow) in the following order of priority:

**Class 1 - First Priority**

Includes:

- Arterials
- Serve as connectors/collectors between areas and routes
- Serve as emergency routes to hospitals and fire equipment
- Serve as snow routes in major hilly terrain during weather situations
- Transit - for major bus routes

**Class 2 - Second Priority**

Includes:

- Medium to low volume of traffic including residential and rural routes

**Other Surface Types**

HRM will regulate the maintenance of the other surfaces, mirroring the priorities given to the adjacent routes unless specified differently for a particular activity. Items within this classification include:

- Bus stops
- Walkways and overhead crosswalks
- Parking lots
- Handicap parking
- Private roads and lanes provided winter maintenance under agreement

## Street Clearing Standards

The Snow & Ice Program will endeavour to ensure the following levels of service.

<b>Road Classification/ Priority</b>	<b>Typical</b>	<b>Service Level After Operations</b>	<b>Start Times and Frequency</b>	<b>Time to Completion from End of Snowfall</b>
Priority 1 Main Arterials	Robie Street, Sackville Street, Portland Street	Bare pavement driving lanes	After 2 cm of snow, 3 hour turnaround	12 hours to full driving lanes
Priority 1 Transit Routes Collector Roads	Parkland, Caledonia Road, Metropoliitian Ave	3m centreline bare	After 2 cm of snow, 3 hour turnaround	12 hours
Priority 1 Residential Street with greater than 10% slope that serve as snow routes	Vestry Street, Joffre Street, Lindsay Hill	Centreline bare	After 4 cm of snow, 3 hour turnaround	12 hours to 2 lane width
Priority 2 Residential Streets	Cork Street, Anderson Street, Chandler Drive	Snow Covered, Passable	After 10 cm of snow *	24 hours to 2 lane widths
Priority 2 Gravel Roads	Confederation Drive, Flandrum Hills	Snow Covered, Passable	After 10 cm of snow	24 hours
Priority 2 Private LAnes	Myers Lane	Snow Covered, Passable		24 hours

- In snowfalls greater than 30 cm, or in blizzard conditions, service levels may not be achieved.
- In multiple snowfalls where all roads have not been fully cleared, priority will be given to the first 2 priority classifications.
- During significant snow events "cut throughs" will commence after 10 cm on residential streets to allow single lane access.\*

### Sidewalk Clearing Standards

The Snow & Ice Program will endeavour to ensure the following levels of service for sidewalks that are area rated and maintained by the HRM.

<b>Sidewalk Priority Classification</b>	<b>Materials Used</b>	<b>Start Time</b>	<b>Duration Until Cleared</b>
Priority 1 Main Arterials Capital District	Salt or Salt/Sand mixture	After 5 cm of snowfall	12 hours from end of snowfall
School Routes	Salt or Salt/Sand mixture	After 10 cm of snowfall	18 hours from end of snowfall
Residential Streets/ Walkways	Salt or Salt/Sand mixture	After completion of first 2 priorities	36 hours from end of snowfall
Intersections (Peninsula Halifax)	Salt or Salt/Sand mixture	After sidewalks are complete	72 hours from end of snowfall

- While the objective is to maintain sidewalks to a bare condition, many factors are key to achieving success. Wet snow packed to ice, freezing rain and sudden freezes after rain can produce a heavy ice build-up on sidewalks. Sand will be applied to provide a degree of traction.
- Standards apply only to sidewalks that are area rated and maintained by the HRM. In other areas, sidewalks are the responsibility of the abutting property owner, and subject to regulations set out in By-Law S-300.
- In the case of multiple snowfalls, where there has been insufficient time to complete all sidewalks, operations will return to the highest priorities and start over.
- During late winter/ early spring, sidewalks are subject to runoffs from melting snow during the day and re-freeze overnight. Spot sanding may take place during regular,