



City of  
**Peterborough**

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**TO: Members of the Committee of the Whole**

**FROM: W.H. Jackson, Director of Utility Services**

**MEETING DATE: November 10, 2008**

**SUBJECT: Report USPW08-013  
Winter Services Operations Policy**

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## **PURPOSE**

A report to recommend a Winter Services Operations Policy.

## **RECOMMENDATIONS**

That Council approve the recommendations outlined in Report USPW08-013 dated November 10, 2008, of the Director of Utility Services, as follows:

- a) That the Winter Service Operations Policy in Appendix C be adopted; and
- b) That the Winter Service Operations Standards in Appendix B be adopted.

## **BUDGET AND FINANCIAL IMPLICATIONS**

### Status of 2008 Winter Budget

As a result of the higher than average snowfall and the record number of storm events, the cost for Winter Road Operations totaled \$1,389,222 for the period January to early April 2008. With a budget of \$1,396,100 the 2008 budget is effectively expended.

During this same time period, Winter Sidewalk Operations resulted in higher than average costs totaling \$338,629. With a budget of \$340,400 the 2008 budget for Winter Sidewalk Operations is also effectively expended.

Based on the experience of previous average winters, it is estimated that an additional budget of \$400,000 will be required to provide Winter Road and Winter Sidewalk Operations for the months of November and December 2008. These funds are available in the Winter Reserve Fund, if needed, but the remaining balance would only be \$38,474.10 in this Reserve Fund.

### Future Budgets

Future year budgets may see adjustments to support new operating standards that may be approved by Council.

## **BACKGROUND**

### 1. General

The Strategic Business Analysis for Public Works prepared by McCormick Rankin Corporation in 2007 contained five recommendations referenced to winter services as follows:

- *That the winter roads service standards be approved by Council;*
- *That winter sidewalk service standards be established and approved by Council;*
- *That a winter route rationalization study be undertaken;*
- *That upon approval of roads and sidewalk service standards, a resource needs analysis be undertaken to determine the level of resources required; and*
- *That the City outsources sidewalks and parking lots. The City apply a managed competition strategy to identify the most appropriate manner in which to deliver Winter Control Operations on Roads.*

The purpose of this report is to deal with the first two recommendations.

### 1. Road and Sidewalk Classifications

The Municipal Act provides road classification criteria in the “Minimum Maintenance Standards For Municipal Highways”, (MMSMH) Ontario Regulation 239/02. As shown in Appendix A, roads are given a classification of 1 to 6. The roads with the City of Peterborough fall under Classification Categories 2, 3 and 4. There is no classification for municipal sidewalks and, accordingly, they are treated equally in the various winter responses.

## 2. Storm Categories and Road Winter Service Response

To guide a response to actual or forecasted winter weather, the city has developed three categories of storms as follows:

### Category 1

This is a storm with less than 5 cm. of snow either actual or forecasted. Under this Category, Class 2 and 3 roads only are salted and sanded with an average duration time of 4 hours.

### Category 2

For Category 2 storms, freezing rain or ice packed conditions either occur or are forecasted. Under this Category, Class 2, 3 and 4 roads are salted and sanded with an average duration time of 4 to 6 hours.

### Category 3

This is a storm with greater than 5 cm. of snow either occurring or forecasted. Under this Category, Class 2, 3 and 4 roads are plowed, sanded and salted with an average duration of 12 hours.

For Category 2 and 3 Storm Events, in addition to the above, Winter Control Services are provided for:

- City Hall
- Police Station
- Fifteen Municipal Lots
- King Street Parking Garage
- Simcoe Street Parking Garage
- Thirteen City Park parking lots
- 434 Bus stops
- 33 Adult crossing guard location
- 20 Disabled parking locations in the DBIA

Depending upon snow accumulation, available resources are directed to remove snow from the DBIA and along curb-faced walks.

The performance outcome of the aforementioned winter services is for bare pavement for road Classes 2 & 3 and centre bare for road Class 4.

During a continuous Category 3 storm event, the time to achieve the performance outcome may increase. Depending upon temperature and traffic volume, this may result in snow pack developing on Class 4 roads.

Appendix B presents the standard response times and performance outcome described in this report.

### 3. Sidewalk Winter Service Response

Resources are deployed on day shift when snow accumulation exceeds 2 cm. Plowing occurs on regularly scheduled day shifts unless accumulation exceeds 12 cm in depth on the sidewalks. For a snowfall of greater than 12 cm in depth, overtime is used to complete sidewalk-plowing operations.

The average time to complete a sidewalk plowing operation is 7 to 15 hours, depending on route length and depth of snow. Sanding operations usually follow a plowing operation or after any form of freezing precipitation which can add an additional 12 to 18 hours to the completion of both operations.

Resources during winter control operations are assigned in priority to the roads first and sidewalk operations secondly. Bus stops are also cleared after winter service of the roads has been completed.

### 4. Parking Lot Maintenance

Public Works is responsible for the winter maintenance of the Police Station, City Hall and 15 municipal parking lots. The intent is to complete these tasks with an average duration time of 6 hours. The snow clearing of these parking lots must be completed first before equipment can be deployed to cul-de-sac routes. This schedule accommodates the provision of public and institutional parking.

### 5. Parking Garage Maintenance

Public Works is responsible for the winter maintenance of the King Street and Simcoe Street parking garages. The intent is to complete these tasks with an average duration time of 6 hours per lot. In addition to plowing these locations, the snow must be immediately removed from the rooftop. This operation is completed with support from contract services.

### 6. Winter Services Operations Policy

Appendix C presents a draft Winter Services Operations Policy. The policy formalizes the existing winter services response that is described in the body of this report. Any changes to the Policy will only be possible after consideration and approval by Council.

## SUMMARY

Information regarding the existing winter services program has been provided. The Level of Service (response times) decision that, of course, relates to labour and equipment availability is critical for the planning of future operations. Staff has drafted a winter services policy to formalize the existing winter service standards.

Submitted by,

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Attachments:

Appendix A – Road Classification Based on Minimum Maintenance Standards  
Appendix B – Winter Services Standards & Performance Outcome  
Appendix C – Winter Services Operations Policy

**Appendix A – Road Classification Based on Minimum Maintenance Standards**

Under Ontario Regulation 239/02 of the Municipal Act, various minimum maintenance standards for municipal roads are established. The standards relate to the classification of road. For example, a local street should not expect the same level of service as an arterial road. In an effort to provide Province wide consistency, Table A.1 was included in Regulation 239/02 as a means of classifying the various roads within a Municipality.

**Table A.1 Road Classifications Based on Minimum Maintenance Standards**

Average Annual Daily Traffic (number of motor vehicles)	Posted or Statutory Speed Limit (kilometers per hour)						
	100	90	80	70	60	50	40
15,000 or more	1	1	1	2	2	2	2
12,000 - 14,999	1	1	1	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	3	3
5,000 - 5,999	1	2	2	3	3	3	3
4,000 - 4,999	1	2	3	3	3	3	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	4	4
1,000 - 1,999	1	3	3	3	4	4	5
500 - 999	1	3	4	4	4	4	5
200 - 499	1	3	4	4	5	5	5
50 - 199	1	3	4	5	5	5	5
0 - 49	1	3	6	6	6	6	6

**Appendix B – Winter Service Standards and Performance Outcome**

**Table B.1 - Accumulation and Duration: Minimum Maintenance Standards for Municipal Highways (MMSMH) and City of Peterborough Level of Service for Snow Clearing on Roadways**

Road Class	MMSMH Standard		City of Peterborough Level of Service	
	Maximum Accumulated Depth (cm)	Maximum Duration Time (hrs)	Maximum Accumulated Depth (cm)	Maximum Duration Time (hrs) to Achieve Standard
2	5	6	5	6
3	8	12	8	12
4	8	16	8	16

**Table B.2 - Duration Time for Ice Control on Roadways**

Road Class	MMSMH Standards	City of Peterborough Level of Service
	Maximum Duration Time (hrs)	Maximum Duration Time (hrs) to Achieve Standard
2	4	4
3	8	8
4	12	12

**Table B.3 - Outcome of Snow Clearing and Ice Control on Roadways**

Road Class	City of Peterborough End Result Outcome*		
	Bare Pavement Outcome	Centre Bare Outcome	Snow Packed
2	X		
3	X		
4		X	

\* During a continuous Category 3 storm event, the time to achieve the performance outcome may increase. Depending upon temperature and traffic volume, this may result in snow pack developing on Class 4 roads.

**Table B.4 – Sidewalk Winter Plowing Response**

<b>Snow Accumulation</b>	<b>Clearing Operation</b>	<b>Time for Completion (Hrs)</b>	<b>Follow-up</b>
2 cm +	Regular Shift	7 – 15	Sanding which can take an additional 12 – 18 hours
12 cm +	Regular Shift plus Overtime Shifts	7 – 15	Sanding which can take an additional 12 – 18 hours

Note: The sidewalk operations are started after an accumulation of 2 cm of snow and where resources are available. Bus stops are cleared only after the road winter services are complete.

**Table B.5 – Parking Lot Maintenance**

<b>Location</b>	<b>Storm Category</b>	<b>Response Time (Hrs.)</b>
<ul style="list-style-type: none"> <li>• City Hall</li> <li>• Police Station</li> <li>• Municipal Lots (15)</li> <li>• Parking Garages (2)</li> <li>• City Park Parking Lots (13)</li> </ul>	2 & 3	6

**Appendix C – Winter Service Operations Policy**



**DRAFT  
POLICY**

**WINTER SERVICE OPERATIONS**

<b>Policy Type:</b>	Municipal Services	<b>Effective Date:</b>	
<b>Department:</b>	Utility Services	<b>Approval Level:</b>	Council
<b>Division:</b>	Public Works	<b>Policy #:</b>	
<b>Section/Facility:</b>	Roads	<b>Revision #:</b>	N/A

**1.0 PURPOSE**

- 1.1 The purpose of this policy is to establish Winter Service Standards for snow removal and ice control on City maintained roads and sidewalks in order to ensure the general safety of the public and to provide continued accessibility in compliance with the Municipal Act, 2001.

**2.0 APPLICATION**

- 2.1 This policy applies to all individuals who have responsibility for overseeing, directing, supervising, or conducting winter service operations on behalf of the City of Peterborough.
- 2.2 Winter service operations include: snow clearing, ice control, snow storage, snow disposal, and patrol.

**3.0 DEFINITIONS/ACRONYMS (As Required)**

**As soon as practicable** - Means the duration of time from being made aware of a problem until the time when action and repairs can be taken at the site of the problem.

**City** - Means the Corporation of the City of Peterborough, its agencies, boards and commissions.

**Council** - Means the elected City Council of the City of Peterborough.



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POLICY**

**WINTER SERVICE OPERATIONS**

**4.0 POLICY STATEMENT(S)**

- 4.1 The City will establish, maintain, and update Winter Service Standards, for approval by Council, to guide resource allocation and winter service response decisions.
- .1 The City's Winter Service Standards for snow clearing on roadways will be in accordance with the Minimum Maintenance Standards for Municipal Highways, Ontario Regulation 239/02 of the Municipal Act, 2001.
  - .2 Resources for winter control operations are assigned in priority order of roads first and sidewalk operations and bus stops as the next priority.
- 4.2 The City will conduct its winter service operations in accordance with the Winter Service Standards as approved by Council.
- .1 The City acknowledges that there may be times when, due to the severity of a winter storm, the Winter Service Standards cannot be achieved within the usual time allotted. Under such circumstances, the City will endeavour to recover winter service response to the Winter Service Standards as soon as practicable.



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**POLICY**

**WINTER SERVICE OPERATIONS**

**5.0 APPENDIX, RELATED POLICIES, PROCEDURES & LINKS**

**5.1 Pertinent Resources**

Highway Traffic Act

[http://www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_90h08\\_e.htm](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90h08_e.htm)

Municipal Act, 2001

[http://www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_01m25\\_e.htm](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_01m25_e.htm)

Ontario Regulation 239/02 Minimum Maintenance Standards for Municipal Highways

[http://www.e-laws.gov.on.ca/html/regs/english/elaws\\_regs\\_020239\\_e.htm](http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_020239_e.htm)

Report USPW08-013 "Winter Services Operations Policy"

URL link to Report

Appendix A: Road Classification Based on Minimum Maintenance Standards

Appendix B: Winter Service Standards and Performance Outcome

**5.2 Related Policies**

N/A

**5.3 Related Procedures**

Winter Service Standards for Roads Procedure

Winter Service Standards for Sidewalks Procedure

**5.4 Related Forms**

N/A

**5.5 Miscellaneous**

N/A

**6.0 AMENDMENTS/  
REVIEWS**

6.0 AMENDMENTS/ REVIEWS		Next Review Date
Date (yyyy-mm-dd)	Section(s) Amended	Comments