



INFORMATION REPORT

TO: Chair and Members Public Works Committee	WARD(S) AFFECTED: CITY WIDE
COMMITTEE DATE: October 15, 2012	
SUBJECT/REPORT NO: Winter Control Program Activation Process and Pilot Programs (PW12079) - (City Wide) (Outstanding Business List Item)	
SUBMITTED BY: Gerry Davis, CMA General Manager Public Works Department	PREPARED BY: Darrell Smith, P.Eng. (905) 546-2424, Extension 7646
SIGNATURE:	

Council Direction:

On April 2, 2012, the Public Works Committee requested that staff report back respecting the Winter control activation parameters, particularly the 10 cm activation policy and the possible change to 7to 8 centimetres.

Information:

The Roads & Maintenance Section of the Operations & Waste Management Division is responsible for implementing the Winter Control Program (WCP) and achieving the Service Standards as approved by Council in 2001 (attached as Appendix A); and the Province of Ontario Minimum Maintenance Standard (MMS). The WCP includes components of the MMS response requirements (i.e. ploughing and material applications). The service is delivered through the use of a combination of contracted services and in-house resources and their respective activation processes are addressed in the following:

Contracted Services

- 1. Area Service Contract** - The external WCP Area Service Contract provides for material application and ploughing services on priority one roads such as the Lincoln Alexander Parkway, Red Hill Valley Parkway, and Upper James Street from Rymal Road to White Church Road. Under the terms of the contract, the contractor assumes the liability for MMS and Level of Service compliance. As such they are typically responsible to patrol their routes and for the activation of

their forces, however City staff may also activate the contractor in emergency situations.

- 2. Stand By Equipment and On Call Equipment** - The Snow Clearing / Removal Contracts provide stand by and on call services to augment city forces during significant snow events and are only activated when called in by City staff.

Winter Activation Protocol -In House Services

In house resources are used to perform all other Winter program services on the remaining roadway classes (two and three) outlined as follows:

- 1. Winter Road Patrol** - Apart from dedicated road patrollers, all Winter operators have Winter route inspection responsibilities as part of their duties. The information gathered is forwarded to the appropriate Superintendent or Supervisor as required for action.
- 2. MMS Compliance Activities** -These include material application and addressing issues such as ice patches and snow drifts. All Supervisors and staff can immediately respond to any MMS compliance issue that they become aware of and approval from the Superintendent is not required.
- 3. Winter Control Program Compliance Activities** (i.e. ploughing of class two & three roads) - These activities are typically activated through a decision of the WCP Management Team related to major storms, or at the discretion of Supervisors for localized events or road conditions. Given the large geographic service area and variable weather conditions, program activation timing and response levels may vary for each event. The WCP Service Level provides guidelines to initiate activation on all road classes; 8 and 10 cm. of snow accumulation trigger ploughing on class two and three roadways respectively and it is not proposed to undertake any changes to the current guidelines. These guidelines provide for discretion in the decision to activate ploughing wherein other factors such as the weather forecast, the type of accumulation (i.e. powdered snow versus slush) and the time of season may be considered. For example, if there is an 8 cm accumulation of slush on a class three roadway and the weather is forecasting a flash freeze, ploughing will be activated to clear the road surface prior to freezing and rutting. Conversely, if there is 10 cm of snow and the forecast calls for rising temperatures and/or rain, ploughing may not be activated.

If a major widespread snow event is forecasted, the WCP Management Team will discuss the expected level of response in advance considering matters such as the forecast, Highway Traffic Act requirements (70 hour driving time), available contracted and in house resources, response action and time. Following activation, program performance is monitored and adjusted as required in response to actual conditions to ensure achievement of the intended service. The WCP model is predicated on the anticipation and avoidance of unsafe road

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conditions, however from time to time local weather and environmental factors generate unforeseeable conditions that place the WCP program in a reactive mode. To this end a post event debrief is generally conducted to review the performance of the response and identify improvement opportunities.

In addition the thirteen mountain access roads within the City's roadway network, receive WCP service at standards exceeding those established for priority or class 1 roads through enhanced

- Road surface condition inspection and monitoring
- Anti icing materials application (brine solution)
- De-icing materials application (road salt)
- Ploughing activities.

Winter Control Pilot Programs

During the Wnter operation period of 2011 / 2012, the Roads & Maintenance Section of the Operations & Waste Management Division participated in several service level pilot programs which included:

- Alternating Directions on Ploughing Routes
- Pedestrian Street Crossing Windrow Removal; and
- Bicycle Lane Winter Maintenance.

It was our intention to report back to Council on their feasibility and budget impact prior to the start of the 2012-13 Winter operations period. Due to the type of weather and lack of snow last year, there is insufficient data to draw any conclusions about the viability of these programs, therefore, Roads & Maintenance will continue the pilot programs for the 2012-13 season and report back to Council in 2013.

**APPENDIX A
REPORT PW12079**

Winter Control Level of Service Standards 2001

Winter Control Level of Service Standards									
Road Classification		Surface Condition		Snow Accumulation		Treatment			
Type	Priority	Target Surface Condition	Response Time	Target Response	Completion Time	Anti-Icing	De-icing	Salt	Sand/Salt
Linc/Arterials	1	Bare	Immediate	2.5 cm	4 hrs	*	*	*	*
Escarpment Crossings	1	Bare	Immediate	5 cm	4 hrs	*	*	*	*
Primary Collectors e.g. Whitney Ave	2A	Bare	4 hrs	8 cm	8 hrs		*	*	*
Secondary Collectors e.g. Fletcher Rd	2B	Centre Bare	4 hrs	8 cm	8 hrs		*	*	*
Rural Roads Hard Surface e.g. Golf Club Rd	3	Centre Bare	8 hrs	10 cm	24 hrs				*
Residential e.g. Ravina Cres	3	Snow Packed	8 hrs	10 cm	24 hrs				*
Loose-top Rural Roads e.g. Trimble Rd	3	Snow Packed	12 hrs	10 cm	24 hrs				

As approved by Council in 2001.