Service Business Plan

Service Name	Winter Maintenance	**Service Type**	Public
Service Owner Name	Mark Adam	**Budget Year**	2017
Service Owner Title	Manager of Roads Operation		

Service Description

A public service to provide snow plowing and salting/sanding of public roads, sidewalks, walkways and parking areas.

Current State

Customers & Their Expectations	This service is delivered to: Road and sidewalk users to provide safe and efficient travel throughout Burlington's transportation network.
Existing Service Delivery	Winter maintenance is provided for 1,913 lane kilometres of roadways and 839 kilometres of sidewalk. Services are delivered according to the legislated requirements of the Municipal Act's Minimum Maintenance Standards and Council-approved levels of service. This service also provides winter maintenance of regional roads within Burlington, according to the Regional Maintenance Agreement, Contractor Maintenance Services; and of boundary roads with the Town of Milton, Town of Oakville and City of Hamilton, in accordance with Boundary Road Agreements. Winter maintenance service is delivered through a combination of in-house and managed contracted resources.
Existing Customer Engagement Tools / Methods	Customer engagement tools include the City's website (including information on levels of service and scheduled daily operational updates during road plowing events), a new You Tube Video on Winter Operations, newspaper ads, telephone, in person and email.
Is this Service Provincially Legislated?	Yes Municipal Act's Minimum Maintenance Standards
For this Service are there Approved Service Standards?	Yes Council-approved levels of service

Sub-Services

Winter Maintenance - Roads	Winter maintenance of roads, including anti-icing, plowing, salting or sanding and snow removal.
Winter Maintenance - Sidewalks	Winter maintenance of sidewalks, including plowing, salting or sanding; and shoveling of bus pads and shelters, and school crossings.

Winter Maintenance – Other City Facilities	Winter maintenance of parking lots, multi-use trails and walkways in designated areas, including plowing, salting or sanding, and shoveling.
Weather Forecast and Road Condition Monitoring	Routine 24/7 monitoring of road and weather conditions from October 15 through April 15 each year, to identify maintenance needs and proactively respond to winter conditions.

Recent Continuous Improvement Initiatives

In 2016, The City installed a new Brine station which led to a reduction of externally purchased product and cost reductions. Two new vehicles were purchased to support Winter Maintenance using the "right sizing" approach which aligns vehicle replacement requirements with service standards and needs. Lastly, staff re-structured sidewalk routes which led to an enhanced service levels and a better balance between internal and external (via contractor) service delivery.

In 2015, the city developed a You Tube Video to inform residents regarding winter maintenance operations and implemented a "What's Been Plowed" application through the City's website to provide information regarding the location and status of roadway plowing activities. In addition, in 2015, Council approved additional resources for sidewalk snow plowing, roadway plowing and additional snow removal for areas with limited snow storage beginning in the 2015/2016 winter season.

In 2014, Council approval an increased level of service for snow plowing on the Centennial, Beachway and North Hydro Corridor multi-use paths and parking lay-by lanes. An enhanced Automatic Vehicle Location system was also installed on winter maintenance vehicles to improve the City's ability to monitor operations and report on performance meeting the City's service levels.

Emerging Opportunities and Anticipated Risks

Emerging Opportunities	Weather conditions, including snow accumulation during a storm, can vary greatly across the City. The City's ability to respond to varying conditions depends on the quality and quantity of local weather and road data available. The addition of either City-owned weather stations or additional shared stations with Halton Region may improve the planning of winter control operations, to optimize the use of resources. Lastly, with the installation of a new Brine station, City staff can begin to experiment with different mixtures to optimize ice and snow melting capabilities during lower temperatures.
Anticipated Risks	The unpredictable nature of winter weather presents a risk to budgets, resources and infrastructure. Extreme winter weather is becoming more common each year. To manage variations in winter weather, the operating budget is based on an average of the previous five years. In addition, a Severe Weather Reserve Fund exists to account for extreme events.

Service Objectives	Target Completion
Investigate the opportunity to combine this service with Roads and Sidewalk Maintenance for ease of management and delivery.	Jun 2017
Implement and monitor increased levels of service for additional snow removal in areas with limited snow storage.	Jun 2017
Develop a Winter Fleet Strategy in collaboration with Fleet Maintenance to ensure the service's long-term goals are attainable with the right vehicles and equipment.	Dec 2017

Review changes in salt application equipment for preparation of winter control contracted services tender in 2018	Jun 2017

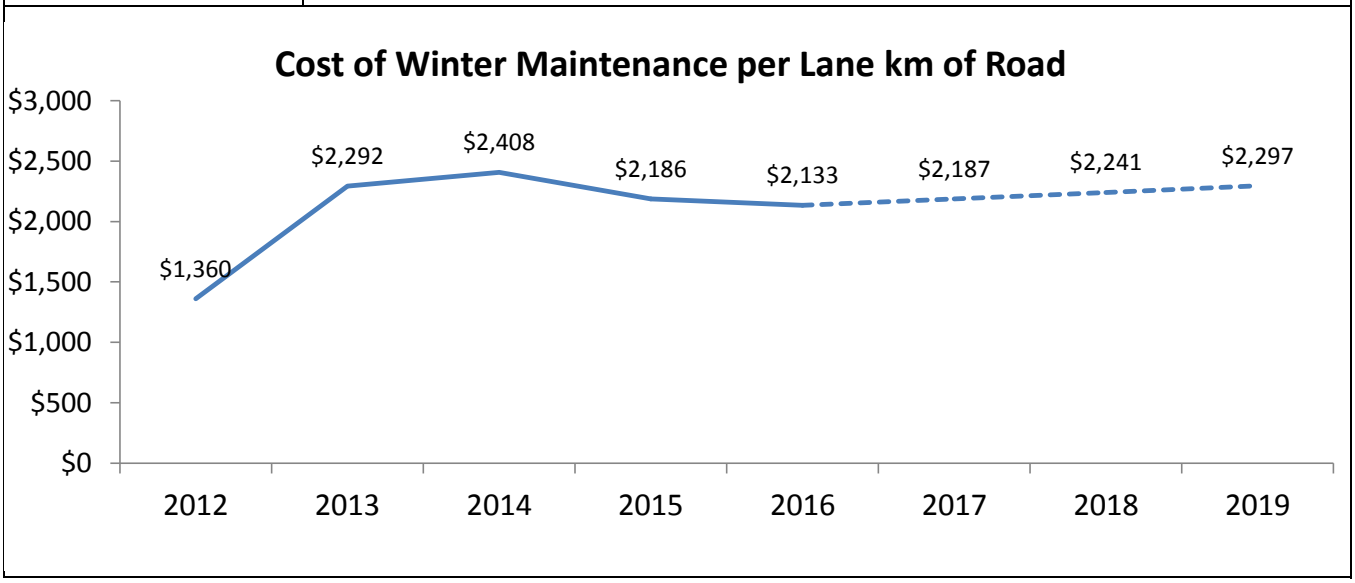
MEASURING SUCCESS

How much did we do?

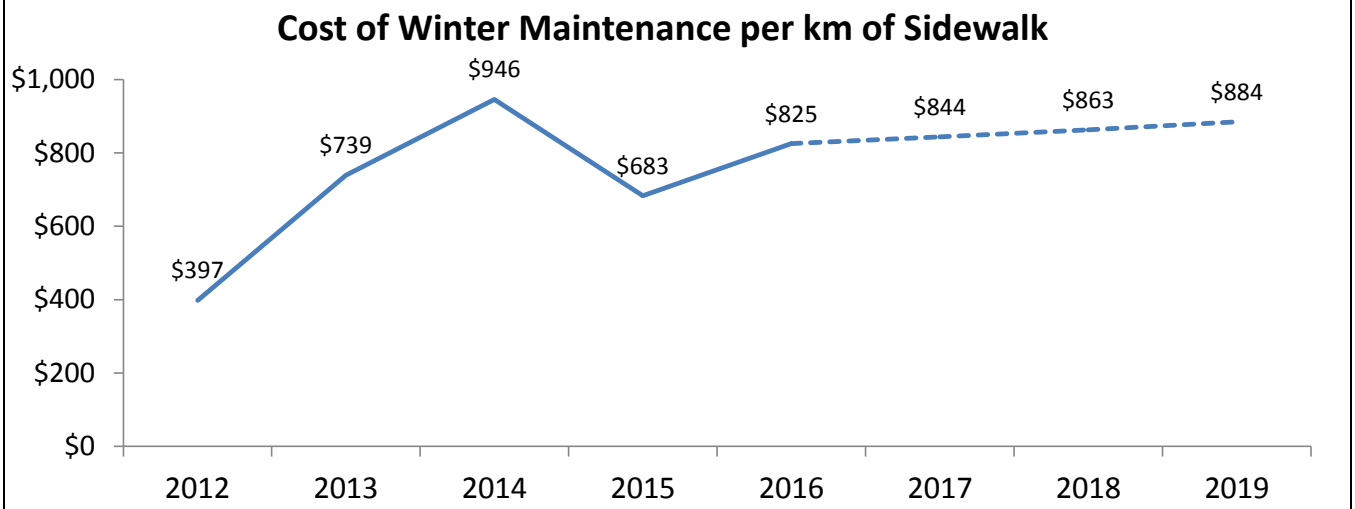
Performance Measurement	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Projection	2017 Forecast	2018 Forecast	2019 Forecast
Average mean winter temperature in degrees Celsius (Dec-Mar)	2.32	0.53	- 6.35	- 3.10	1.50	1.50	1.50	1.50
Winter snowfall total in centimetres (Nov-Apr)	69.2	115.8	137.4	147.0	140.0	140.0	140.0	140.0
Tonnes of salt used	8,193	16,784	17,876	19,376	15,000	15,000	15,000	15,000

How well did we do it?

Performance Measurement	Cost of Winter Maintenance per Lane km of Road
Story behind the data	The cost of winter control for roads is influenced by the frequency, type and severity of winter weather. For example, in 2012 the winter was not as severe as recent winters and therefore, expenditures were not as high. The 2014/2015 winter was characterized by extremely cold temperatures that led to higher than average use of salt in order to maintain safe roadways.

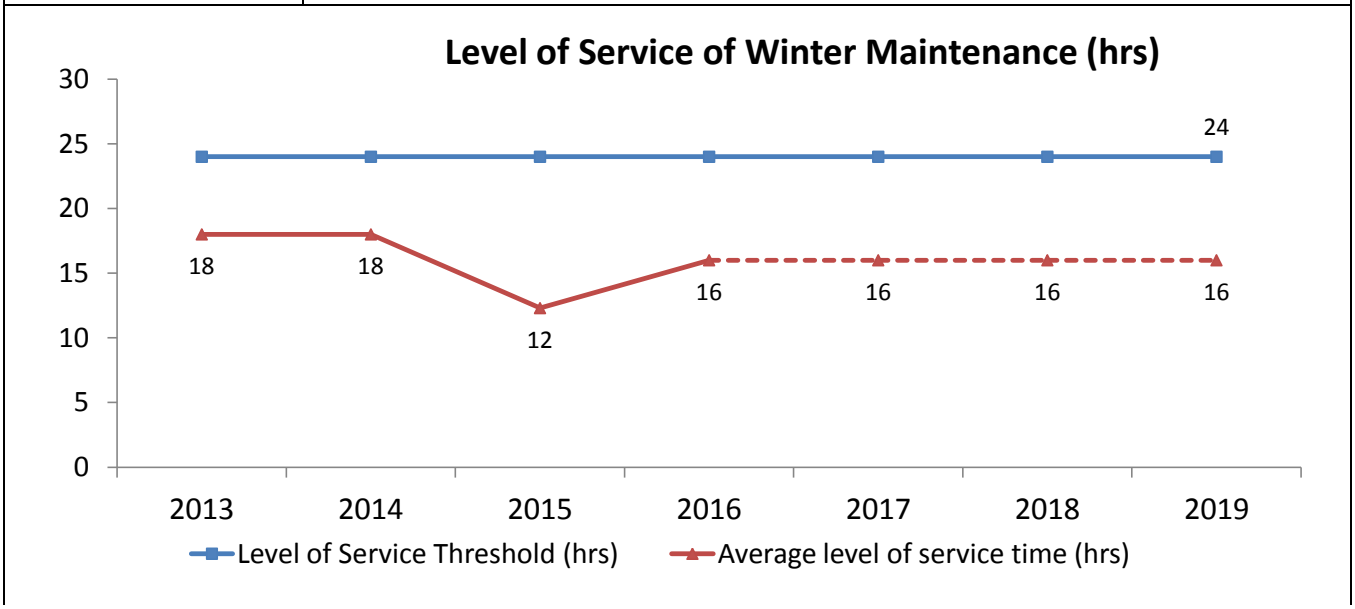


Performance Measurement	Cost of Winter Maintenance per km of Sidewalk
Story behind the data	The cost of winter control for sidewalks is influenced by the frequency, type and severity of winter weather. Due to these fluctuations, annual budgets are developed based on a 5 year rolling average. The maintenance of sidewalks is a local municipal responsibility under the Municipal Act. As such, the city also pays for winter maintenance of sidewalks on regional roads.



Is anyone better off?

Performance Measurement	Level of Service of Winter Maintenance (hrs)
Story behind the data	Winter maintenance services are provided based on legislated and council approved levels of service. Prior to the winter of 2014/2015, the ability to accurately document if the city was achieving these levels of service was paper based and generally qualitative.
Where do we want to go?	The implementation of an Automated Vehicle Location System on all city and contractor vehicles performing winter maintenance during the 2014/2015 winter provided the data to allow the city to more accurately measure performance. The goal will be meeting the levels of service 100% of the time.



2017 OPERATING BUDGET

SERVICE RESOURCE SUMMARY

WINTER MAINTENANCE

Service Description A public service to provide snow plowing and salt/sanding of public roads, sidewalks, walkways and parking areas

Service Owner Name Mark Adam

	2015	2016		2017 Proposed				
	Actual	Budget	Year End Projections	Base Budget	% Change vs. 2016 Budget	Business Cases	Total Budget	% Change vs. 2016 Budget
Human Resources	$ 1,437,563	$ 1,683,897	$ 1,389,642	$ 1,723,586	2.4%	$ 9,676	$ 1,733,262	2.9%
Operating/Minor Capital Equip.	$ 1,597,588	$ 1,120,765	$ 985,413	$ 1,208,010	7.8%	$ -	$ 1,208,010	7.8%
Purchased Services	$ 2,155,083	$ 2,218,356	$ 2,173,767	$ 2,353,038	6.1%	$ -	$ 2,353,038	6.1%
Corp. Expenditures/Provisions	$ 2,070,410	$ -	$ -	$ -	n/a	$ -	$ -	n/a
Internal Charges & Settlements	$ 613,640	$ 669,584	$ 535,683	$ 708,697	5.8%	$ 3,696	$ 712,393	6.4%
TOTAL EXPENDITURES	**$ 7,874,283**	**$ 5,692,602**	**$ 5,084,505**	**$ 5,993,331**	**5.3%**	**$ 13,372**	**$ 6,006,703**	**5.5%**
Controllable Revenues	$ (1,022,890)	$ (1,005,534)	$ (907,132)	$ (1,046,183)	4.0%	$ (5)	$ (1,046,188)	4.0%
General Revenues & Recoveries	$ (2,070,410)	$ -	$ -	$ -	n/a	$ -	$ -	n/a
TOTAL REVENUES	**$ (3,093,300)**	**$ (1,005,534)**	**$ (907,132)**	**$ (1,046,183)**	**4.0%**	**$ (5)**	**$ (1,046,188)**	**4.0%**
NET OPERATING BUDGET	**$ 4,780,984**	**$ 4,687,068**	**$ 4,177,373**	**$ 4,947,148**	**5.5%**	**$ 13,367**	**$ 4,960,515**	**5.8%**