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Winter Operations 2014/2015

Strategic Direction Recommendations

August 4, 2015

Overview

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2. Operational Review
3. Service Standards
4. Challenges
5. Recommendations
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Lessons Learned

Enhancing service delivery under the current standards requires a program that includes:



- contingencies for extreme weather events and excessive snow accumulation on the ground
- strategic deployment of non-traditional snow resources, when required
- formalized priorities around snow removal in the Winter Operations Plan

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Operational Review

- an independent 3rd party review by Grant Thornton
- consultation with Councillors, Accessibility Advisory Committee, Fire, Police, Transit, HRSB, etc.
- strategic restructuring of resources including the proposal of new performance based streets tenders to achieve the following:
 - Project Management of tendered services (Superintendents, Quality Assurance, etc)
 - Increase number of trucks and other equipment
 - Increase trained operators
 - Reduce use of municipal salt & sand by contractors
 - Two new salt domes by contractors in proposed service area

Service Standards - Streets

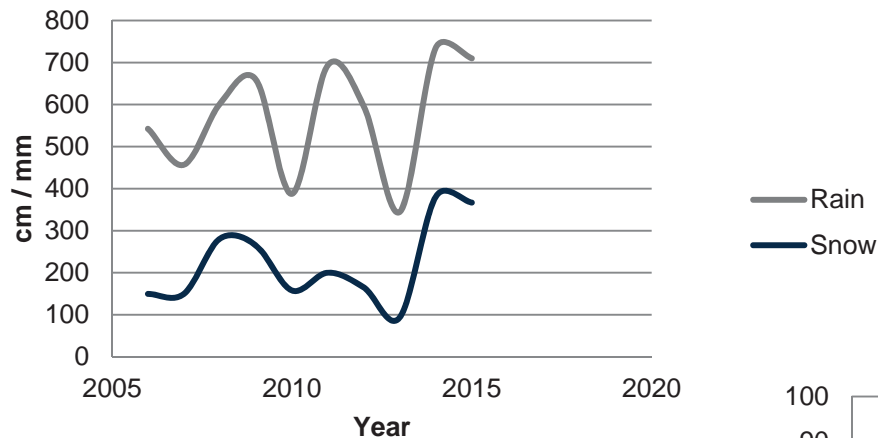
Road Classification/ Priority	Typical	Service Level After Operations	Start Times and Frequency	Time to Completion from End of Snowfall
Priority 1 Main Arterials	Robie Street, Sackville Street, Portland Street	Bare pavement driving lanes	After 2 cm of snow, 3 hour turnaround	12 hours to full driving lanes
Priority 1 Transit Routes Collector Roads	Parkland, Caledonia Rd, Metropolitan 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

Service Standards - Sidewalks

Sidewalk Priority Classification	Materials Used	Start Time	Duration Until Cleared
Priority 1 Main Arterials Capital District	Salt or Salt/Sand mixture	After 5 cm of snowfall	12 hours from end of snowfall
Priority 2 School Drop Off Zones and Transit Routes	Salt or Salt/Sand mixture	After 10 cm of snowfall	18 hours from end of snowfall
Priority 3 Residential Streets/ Walkways	Salt or Salt/Sand mixture	After completion of first 2 priorities	36 hours from end of snowfall
Intersections / bus stops	Salt or Salt/Sand mixture	After sidewalks are complete	48 hours from end of snowfall

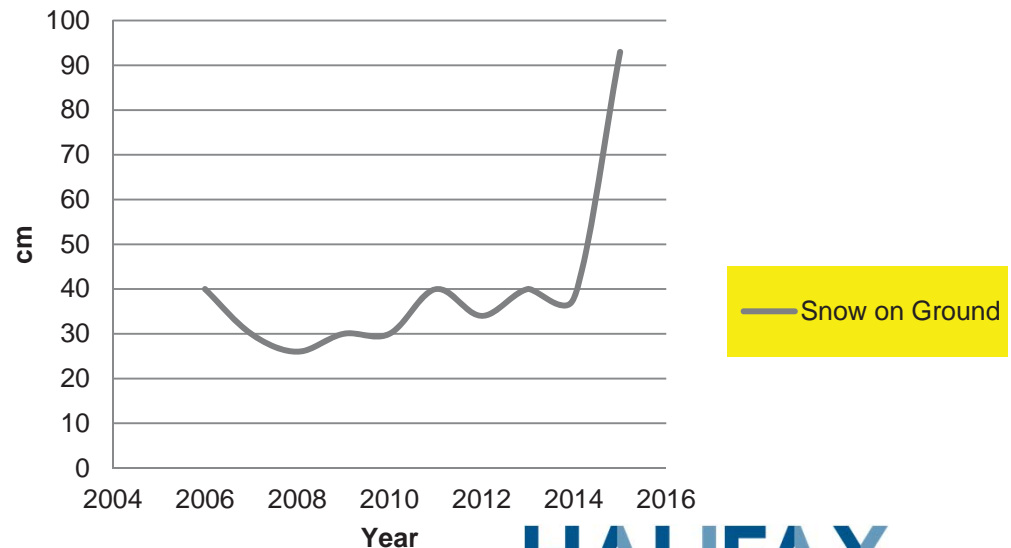
Acknowledgement of Challenges

Figure A: Precipitation by Year



HRM has had similar patterns of precipitation in the past (snow & rain) however in 2014/15 the snow levels on the ground were 230% greater than the 10 year average

Figure B: Snow on Ground by Year



- 10 year average peak “snow on ground” is 40 cm.
- 2014/15’s peak “snow on ground” was 93 cm.

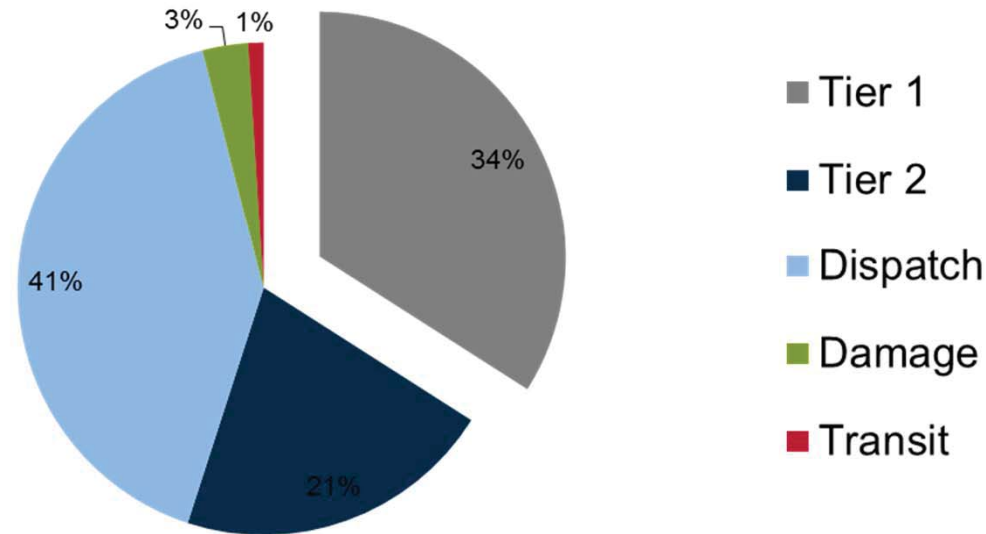
Recommendations

1. Endorse the following strategic directions to improve the delivery of the Winter Operations services as described in the discussion section of the report by:
 - a) Increasing 311 call centre capacity to respond to calls and e-mails during severe weather events;
 - b) Increasing capacity to monitor and measure performance and quality of contracted and in-house service delivery;
 - c) Taking necessary actions to improve compliance with snow-related parking prohibitions;
 - d) Improving operational readiness by securing additional equipment capability and strengthening winter operations planning; and,
 - e) Stabilizing winter operations expenditures.

2. Improve Sidewalk clearing by:
 - a) Working within existing approved contracts and resources, direct staff to return to Regional Council in December 2015 with options to improve sidewalk service outcomes, including service coordination, street intersections, bus stops, and accessibility; and
 - b) Extending the remaining nine sidewalk service contract routes through the 16/17 winter season and direct staff to return to Regional Council in the spring of 2017 with recommendations on the sidewalk program, commencing the 17/18 winter season.

Increase 311 Call Centre Capacity During Events

Figure 1: Snow and Ice Management Related Calls to 311 (2014/2015)



- **Modernize** Halifax's 311 Call Centre Technology (telephony/CMS system)
- **Implement** remote call fielding by 311 agents
- **Supplement** dedicated 311 call centre agents with cross trained staff
- Better communicating appropriate resident use of 311 Call Centre capacity
- Web redesign project (just starting) as that holds potential for communicating snow and ice issues

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Increase Capacity to Monitor and Measure Performance & Quality

- **Increase** the capacity to monitor service delivery;
- **Increase** the frequency of inspections;
- **Revise** contract language to better enable the municipality to hold contractors accountable; and,
- **Install** Automatic Vehicle Location (AVL) technology on in-house Winter Operations equipment.



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Increase Compliance with Parking Restrictions

- **Increase** the number of parking enforcement officers
- **Explore** feasibility to increase fines
- **Secure** additional access to tow trucks
- **Emphasize** the importance of resident cooperation



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Improve Operational Readiness

- Enhance operator training
- Secure additional equipment
- Increase meteorological forecasting
- Update Winter Control Plan



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Stabilize Expenditure

- **Minimize** use of hourly based contracts
- **Expand** the geographic scope of performance based contractors including 2 new salt domes
- **Consolidate** in-house resources
- **Move** accountability for, and control of, expenses (fuel, repairs, damage) to Winter Operations
- **Standardize** trucks & equipment

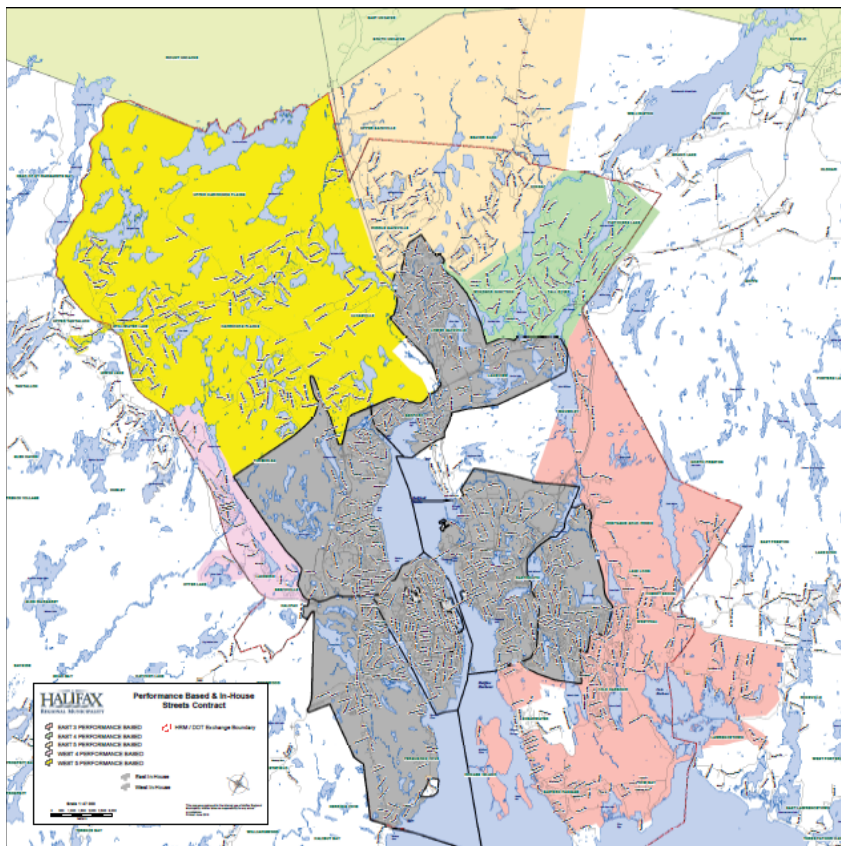
Additional Services Included in New Performance Based Contracts

- Project Management of tendered services (Superintendents, Quality Assurance, etc)
- Demonstrated inventory of specific equipment (graders, loaders, backhoes, loader mounted blowers)
- Capacity to bucket the snow and/or haul it from narrow cul-de-sacs
- Capacity to use brine
- Increased service from 22 to 28 weeks
- Higher concentration of bus stops, cul-de-sacs, catch basins and locations with limited snow storage
- Includes spring sweeping to remove traction sand from winter
- Grading of municipally-owned and serviced gravel roads
- 24/7 coverage on site and via a direct phone number or email

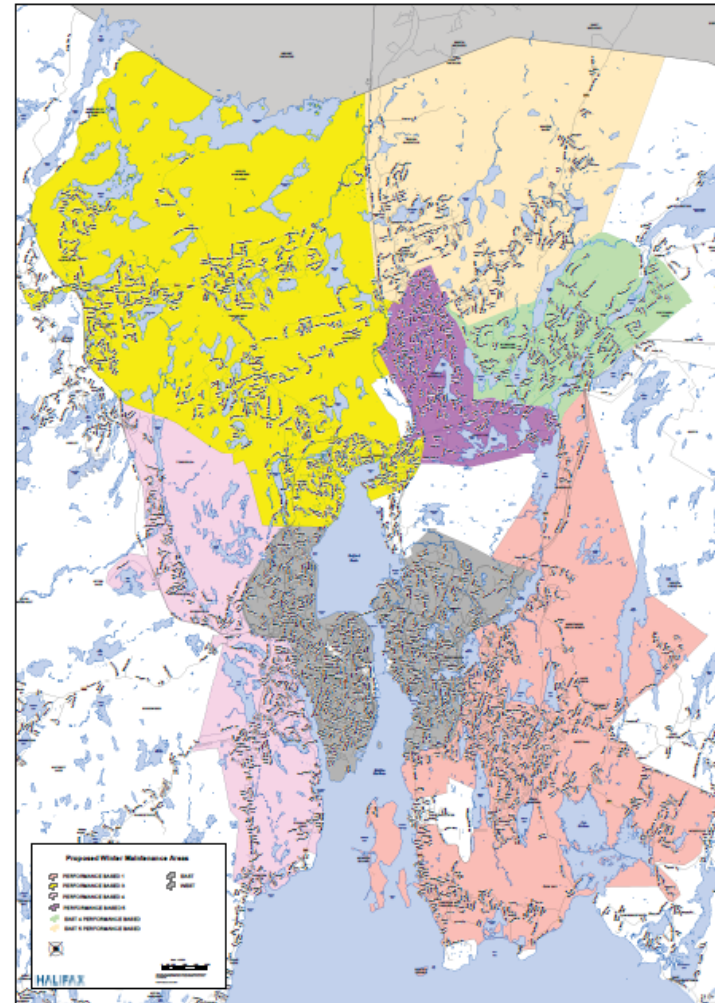
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Expansion of Performance Based Contracts

Existing Areas & Contracts



Proposed Areas & Contracts for 2015/16



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Impacts of New Performance Based Contracts

2014/15 season	KM's	Staff	Total pieces	Trucks	Loaders	Graders
In House	2,244	160	45	40	4	1
Hourly retainer			110	68	40	2
Performance Based	1,580			+/- 30	10	3

Proposed for 2015/16 season	KM's	Staff	Total pieces	Trucks	Loaders	Graders
In House	1,107	160	45	40	4	1
Hourly retainer *			30-40	+/- 20	+/- 22	4
Performance Based **	2,717			+/- 67	18	6

* Hourly equipment needs to be retendered for 2015/16

** Additional resources available as required in NEW performance based contracts over and above the resources listed above

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Improve Sidewalk Clearing

- make all contracted sidewalk routes have identical contract end dates;
- re-aligning sidewalk service delivery areas;
- tightening sidewalk contract language; and,
- considering changes to the sidewalk service level standards



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Considerations for sidewalks to Come Back December 2015

- Options to improve service outcomes, including service coordination between streets and sidewalks clearing activities
- Increased supervision of in house and contracted equipment
- Greater emphasis on accessibility needs

Communications

Corporate Communications delivered an enhanced, comprehensive marketing and communications program.

Winter Operations Communications Metrics		
Media Interaction	Winter 2013-2014	Winter 2014-2015
PSAs	59	130
Proactive Media Availabilities	5	10
Media Inquiries and Interviews	92	329
Tweets	N/A*	404
Newspaper Adverts	15	18
311 Calls	11,619	23,084
Toolkits/Updates (Mayor and Council)	8	28

* Tweets not tracked in 2013/2014.

The program included:

- an information tool kit prior to the start of the winter season and 28 updates throughout the winter
- proactive communications regarding overnight parking ban restrictions, storm preparation and clean-up as well as impact on municipal services
- distribution of 140 PSAs to media; also posted on halifax.ca and twitter

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Winter Operations Budget (2008-2015)

	2014/15	2013/14	2012/13	2011/12	2010/11	2009/10	2008/09
Budget	22,483,100	21,995,000	19,123,000	12,419,000	12,247,000	12,445,000	13,621,000
Actual	36,389,484	25,756,642	21,636,795	18,365,000	18,963,000	18,188,000	21,782,000
Variance	-13,906,384	-3,761,642	-2,513,795	-5,946,000	-6,716,000	-5,743,000	-8,161,000

NOTE: The 2014/2015 budget figure reflects Winter Operations salaries and benefits at a value of \$4.8 M. Budget and actual expenditures in 2012/20103 and 2013/2014 differ from prior reported figures due to inclusion of fleet costs - \$1,550,642 in 2013/2014 and \$1,539,795 in 2012/2013.

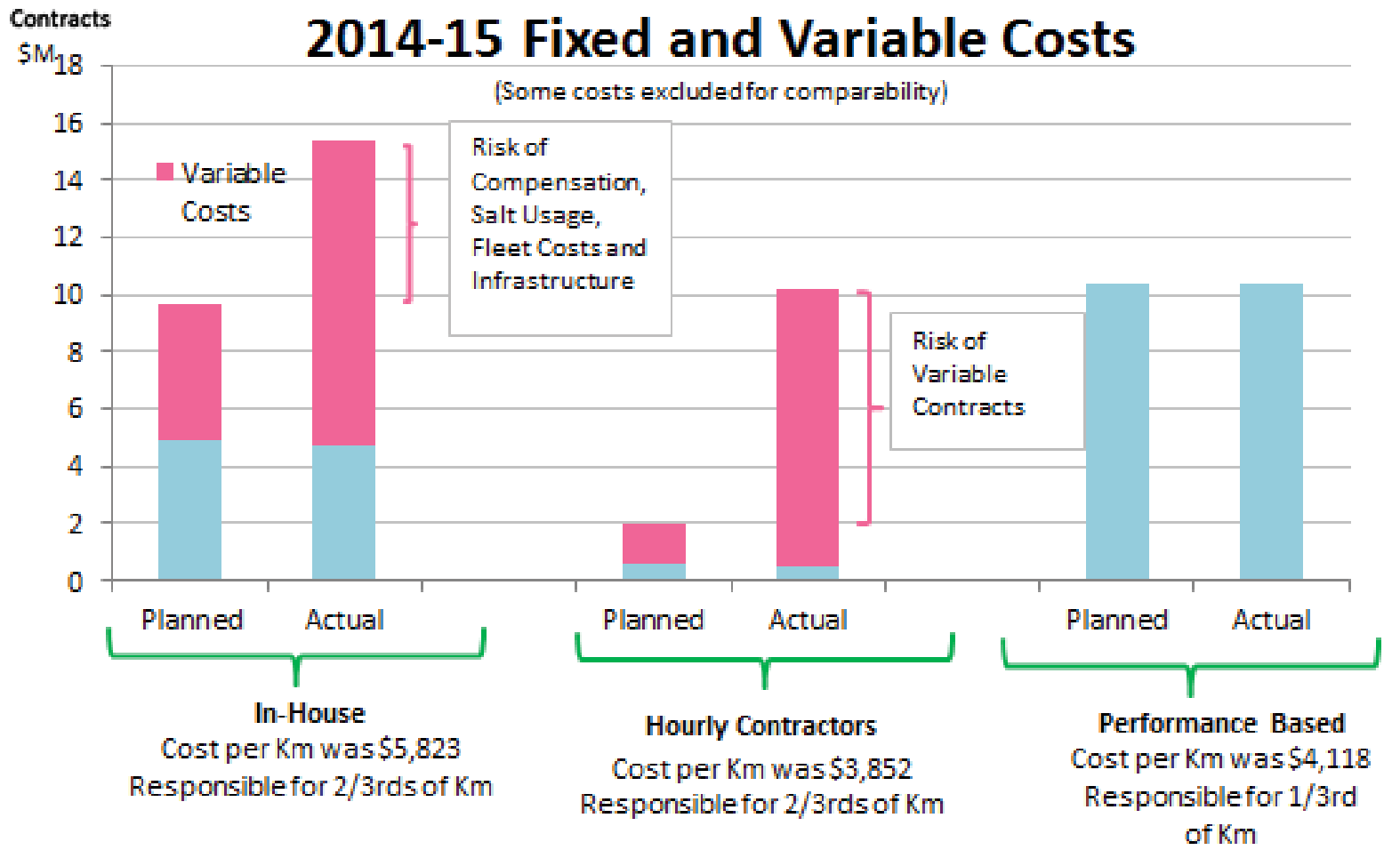
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2014/15 Actual Costs

Winter Operations Budget for 2014-2015 Season				
Item	Planned Expenditure	Actual Expenditure	Variance (Dollars)	Variance (Percent)
Fixed Costs				
Compensation (Salary)	\$4,909,100	\$4,659,500	-\$249,600	-5%
Performance Based Sidewalk Contracts	\$4,110,900	\$3,910,259	-\$200,641	-5%
Performance Based Street Contracts	\$6,247,900	\$6,507,006	\$259,106	4%
Seniors Assistance Program	\$400,000	\$400,000	\$0	0%
Hourly Based Contracts (Retainers)	\$595,000	\$478,506	-\$116,494	-20%
Total Fixed Costs	\$16,262,900	\$15,955,271	-\$307,629	-2%
Variable Costs				
Compensation (Overtime)	\$659,200	\$3,004,506	\$2,345,306	356%
Hourly Based Street Contracts (Fees)	\$1,427,400	\$9,703,201	\$8,275,801	580%
Repairs to Infrastructure	\$0	\$164,527	\$164,527	N/A
Salt and Sand	\$1,749,800	\$4,120,642	\$2,370,842	135%
In-House Traffic Control	\$0	\$183,499	\$183,499	N/A
Miscellaneous	\$383,800	\$427,727	\$88,927	23%
Fleet (Repairs and Fuel)	\$2,000,000	\$2,785,111	\$785,111	39%
Total Variable Costs	\$6,220,200	\$20,434,213	\$14,214,013	229%
Total All Costs	\$22,483,100	\$36,389,484	\$13,906,384	62%

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Budget Implications



Snow/Ice Removal Costs

Cost Per Kilometre Calculations – Streets (Contractor vs. In-House Comparison)

Category	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
In-House (without P2)	\$4,619	\$3,689	\$3,785	\$3,331	\$4,039	\$5,783	\$9,655
Performance Based	N/A	N/A	N/A	\$4,030	\$4,109	\$3,871	\$4,118

Table 5: Cost Per Kilometre Calculations – Sidewalks (Contractor vs. In-House Comparison)

Category	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
In-House (without P2)	\$13,676	\$10,475	\$7,960	\$9,478	\$8,029	\$10,573	\$17,249
Performance Based	\$5,503	\$5,436	\$5,555	\$5,606	\$5,727	\$4,550	\$4,655

Removal of 12-14 inch thick ice required the use of graders (equipped with ice blades) paired with hauling crews to truck out ice chunks. Ice removal took 8 to 12 hours for an average residential street. Each grader crew cost approximately \$7,280 per 12hr shift.

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Recommendation Timelines

	Estimated Cost	2015/16	2016/17	2017/18
Increase 311 Call Centre Capacity during events				
Implement 311 Call Centre Technology	RFP being prepared		√	
Implement remote call fielding by 311 agents	Included with new technology		√	
Supplement dedicated 311 call centre agents with cross trained staff	Included with new technology		√	
Increase communication regarding 311 Call Centre capacity		√		
Web redesign project - tool for increased communication/on line services	Capital Budget		√	
Increase capacity to monitor and measure performance & quality				
Increasing the capacity to monitor service delivery;	Internal resources	√		
Increasing the frequency of inspections;	Internal resources	√		
Revisit contract language for increased accountability	ONGOING			
Installing AVL technology on in-house equipment	24,000 (non legacy agreement)	√		
Increase Parking Compliance				
Increase the number of dedicated parking enforcement	TBD	√		
Explore feasibility to increase fines	None		√	
Secure additional access to tow trucks	TBD	√		
Emphasize the importance of resident compliance with parking prohibitions	Communication	√		
Improve Operational Readiness				
Enhance operator training	\$50,000 - \$100,000	√		
Secure additional equipment	Graders \$72,500	√		
Increase meteorological forecasting	\$5,000	√		
Update Winter Control Plan	In-house	√		
Stabilize Expenditure				
Minimize use of hourly based contracts	With approval of PB contracts	√		
Expand the geographic scope of performance based contractors	With approval of PB contracts	√		
Consolidate in-house resources	With approval of PB contracts	√		
Move accountability for, and control of, fleet expenses to Winter Operations			√	
Standardize trucks & equipment	Fleet working on BC to lease trucks		√	
Improve Sidewalk Clearing				
Improved outcomes within existing contracts and resources	TBD	√		
Make all contracted sidewalk routes have identical contract end dates;	Changes after 16/17 season			√
Re-aligning sidewalk service delivery areas;	Changes after 16/17 season			√
Tightening sidewalk contract language; and,				√

Service Improvements for 15/16

Increase 311 Call Centre effectiveness through communication regarding “when to call”

Increase capacity to monitor & measure performance & quality

- Increase the capacity to monitor service delivery (Internal Resources)
- Increase the frequency of inspections (Internal Resources)
- Installing AVL technology on in-house equipment (\$10,000-\$24,000)

Increase Parking Compliance

- Increase the number of dedicated parking enforcement (Cost TBD)
- Secure additional access to tow trucks (Cost TBD)
- Emphasize the importance of resident compliance with parking prohibitions

Improve Operational Readiness

- Enhance operator Training (\$50,000-\$100,000)
- Secure additional equipment (\$72,500 – graders)
- Increase meteorological forecasting (\$4,000- \$5,000)
- Update Winter Control Plan

Stabilize Expenditures (with approval of Performance Based Contracts) - \$4,000,000

- Minimize use of hourly based contracts
- Expand the geographic scope of performance based contractors
- Consolidate in-house resources

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Financial Implications

- The recommendations for 2015/2016 could be implemented at a cost between \$136,500 and \$201,500 (excluding the performance based streets contracts)
- The proposed performance based streets contracts would cost an additional \$4M net of the estimated savings below.

BUDGET SAVINGS - category	Current Budget	Estimated Savings
Salt	\$1,625,200	\$800,000
Sand	\$124,600	\$100,000
Retainers for hourly based contractors	\$614,400	\$300,000
Usage for hourly based contractors	\$1,400,000	\$700,000
Infrastructure repair	\$150,000	\$100,000
Total Estimated Savings		\$2,000,000

Next Steps

It is recommended that Regional Council:

1. Endorse the Winter Operations 2014/2015 – Strategic Direction Recommendations; and,
2. Approve the Award of Tenders – Winter Streets Snow and Ice Control 15-071, 15-072, 15-073 and 15-080

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Thank you

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