

CITY OF HAMILTON

CITY MANAGER'S OFFICE
Audit Services Division

TO: Chair and Members Audit, Finance and Administration Committee	WARD(S) AFFECTED: CITY WIDE
COMMITTEE DATE: January 17, 2013	
SUBJECT/REPORT NO: Audit Report 2012-06 - Snow Clearing / Salt & Sand Contracts (AUD13005) (City Wide)	
SUBMITTED BY: Ann Pekaruk Director, Audit Services City Manager's Office	PREPARED BY: Ann Pekaruk 905-546-2424 x4469
SIGNATURE:	

RECOMMENDATION

- (a) That the Management Action Plans as detailed in Appendix "A" of Report AUD13005 be approved; and
- (b) That the General Manager of Public Works be directed to instruct the appropriate staff to have the Management Action Plans (attached as Appendix "A" to Report AUD13005) implemented.

EXECUTIVE SUMMARY

The 2012 Internal Audit work plan approved by Council included an audit of Snow Clearing / Salt & Sand Contracts. How snow clearing, salt, sand and de-icing fluids contracts are awarded, administered and monitored was reviewed. The adequacy and effectiveness of controls and processes in the management of the City's contracted winter maintenance program were assessed. The City's own snow clearing program was also included in this audit. Inventory and usage control of salt, sand and de-icing fluids was examined.

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The results of the audit are presented in a formal Audit Report (2012-06) containing observations, seven recommendations and management responses. Audit Report 2012-06 is attached as Appendix "A" to Report AUD13005.

Alternatives for Consideration – Not Applicable

FINANCIAL / STAFFING / LEGAL IMPLICATIONS (for Recommendation(s) only)

Financial: There will be a cost of installing Loadrite on all yard loaders to weigh and control the movement of salt and salt/sand inventory throughout the year and performing third party quality control spot checks to verify the accurate mixture of salt/sand.

Staffing: The implementation of some of the recommendations (#1 and #5) is addressed by management through the hiring a new position, Winter Project Manager. Additional staffing may be required to reconcile and follow up on inventory variances and compare the GPS records to the Daily Activity Sheets.

Legal: None.

HISTORICAL BACKGROUND (Chronology of events)

The audit was scheduled as part of the 2012 Internal Audit work plan approved by Council. The audit fieldwork was completed in August 2012. The results of this audit are attached as Appendix "A" of Report AUD13005.

The Audit, Finance and Administration Committee receives and approves final audit and review reports as part of its responsibilities for the oversight of governance and control.

POLICY IMPLICATIONS

- Harmonized Winter Control Level of Service Standards and Response Guideline (TOE01113), 2001
- Ontario Municipal Act (Revised 2010), Regulation 239/02
- Ontario Ministry of Transportation - Ontario Provincial Standard Specification (OPSS) 2502

RELEVANT CONSULTATION

Appendix “A” to Report AUD13005 includes action plans which reflect the responses of management responsible for the Roads and Maintenance Section in the Operations Division of the Public Works Department.

ANALYSIS / RATIONALE FOR RECOMMENDATION

(include Performance Measurement/Benchmarking Data, if applicable)

The Roads Winter Control Program is concerned with the removal of snow and ice from the City’s roads and sidewalks. Several aspects of such operations (total cost 2011 - \$18.5 million) were reviewed, including:

1. Purchase, storage and usage of salt, salt/sand and de-icing fluids (materials) for application to roads and sidewalks. The cost of these materials amounted to over \$3.5 million in 2011.
2. Snow removal contracts with third party vendors, amounting to \$7 million in 2011. The largest of these contracts (\$3.2 million) is with Integrated Maintenance and Operations Services Inc. (IMOS) which supplies standby and on-call equipment as well as operators needed to assist with application of materials and snow ploughing.
3. Employee and vehicle expenses, related to salaries and wages paid to the City’s own employees that work on winter control and City vehicles used for this activity. These costs amounted to over \$7.9 million in 2011.

A formal Audit Report (2012-06) containing observations, recommendations and resulting management action plans was issued. Seven recommendations were included in Audit Report 2012-06 (attached as Appendix “A” of Report AUD13005). The recommendations made are:

- Improve practices of inventory control by performing reconciliations throughout the year;
- Maintain a log of materials ordered to ensure deliveries are received per the contract terms;
- Verify the weight of the inventory that is delivered;
- Confirm the materials ordered meet the quality standard provisions in the contract;
- Ensure IMOS is only paid for “Operational Time” as per the terms of the contract;
- Compare the City’s vehicles GPS ploughing and materials spread information to the Daily Activity Sheets; and
- Document the time calls are placed to contractors and their arrival in the yard to ensure compliance with the terms of the contract.

ALTERNATIVES FOR CONSIDERATION

(include Financial, Staffing, Legal and Policy Implications and pros and cons for each alternative)

Not applicable.

CORPORATE STRATEGIC PLAN (Linkage to Desired End Results)

Focus Areas: 1. Skilled, Innovative and Respectful Organization, 2. Financial Sustainability, 3. Intergovernmental Relationships, 4. Growing Our Economy, 5. Social Development, 6. Environmental Stewardship, 7. Healthy Community

Financial Sustainability

- ◆ Delivery of municipal services and management of capital assets/liabilities in a sustainable, innovative and cost effective manner.

APPENDICES / SCHEDULES

Appendix "A" to Report AUD13005

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**CITY OF HAMILTON
INTERNAL AUDIT REPORT 2012-06
SNOW CLEARING / SALT & SAND CONTRACTS**

#	OBSERVATIONS OF EXISTING SYSTEM	RECOMMENDATION FOR STRENGTHENING SYSTEM	MANAGEMENT ACTION PLAN
1.	<p><u>Inventory Control – Salt and Salt/Sand Mix</u> The City uses a variety of materials such as salt and a salt/sand mix for winter snow and ice control. During the past winter season, the City purchased more than \$2.6 million in salt and \$270,000 of salt/sand mix.</p> <p>End of the year inventory counts of salt and salt/sand were performed at the 14 yards across the City. At nine of the 14 yards, there were salt variances between the inventory count and the amount reported in the Hansen inventory system greater than 100 tonnes. In four of the eight yards, there were salt/sand mix variances of over 100 tonnes.</p> <p>As a result, salt inventory was understated in Hansen by \$16,510 and the salt/sand mix was understated by approximately \$87,150.</p>	<p>That management improve practices of inventory control. By reconciling inventory in the yards to that recorded in the Hansen system more often throughout the year, overages and shortages may be easier to investigate and thus, take corrective action, if applicable.</p>	<p>Agreed. Loadrite will be installed on all the yard loaders. There will be a complete removal and reload of all stock from storage structures using the Loadrite system before and after the winter season.</p> <p>If a full time Winter Project Manager position is approved, Loadrite tickets will be reconciled each month and compared to the monthly estimates of inventory. This will allow staff to address any discrepancies between the actual inventory and Hansen.</p>

#	OBSERVATIONS OF EXISTING SYSTEM	RECOMMENDATION FOR STRENGTHENING SYSTEM	MANAGEMENT ACTION PLAN
2.	<p><u>Inventory Replenishment</u></p> <p>Salt and salt/sand mix are ordered by the Operations' Supervisors as their inventory is depleted. The contracts specify that the City is to receive the materials ordered the next day, weather permitting. The Supervisors in the East and West District yards do not maintain a log documenting when the order was placed. The lack of documentation makes it difficult for management to evaluate the vendor's performance with respect to deliveries as per the contract.</p> <p>The City does not confirm the inventory delivered from the vendor when it agrees to the quantity listed on the invoices. Inventory is not weighed upon delivery and City management does not visit the vendor periodically to inspect the process.</p> <p>The salt/sand mix contract has a provision that the materials delivered will meet specified quality requirements. The salt/sand mixture is required to be at a ratio of one part salt and three parts sand (1:3 ratio). Management does not confirm that the product received meets this standard. There is a risk that the City could be paying for a more expensive material than actually received. If a sub-standard mixture of salt/sand was applied to the roads, it may affect the safety conditions.</p>	<p>That Supervisors maintain a log with the material ordered and the date of the order. This information should be compared to the actual delivery date in order to evaluate the vendor's performance per the contract terms.</p> <p>That management weigh trucks on a sample basis throughout the year on the City's weigh scales at the transfer stations to determine the reasonableness of the quantities billed.</p> <p>That management confirm the materials purchased meet the quality standard provisions specified in the contract.</p>	<p>Agreed. The East and West Districts will implement a similar recording practice that is currently being used in the North.</p> <p>Agreed. There will be spot checks of inventory being delivered by sending the delivery trucks to local transfer stations for weight verifications.</p> <p>Agreed. Quality control spot checks will be performed by external companies during various times throughout the season.</p>

#	OBSERVATIONS OF EXISTING SYSTEM	RECOMMENDATION FOR STRENGTHENING SYSTEM	MANAGEMENT ACTION PLAN
3.	<p><u>Reconciling IMOS Timesheets</u></p> <p>The City has a contract with Integrated Maintenance & Operations Inc. (IMOS) to provide winter road maintenance on some of the City roads. IMOS is responsible for monitoring and keeping the roads clear of ice and snow. IMOS submits invoices to the City for work performed and City staff verify the accuracy of the invoices by comparing the hours charged to the information provided from the Global Positioning System (GPS) units installed on IMOS vehicles. Discrepancies in time between the Operator timesheets and the output from the GPS units are required per the contract to be returned to IMOS for verification.</p> <p>During audit testing, several instances were noted where time claimed by IMOS exceeded what was recorded in the GPS records. City management attributed the differences to the time taken by IMOS to load trucks at the beginning of the shift and unload them on their return. However, no billing for idle time is to be made as per the term of the contract and as recently clarified under the new contract. The City could be paying more for the services provided by IMOS than provided for in the contract.</p>	<p>That management ensure IMOS is only being paid for "Operational Time" as per the terms of the new contract, which began on October 15, 2012.</p>	<p>Agreed. The recommendation has been addressed through the new contract and the full use of the GPS system.</p>

#	OBSERVATIONS OF EXISTING SYSTEM	RECOMMENDATION FOR STRENGTHENING SYSTEM	MANAGEMENT ACTION PLAN
4.	<p><u>GPS on City Vehicles</u> The City's vehicles used in the clearing of winter snow and ice are equipped with GPS units. GPS data is used to verify that all streets have been cleared and/or salted. The GPS can also be used to verify that the work reported on the Daily Activity Sheets by the Supervisors is accurate.</p> <p>Currently, there is no reconciliation between the information provided by the GPS units and the work reported by the Supervisors in the Daily Activity Sheets which is recorded in the Hansen system.</p> <p>Accurate GPS records reconciled to the Daily Activity Sheets will improve the City's ability to limit its liability for accidents on City roads during winter conditions.</p>	<p>That management and staff compare the ploughing and materials spread information available from GPS reports to the Daily Activity Sheets and Hansen data. Differences should be investigated and documented.</p>	<p>Agreed. Random spot checks will be performed throughout the year. Due to existing staff limitations, it is not feasible to compare every GPS report to the Daily Activity Sheets and Hansen data.</p>
5.	<p><u>Snow Clearing Services</u> Vendors (on-call or standby equipment and operators) are required to be on the work site within one hour of being called into services to assist with snow clearing and removal. Supervisors are not documenting when calls are made to on-call vendors, when they arrive for work and late arrivals. Vendors that do not show up within an hour impact the City's ability to clear snow in a timely manner and comply with a term of the contract.</p>	<p>That Operations' Supervisors responsible for contacting the vendors for snow clearing and removal document the time they place the calls to the vendors and the arrival times in the yard. Follow up should be performed with vendors that do not arrive within an hour as per the terms of the contract.</p>	<p>Agreed. The Contract Winter Project Manager will monitor the performance parameters of the vendors for 2013. If a new full time position is approved, this task will be part of his ongoing duties.</p>