

**STAFF REPORT:      ENGINEERING AND PUBLIC WORKS DEPARTMENT**

**REPORT TO:**                    **Committee of the Whole**  
**MEETING DATE:**           **June 9, 2014**  
**REPORT NO.:**                **EPW.14.034**  
**SUBJECT:**                    **Winter Control Equipment Replacement**  
**PREPARED BY:**            **Jim McCannell, Manager of Roads and Drainage**

**A.      Recommendations**

THAT Council receive Staff Report EPW.14.034 entitled “Winter Control Equipment Replacement”;

AND THAT Council direct Staff to prepare the Draft 2015 Capital Budget to provide for the replacement of the 2005 International Snowplow and continue with the 6 month contracted Road and Drainage Operator.

**B.      Background**

During the 2014 Capital Budget preparation Council asked Staff to prepare a report to review the cost/benefits of maintaining the Town’s current complement of Staff and equipment versus negotiating with our current service provider for a 4<sup>th</sup> snowplow.

The Roads and Drainage Division has a 2005 International snowplow truck that is scheduled for replacement in 2015 as it is approaching its 10 year serviceable life. The truck is in fair condition and has been well maintained by Staff. Past experience has shown that a used snowplow will bring approximately \$40,000 at auction. The reason behind replacing snowplows after 10 years follows the research done by the County of Grey that shows after 10 years of service the repair and maintenance cost increase significantly. The sand, salt, and combined liquids are very corrosive and reduce the overall useful life of the truck. The salt affects not only the physical components of the truck but moreover also attacks the wiring and can lead to electrical and wiring problems. These types of problems can be intermittent and very difficult to find and repair, leaving the Town without adequate equipment to meet the Town’s defined level of service.

In order to provide for adequate Staffing during winter control periods, the Town currently has a Winter Control Operator under a 6 month contract during the period of November 1 to April 15 each year. There are provisions in the contract that allows for an extension to April 30 if conditions warrant. This contract can be allowed to expire without further costs to the Town at the end of each winter control period.

In addition to Town owned equipment and operators, the Town entered into a three year contract in 2012 for three hired snowplow trucks and drivers to undertake snowplowing, sanding and salting on various roads throughout the Town. The contract includes a provision for a 4<sup>th</sup> snowplow, together with a loader and operator for the loading and hauling of snow from the commercial core areas, and also includes a provision for a contract extension for an additional 3 years, terminating on April 15, 2018.

The following sections compare the costs to replace the current equipment and to continue to use seasonal contracted staff each winter against the cost to hire a 4<sup>th</sup> snowplow truck and driver each winter. The following calculations were made using the current best estimates and contracted unit costs.

### Alternatives

**1. Purchase a new Town owned and operated snowplow truck.** The full cost of the Town owned truck with a 6 month Winter Contracted Operator available for 44 hrs/ week is estimated at \$78,936 per year, consisting of \$62,534 for the winter snowplowing and \$16,402 for the summer costs of keeping the truck during the summer. (See Table #1 of Attachment #1). This would stay consistent with the Town's current number of employees and equipment as well as keeping the same level of service.

These costs are based on a contracted Operator (under a 6 month contract) being available to drive a Town truck for winter control duties but also available to perform other road maintenance duties during the winter that are not performed by the contractor, such as: pushing back snow banks, digging out signs, repairing trucks and equipment, cutting trees, repairing signs, guards rails, and mail boxes, placing cold patch, culvert replacements, vacation coverage, pager call outs, etc. There is a value to these activities that does not show up when directly compared to the cost of a hired snowplow and driver. Keeping a full time (6 month) contracted Operator provides 559 hours of other work to the Town beyond that for snow plowing only.

Option #1 provides the Town with the most control over operations by employing the Operator directly. The Town is able to ensure training levels, Health and Safety compliance, route consistency and to monitor overall worker competency.

The total annual cost of Option #1 is **\$78,936**.

**2. Hire a 4<sup>th</sup> snowplow truck while maintaining the same level of Service.**

The annual cost of the contracted snowplow truck (see Table #2 of Attachment #1) would be \$73,963. Without the use of the truck each summer the Town would need to hire a truck when required. The cost for additional trucking service during the summer is estimated at \$14,250. Further to these costs, there would be \$5,776 in administration related to these contracted services.

To keep the same or current level of service requires 559 hours of non-snowplowing work hours described under Option 1. The cost of these non-snowplowing activities is \$18,302 (559 hr x \$32.74/hr). Although it is not expected that contracted staff will be hired to provide the 559 hrs of labour, this work will have to be done by other Staff or deferred. The 559 hrs of labour is lost opportunity to accomplish value added work.

The total cost of Option #2 to provide a comparable level of service as Option 1 is **\$112,432**.

### Recommendation

Staff feel the replacement of the Town's snowplow truck along with the (6 month Contract) Town Operator provides overall better value to the residents and Town. The cost of Option #1 is less than hiring the 4<sup>th</sup> snowplow truck and therefore is the preferred option. There are additional advantages because the Town employee has the benefit of knowing the local road system better. The cost to repair damage resulting from unfamiliarity of routes by various drivers has not been included. Having a single Operator dedicated to the route provides consistency in how the route is plowed, where snow can be placed and minimizes road damage. The Town Operator tends to be more conscientious and aware of the residents' needs. The Town has experienced problems with different hired drivers being assigned to the same route. Being familiar with a route is very beneficial during a winter control event to avoiding damage to Town infrastructure.

The continued use of Town owned equipment and contracted Staff can provide an anticipated savings of \$30,000 (\$112,432 - \$78,936) per year resulting in \$300,000 of value over the service life of the snowplow truck.

Staff is recommending the purchase of a replacement snow plow truck and the continued use of Contracted Town Operators as presented in Option #1.

An alternative recommendation has been provided below should Option #2 be the preferred course.

AND THAT Council directs Staff to prepare the Draft 2015 Budget for Contracted Services to include the anticipated costs for a 4th Snowplow truck for the term of the current tender as defined in Tender 2012-10-T-EPW and increase the Roads and Drainage Operating Budget for equipment rental by the anticipated amount shown in Report EPW.14.034 entitled "Winter Control Equipment Replacement".

### **C. The Blue Mountains' Strategic Plan**

The consideration of the adequacy of the Roads and Drainage Division winter maintenance requirements furthers the Town's Strategic Plan Goal No. 2, "Addressing the Town Municipal Infrastructure Needs".

#### **D. Environmental Impacts**

Snow removal is an energy intensive activity. The Contractor will be asked to participate in the Town's anti-idling initiative and to take reasonable steps to reduce their energy consumption.

#### **E. Financial Impact**

The Roads and Drainage Capital Budget for replacement equipment will continue to show \$265,000 for the anticipated replacement of the 2005 International Snowplow Truck. (G/L 6-308-1000-64011)

Option #1 doesn't have any effect on the Operating Budget.

Option #2 will see an increase to the Operating Budget of \$33,678; please see chart below for details.

Winter Truck Costs	\$73,963
Summer Truck Rental Costs	\$14,250
Truck Amortization	(\$22,500)
Fuel Costs	(\$10,868)
Wages	(\$19,153)
Administration Costs	(\$2,196)
Total Increase	\$33,678

#### **F. In Consultation With**

Sam Dinsmore, Financial Analyst

#### **G. Attached**

Attachment #1: Table 1: Town Owned & Operated Snowplow Truck  
Table 2: Contracted 4<sup>th</sup> Snowplow Truck

Respectfully submitted,

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Table #1

Town of the Blue Mountains  
**Town Owned & Operated Snow Plow Truck**

	Rate	Quantity	Winter Cost	Summer Cost	Total Annual Costs
<b>Option 1 - Town Owned &amp; Operated Truck (Status Quo)</b>					
<b>Asset Costs</b>					
<i>(Assume \$265,000 - 40,000 purchase cost over 10 yrs )</i>					
Annual Depreciation Costs	\$ 22,500	1	\$ 11,250	\$ 11,250	\$ 22,500
<b>Total Asset Cost</b>	<b>\$ 22,500</b>	<b>1</b>	<b>\$ 11,250</b>	<b>\$ 11,250</b>	<b>\$ 22,500</b>
<b>Operating Costs: Fuel &amp; Salary Costs</b>					
<b>Fuel Costs:</b>					
<i>(Assume 11,498 km's per winter season, consuming a total of 8,360 litres of fuel)</i>					
Winter Fuel (Litres)	\$ 1.30	5016	\$ 6,521	\$ -	\$ 6,521
Summer Fuel (Litres)	\$ 1.30	3344	\$ -	\$ 4,347	\$ 4,347
<b>Total Fuel Costs</b>	<b>\$ 1.30</b>	<b>8360</b>	<b>\$ 6,521</b>	<b>\$ 4,347</b>	<b>\$ 10,868</b>
<b>Salary Costs:</b>					
<i>(Assume full time salary: 44 hours per week, over 26 weeks total of 1,144 hours no Summer hours)</i>					
Salary Truck Operator Hours					
Winter Truck Operator Hours: 65 Winter Event Days x 9 hours per day	\$ 32.74	585	\$ 19,153	\$ -	\$ 19,153
Summer Truck Operator Hours: 18 hours x 28.5 weeks	\$ 32.74	0	\$ -	\$ -	\$ -
<b>Total Truck Operator Salary Costs</b>		<b>585</b>	<b>\$ 19,153</b>	<b>\$ -</b>	<b>\$ 19,153</b>
Salary Road Maintenance Hours					
Winter Road Maintenance Hours	\$ 32.74	559	\$ 18,302	\$ -	\$ 18,302
Summer Road Maintenance Hours	\$ 32.74	0	\$ -	\$ -	\$ -
<b>Total Road Maintenance Costs</b>		<b>559</b>	<b>\$ 18,302</b>	<b>\$ -</b>	<b>\$ 18,302</b>
<b>Total Salary Costs</b>	<b>\$ 32.74</b>	<b>1144</b>	<b>\$ 37,455</b>	<b>\$ -</b>	<b>\$ 37,455</b>
<b>Total Operating Costs</b>			<b>\$ 43,975</b>	<b>\$ 4,347</b>	<b>\$ 48,323</b>
<b>Repair, Administration &amp; Insurance Costs</b>					
Insurance	\$ 1,609	1	\$ 805	\$ 805	\$ 1,609
Maintenance Costs: <i>(Average cost over 10 years)</i>	\$ 6,504	1	\$ 6,504	\$ -	\$ 6,504
<b>Total Repair, Administration &amp; Insurance Costs</b>			<b>\$ 7,309</b>	<b>\$ 805</b>	<b>\$ 8,113</b>
<b>Total Annual Town Owned &amp; Operated Costs</b>			<b>\$ 62,534</b>	<b>\$ 16,402</b>	<b>\$ 78,936</b>

Town of the Blue Mountains  
**Town Owned & Operated Snow Plow Truck**

Table #2

Arnott Contruction  
**Contracted 4th Snowplow Truck**

	Rate	Quantity	Winter Cost	Summer Cost	Total Annual Costs
<b>Option 2 - Contract out Plow and Operator and additional Winter hours</b>					
<b>Operating Costs: 2014 prices</b>					
<b>Contract Costs</b>					
Hourly Costs: (Assume 65 Winter Event Days x 9 hours per day= 585 hours)	\$ 103	585	\$ 60,208	\$ -	\$ 60,208
Fuel Surcharge: (Assume 65 Winter Event Days x 9 hours per day= 585 hours)	\$ 3	585	\$ 1,755	\$ -	\$ 1,755
Standby Costs per Day	\$ 100	120	\$ 12,000	\$ -	\$ 12,000
<b>Total Winter Truck Costs</b>			<b>\$ 73,963</b>	<b>\$ -</b>	<b>\$ 73,963</b>
<b>Salary Road Maintenance Hours</b>					
Winter Road Maintenance Hours	\$ 32.74	559	\$ 18,302	\$ -	\$ 18,302
Summer Road Maintenance Hours	\$ 32.74	0	\$ -	\$ -	\$ -
<b>Total Road Maintenance Costs</b>		559	<b>\$ 18,302</b>	<b>\$ -</b>	<b>\$ 18,302</b>
<b>Total Salary Costs</b>	<b>\$ 32.74</b>	<b>559</b>	<b>\$ 18,302</b>	<b>\$ -</b>	<b>\$ 18,302</b>
<b>Rental Costs</b>					
Summer Vehicle Rental Costs: \$95/hour x 150 hours (estimated hours)	\$ 95	150	\$ -	\$ 14,250	\$ 14,250
<b>Total Rental Costs</b>	<b>\$ 95</b>	<b>150</b>	<b>\$ -</b>	<b>\$ 14,250</b>	<b>\$ 14,250</b>
<b>Total Operating Costs</b>			<b>\$ 92,265</b>	<b>\$ 14,250</b>	<b>\$ 106,515</b>
<b>Administration &amp; Insurnace Costs</b>					
Administration & Inspection Costs (8% of Total Costs)			\$ 5,917	\$ -	\$ 5,917
<b>Total Repair, Administration &amp; Insurnace Costs</b>			<b>\$ 5,917</b>	<b>\$ -</b>	<b>\$ 5,917</b>
<b>Total Annual Contracted &amp; Road Maintenance Costs</b>			<b>\$ 98,182</b>	<b>\$ 14,250</b>	<b>\$ 112,432</b>