



## STAFF REPORT ACTION REQUIRED

### Toronto Fire Services – Fleet Replacement Reserve Funding Analysis

<b>Date:</b>	August 3, 2011
<b>To:</b>	Budget Committee
<b>From:</b>	Fire Chief and General Manager, Toronto Fire Services
<b>Wards:</b>	All
<b>Reference Number:</b>	p:\2011\ClusterB\FIR\bu1123.doc

#### SUMMARY

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This report addresses the recommendation approved with the 2011 Operating budget for Toronto Fire Services (TFS) that the Fire Chief report back to the Budget Committee prior to the 2012 budget process on the adequacy of fleet reserve contribution, the current status of the existing fleet and the projected necessary annual contribution level to provide sustainable emergency response.

TFS' heavy fire apparatus fleet currently has 179 vehicles, of which 40 vehicles or 22% will be at least 15 years old in 2012. The standard service life for fire apparatus recommended for Toronto Fire Services by the Fire Underwriters' Survey, the insurance authority for assessing fire services capabilities which directly affects commercial insurance rates within the City, is 12 years in front line service and 3 years in reserve, for a total of 15 years.

This report reconfirms the annual Fire Fleet Replacement reserve contribution target of \$7.2 million and the five year replacement plan to clear the backlog of 15 year old vehicles originally proposed in 2004. TFS has reviewed changes in technology, inflation and currency exchange rates which impact the adequacy of the fleet reserve contribution target as well an appropriate lifecycle replacement plan for the heavy fire apparatus fleet.

TFS also maintains a light vehicle fleet comprising 180 vehicles including cars for Fire Prevention staff, specialized vans for District Chiefs, and various support functions. These vehicles are currently replaced from the existing reserve contribution as funds allow.

## RECOMMENDATIONS

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The Fire Chief and General Manager of Toronto Fire Services recommends that this report be received for information.

### Financial Impact

Council approved incremental budget increases to the Fire Fleet Replacement Reserve provision in past budgets in order to accelerate the replacement program and eliminate the backlog of vehicles over 15 years of age. To achieve the needed turnover level and eliminate all 15 year old vehicles within a 5 year time frame, the vehicle replacement plan was to have an annual funding of \$7.2 million. However, as a short-term necessity to meet annual budget reduction targets, TFS has accepted reductions in the contributions.

**Chart 1: Annual Fire Fleet Replacement Reserve Contribution - \$millions**

2005	2006	2007	2008	2009	2010	2011	Proposed 2012
\$5.561	\$5.604	\$3.189	\$6.061	\$6.631	\$5.703	\$5.703	\$7.200

In 2007, and as part of Fire's contributions to meet City-wide extraordinary cost containment reductions, the contribution was reduced by \$2.4 million. The 2009 budget reached a maximum contribution level of \$6.631 million before being reduced by (\$0.928) million in 2010 to \$5.703 million. The Approved 2011 Operating Budget reserve contribution stands unchanged at \$5.703 million.

The 2012 Operating Budget submission for TFS includes a request to increase the Fire Fleet Replacement Reserve contribution by \$1.497 million to \$7.2 million. The increase is subject to review and has been identified as Minor Service Level Reduction which contributes to the expenditure reduction target for TFS. This would leave the recommended reserve contribution for fleet replacement at \$5.703 million for 2012.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

### DECISION HISTORY

Fire outlined the need for the \$7.2 million in an information report entitled "Heavy Fire Apparatus In the 2005 Capital Program." Report to Community Services Committee, January 11, 2005, Heavy Fire Apparatus in the 2005 Capital Program

<http://www.toronto.ca/legdocs/2004/minutes/committees/cms/cms041209.pdf>

Budget Committee consideration of 2011 Operating Budget, February 10, 2011

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2011.BU9.1>

## **ISSUE BACKGROUND**

As an immediate measure to meet the 2010 Operating budget reduction target, TFS reduced its Fleet Reserve contribution in the 2010 budget to \$5.703 million. This is less than the Council approved annual target figure of \$7.2 million. At the time of the reduction, TFS indicated that the reduced funding level would not be sustainable beyond 2012.

## **COMMENTS**

The age of the fleet is a concern not only as a factor of operational efficiency but it also impacts the commercial insurance sector as a risk factor used in the determination of insurance rates. The Fire Underwriters' Survey is the instrument used by the insurance industry to evaluate fire risk.

Public Fire Protection Classification or "town grade" is expressed on a scale of 1 to 10, where Class 1 represents the highest level of public fire protection and Class 10 represents the absence of any effective public fire protection. The grading is developed from a comprehensive review of all facets of a community's fire defences.

The 2002 survey for Toronto stated that vehicles that exceed the useful life cycle maximum of 15 years are not eligible to be recorded as fire apparatus in determining the classification. The survey recommended replacement of all front line apparatus after a maximum of 12 years in service and three years in reserves, for a total of 15 years.

Toronto's existing rating of Class 3 was re-confirmed in 2007. Periodic updates of the Survey determine if adjustments have been made in response to the Underwriter's assessment of fire protection for the City of Toronto.

An analysis using current vehicle costs at current exchange rates, indicate that the \$7.2 million remains a viable target figure for funding a five year vehicle turnover cycle. However, future pricing factors as the result of technology based changes or changes to regulatory standards, will need to be monitored.

For example, currently, TFS heavy apparatus purchases must conform to 2010 engine emission standards. This adds approximately \$10,000 to \$15,000 to the 2007 emission changes, which added \$7,000 to \$10,000 depending on engine size, to each truck purchased from that year forward.

Further, the National Fire Protection Association (NFPA) has mandated safety related changes for fire apparatus effective, January 2009 including vehicle data recorders (fire truck black boxes), vehicle stability systems, (electronic anti-roll), more ground and interior lighting, seat belt warning devices, and more reflective striping.

All of these improvements are in addition to recent safety upgrades such as secure latching for self contained breathing apparatus (SCBA), better in-cab handholds, step surface grip, side air bags, and more stringent safety testing procedures.

Another inflationary factor in the manufacturing cost is the commodity prices of the base metals used to build fire apparatus. Aluminum, as well as steel has doubled in price in the last three years. Any annual funding adjustments to reflect those costs will be better known closer to the time that Fire Services goes to tender for its vehicles.

Chart 2 provides a replacement schedule of the heavy fleet at various funding levels based on oldest vehicles being replaced first using the values of the current contribution level, the 2011 approved level of \$5.703 million and previously recommended Fire Fleet Replacement Reserve funding contributions:

<b>Chart 2: Replacement Rate Based on Annual Fleet Reserve Contribution</b>	<b>\$5.703 million</b>	<b>\$6.061 million</b>	<b>\$6.630 million</b>	<b>\$7.200 million</b>
15 Year old Vehicles to be replaced in:				
2012	10	10	11	13
2013	11	11	12	14
2014	11	13	14	16
2015	14	14	14	14
2016	10	13	13	11
Total Vehicles replaced within 5 year Replacement Target	56	61	64	68
Total Vehicles outside 5 year Replacement Target	12	7	4	0
Total Vehicles 15 Yrs of Age or Older by 2016	68	68	68	68
Cost to Replace 68 Vehicles 15 Yrs or Older by 2016	\$35.34	\$35.34	\$35.34	\$35.34
Funds Available from Reserve Contributions	\$28.11	\$30.21	\$32.37	\$35.40
Surplus/(Shortfall)	(\$6.72)	(\$4.92)	(\$2.08)	\$0.78

The chart indicates that the current fleet contribution of \$5.703 million will not reduce the backlog of over age vehicles completely within 5 years. Higher contribution rates will reduce the backlog further, but will not eliminate it within the originally proposed 5 year time frame until the contribution rate is at the target of \$7.2 million.

Under optimum arrangements, TFS would replace 68 heavy fire vehicles that are at, or will be at 15 years of age within the next five years. Fire apparatus of this age exceed the Fire Underwriters Survey guidelines that specify a maximum 15 year life cycle (12 years as a front line vehicle and 3 additional years in reserve). As a result of this analysis, TFS submitted a request that the Fire Fleet Replacement reserve contribution in the 2012 Operating budget be increased from the current \$5.703 million to the target contribution of \$7.2 million, subject to the approval process.

At the end of the five year catch-up cycle at the \$7.2 million funding level, the contribution level could be re-evaluated. Based on an orderly replacement cycle, there would be approximately 12 vehicles out of 179 turning 15 years of age annually and with

an average current value of approximately \$498,000, the reserve funding requirement could be reduced to \$6.0 million.

TFS also maintains a light vehicle fleet comprising 180 vehicles including cars for Fire Prevention staff, specialized vans for District Chiefs, and various support functions. These vehicles are currently replaced from the existing reserve contribution as funds allow. Based on a ten year lifecycle, the division would be expected to replace 18 units annually at an average value of \$23,000 and a total annual cost \$0.414 million. This amount should be included when determining the value of Fleet Reserve funding in a mature lifecycle replacement environment. Therefore, if \$7.2 million per year is contributed for 5 years beginning in 2012, A reasonable future funding level after 2016 for all of TFS' fleet would be \$6.4 million per year.

## **CONTACT**

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## **SIGNATURE**



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