



City of Richmond

Report to Committee

To: General Purposes Committee **Date:** October 7, 2024
From: Jim Wishlove **File:** 09-5140-01/2024-Vol
 Fire Chief 01
Re: **Fire Vehicle Replacement Reserve Purchases (2021 to 2024) Budget Amendment and Annual Funding Requirement for Equipment Replacement Reserve Fund - Fire Rescue Vehicles Reserve Fund**

Staff Recommendations

1. That a capital request for a one-time funding of \$5.0 million for Fire Vehicle Replacement Reserve Purchases be funded by Emergency Response Fuel Facility Provision (contribution from Vancouver Airport Fuel Facility Corporation), detailed in the staff report titled "Fire Vehicle Replacement Reserve Purchases (2021 to 2024) Budget Amendment and Annual Funding Requirement for Equipment Replacement Reserve Fund - Fire Rescue Vehicles Reserve Fund", dated October 7, 2024, from the Fire Chief, be submitted through the 2025 budget process; and
2. That an additional level request to increase the annual contribution for identified future purchase needs to the Vehicle and Equipment Reserve - Fire Rescue Vehicles by \$600,000 be submitted through the 2025 budget process.

Jim Wishlove
 Fire Chief
 (604-303-2715)

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Finance	<input checked="" type="checkbox"/>	
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO

Staff Report

Origin

This report supports Council's Strategic Plan 2022-2026 Focus Area #3 A Safe and Prepared Community:

Community safety and preparedness through effective planning, strategic partnerships and proactive programs.

This report supports Council's Strategic Plan 2022-2026 Focus Area #4 Responsible Financial Management and Governance:

Responsible financial management and efficient use of public resources to meet the needs of the community.

Findings of Fact

Equipment Replacement

Pursuant to Council Policy 3001, Budget Amendments, staff are requesting additional funding in the amount of \$5.0 million in order to fulfill the procurement of four previously approved fire trucks.

Operating a fire service that supports Council mandated services and response to routine, specialized, minor and major incidents and meets industry standards to deliver these services 24/7 requires a contingent of equipment including large emergency vehicles, support vehicles and other capital assets such as: Self-Contained Breathing Apparatus (SCBA) ladders, and hose.

Managing and maintaining this equipment to ensure it is operationally and financially viable requires continuous attention and evaluation. Replacement costs are balanced against repair costs, including the operational downtime when vehicles are unavailable for use while being repaired. When equipment is being repaired, without adequate back-up resources, there are potential safety risks to the community with respect to the ongoing provision of emergency responses.

The operational viability of emergency vehicles is guided by the North American standardized best practises for vehicle and equipment replacement cycles to mitigate failures and forecast maintenance issues.

North American standardized best practises identified a fifteen (15) year life cycle for frontline service emergency vehicles with an additional five (5) years of service in a secondary role, for a total lifespan of twenty (20) years. Through comprehensive inspections and appropriate service and maintenance Fire-Rescue has been able to extend vehicle life cycles out to twenty-two (22) years.

The recommended replacement life cycle for the City of Richmond fleet of support vehicles is ten (10) years. Richmond Fire-Rescue (RFR) follows these standards. An annual thorough inspection of the vehicles has the potential to extend these life cycles.

During the annual inspection process, RFR takes the following factors into consideration to inform the decision whether to replace equipment or continue to deploy:

- North American standardized best practices.
- Vehicle conditions, including mileage, and maintenance costs.
- Community need and service provision.
- Equipment efficiencies and sustainability.
- New technology and innovations.
- Community risks.
- Regular and ongoing response data reviews.

RFR's inventory of emergency vehicles consists of front line vehicles, used for initial, primary response and second line vehicles for back up purposes (i.e. when front line vehicles are being repaired or there is a large incident).

When there is new inventory added to the front line, the existing front line vehicles are reassigned to the second line provided they've met the annual inspection standards. The previous second line unit is then scheduled for decommissioning.

Large vehicles and other equipment such as SCBA and fire fighting hose which are funded from the Equipment Replacement Reserve Fund - Fire Rescue Vehicles (the Reserve) account also have a specific life cycle and require replacement on a regular basis. A reserve, as a means to fund equipment, allows for proactive planning and provides assurance that emergency response equipment remains in good operational readiness to meet the City's safety response mandate.

Richmond-Fire has a vehicle and equipment replacement schedule adhering to standards in order to maintain existing service levels. The North American best practices standards were used as a guideline to establish the replacement year for emergency vehicles. However, based on the current vehicle condition and usage, some of the life spans have extended to more efficiently sustain the reserve. This schedule reflects the replacement requirements of the existing vehicle and equipment inventory

Analysis

In 1965, a reserve fund ("Equipment Depreciation Fund Bylaw") was established to set aside funding for the procurement of replacement frontline, emergency response equipment. In 2002, the reserve was restructured and became the "Equipment Replacement Reserve Fund - Fire Rescue Vehicles" (the Reserve) and was established for the replacement of Fire Rescue vehicles and equipment. An annual contribution to the Reserve, which sets aside funds for the replacement, was included in the operating budget. In 2011, RFR brought forward a report to Council regarding the status of the Reserve. Since then, market and industry conditions have evolved to the point that staff believe it is prudent to inform Council of the current status and

capacity of the reserve. The funding of the Reserve is based on the planned replacement of front line fire apparatus, support vehicles and fire equipment utilizing the industry standards for each type of vehicle and equipment. The Reserve has been sustainable until the recent dramatic cost escalations of both Fire trucks and support vehicles.

The unallocated balance of the Reserve as of December 31, 2023 is \$1,732,822. The 2024 annual budgeted contribution to the Reserve is \$1,363,000.

Current Market Analysis

Currently, there are few manufacturers in North America with limited capacity to produce the volume of heavy vehicles required to meet global market demand. The market has experienced and continues to experience significant and rapid cost escalation without any foreseeable mitigating factors to curb this market trend. For example, the City paid \$1.1 million for the last Fire Engine received in 2021; which took 1.5 years from the time of order to delivery. As a comparison, the Cities of Burnaby and Surrey recently entered into manufacturing contracts with vendors and have publicly identified costs at \$2.2 million and \$2.4 million respectively for replacement (heavy) fire apparatus excluding equipment. The trend is showing that replacement costs are currently doubled for a manufactured pumper or frontline heavy truck. The wait time between ordering and delivery has also increased from approximately 20 months to an estimated 36 months. The cost escalation and increasing wait time are key replacement planning considerations for all Fire Departments in the region. This analysis has an inflation rate based on the current CPI built-in for front line Fire Vehicle replacement.

Council has previously approved \$6.0 million for the Fire Vehicle Replacement Reserve Purchases projects from 2021 to 2024. Beginning in the 2021 fiscal year, a number of barriers impacted RFR’s ability to procure replacement Fire Apparatus including: the discontinuation by the vendor of the current RFR standard Fire Engine model, a lack of on-time capacity for the contracted vendor to produce Fire Apparatus due to post-Covid staffing, and logistics and supply chain impacts during vehicle construction. The combined project scope is to replace four 2004 Fire Apparatus - Engines and a high-flow industrial pumper. The purchasing process for these vehicles is in the planning phase until funding is secured. The current total replacement cost is estimated to be \$11.0 Million. Due to the recent price escalation, there is a funding shortfall of \$5.0 million. To move forward with the replacement, one-time funding of \$5.0 million is required as illustrated below:

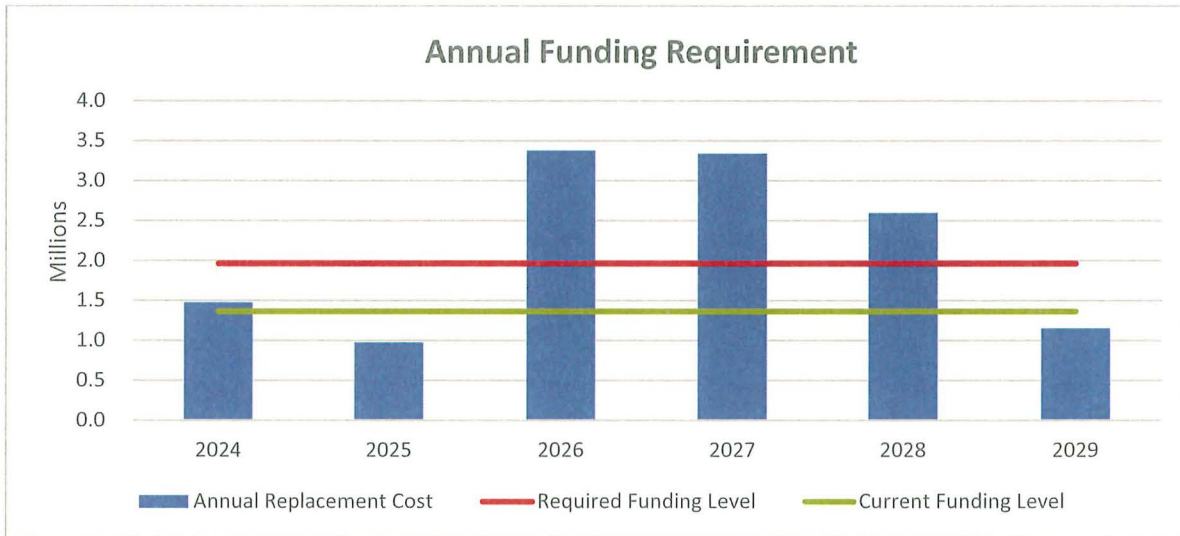
Project Name	Plan Year	Vehicle	Approved Budget	Estimated Cost	Additional Funding Required
Fire Vehicle Replacement Reserve Purchases	2021	2004 -Fire Engine	\$ 1,198,000	2,557,750	\$ 1,359,750
Fire Vehicle Replacement Reserve Purchases	2022*	2004 -Fire Engine	2,021,000	3,357,750	\$ 1,336,750
Fire Vehicle Replacement Reserve Purchases	2023	2004 -Fire Engine	1,336,000	2,557,750	\$ 1,221,750
Fire Vehicle Replacement Reserve Purchases	2024	2004 -Fire Engine	1,476,000	2,557,750	\$ 1,081,750
Total			\$ 6,031,000	\$ 11,031,000	\$ 5,000,000

*2022 included industrial pumper estimated at \$800,000
 Amounts are all rounded to \$'000s

Annual Funding Requirement

Since the onset of the COVID pandemic, goods and services, including fire apparatus and equipment, have seen significant cost escalations beyond the control of the City. Most fire truck

manufacturers were closed due to COVID for a period of time and once reopened had experienced issues with staffing and getting back up to previous production capacity. Based on the current market trends and projection, staff project a substantial shortfall between the current annual contribution to the Reserve and the annual funding requirement. A \$600,000 increase in the annual contribution to the Reserve will be required.



Potential Funding Options for Consideration:

Option 1 - Status quo (Not Recommended)

Under this option, staff will modify the current project scope to acquire 2 Fire Engines instead of 4 Fire Engines so that the capital projects will stay within budget. As per Budget Amendment Policy 3001, Council approval is required for the modification of the existing capital projects scope. Based on the current annual contribution level to the Reserve, after the planned truck purchase for 2026 there will not be sufficient funding to acquire future vehicle and equipment replacements. Any future replacements will have to be deferred, or funds borrowed from other funding sources. If RFR is unable to replace end of life vehicles, service levels will be impacted.

Option 2 – A one-time capital funding of \$5.0 million (Not Recommended)

As per Budget Amendment Policy 3001, Council’s approval is required for the additional \$5.0 million capital funding to replace the 4 Fire Engines. Staff will submit a one-time capital funding request for the Fire Vehicle Replacement Reserve Purchases in the total amount of \$5.0 million funded from the Emergency Response Fuel Facility Provision (contribution from Vancouver Airport Fuel Facility Corporation), for Council’s consideration as part of the annual budget process. Based on the current annual contribution level to the Reserve, after the planned truck purchase for 2026 there will not be sufficient funding to acquire future vehicle and equipment replacements. Any future replacements will have to be deferred, or funds borrowed from other funding sources. If RFR is unable to replace end of life vehicles, service levels will be impacted.

The Emergency Fuel Facility Provision has been identified as a suitable funding source. These funds are not in a formal reserve account nor are they subject to any restrictions on use. Moreover, the contemplated use of this provision is consistent with Council's initial expressed interest in having these funds available for emergency response. The City received these funds under the Site-Specific Municipal Access Agreement entered into with the Vancouver Airport Fuel Facility Corporation (VAFFC) and in 2021 Council authorized the expenditure of \$800,000 from this provision for the purchase of a high flow industrial pumper that, among other things, is able to support the operations with a front line fire engine, to be used during a major disaster and as a high-volume foam pumper for major semi-tractor/trailer fires. It should also be noted that emergency response in relation to VAFFC's operations is the responsibility of VAFFC alone and that significant safeguards, conditions, insurance and indemnities are in-place for this purpose. As with the high industrial pumper, the purchase of fire engines are of benefit to the entire City for emergency response and is an appropriate use of this provision.

Option 3 – A one-time capital funding of \$5.0 million and an increase in the annual contribution to the Reserve by \$600,000 (Recommended)

As per Budget Amendment Policy 3001, Council's approval is required for the additional \$5.0 million capital funding to replace the 4 Fire Engines. Staff will submit a one-time capital funding request for the Fire Vehicle Replacement Reserve Purchases in the total amount of \$5.0 million funded from the Emergency Response Fuel Facility Provision (contribution from Vancouver Airport Fuel Facility Corporation), and an additional level request to increase the annual contribution to the Reserve by \$600,000 through the 2025 budget process for Council's consideration, based on the current known market prices and conditions. This will ensure solvency for identified future purchase needs. This Reserve will be monitored regularly, and if the adjustments to market rates and conditions change, staff will keep Council informed of any substantial changes of funding requirement. As described in Option 2 above, the use of the Emergency Response Fuel Provision for the \$5.0 million capital funding to replace the 4 Fire Engines is an appropriate use of this provision.

Financial Impact

Staff recommend Option 3, that a capital request for a one-time funding for Fire Vehicle Replacement Reserve Purchases in the total amount of \$5.0 million, funded from the Emergency Response Fuel Facility Provision (contribution from Vancouver Airport Fuel Facility Corporation), and an additional level request for \$600,000 increase in the annual contribution to the Reserve be submitted for Council's consideration as part of the 2025 budget process.

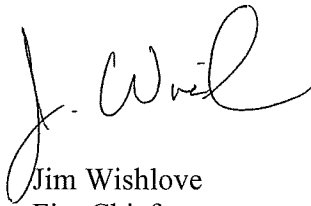
Conclusion

The City remains steadfast in its commitment to responsible financial management and recognize the supply chain environment has presented significant challenges with respect to cost escalation. This Reserve will be monitored regularly, and if the adjustments to market rates and conditions change, staff will keep Council informed of any substantial changes affecting the Reserve.

October 7, 2024

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Staff remain committed to informing and mitigating the future community safety fiscal decisions, ensuring long-term sustainability and a continued ability to deliver essential services to our residents.

A handwritten signature in black ink, appearing to read "J. Wishlove". The signature is fluid and cursive, with a large initial "J" and a long, sweeping underline.

Jim Wishlove
Fire Chief
(604-303-2715)

JW:js