



## COUNCIL REPORT

Report Date: March 14, 2024  
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Meeting Date: April 9, 2024  
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TO: Vancouver City Council  
FROM: Fire Chief/General Manager of Vancouver Fire Rescue Services  
SUBJECT: Purchase of PFAS-free Bunker Gear

### Recommendations

THAT Council approve a one-time Vancouver Fire Rescue Services 2024 budget increase of \$2,825,000 for the purchase of PFAS-free bunker gear to be funded one-time through the general stabilization reserve.

### Purpose and Executive Summary

This report proposes Operating Budget adjustments for Vancouver Fire Rescue Services to procure PFAS-free bunker gear, aligning with evolving safety standards and addressing concerns over Per-and-Polyfluoroalkyl Substances (PFAS) exposure.

PFAS compounds, commonly found in traditional bunker gear, pose significant hazards to firefighters and communities, including potential carcinogenic effects and environmental contamination.

Prioritizing the acquisition of PFAS-free gear reflects a commitment to firefighter safety and occupational health standards. By embracing these changes and transitioning to safer alternatives, fire departments can mitigate the risks of PFAS exposure, safeguarding both firefighters and their communities.

The procurement of PFAS-free bunker gear entails a total purchase cost of \$3.7 million, accounting for all suppression staff. Existing budgets will fund the purchase of units for 25% of staff. The one-time funding request of \$2.8 million is required to procure PFAS-free bunker gear for all remaining personnel in 2024.

### Council Authority/Previous Decisions

There is no applicable Council authority or previous decisions relevant to this report.

## **City Manager's Comments**

The City Manager concurs with the foregoing recommendations.

## **Context and Background**

Occupational cancer is the leading cause of death among firefighters, with the WHO classifying their exposure as a top-level carcinogen. In 2023, 72% of firefighter deaths in the International Association of Fire Fighters were due to occupational cancer, and in Canada, this figure was nearly 94%. For the Vancouver Fire Rescue Services, 20% of occupational claims are for presumptive cancers, with 34 members having died from work-related cancer since 2017.

A key contributor to the increased incidence of cancer for firefighters is exposure to PFAS, commonly known as "forever chemicals". Structural firefighting bunker gear is composed of three layers: Outer Shell, Thermal Liner, and a Moisture Barrier. Since early 2021, the outer shells and thermal liners of all our VFRS bunker gear do not contain PFAS products. PFAS is widely used in the moisture barrier of North American firefighter gear for water and oil repellency, meeting the NFPA's 1971 Standards (Current Edition-2018). Given skin contact with PFAS in the moisture barrier component of their gear, firefighters are subject to exposure through daily use and in periods of extreme heat conditions combined with high physical exertion. Studies have linked the absorption of PFAS chemicals from bunker gear to cancer risk and other adverse health effects related to behavioral development, metabolism, and the circulatory, digestive, endocrine, immune, neurological, and reproductive systems. The impact to reproductive systems is of particular concern given our trend to diversify our workforce.

## **Discussion**

In late 2023, a Non-Fluorinated (PFAS-free) Moisture Barrier passed rigorous NPFA testing and was certified by NFPA for use in structural firefighting.

Through the City of Vancouver's current vendor for bunker gear, VFRS has the opportunity to acquire this new PFAS-free moisture barrier. The procurement of the PFAS-free bunker gear would be a strong commitment to ensure VFRS is taking steps to mitigate the hazards faced by firefighters and other City staff on the job.

With this purchase, we understand the vendor will commit to prioritizing the production and delivery of bunker gear for the City with an estimated turnaround time of 7-8 months. We also understand this order will make VFRS the first fire department in North America to provide staff with PFAS-free bunker gear.

## **Financial Implications**

VFRS was able to place a partial order of the new bunker gear that will supply approximately 25% of our workforce within the existing operating budget. The additional one-time funding request of \$2,825,000 is required to procure PFAS-free bunker gear for all remaining personnel in 2024. This funding will cover the purchase of PFAS-free bunker gear, including coats and pants, ensuring that all personnel are equipped with the necessary protective equipment. The one-time funding from the general revenue stabilization reserve will need to be replenished. In addition, there will be an ongoing operating budget need of \$415,000 annually that is required for replenishment of future gear and will be reviewed during the annual budget process. This

annual budget will ensure that a sufficient reserve can be maintained to replace aging or damaged gear in a timely manner, thereby sustaining the integrity and effectiveness of firefighting operations.

**Legal Implications**

There are no legal implications associated with this report's recommendations.

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