



Report Date: January 15, 2020

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## **REQUEST FOR DECISION REPORT**

**TO: Finance Committee**

**FROM: Ryan Thoms, Manager of Emergency Services**

**IN COLLABORATION WITH: Mike Wall, Manager of Asset Management and Strategic Initiatives, Linda Greenan, Manager of Financial Services**

**SUBJECT: Fire Services Capital Asset Management**

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### **ACTION/RECOMMENDATION**

**THAT** the Committee recommend the Board endorse the concept and principles of developing capital asset management plans for the qathet Regional District local fire services by following facility condition assessments, BC Building Code, Worksafe BC, and adherence to the Fire Underwriters Survey guidelines for fire hall and fire apparatus replacement schedules; and

**THAT** the Committee recommend Board commit the recommended capital funding to build reserves in the respective fire department service budgets to meet the identified capital asset management planning needs outlined in the “Fire Services Capital Asset Management” report dated January 15, 2020.

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### **PURPOSE/SUMMARY**

To consider the principles of local fire service capital asset management.

### **STRATEGIC PRIORITY**

Asset Management is no longer noted as a qRD Strategic Priority though it is essential for the long term sustainability of the local fire services.

### **TYPE OF DECISION**

Directive

### **HEALTH & SAFETY IMPACT/RELATIONSHIP**

The development of asset management plans for fire service facilities and vehicle fleets is consistent with maintenance of safe workplaces for qRD firefighters.

## **RISK MANAGEMENT IMPACT/RELATIONSHIP**

Failing to invest in the necessary maintenance and replacement of fire service facilities and vehicles may expose the qRD to significant risk in its ability to provide sustainable service delivery. Specific risks and consequences could be the failure to meet the service requirements or reduction in the levels of service.

## **BACKGROUND**

The qRD operates four local fire protection services: Northside Volunteer Fire Department, Savary Island Volunteer Fire Department, Malaspina Volunteer Fire Department, and the Lasqueti Island Volunteer Fire Department.

On April 25, 2019 the qRD Board adopted the following resolution:

*THAT the Board adopt Asset Management Policy 3.14 as amended.*

Policy 3.14 explains the role of the Board is to:

- a) Approve asset funding through the annual budget process;*
- b) Approve funding and resources to maintain the asset management program;*
- c) Provide high level oversight of the delivery of qRD's Asset Management Strategy;*
- d) Approve Levels of Service that reflect, to the best of the Board's ability and within the context of qRD's financial capacity, the reasonable expectations citizens have for qRD services; and*
- e) Act as stewards for qRD's Assets.*

On June 27, 2019 the qRD Board adopted the following resolution:

*THAT the Board adopt the 2019-2021 Asset Management Strategy.*

The procedures identified within the Asset Management Strategy provide the following guidance for the development of individual fire service asset management plans:

Asset Management Strategic Goal	Action	Timeline		
		2019	2020	2021
<b>4 Development of Individual Service Asset Management Plans</b> Having a comprehensive and actionable plan for the sustainable delivery of each Regional District service is the ultimate goal of the Regional District's asset management program. These plans will provide detailed information about the infrastructure required to provide an agreed level of service in the most cost effective manner while outlining associated risks.	4.1 Use the Asset Registry and the tools developed for use in the Regional District's asset management program to prepare individual asset management plans for each of the Regional District's services that operate and maintain assets.		√	
	4.2 Include state of infrastructure details including asset types, inventory, age, condition, valuation and criticality.		√	
	4.3 Include a list of the legislative, regulatory and statutory requirements for the service and its associated assets.		√	√
	4.4 Offer levels of service alternative options and the financial implications associated with each service level option.			√
	4.5 Identify service and risk consequences of asset renewal alternative options.		√	√
	4.6 Include a list of demand drivers that may impact future service delivery and provide a plan to address these potential impacts.			√
	4.7 Identify performance gaps if any in the service and define options to close the gaps.			√
	4.8 Include a long-term operations, maintenance and capital renewal and upgrade priority program.		√	√
	4.9 Include details on the projected expenditures required to provide an agreed level of service for a 10 year period at a minimum.		√	√
	4.10 Provide a list of tasks that should be undertaken to improve the asset management plan.		√	√

## DISCUSSION

The nature of local fire services as committed by qRD bylaws and policies, and adhering to all provincial fire and safety standards, means the delivery of structural fire protection, medical first responder, and rescue services, results in each of the four fire services requiring significant ongoing capital investment. Most significantly among the fire service capital items are the fire hall facilities and fleets of fire and rescue apparatus. Confirming an asset management plan for the safe and effective maintenance and renewal of fire halls and apparatus should be a priority for the long term sustainability of the fire services.

Planning for the maintenance, upgrading, and eventual replacement of fire halls is based on age of the facility, functionality, and ongoing condition assessments. The qRD has performed condition and risk assessments of its current fire halls resulting in the Asset Management Department recognizing estimated replacement dates and required reserve contributions as outlined in the section below titled "Fire Hall and Apparatus Current Status".

Many local fire services across Canada choose to follow the Fire Underwriters Survey (FUS) for guidance in developing plans for fire apparatus. FUS describes itself as:

*"a national organization that represents more than 85 percent of private sector and casualty insurers in Canada. Fire Underwriters Survey provides data to program subscribers regarding public fire protection for fire insurance statistical and underwriting evaluation. It also advises municipalities if they desire to review the current levels of fire defence in the community and*

*provide direction with recommendations where improvement will enable them to better deal with fire protection problems.*

*Fire Underwriters Survey offices maintain data from surveys on fire protection programs throughout all municipalities across Canada. The results of these surveys are used to establish the Public Fire Protection Classification (PFPC) and Dwelling Protection Grade (DPG) for each community. The PFPC and DPG is also used by underwriters to determine the amount of risk they are willing to assume in a given community or section of a community.*

*The overall intent of the grading system is to provide a measure of the ability of the protective facilities within a community to prevent and control the major fires that may be expected to occur by evaluating in detail the adequacy, reliability, strength and efficiency of these protective facilities.”*

Adhering to the FUS grading guidelines can result in significant cost savings for property insurance for the service area taxpayers. Recent recognition by FUS of improvements within the SIVFD resulted in an improved DPG for Savary Island with resulting hundreds of dollars of savings for many property owners' insurances. Also, recognition by FUS of the NVFD achievement of Superior Tanker Shuttle Service resulted in further significant insurance savings for property owners within the NVFD service area.

FUS provides guidelines for most aspects of the fire services and in most cases the FUS guidelines are consistent with the standards set by the Fire Commissioner and Worksafe BC requirements. FUS guidelines also set service life limits for certain fire apparatus. Generally FUS guidelines recommend fire engine replacement at twenty years and water tender replacement at thirty years. Regarding fire engine replacement FUS recognizes that small communities may be challenged to meet the twenty year replacement schedule and therefore will recognize extensions of service life provided the engine is in good working condition. As a local example, the recent FUS review of the Savary Island fire service area recognized the SIVFD could extend the service life of the 1997 fire engine up to twenty five years. Recent discussions with FUS staff have confirmed that FUS would consider all rural areas of the qRD as a small community and therefore consideration of fire engine service life from twenty to twenty five years may be considered. It is important to understand that fire apparatus are generally well maintained and drive relatively short distances during their service lives however the stresses they undergo during training and fire operations can put their engines, brakes, and other components under considerable strain. Also, as an apparatus gets older the necessary replacement parts may become more difficult or more expensive to attain. Therefore programs of regular inspections and maintenance are crucial and ongoing discussions with the respective Fire Chiefs will allow for an understanding of exactly when a specific apparatus will need replacement. At a minimum the qRD should expect a fire engine to provide service for twenty years with the possibility of attaining an extra five years provided it is in good working order and can be operated safely. Water tenders should be anticipated to provide thirty years of service with no extension of recognition beyond that time. FUS does not specify service life for other fire department support vehicles such as rescue trucks and pickup trucks so in these instances the qRD staff are currently recommending consideration of a target thirty year service life.

### Fire Hall and Apparatus Current Status:

The following list details the current facilities and vehicles in each fire service with summary of current conditions:

#### Northside Volunteer Fire Department:

Fire Halls (2 total):

#1 Fire Hall: 8540 Plummer Creek Road

#2 Fire Hall: 9642 Larson Road

Apparatus Fleet (6 total):

Two fire engines (2000, 2005)

Three Water Tenders (2001, 2010, 2013)

1 Rescue Vehicle (2003)

NVFD facilities are currently in a good position with #1 fire hall constructed in 2012 and #2 fire hall currently with funding in place and plans for replacement in summer 2020. The Asset Management Department assumes fifty years of service life for these facilities.

NVFD apparatus will require the replacement of the two engines in the coming five to ten years respectively, assuming extension of the engines to twenty-five year service lives per FUS criteria for small communities. All three water tenders and rescue truck will require replacement in the following decade

#### Savary Island Volunteer Fire Department:

Fire Halls (3 total):

Main Fire Hall: 1847 Savary Island Road

West Fire Hall: 1134 Vancouver Blvd

East Fire Hall: 2856 Vancouver Blvd

Apparatus Fleet (6 total):

One fire engine (1997)

Three Light Fire Attack Vehicles (2007, 2008, 2015)

One First Responder Vehicle (2009)

One Utility Pickup Truck (1999)

The SIVFD fire halls are all currently in good condition, with all halls built or upgraded between 2008 and 2013. The Asset Management Department currently estimates replacement of the SIVFD fire halls in 2049.

The SIVFD apparatus fleet have one significant replacement upcoming with the planned fire engine replacement in 2022.

The SIVFD First Responder Vehicle may be replaced soon as the vehicle has been suffering from yet unresolved electrical/computer problems that periodically cause the vehicle to fail to start.

Malaspina Volunteer Fire Department:

Fire Halls (2 total):

#1 Fire Hall: 9999 Hwy 101

#2 Fire Hall: 4322 McLeod Road

Apparatus Fleet (6 total):

Two fire engines (2004, 2019)

Three Water Tenders (2015, 2015, 2019)

1 Rescue Vehicle (2013)

Both MVFD fire halls are currently in fair and good condition. The Asset Management Department is currently expecting replacement for the #1 and #2 fire halls in 2030 and 2047 respectively.

The MVFD fleet is currently in good shape with all but one apparatus replaced in the last seven years. One fire engine will need replacement within the coming four to nine years in order to stay within the twenty to twenty-five year service life.

Lasqueti Island Volunteer Fire Department:

Fire Halls (2 total):

North Fire Hall: Main Road approx. 1 km from False Bay

South Fire Hall: Main Road approx. 10 km from False Bay

Apparatus Fleet (5 total):

One fire engine mini pumper (2003)

Two Fire Attack Vehicles (1983, 1987)

One Water Tender (1984)

One First Responder Vehicle (Emergency Medical Unit) (2003)

Condition assessments have recommended the LIVFD north fire hall be replaced as soon as possible. Some recent renovations and upgrades have addressed the significant safety and liability concerns. The south fire hall is a newer facility and is in good condition. Recent Worksafe BC inspection did recommend some investments to improve organization and safety within the hall. These improvements are currently budgeted for 2020.

The LIVFD fleet requires investment as three of the vehicles are over thirty years old.

**FINANCIAL IMPLICATIONS**

The asset management plans for the qRD local fire services are still works in progress. The goal is for the Asset Management and Emergency Services departments, with direction from the

Board, to work toward an understanding of the necessary capital reserves contributions for each service. Based on the current understandings the financial implications are as follows:

NVFD:

Given that the NVFD has one new fire hall and one hall on the verge of being built the development of facility replacement plans in this service has been a lower priority and therefore there is no current financial estimate for facility replacement. The Asset Management Department intends to develop the facility replacement plan by 2021.

The proposed 2020 NVFD budget would see \$89,000 transferred to reserve for future apparatus replacement. This will be necessary for the two fire engine purchases required in the next ten years.

SIVFD:

The Asset Management Department recommends \$51,800 per year contribution to reserves for future replacement of the three SIVFD fire halls estimated in 2049.

The proposed 2020 SIVFD budget would see \$55,000 contributed to reserves. This amount is not enough to achieve the estimated \$350,000 fire engine replacement due in 2022. The remainder will need to be achieved by borrowing.

MVFD:

In order to replace the MVFD #1 hall in ten years and the #2 hall in 27 years the Asset Management Department currently recommends an annual contribution of \$158,700.

The proposed 2020 MVFD budget would see an \$89,417 reserve contribution. This should be sufficient for the next fire engine replacement due within the next nine years.

LIVFD:

Given the current understanding, the qRD should be prioritizing immediate consideration to replacement of the LIVFD north fire hall and three of the five LIVFD apparatus as soon as possible. The Asset Management Department considers the cost for the LIVFD north fire hall at a minimum of \$720,000.

The current rate of transfers to reserve will not provide a significant pool of funds for construction of the fire hall and the majority of the financing will need to come from borrowing.

**PUBLIC AND/OR STAKEHOLDER ENGAGEMENT**

Staff work on an ongoing basis with Fire Chiefs in each of the fire service areas regarding facility and apparatus operations and planning. The fire services have not performed any public engagement regarding asset management needs.

**CONCLUSION**

Developing and following the capital asset management plan will provide a better understanding of the expected service lives of the most significant capital items in the fire services: fire halls and fire apparatus fleets.

The timelines are based on facility condition assessments and expected lifespans while the fleet replacement timelines are based on guidance from the Fire Underwriters Survey of Canada. The timelines provide the qRD with effective planning tools for the ongoing sustainability of the local fire services.

Ryan Thoms  
Manager of Emergency Services

Concurrence: Al Radke  
Chief Administrative Officer