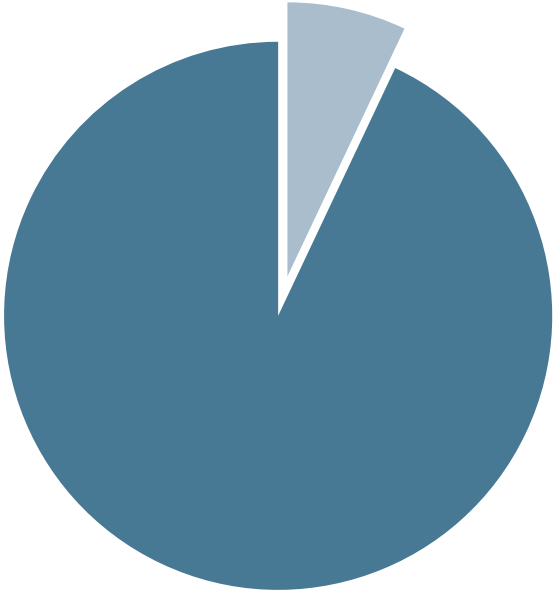




# FIRE & RESCUE SERVICES

<b>Operating Budget:</b>	\$1,387,000
<b>Capital Budget:</b>	\$462,500
<b>Staffing Complement:</b>	6.0 FTE (Full-Time Equivalent)
<b>Supports Strategic Focus Areas:</b>	Corporate Excellence and Community Livability

## DEPARTMENT'S SHARE OF CITY BUDGET



■ Fire and Rescue Services **6.6%**      ■ Remaining City Budget **93.4%**



# FIRE & RESCUE SERVICES

## OVERVIEW

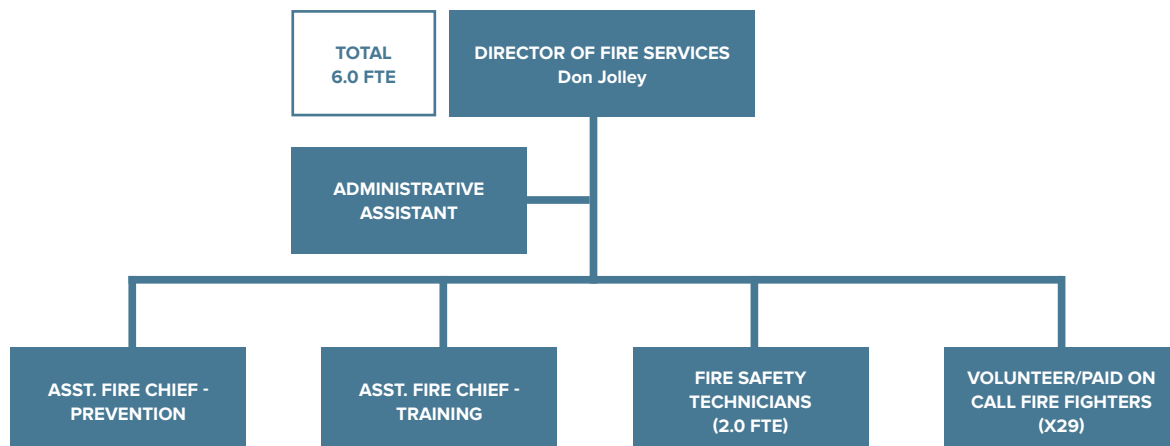
Fire and Rescue Services provides incident response at the Full Service Operations Level under the Provincial Fire Training Standard (“the Playbook”) and acts as a first point of contact with citizens and visitors for many public safety concerns. Fire & Life Safety Education sessions, directed at a wide variety of community demographic and social groups, provide valuable information and exposure to the dangers of fire and other hazards as well as methodologies to prevent or minimize damage and injury. Staff regularly ensure safety for public and commercial properties through legislated and comprehensive fire safety inspections.

The current core of the department is a highly dedicated group of paid on call (POC) firefighters trained to Full Service/NFPA 1001 Level 2. Using the POC’s and a small group of career staff, the department performs emergency response to fire suppression, medical response, rescue, and other emergency incidents as well as non-emergency services, including community service activities, inspections, training, public education, emergency management, and pre-incident planning. The POC Members Association and IAFF also engage in numerous community events.

When required, specialized technical rescue and technician level dangerous goods (Hazmat) response is provided through aid agreements with contractors and larger neighbouring fire departments.

The success of the POC volunteer service delivery model is a priority for the City. Continuous efforts are made to minimize any unnecessary burdens on the POC membership by providing industry leading training, technology, equipment and procedures, and ensuring a small contingent of career staffing.

## STAFFING COMPLEMENT





# FIRE & RESCUE SERVICES

## 2018 ACHIEVEMENTS

### ADMINISTRATION/OPERATIONS

- **Fire Underwriters Survey.** The department achieved a very significant improvement in its Fire Underwriter Survey (FUS) grading for commercial insurance. The new grade of 2 places the department among the best in both the lower mainland and Canada.
- **Self-Contained Breathing Apparatus (SCBA) Replacement.** End of life replacement of the Department's critical breathing apparatus for firefighter safety.
- **First Responder Training Provider Transition.** Transition to the Canadian Red Cross as new provider of instructor training and firefighter certification for the medical first responder program.
- **BC Ambulance "Rest and Ready Station".** The fire department facilitated discussions which have led to the decision by BC Ambulance to open a new Rest & Ready Station in the municipal complex which will improve medical response within the community.
- **Personal Protective Equipment (PPE) Inventory Database.** All former manual processes pertaining to the PPE inventory database have now been moved into the FDM digital database to allow for permanent record reference as well as ongoing accurate and timely management of maintenance, replacement, and repair.
- **Operational Guideline Refresh.** Management staff went through every safety oriented operational guideline (OG) to ensure they are current and applicable. Re-writes and refreshes occurred on numerous OG's.

### PREVENTION/EDUCATION

- **Transition to Online Burning Permits.** Chief Perrie and Admin Assistant Sandie Mallan worked with the City's IT and Finance personnel to initiate online Burning Permits through Tempest.
- **Fire Safety Inspections.** The department completed inspections of nearly every local business and multi-family occupancy. Full fire inspections of airport properties has also begun, in cooperation with airport staff and City Bylaws and Building departments.
- **School and Community Education Sessions.** To date, over 80 sessions have been completed at schools, with community groups, in neighbourhoods, and as part of the Youth Academy. All were undertaken by either the Fire Safety Technicians (FST's) or POC firefighters. It is projected that over 100 sessions will be completed by year-end.
- **City Staff Training.** The fire department delivered Automatic External Defibrillator (AED) training to thirty (30) enthusiastic members of City staff in May. Eight (8) City staff also undertook fire extinguisher training at the fire training ground in May with another session scheduled this fall. Fire drills were also conducted at all the City facilities.

### TRAINING

- **Integrated New Members.** New recruits to the POC membership are hired and trained each year. In 2018, five new recruits joined the POC crew, and three junior members continued their training.
- **Advanced Training.** Firefighters attended several advanced training opportunities this year, including Fire Officer, Live Fire, Hazardous Materials, IAFF Health & Wellness, and the "Crude by Rail" training program in Colorado on behalf of CP Rail.
- **Training Attendance.** All members of the department exceeded the required number of training hours for the year.

# FIRE & RESCUE SERVICES

## DEFERRED PROJECTS

- **Paperless Fire Inspections.** Plans were being made for the implementation of a Mobile Inspection App which would allow for paperless fire inspections. Surrey Fire, who owns and hosts the technology, has identified some issues that need to be resolved before the system can be implemented. We have no date of anticipated implementation at this time

## KEY CHALLENGES FOR 2019

- **Decline In Paid On Call Firefighter Participation During Early Morning And Business Hours.** There has been a trend of decreasing POC attendance during weekday morning and business hour periods in 2017 and 2018. This is occurring despite enhanced recruitment of POC's in the past 24 months. A Decision Package relating to this issue has been submitted.
- **Radio System Decision for Future.** A decision on the future of the fire department radio system needs to be made through the 2019 Business Planning process. The current agreement with UBC for the repeater site expires in May and UBC has indicated a willingness to extend until May 2020, at which time alternative solutions must be implemented. A Decision Package relating to this has been submitted.
- **Large Increase in Fire Inspections in Community.** Phase 2 of the Golden Ears Business Park on South Harris is near completion, adding multiple new businesses and required inspections. Phase 3 & 4 are expected to commence soon, increasing inspection numbers significantly and challenging the ability of current staff to meet expectations for annual inspection frequency. This situation will be monitored and Council will be updated as the situation changes.

- **Determination of Site for New Firehall Facility.** Determining the site for the future firehall is a critical decision for the City to ensure appropriate and effective fire & rescue operations for next 30+ years. The decision process began in 2018 and a preferred site has been identified, although negotiations with the property owner have recently stalled.
- **Future Career Staff Turnover.** Replacement or retirement of at least 2 Chief Officers is expected within 6-24 months. Transition plans need to be considered.
- **POC Retention.** High turnover of POC membership reduces the level of skills, knowledge and experience of the department. Significant time and resources are committed to recruitment, training and maintaining skills amongst the members.



# FIRE & RESCUE SERVICES

## KEY INITIATIVES 2019

DIVISION	INITIATIVE	TARGET
ADMINISTRATION	<b>INCREASED CAREER STAFFING.</b> Implementation of decision from Business Planning process for additional career staffing to address decreased POC attendance.	Q1-3
	<b>FIREHALL REPLACEMENT PROCESS.</b> Delayed Phase 2 of firehall project to secure a suitable site in 2018. Project now approximately 1 year delayed for start of site/building design.	2020
TRAINING	<b>RECRUITING AND TRAINING OF POC'S.</b> Recruit and train 6-8 new POC's.	Q1-4
PREVENTION	<b>ENHANCE FALSE ALARM REDUCTION STRATEGY.</b> Continue to generate strategies to combat false alarms in "repeat offender" occupancies and single family homes.	Q2-4
OPERATIONS	<b>RADIO SYSTEM DECISION.</b> Implementation of decision from Business Planning process for future radio system location and type.	Q1-2
DEPARTMENTAL COLLABORATION	<b>ONLINE PERMIT APPLICATIONS.</b> Completion of the Burning Permit online process.	Q2-3
	<b>COUNCIL ORIENTATION.</b> Host an orientation session on Pitt Meadows Fire & Rescue Services for the new City Council.	Q1

## PROPOSED OPERATING BUDGET

	2018 APPROVED BUDGET	2019 PROPOSED BUDGET	PROPOSED CHANGES FOR 2019		2020 PROPOSED BUDGET	2021 PROPOSED BUDGET	2022 PROPOSED BUDGET	2023 PROPOSED BUDGET
<b>REVENUE</b>	\$(80,500)	\$(83,500)	\$(3,000)	-3.7%	\$(83,500)	\$(83,500)	\$(83,500)	\$(83,500)
<b>EXPENSES</b>								
<b>ADMINISTRATION &amp; OPERATIONS SUPPORT</b>	977,900	991,800	13,900	1.4%	1,017,200	1,043,400	1,070,000	1,097,200
<b>FIRE PREVENTION PROGRAM &amp; TRAINING GROUND</b>	11,000	11,500	500	4.5%	11,800	12,200	12,500	12,900
<b>PAID ON CALL SYSTEM</b>	426,400	411,300	(15,100)	-3.5%	423,100	435,000	446,900	458,900
<b>FLEET &amp; EQUIPMENT</b>	54,100	55,900	1,800	3.3%	57,500	59,000	60,700	62,300
	1,469,400	1,470,500	1,100	0.1%	1,509,600	1,549,600	1,590,100	1,631,300
<b>NET OPERATING EXPENSES</b>	\$1,388,900	\$1,387,000	\$(1,900)	-0.1%	\$1,426,100	\$1,466,100	\$1,506,600	\$1,547,800

### KEY BUDGET CHANGES FOR 2019:

SALARY AND BENEFITS	25,600
POC INCIDENTS	(35,000)
POC TRAINING	15,000
TELEPHONE AND COMMUNICATION EQUIPMENT	(7,000)
OTHER	(500)
<b>CHANGE IN NET OPERATING EXPENSES</b>	<b>\$(1,900)</b>

# FIRE & RESCUE SERVICES

## PROPOSED CAPITAL BUDGET

DEPT NAME	PROJECT #	PROJECT NAME	PRIORITY	2019	2020	2021	2022	2023	TOTAL
FIRE & RESCUE SERVICES	15-FS-016	REPLACEMENT - HUB FL80 RESCUE F006 180030	3	\$-	\$-	\$350,000	\$-	\$-	\$350,000
	15-FS-018	REPLACEMENT - HUB MACK ENGINE 180031	1	-	900,000	-	-	-	900,000
	15-FS-019	REPLACEMENT - FORD F350 180032	2	-	-	-	85,000	-	85,000
	15-FS-053	FH MEETING ROOM FURNITURE 110014	4	-	-	10,000	-	-	10,000
	15-FS-064	FIREHALL OFFICE FURNITURE REPLACEMENT 110014	4	-	-	20,000	-	-	20,000
	16-FS-024	FIREFIGHER PROTECTIVE CLTHG (TURN-OUT GEAR)-090020	1	19,500	19,500	19,500	20,000	20,000	98,500
	16-FS-025	MINOR CAPITAL TOOLS & EQUIPMENT 990067	2	12,000	15,000	15,000	15,000	15,500	72,500
	16-FS-026	VEHICLE EXTRICATION & RESCUE EQUIPMENT	3	-	-	-	-	95,000	95,000
	16-FS-027	CHIEF VEHICLE REPL - FORD EXPLORER 2011 010019	3	-	-	65,000	-	-	65,000
	16-FS-038	FIRE TRAINING GROUND UPGRADE/RETROFIT 180034	2	8,000	-	-	-	-	8,000
	17-FA-107	MAIN FIRE HALL - REPLACEMENT 170032	3	400,000	7,000,000	2,225,000	-	-	9,625,000
	17-FS-032	REPLACEMENT - WILDLAND FF SKID-SQUAD 1180035	3	-	-	-	50,000	-	50,000
	17-FS-033	REPLACEMENT - UTILITY SKID FOR SQUAD 1180036	3	-	-	-	10,000	-	10,000
	17-FS-034	REPLMT-SKID LOADER TROLLEY UNIT-SQUAD 1 180037	4	-	-	-	11,000	-	11,000
	18-FS-022	E-COMM RADIO SYSTEM DP	3	23,000	-	-	-	-	23,000
<b>FIRE &amp; RESCUE SERVICES TOTAL</b>				<b>\$437,500</b>	<b>\$7,934,500</b>	<b>\$2,704,500</b>	<b>\$178,000</b>	<b>\$130,500</b>	<b>\$11,385,000</b>



# FIRE & RESCUE SERVICES DECISION PACKAGE

## DECISION PACKAGE: E-COMM RADIO SYSTEM FOR FIRE SERVICES

<b>Department/Division</b>	Fire & Rescue	
<b>Submitted by</b>	Assistant Chiefs Brad Perrie and Mike Larsson	
<b>Estimated Capital Cost</b>	One time: \$ 30,000	Ongoing: \$ 0
<b>Estimated Operating Cost</b>	One time: \$ 10,000	Ongoing: \$ 0

### RECOMMENDATION

THAT Council:

- A. Approve the extension of the City’s agreement with the UBC Malcolm Knapp Research Forest to allow for the continued operation of the Fire Department’s current radio system until May 2020, with a one-time capital cost of \$30,000 and a one-time operating cost of \$10,000; AND
- B. Direct staff to research the financial and practical implications of transitioning to E-Comm Radio System in 2020, as well as any other viable options;  
OR
- C. Other.

### EXECUTIVE SUMMARY

The current legacy UHF/VHF radio equipment used by the Pitt Meadows Fire & Rescue Services (PMFRS) is old technology with limited resiliency and redundancy. Not only is it unsecured and easily accessed by public scanners (an FOI concern), but it does not allow for communication with other emergency services (e.g. RCMP and BC Ambulance) and its coverage is limited in certain areas of the city, raising potential safety concerns for firefighters. Furthermore, the radio repeater site in the UBCM Malcolm Knapp Research Forest that is essential for the operability of the current radio system will be decommissioned in 2020, forcing the need to identify alternatives.

PMFRS, along with Burnaby and Maple Ridge, are the only emergency services in the Metro Vancouver region that have yet to make the transition to the E-Comm radio system. In Pitt Meadows and Maple Ridge, both the RCMP and BC Ambulance operate on the E-Comm radio system. Both Port Coquitlam Fire and Langley Township Fire transitioned to E-Comm in 2017/18.

We now understand that Maple Ridge Fire is pursuing a conversion to the E-Comm radio system in their 2019 Business Plan, although the transition will most likely occur closer to 2020. This will mean that Maple Ridge will no longer be using the UHF/VHF radio system that is currently used to communicate with PMFRS. Although there will be a transition period during the early months of conversion to E-Comm where Maple Ridge will continue to carry their UHF/VHF radios, this will be a temporary scenario and Pitt Meadows will need to address the pending risk of lost communication with their mutual aid partner. It will be important, therefore, for Pitt Meadows to plan their transition to E-Comm before Maple Ridge ‘retires’ their old system entirely.

Due to a significant increase in operational costs associated with the transition to E-Comm, staff recognize the need to plan accordingly. Therefore, staff are recommending a one year extension of the current agreement with UBCM to maintain the current radio system, so that plans can be made for the transition to E-Comm in 2020.



# FIRE & RESCUE SERVICES DECISION PACKAGE

## BACKGROUND/DISCUSSION

The current PMFRS radio system is basic, stand-alone and isolated. It functions well within its limitations but does not meet the new standards being recommended by Industry and Public Safety Canada regarding resiliency and interoperability for public safety. Additionally, all Metro Vancouver fire services except Maple Ridge and Burnaby, plus all police and ambulance services, have migrated to the E-Comm radio system due to its secure, robust and redundant nature combined with capability for full interoperability for all response agency users. Currently PMFRS does not have true interoperability with any other emergency response agency, though systems are in place with Maple Ridge Fire to overcome this at a rudimentary level.

A switch over to the E-Comm radio system will provide a number of important improvements, including: enhanced firefighter safety; full interoperability with other emergency responders; enhanced operational capability through more radio channels, increased network coverage and better building penetration; state of the art resiliency, redundancy and seismic stability; and dedicated 24/7 system maintenance and support.


E-Comm now utilizes the Next Generation Radio Program (NGRP) which is a best-in-class Project 25 (P25) technology widely adopted by public safety agencies across North America. It is highly robust, specifically designed for first response agencies, and meets all current and future federal government mandates for secure public safety radio systems. The E-Comm system operates within a dedicated public safety block (700 MHz) in the radio spectrum and functions with first responder safety and operational excellence as the top priorities.

The current PMFRS radio system operates on the VHF radio spectrum utilizing portable, mobile and base radios. It is not encrypted or digital, both of which are now industry standards in public safety. Industry Canada is encouraging public safety agencies to move off the VHF frequency band as soon as possible due to user crowding in this band and increased demand for radio spectrum. Belt-mounted pagers are used for alerting all staff for all incidents.

The City operates two radio repeater sites: the primary one located at the liquid mirror observatory site in the UBC Malcolm Knapp Research Forest in Maple Ridge; and the secondary (back-up) site at the firehall itself. The repeater coverage is generally adequate except for certain areas in the north of the City and in the shadow down near the Arenas. At times in these areas, radio communication can be sporadic, unsatisfactory and potentially unsafe with reduced coverage and/or signal penetration. The current PMFRS radio system has virtually no resiliency at either of its repeater sites if faced with a serious incident such as wildfire, severe weather event, or moderate earthquake.

In 2015, UBC served notice to the City that the observatory was being decommissioned and that the electrical service to the site would be discontinued. An agreement between the City and UBC was reached to maintain operational capability of the repeater until May 2019. The City has approached UBC once more to inquire about a further extension of the agreement. Based on preliminary conversations this past month, Staff are confident that UBC will agree to continue the operability of the main repeater, but only until 2020, after which alternative measures must be implemented. UBC is most concerned with the fire hazard of the existing overhead power line to the repeater tower, as the trees in the near vicinity cannot be topped or clear cut.





# FIRE & RESCUE SERVICES DECISION PACKAGE

To maintain the current radio system, PMFRS has engaged a private radio systems retailer. They are on-call for maintenance but response cannot be guaranteed within any specific timeframe due to their many competing interests commercially; many of whom are much larger than PMFRS. No other private service provider offered better alternatives, and internal capacity simply does not exist. In addition, Surrey Fire has no official role in operation or maintenance of our proprietary radio system - it is not part of their service contract, nor do they desire it to be.

Additionally, the current VHF radio system is challenged with providing uninterrupted and clear radio communication within larger concrete and steel buildings and underground parking areas within the community. PMFRS has “work-arounds” for localized operations in many of these areas but communication with the firefighters lifeline at Surrey Fire Dispatch is sometimes unsatisfactory.

The Maple Ridge Fire Department (MRFD) currently operates on a different radio spectrum (400 MHz) than Pitt Meadows (100 MHz). This creates challenges for communicating directly between department personnel at joint operations. Currently the departments share radios with each other but this requires the officers in charge to monitor multiple radios simultaneously; not an easy feat nor particularly operationally safe or efficient. Neither Pitt Meadows nor Maple Ridge fire services have interoperability capacity with RCMP or BC Ambulance which exists throughout most of the rest of Metro Vancouver. Maple Ridge Fire is also actively pursuing transition to the E-Comm Radio system with their Council.

The current departmental inventory of communications equipment has a capital replacement value of approximately \$80,000. The annual costs to operate and maintain the current system are approximately \$25,000 annually. This equipment cannot be integrated into the E-Comm system and disposal or other use would need

to be explored. E-Comm radios and accessories must be either pre-purchased or they can be operationalized annually through a levy agreement. The levy option is recommended for Pitt Meadows given the small number of units, the lack of internal technical expertise to maintain them, and an absence of capital funds currently dedicated. The levy costs are incorporated into the Financial Implications Table below.

Fire dispatch and associated records management services are currently provided under contract by the Surrey Fire Service. The current five-year agreement expires at the end of 2019. The current relationship has been strong and highly effective for over 20 years. It has a cost of approximately \$42,000 annually and neither party has a desire to end the relationship. While E-Comm does also provide these services for an additional cost, a transition to E-Comm does not necessitate any change in dispatch provider.

The Surrey Fire Communications Centre (“Surrey Dispatch”) provides 911 call taking & dispatch for over thirty-five communities across BC, including Pitt Meadows. Innovations in technology provide automated down-stream interface with E-Comm and the British Columbia Ambulance Service, along with quicker notifications and overall faster response times. Surrey Fire also dispatches our neighbouring Maple Ridge, Port Coquitlam and Township of Langley fire services.

## SUMMARY

In summary, PMFRS has delayed the transition to E-Comm as long as possible due to the significant costs associated with this initiative. With a 12-month extension from UBC on the current repeater site agreement until May 2020, and some urgent repairs to the repeater tower, the City will have a year to confirm the approach (both financially and practically) for making the transition to E-Comm. There are also some alternative options which will be explored below.

# FIRE & RESCUE SERVICES DECISION PACKAGE

## FINANCIAL IMPLICATIONS (2019)

COSTS	ONE TIME		ONGOING	
	CAPITAL	OPERATIONAL	CAPITAL	OPERATIONAL
EMERGENCY REPAIRS TO RADIO TOWER	\$30,000	\$ -	\$ -	\$ -
ANNUAL MAINTENANCE	-	10,000	-	-
	-	-	-	-
	-	-	-	-
<b>TOTAL COSTS:</b>	<b>\$30,000</b>	<b>\$10,000</b>	<b>\$ -</b>	<b>\$ -</b>

## FINANCIAL IMPLICATIONS FROM E-COMM ESTIMATE

(see attachment A; these costs would begin in 2020 if the City transitions to E-Comm)

COSTS	ONE TIME		ONGOING	
	CAPITAL	OPERATIONAL	CAPITAL	OPERATIONAL
CONSULTANT FEES FOR START UP	\$8,000	\$-	\$-	\$-
BASE EQUIPMENT UPGRADES	15,000	-	-	-
ANNUAL RADIO INFRASTRUCTURE LEVY	-	-	-	133,160
ANNUAL USER EQUIPMENT LEVY	-	-	-	49,280
<b>TOTAL COSTS:</b>	<b>\$23,000</b>	<b>\$-</b>	<b>\$-</b>	<b>\$182,440</b>

## ALTERNATIVES

1. To mitigate the taxation impact of transitioning to the E-Comm System, the City could consider phasing in the effect with the use of the Operating Reserve, resulting in tax increases of 0% in 2020, and 0.29% in each of years 2021 and 2023.
2. In order to address UBC's immediate fire hazard concerns regarding the overhead power lines at the repeater site, the City could invest in an alternate/upgraded power source, such as an underground hydro network or a solar/generator system. Alternatively, the City could invest in the relocation of the repeater tower to a safer location with less trees and minimal fire risk. Staff are currently investigating the costs associated with these alternatives and will update Council as information is available.

These options are temporary solutions as the eventual transition to E-Comm is a critical initiative for the City for all the practical and safety reasons outlined herein. Staff will engage in a cost-benefit analysis to determine the best timing for the transition to E-Comm based on the costs of the aforementioned alternate power sources for the radio tower, as well as taking into consideration the timing of Maple Ridge's transition to the E-Comm system.

# ATTACHMENT A

## E-COMM QUOTE FOR PITT MEADOWS FIRE & RESCUE



**Pitt Meadows Fire**  
**2018 Preliminary Radio Levy Estimates**  
**August 13, 2018**

Metrics	
# Radios	40
Coverage Area	8,825
Coverage Area (Adjusted)	8,825
Population	18,573
Traffic (Erlangs)	0.11900
# Dispatches	220

Radio Infrastructure			Pitt Meadows Fire Annual Share
<b>Radio and User Equipment</b>			
<b>Capital Costs</b>			
<b>Radio Infrastructure</b>	<u>Amort'n Period</u>		
Civil Works	20.5 years		15,685
Microwave Network	15.5 years		4,111
Microwave Network	10.0 years		4,590
Radio Components	12.5 years		30,989
Radio Components	4.0 years		-
<b>Radio Infrastructure</b>			<b>55,375</b>
Consoles	10.5 years		6
Consoles	5.0 years		17
Consoles	7.0 years		39
Consoles	10.0 years		35
<b>Consoles</b>			<b>97</b>
Dispatch Building	20.5 years		282
Dispatch Building	3.0 years		1
Dispatch Building	5.0 years		303
Dispatch Building	10.0 years		11
Dispatch Building	15.0 years		4
<b>Dispatch Building</b>			<b>601</b>
<b>Total Capital Costs</b>			<b>56,073</b>
<b>Annual Maintenance Costs</b>			
		<b>Total Annual</b>	
Radio Operating & Mtce Costs		8,921,760	67,924
SWAP Termination Costs (prior)		193,393	1,472
Reserve for Capital (prepaid)		500,000	3,807
<b>Total Operating &amp; Maintenance</b>			<b>73,203</b>
			-
<b>Total Radio Infrastructure Levy</b>			<b>129,276</b>

User Equipment					Motorola Radios
Description	Amort Period	Qty	Unit Price	Extended Cost	Annual Cost*
<b>Capital Costs</b>					
Portable Radio Single Band	7.5	26	7,315	190,190	29,052
Portable Radio Dual Band	7.5	4	9,076	36,304	5,546
Mobile Radio - Single Band	7.5	9	6,539	58,851	8,990
Base Station (Console Radio)	7.5	1	6,593	6,593	1,007
In Vehicle Repeater Systems (DVRS)	7.5	-	-	0	0
<b>Total User Equipment</b>		<b>40</b>		<b>291,938</b>	<b>44,595</b> (g)
<b>Annual Operating/Mtce Levy</b>					
Radio admin/licensing- Mob/Port		40	41		1,640
Other O&M (includes tech allocation)	% radios	0.5%	356,350		1,606
<b>Total Annual O&amp;M</b>					<b>3,246</b>
<b>Total User Equipment Levy</b>					<b>47,841</b>

<b>2018 Total Levy Estimates</b>	<b>177,117</b>
----------------------------------	----------------

**Pitt Meadows Fire**  
**2018 Preliminary Radio Levy Estimates**  
**August 13, 2018**

Metrics	
# Radios	40
Coverage Area	8,825
Coverage Area (Adjusted)	8,825
Population	18,573
Traffic (Erlangs)	0.11900
# Dispatches	220

Summary:	Description	Total
<i>Rounded (00's)</i>		
	Total Radio Infrastructure Levy	129,280
	Total User Equipment Levy	47,840
	<b>2018 Levy Estimates</b>	<b>177,120</b>
	<b>% increase</b>	<b>3.00%</b>
	Total Radio Infrastructure Levy	133,160
	Total User Equipment Levy	49,280
	<b>2019 Levy Estimates</b>	<b>182,440</b>
	<b>% increase</b>	<b>3.00%</b>
	Total Radio Infrastructure Levy	137,150
	Total User Equipment Levy	50,760
	<b>2020 Levy Estimates</b>	<b>187,910</b>
	<b>% increase</b>	<b>3.00%</b>
	Total Radio Infrastructure Levy	141,260
	Total User Equipment Levy	52,280
	<b>2021 Levy Estimates</b>	<b>193,540</b>
	<b>% increase</b>	<b>3.00%</b>
	Total Radio Infrastructure Levy	145,500
	Total User Equipment Levy	53,850
	<b>2022 Levy Estimates</b>	<b>199,350</b>

**Notes:**

- a) Based on the 2018 Budget (approved by the Board of Directors on November 30, 2017)  
2019-2022 Estimates expected to be average 3.0% increase annually but may be lower should additional agencies join E-Comm radio.  
Individual agency increases may vary due to individual metrics changes.
- b) Includes net PST paid by E-Comm where applicable
- c) PST/GST will be billed to member agencies on the above levies in accordance with CRA requirements.
- d) Annual levy for shared infrastructure includes financing @ 4.65% calculated semi-annually as per E-Comm's existing financing with MFA (refinanced March 24, 2008). This rate may be lowered to a blended rate when new financing arrangements occur.
- e) Per Members' Agreement, levies are payable quarterly in advance; interest will be charged on late payments
- f) Metrics are based on the following:  
-# of radios based on user equipment requested by the agency (portables and mobiles)  
-Coverage area and population as per BC Stats  
-Traffic and # of dispatches are based on 1995/96 estimates to be comparable with other police and fire agencies
- g) User equipment pricing has been provided based on average fire radio configurations for the P25 radio system.  
Pricing is based on current Motorola MSO pricing and includes a 10% contingency for variations in configuration as well as 7% net taxes.

**Portable Radios for Firefighters:**

This includes the Single Band Ruggedized APX6000 Portable Radio, Remote Speaker Mic (Hi Vis Green without channel selector), 3400Mah battery and limited spare batteries (10 spare). DVRS ready. Color: Hi-Vis Green. Radio Holster, and Multibank charger (cost per radio portion of multi bank charger).

**Portable Radios for Chief Officers:**

This includes the Dual Band (700/800/VHF) Ruggedized APX8000 Portable Radio, Remote Speaker Mic (Black without channel selector), 3400Mah battery. DVRS ready. Color: Black. In Vehicle chargers (3) for Chief Officer Vehicles.

**Mobile Radios:**

This includes single band radios, dash mount, DVRS enabled all with the 02 Control Head. This includes a standard Palm Mic, antenna for 700/800MHz and the custom cable for the radio to interface with the in vehicle Sigtronics units.

Installation is separate and not included in the quote.

**Consolette:**

Includes a dash mount single band option with a SAMLEX Box power supply and case for use in the station.

Actual user equipment pricing will be based on vendor pricing in effect at the time of equipment order.

DVRS are excluded from the above and would be an additional user equipment levy if required.

User equipment capital levies include financing @ 3.50% calculated semi-annually per E-Comm's existing financing with MFA; should actual rates vary, then the actual rate in effect at the time of borrowing will be used.



**Pitt Meadows Fire**  
**2018 Preliminary Radio Levy Estimates**  
**August 13, 2018**

Metrics	
# Radios	40
Coverage Area	8,825
Coverage Area (Adjusted)	8,825
Population	18,573
Traffic (Erlangs)	0.11900
# Dispatches	220

**h) Excluded costs are as follows:**

- The cost of installation for radio user equipment, including mobiles and base stations
- The cost of vehicular installation, vehicular intercom interface and installation
- The cost of mobile antennas, base station antenna or their installation
- The cost of firehall alerting antennas or their installation
- The cost of interfacing a legacy firehall alerting system to the E-Comm radio network
- The cost of paging and/or paging systems and their installation
- The cost of interfacing to a legacy paging system
- The cost of adapting to an existing apparatus intercom system; to be priced at the time of transition.
- Any additional costs related to dispatch are the responsibility of the agency.

**j) Locution and any related costs are EXCLUDED as the agency is not on E-Comm's FireCAD.**

Connectivity costs for locution are EXCLUDED as this is to be determined (Ex. could be a mix of city fibre, wireless such as Rogers or TELUS 3G or something else)

**k) Remote dispatch costs are EXCLUDED. Should there be additional costs associated with remote dispatch, such costs will be the responsibility of the agency. Additional costs related to remote dispatch could include: consoles; RF connection to the microwave backbone; RF connection antennas for the connection; network equipment to be able to connect into the RF connection; and connection wiring between the RF connection, the network and the console.**

***If any of the above facts and assumptions are incorrect or incomplete, please advise as soon as possible as the attached estimate may change accordingly. This quote is for preliminary estimate purposes only and is not final.***

# FIRE & RESCUE SERVICES DECISION PACKAGE

## DECISION PACKAGE: TWO (2) FIRE SAFETY TECHNICIANS (FST)

<b>Role Description</b>	Two (2) Permanent full-time IAFF Fire Safety Technician (FST) positions	
<b>Department/Division</b>	Fire & Rescue	
<b>Submitted by</b>	Assistant Chiefs Brad Perrie and Mike Larsson	
<b>Estimated Capital Cost</b>	One time: \$ 0	Ongoing: \$ 0
<b>Estimated Operating Cost</b>	One time: \$ 9,600	Ongoing: \$ 243,070 +

### RECOMMENDATION

THAT Council:

- A. Authorize the hiring of two (2) Fire Safety Technicians by April 1, 2019 for an estimated one-time operating cost of \$9,600 and an estimated annual operating cost of \$243,070 ; OR
- B. Other.

### EXECUTIVE SUMMARY

This staffing request seeks the addition of two (2) full-time Fire Safety Technician (“FST”) positions to work seven days a week on a 4-on-4-off shift pattern, starting in April 2019. Paid-on-Call (“POC”) firefighters perform exceptional duties on the City’s behalf 24/7 in all conditions. However, the changing demographics of the community, combined with the decreased availability of POC volunteers, has resulted in circumstances where adequate emergency response staffing has been challenged a number of times. This raises potential operational, safety and liability concerns. The addition of 2 FST’s working seven days a week will facilitate extended hours of career staffing during times of low POC availability. Combined with responding POC’s, the additional FST’s will enhance the department’s operational capability.

### BACKGROUND/DISCUSSION

The City’s current fire service model incorporates two (2) unionized FST’s, two (2) exempt Assistant Chiefs, one (1) exempt Fire Chief, and one Administrative Assistant (CUPE), for a total of six full-time staff, plus approximately 30 paid-on-call firefighters. This model has served the community well since the paid-on-call system was instituted in 2010 and has provided the community with a high level of protective service. During the past 18 months, however, there has been evidence identifying a need to make an operational change related to seven-day-a-week daytime career staffing.

Culturally, there has been a significant transformation within the fire department. Historically, volunteer firefighters were seriously invested in the department and its future, often contributing 10 or more years of service. The recent generation of POC’s, however, are less heavily invested overall and many of them are aggressively pursuing full-time employment elsewhere as career firefighters. As a result, Pitt Meadows Fire & Rescue, as well as many other POC departments in Metro Vancouver, has become a ‘training ground’ for firefighters who leave for full-time positions in other municipalities, contributing to increased turnover within the department.



# FIRE & RESCUE SERVICES DECISION PACKAGE

Many recommendations from the current Master Plan have been implemented but have not successfully overcome the current challenges. For example:

- Recruiting additional POC's has not changed POC incident turn-out numbers during mid-week daytime hours;
- Increasing the POC remuneration package has not enhanced POC turn-out numbers;
- Increased training opportunities and responsibilities for POC's has not increased POC turn-out numbers;
- The recent increase in POC turnover was not anticipated based upon previous years' experience.

## **DIMINISHING POC AVAILABILITY**

The typical standard response for all fire departments to the vast majority of calls is a single engine apparatus with a crew of four firefighters. For medical calls the requirement is only two firefighters and, for more serious incidents, eight or more firefighters may be required. POC attendance in the evening and overnight is strong and is not a concern at this time.

Incident response is classified in two ways: Platoon page-outs and All Call page-outs. All Calls occur for all serious incidents including MVA's, fires, alarms in non-sprinklered buildings, and other serious events. Platoon page-outs are for less labour intensive and often minor incidents, such as medical calls, CO alarms, dumpster fires, wires down, alarms in sprinklered buildings, etc.

Overall, the department averages 6-8 personnel for Platoon calls and 10-14 for All Calls. These numbers are consistent around the clock, except for daytime hours between 06:00am to 17:00pm. These are very good numbers which ensure strong and appropriate staffing levels overall, at all call types. In 2017, however, the department experienced an increase in the number of calls with three or fewer POC's attending during daytime hours; a trend that continues in 2018. This may indicate a change in availability with fewer interested persons available during daytime hours (e.g. shift workers), or it

may reflect a change in commitment from POC's related to prioritizing calls and dropping other activities only to attend calls that engage them at a higher level. The root cause is most likely a combination of these factors and others. Regardless of the reason, the department is experiencing an increase in responses where the number of POC's has decreased during daytime hours.

While shortages of POC's have historically been observed on occasion during the summer months (family vacations, etc.), shortages are no longer isolated to the summer. It is very important to note that there have been no incidents of operationally negative impacts, but an increasing frequency of limited POC availability raises the potential. The department must ensure, however, that adequate numbers of trained staff are responding at all times as per safety legislation.

## **PROPOSED SOLUTION**

The addition of two FST's working seven days a week, on a four-on-four-off shift rotation, will enhance coverage through a longer time period during daytime hours, as well as adding guaranteed coverage on the weekend. The hours between 0600 – 1700 demonstrate the highest frequency of calls with 3 or fewer POC's attending on average over the past two years.

# FIRE & RESCUE SERVICES DECISION PACKAGE

## ROLES OF PROPOSED NEW FST'S

The addition of two FST's will guarantee adequate response rates during daytime hours, seven days a week. It will also ensure an experienced driver and officer are present when POC involvement is required. The seven day week coverage during daytime hours will greatly improve response times to medical calls while career staff is on shift.

The primary role of the FST's would be to respond to all emergencies in the city. The FST's would also: assist in the delivery of fire & life safety education programs; perform apparatus and equipment checks; perform basic fire inspections; and assist with regular training of POC's as needed. This will increase departmental capacity in key areas where they are currently struggling to meet demands.

IAFF Local 4810 supports this decision package submission. Final determination of actual shift times and the staffing profile is operational in nature and will be determined by the chief officers, in consultation with the union.

## FINANCIAL IMPLICATIONS

COSTS	ONE TIME		ONGOING	
	CAPITAL	OPERATIONAL	CAPITAL	OPERATIONAL
BASE SALARY (2ND YEAR RATE = 80% OF BASE RATE)	\$0	\$0	\$0	\$79,104
EMPLOYEE HEALTH AND OTHER BENEFITS	-	-	-	23,731
EMPLOYEE SET-UP (UNIFORM, PPE AND LOCKERS)	-	4,800	-	700
OTHER – ADDITIONAL WORK WAGES	-	-	-	18,000
<b>TOTAL COSTS</b>	<b>\$ -</b>	<b>\$9,600</b>	<b>\$ -</b>	<b>\$243,070</b>

Special Remarks: Total costs have been doubled to account for two positions.


The new FST's would start at a 2nd year firefighter rate, as per past employees. They receive an annual incremental seniority-based increase of 10% until their 4th year, as well as collective agreement % increases (2.5% annually in current agreement). The comprehensive IAFF union benefit package which they receive is valued at approximately 30% of the employee's wage annually.

Future wage increases for these positions as per the current IAFF Collective Agreement (expires on Dec 31, 2019) are:

- 2020 – 3rd year rate = 90% (approx. \$90,772 annually per firefighter)
- 2021 – 4th year rate = 100% (approx. \$102,870 annually per firefighter)

Staff propose commencing the positions on April 1, 2019 and phasing in the effect on taxation with the use of the Operating Reserve, resulting in tax increases of 0% in 2019 and 0.52% in each of years 2020 to 2022.





# FIRE & RESCUE SERVICES DECISION PACKAGE

## ALTERNATIVES

There are no apparent realistic alternative solutions to meet all of the identified challenges.

1. One additional FST will not ensure coverage is improved. Adding only one FST does very little to enhance daytime staffing levels.
2. Pitt Meadows could formally request that Maple Ridge Fire respond via an Automatic Aid Agreement (different than the current Mutual Aid Agreement) whereby they would be contracted to automatically respond to calls, or specific designated calls, during the daytime hours. This would always ensure adequate staffing levels without adding any additional Pitt Meadows career staff. This system is currently employed with very real success between all of the North Shore fire departments. However, the Automatic Aid option presents four specific challenges:
  1. Maple Ridge may not be interested.
  2. It requires an up-front contract agreement, including payments or reciprocal response.
  3. It would likely damage the morale of the current POC's if they regularly responded with career firefighters from a neighbouring department.
  4. It removes the local ownership of emergency response which may be seen as reducing service levels by the taxpayers and thus be politically unpalatable. Additionally, should Maple Ridge be unable to respond (due to lack of available resources, etc.), it could expose Pitt Meadows to significant risk.

## SUMMARY

While challenging financially for the City, the addition of 2 FST's is seen by the department administration as essential to the ability of the PMFRS to meet its current operational mandate. As well, it will maintain the primarily Paid on Call composite service model that the City desires from a financial perspective, and that works very well overall. The new FST positions will address numerous current challenges as well as emerging expectations.

The two additional FST's would join the two incumbents to become positive role models and would very likely be committed to the department for their entire working career. This would ensure that strong organizational knowledge can be passed on through instructing, mentoring, and role-modelling. The union has an exceptional relationship with management and they are fully engaged well beyond their shift hours.

