

Staff Report to Council

Fire and Rescue Services

FILE: 01-0645-01/19

REPORT DATE: November 11, 2020 MEETING DATE: November 17, 2020

TO: Mayor and Council

FROM: Mike Larsson, Director of Fire Services

SUBJECT: Pitt Meadows Fire and Rescue Services Review 2020

CHIEF ADMINISTRATIVE OFFICER REVIEW/APPROVAL:



RECOMMENDATION(S): THAT Council:

- A. Receive for information the Fire Services Review Final Report as presented to Council on November 17, 2020; AND
 - B. Consider the Fire Services Review recommendations during the 2021 business planning process (November 23 and 24, 2020) and budget deliberations (December 7 and 9, 2020); OR
 - C. Other.
-

PURPOSE

To provide Council with the 2020 Fire Services Review Final Report, including key recommendations for addressing gaps and challenges.

☒ Information Report

☐ Decision Report

☐ Direction Report

DISCUSSION

Background:

The Pitt Meadows Fire and Rescue Service engages in a comprehensive service review every five years with the goal of creating a document that will assist the department in meeting both the present and future needs of the Pitt Meadows community. As part of this review, a detailed analysis of each component of the current Fire Service model is conducted in an effort to highlight what is working well and what is not. This process

has recently been completed, resulting in the 'PMFRS Fire Service Review – Final Report' which identifies key challenges facing the department and both short-term and long-term mitigation strategies to ensure the safety of both our firefighters and community.

Preliminary concerns were brought to Council in a closed meeting in September (closed under sections 90.1.k of the Community Charter – “*negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages*”), where Council directed staff to prepare a report for consideration at an open meeting.

The Executive Summary of the Report (page 3) outlines the unique challenges facing PMFRS today and prefaces the need for change to mitigate risk, enhance public and firefighter safety, and plan for future growth within our community. Each recommendation presented has been carefully explored to ensure it will be both operationally and financially viable.

The Short-Term Outlook section of the Report outlines the eight (8) recommendations that PMFRS believe are the essential next steps to building resiliency within the department and addressing the key concerns outlined in the Executive Summary. The Long-Term Outlook identifies a further six (6) recommendations that would further enhance the effectiveness and strength of the department.

At this time, Staff are asking Council to consider the initial 8 recommendations in the Short Term Outlook section. The Fire Chief and Chief Administrative Officer will continue to monitor the issues identified in the Long Term section and will endeavour to resolve or mitigate them in the intervening years. If the issue persists and the operational and/or financial challenges are not overcome, staff will ensure these items are brought forward to Council at the appropriate time.

Relevant Policy, Bylaw or Legislation:

Not applicable.

COUNCIL STRATEGIC PLAN ALIGNMENT

- ☒ Principled Governance ☒ Balanced Economic Prosperity ☐ Corporate Excellence
☐ Community Spirit & Wellbeing ☒ Transportation & Infrastructure Initiatives
☐ Not Applicable
-

FINANCIAL IMPLICATIONS

☐ None ☐ Budget Previously Approved ☒ Referral to Business Planning

All financial implications will be considered as part of the 2021 business planning process.

PUBLIC PARTICIPATION

☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

KATZIE FIRST NATION CONSIDERATIONS

Referral ☐ Yes ☒ No

SIGN-OFFS

Written by:

Mike Larsson, Director of Fire Services

ATTACHMENT(S):

A. Pitt Meadows Fire and Rescue Fire Services Review 2020 – Final Report



FIRE SERVICES REVIEW

Prepared by Mike Larsson, Director of Fire Services
in consultation with Dave Mitchell & Associates

FINAL Report – November 2020

PITT MEADOWS FIRE & RESCUE



TABLE OF CONTENTS

Executive Summary	3
Introduction	5
Short Term Outlook (2021 – 2025).....	7
Long Term Outlook (5-10 years)	20
Financial Implications	25
APPENDICES	26

Executive Summary

Throughout the first half of 2020, Pitt Meadows Fire and Rescue Services (“PMFRS” or the “department”) engaged in a comprehensive review of their department and services. The goal of this review was to analyze current delivery systems and to identify service delivery challenges and areas of risk.

Recommendations

This Final Report presents the findings of this review and recommends eight (8) mitigation measures for addressing risks, optimizing public safety, maintaining current service levels and planning for anticipated community growth. Those recommendations can be found in the ‘Short Term Outlook’ section starting on page 7.

The recommendations in this review will:

- Enhance public safety;
- Improve Chief Officer and Firefighter safety;
- Reduce adverse impacts of inexperience caused by high POC turnover;
- Slow the attrition rate;
- Reduce burn-out and fatigue of our Fire Department staff and POC membership;
- Shorten response times;
- Instill public confidence.

These are important outcomes needed to achieve desired service levels for public safety – the City and Council’s most important priority.

Environmental Scan

The following data and challenges provide important context when considering the recommendations that have been put forth in this report:

1. Pitt Meadows has grown considerably over the last 15 years, not only in population but also in the number of complex structures, densified residential complexes, light industrial, commercial and government infrastructure. This growth has added a significant workload onto the Pitt Meadows Fire & Rescue Service and the fire department has not kept pace with this growth (see **Appendix 1** for details).
2. The Department’s call volume is continuing to increase, year over year. Within that increase in emergency incidents, PMFRS is facing a peak number of responses in the summer which are 30% higher than early spring. In addition, POC members are frequently out of town during the summer months, vacationing with their families.
3. The PMFRS is dealing with a number of changes in its response requirements; at the same time, it is dealing with a changing regulatory environment in terms of training as well as a significant decline in response of POC members.

4. Retaining qualified POCs continues to be a significant challenge, with many career departments adding to or replacing staff with firefighters from volunteer and composite fire departments like PMFRS. This contributes to significant turnover of our POCs. From 2018 to present, the department has lost a total of 26 members. At the present time, 59% of members have less than three years' service and only 35% are trained to drive and operate all apparatus. With this significant turnover, valuable experience and knowledge is lost and cannot easily be replaced by incoming recruits. This also heightens safety concerns with respect to emergency incidents and often we are unable to meet the NFPA standards pertaining to qualified responders on scene.
5. The response rate of POC members (ie. the number of POCs that respond to a call) is variable, with the lowest response rate occurring between 0800 and 1600 hours, Monday to Friday. Often, there are less than four POCs that are able to attend a call. This is to be expected as the majority of our POC members work Monday to Friday at their regular jobs. These risks to public safety and liability exposure to the City must be mitigated.
6. During non-working hours, between 1800 to 0600 hours, the department typically experiences a delay in response time (ie. how long it takes to arrive at a call) compared with daytime hours, in which career staff are on shift. During the hours from midnight to 0600 hrs, turnout time is often in excess of 8 minutes for the first apparatus to leave the fire hall with a sufficient crew. For an urban area, the benchmark is for a minimum of 15 trained staff to arrive within a total of 9 minutes from notification, per NFPA 1720¹. The hours between midnight and 0600 hrs represent the longest response period with no career staff on shift and, as the community grows and more medical calls occur within this time period, the need for career staff during these hours will increase. We will continue to monitor this trend in the next several years.



¹ NFPA 1720: Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments, 2019 edition

Introduction

The objective of the Fire Service Review is to analyze our current delivery system, highlighting what is working well and identifying challenges and opportunities in certain areas. The information collected will assist City Council in making the decisions needed to help maintain our current service levels and to continuously improve. It will also act as a framework to develop a plan to meet the needs of the community in the future.

This review will examine response data over a 10-year period and compare it to legislated mandates that govern the fire service. The Department's responses continue to increase with 643² calls for service in 2019, approximately 25% higher than in 2010.

Items that were reviewed include:

- ✓ Current service levels
- ✓ Staffing models
- ✓ Response statistics
- ✓ Fire prevention program
- ✓ Training program
- ✓ Apparatus and equipment

Throughout this review, opportunities have been identified and recommendations made that can assist in long-term planning. If the City wants to maintain the POC based system and the current level of service into the future, additional staffing will be required. These resources will allow for an adequate response model and ensure all training requirements are met. The costs associated with those, if properly managed, will continue to provide a substantial value compared to a full-time career fire service.

Current 'POC' Model

The Pitt Meadows Fire & Rescue Services ("PMFRS" or the "Department") currently operates from a single fire hall with three chief officers, four career suppression firefighters, one administrative assistant and approximately 37 paid-on-call firefighters ("POCs"). PMFRS is a composite, full service fire department providing its nearly 20,000 residents and commercial properties with emergency response. The department is trained to the Playbook Standard set by the Office of the Fire Commissioner; many of our members now have the NFPA 1001



² This total does not include the 14 calls for service with Maple Ridge Fire on the Golden Ears Bridge.

standard when hired as a Paid-on-Call Volunteer through our partnership with the Justice Institute of BC.

Together with the career daytime staff, the department relies heavily on its POC firefighters to provide emergency response to the City of Pitt Meadows by protecting life, property and the environment from fire and other risks. The PMFRS currently provides services far beyond fire suppression, including public education, inspections, vehicle rescue, public assists and first responder medical care to the community. There are mutual aid agreements in place with surrounding communities for the provision of specialized response and assistance when required.

When we compare ourselves to neighbouring departments using composite Career / POC models, we have 0.22 career members per 1,000 residents. Mission has twice that number, and Maple Ridge and Langley Township have three times that number, while Langley City has four times as many (see **Appendix 2**).

A key issue to be addressed is the high turnover in the number of POC members. From 2018 to present, the department has lost a total of 26 members. At the present time 59% of members have less than three years of service and only 35% are trained to drive and operate all of our apparatus. Notwithstanding the significant cost of training (up to \$25,000 per recruit), this POC turnover leads to serious safety concerns on the fire ground and adds significant workload to the chief officers in terms of managing resources during incidents.

In terms of the demands for response we have the highest number of calls for service mid-afternoon which is the time when we have the lowest response by POC members. For many of these hours the response is less than four POCs to respond with the two FSTs which is less than half of the number of responders required for even a single-family residence.

Also adding to the demands on the fire service are an increase in legislation and the regulatory environment, record keeping, enhanced training and high POC turnover. All of this compounded is stressing the current POC/volunteer based system.

Recommendations

In the remaining pages of this report, you will find 8 recommendations and some long term considerations which will help pave the way for PMFRS to meet the current needs and future growth of the community while maintaining an adequate response model unique to Pitt Meadows residents.

Short Term Outlook (2021 – 2025)

RECOMMENDATION #1:

That PMFRS grow the career staffing model as follows to meet the increasing demands of the Community:

- ✓ **Hire Two FST's in 2021;**
- ✓ **Hire Two FST's in 2022; and**
- ✓ **Hire Two FST's in 2023.**

Background and Reasoning:

Fire Safety Technicians ("FST's") are career firefighters who work seven days per week on a rotating 4-on 4-off schedule, from 6:00am to 6:00pm. Two FST's work together as a "shift". FST's are members of the International Association of Firefighters ("I.A.F.F.") The current I.A.F.F. Local 4810 Collective Agreement expired at the end of 2019 and the department is preparing to commence collective bargaining later in 2020.

Under the current scheduling model, FST's respond to medical calls alone, however they must still wait for POC turnout to attend any other call type. A comparison of the response times of the FST's to medical calls versus POC units (Platoon A / B) to medical calls in Table 1 shows, on average, a 3 minute and 13 second faster FST response versus paid-on-call member response. The data was extracted utilizing call benchmarks over a one-year period from March 2019 through March 2020.

Average of First Unit On Scene Time to MESA Calls / Lift Assists: FST	6 min 3 seconds
Average of First Unit On Scene Time to MESA Calls / Lift Assists: Paid-on-Call (Platoon A / B)	9 min 16 seconds

Table 1

Adding two additional FSTs in 2021 will allow us to have three-person crews operate from 0600-1800. Monday to Friday daytime callouts have the lowest POC turnout while receiving the highest call volume. This is the response time frame that the PMFRS needs to address as it poses the greatest risk to safety and liability.

Currently with only two FSTs working in the day, the crews can quickly respond to medical calls without delay. Statistics show that FST response is over three minutes quicker than a POC response. The importance of early pre-hospital care in medical emergencies is a significant factor in positive patient outcomes, such as a heart attack or stroke.

However, all emergency incidents other than medical calls require a POC page out, delaying the apparatus until POC members show up to the hall. Having additional career staff on shift will allow the crews to respond to more call types without necessitating a platoon page out such as Motor Vehicle Accidents, Public Assists, Miscellaneous Fires, and Commercial Alarms (sprinklered buildings).

The following charts (Figures 1 and 2) show the call volume by hour versus the manpower response for those hours; this clearly demonstrates a significant lack of manpower during the daytime hours.

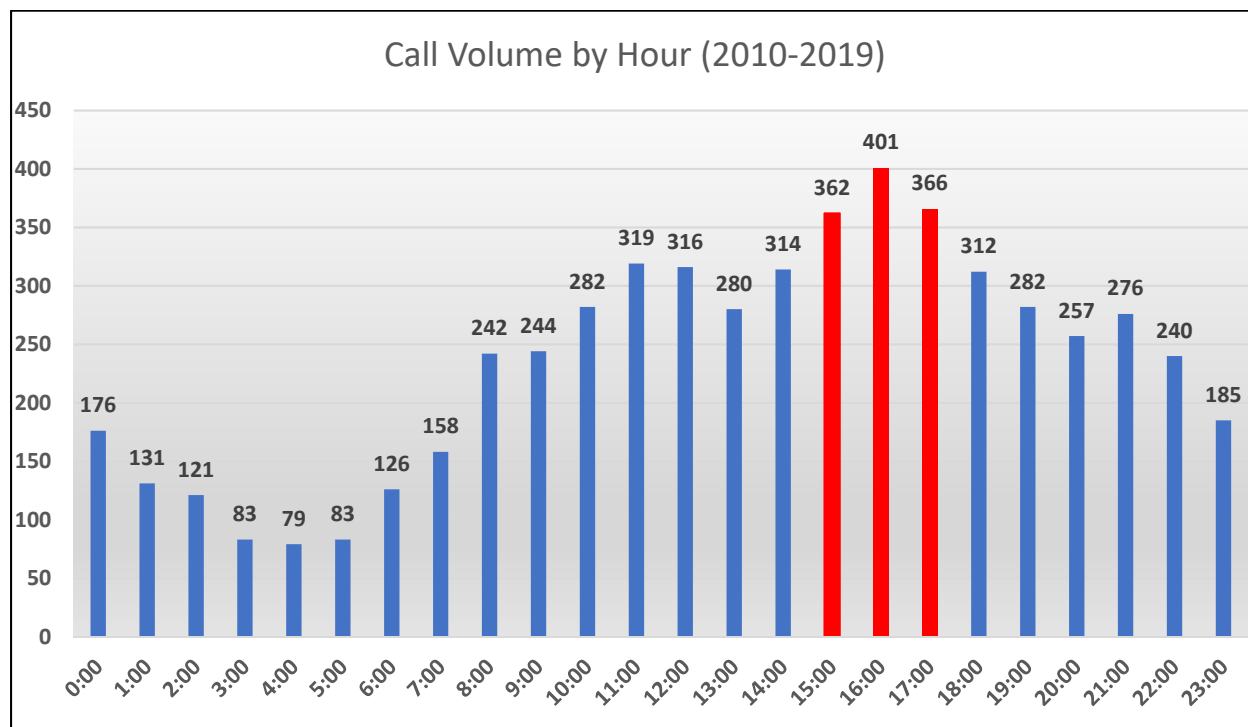


Figure 1

MANPOWER RESPONSE BY HOUR & DAY (2010 – 2019)

Hour	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
0:00	8.57	9.30	10.93	5.54	10.27	12.56	7.29
1:00	8.71	11.36	6.33	6.50	8.00	9.79	9.06
2:00	10.20	9.75	10.25	7.82	11.06	8.50	6.55
3:00	10.24	5.00	10.50	6.83	9.83	10.78	8.77
4:00	11.33	8.50	10.71	10.40	8.83	10.00	14.40
5:00	11.50	8.57	8.50	9.25	6.44	8.33	12.00
6:00	11.00	7.44	8.00	5.50	7.40	6.23	11.50
7:00	10.67	9.50	7.00	6.57	7.63	7.33	14.89
8:00	8.95	4.36	4.63	3.18	3.76	4.03	10.19
9:00	9.32	3.17	3.83	4.09	3.74	3.47	8.76
10:00	11.49	3.90	3.79	3.48	4.38	3.00	11.43
11:00	10.38	3.63	3.85	3.45	3.66	3.36	9.82
12:00	8.19	5.55	4.97	4.69	3.77	4.20	10.58
13:00	10.47	5.33	3.44	5.00	4.14	4.03	11.38
14:00	9.16	5.26	4.96	4.34	5.34	4.76	10.50
15:00	9.66	6.27	7.44	5.41	7.13	7.55	9.60
16:00	9.35	7.40	10.31	8.03	7.95	6.69	10.41
17:00	11.90	10.74	14.20	9.59	12.11	10.83	8.75
18:00	9.68	13.37	18.26	12.47	10.09	9.31	8.11
19:00	11.88	10.78	25.96	11.50	12.88	10.96	8.12
20:00	11.19	10.80	19.95	11.95	10.64	10.42	8.43
21:00	10.71	14.55	23.63	13.86	14.87	9.06	5.93
22:00	10.65	11.67	13.00	13.71	11.55	8.93	7.38
23:00	9.40	8.67	9.50	12.43	9.08	10.05	9.86

Figure 2

Adding another two FSTs in 2022 will allow vacation backfilling by career members. This avoids the failing POC backfill model of today and ensures we have a full complement of career staff during working hours

In 2019, council approved funding to allow POC backfilling of career positions during vacation absences. These backfilling opportunities have been beneficial to the POC members by allowing them to obtain valuable experience attending calls, driving apparatus and acting in an officer capacity.

Backfilling of FST shifts during scheduled vacation blocks is currently fulfilled by POC members utilizing a seniority-based system with FST's offered first choice of available shifts. In 2019 and continuing into 2020, approximately 20% of the shifts remain unfilled. This is due in part to many members being unqualified to backfill and the majority of the POC membership at their primary place of employment during scheduled hours. Therefore, shifts that remain unfilled or are vacant due to illness result in the remaining FST working alone and unable to respond unless supplemented by paid-on-call platoon response. This also results in employees working

alone on weekends without chief officer supervision. With the addition of more FST positions, it will become increasingly difficult to fill these shifts which will necessitate the creation of a full-time floater position intended to strictly fill vacation periods and allow for minimum staffing. This is typically achieved with a 1:4 ratio of 1 floater position for every 4 career firefighters.

In 2023, the addition of another two FSTs will allow the department to have increased coverage during the hours that most POCs are away from the city. This will provide the department the opportunity to modify shifts to extend the hours of FST coverage for medical calls.

The membership of the Department consists of 42 personnel: 37 members from the rank of Firefighter to Captain as well as 1 Fire Chief, 2 Deputy Chiefs, 1 Paid-on-Call Assistant Chief and 1 administrative assistant. Of the 37 active members of the Department, 62% have less than 5 years of service, 19% have between 5 and 10 years and 19% have 10 years or more.

Figure 3 on the following page shows that the average department years of service including FST's is 5.04 years; without FST's the average years of service drops to 3.80 years. Also notable is the fact that 59% of the POC membership have less than 3 years' years of service. Further, only 35% of the department members are qualified to drive all apparatus. Note that these calculations do not include the four chief officers.

With the hiring of the FSTs as recommended, the department will be able to maintain valuable skills and experience with the opportunity to increase levels of service during staffed hours. This may include the addition of medical calls to better align with the level of service provided by our neighbouring municipalities.

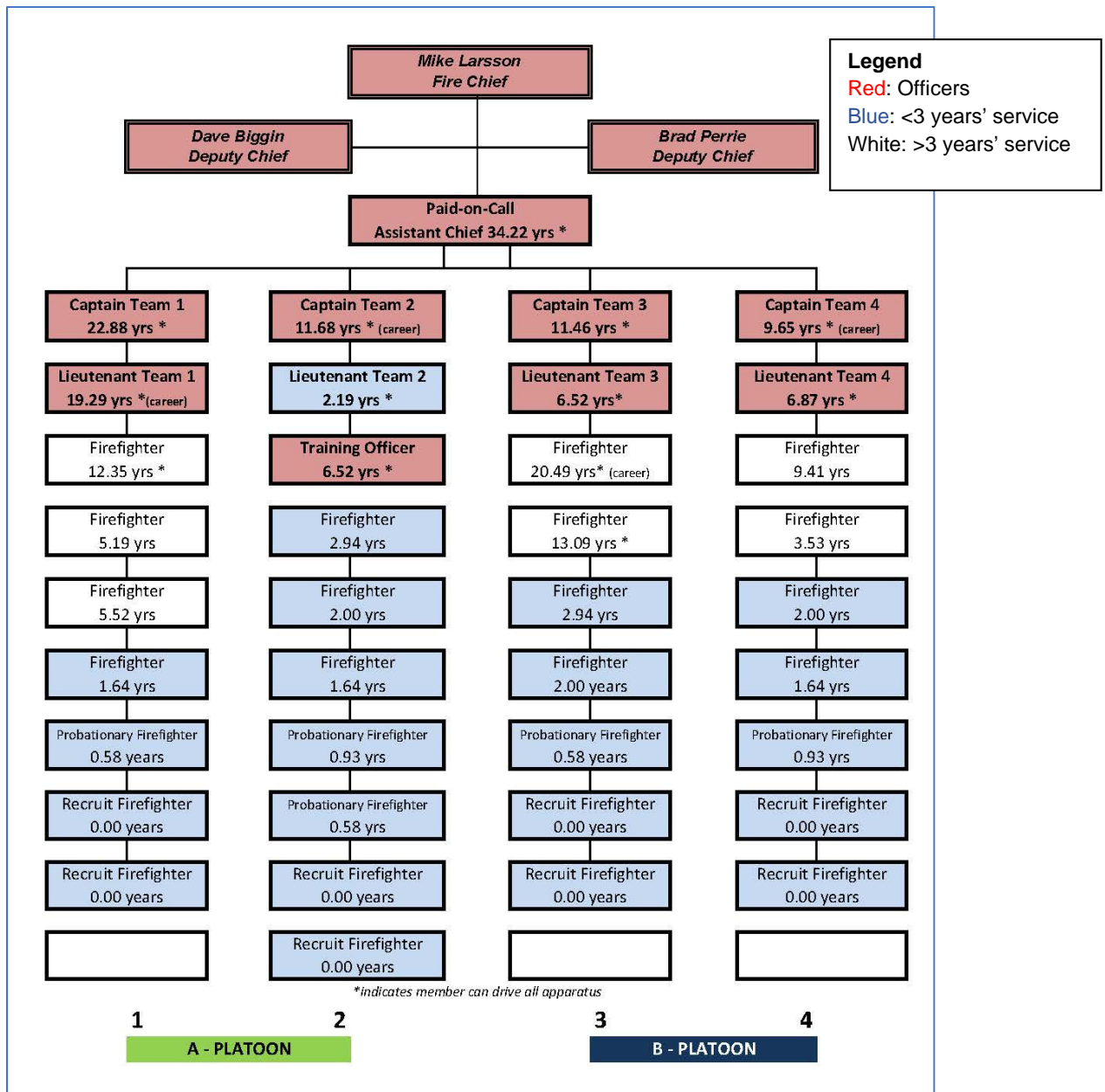


Figure 3

RECOMMENDATION #2:

That PMFRS increase POC membership to 44 members.

Background and Reasoning:

POC turnout has been dropping steadily over the years, as depicted with the low average attendance in Figure 2 on page 9. More frequently, platoon page outs need to be re-paged as an “all call” to ensure enough members respond. If this continues the platoon system that was put in place to alleviate member fatigue may fail, putting more time demands back on all members. The only way to resolve this is by increasing the number of overall POCs.

By adding POC members for a total of 44, this will assist the department in getting enough members out to meet the minimum resource requirements as per the NFPA to structure fires, which is something that we are falling short of on many calls.

Having a deeper pool of members will also lessen the vulnerability with the large turnover we are experiencing. If the department loses 8-10 members per year, it will still be able to maintain a sufficient number to respond (34-36), unlike now where the department has seen as low as 27 active POC members at a given time. This recommendation of 44 POC members has been in many departmental master plans over the last 15 years.

Recruitment

Recruitment and retention problems in volunteer or composite fire departments throughout North America are well documented and Pitt Meadows has not been immune to this trend. The high POC turnover in the City of Pitt Meadows is no longer an anomaly but a year over year trend. Recruitment has become a year round activity and necessity, with several classes a year being brought on as POC recruit members. Recruitment of Paid-on-Call members is now a significant time consuming endeavor for the training department. Community engagements, advertising, open houses and face to face sales are the norm. The department is also now attending the Maple Ridge campus JIBC recruit training program to address their graduates several times a year to promote our department as a viable and rewarding work experience program for those graduates that are looking for a career in the fire service. Although this has been successful for numbers in the short term, the longer term realization is yet to be determined as these pre-qualified applicants may be hired to a lower mainland career department at any moment, which has already been demonstrated.

Recruitment vs. Resignations 2010 – 2020 (does not include LOA or short-term medical leave)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Joined	2	7	4	7	4	8	7	9	6	10	12
Resigned	5	6	4	7	4	6	5	4	8	7	11

Table 2

The reasons for retirement/resignation from the organization vary greatly but can essentially be simplified into two main categories: members leaving the department unable to make the extremely demanding time commitment, and members leaving because they were successful in obtaining their career goal to become a full time firefighter with a larger city. Although career obtainment is in the forefront of our membership turnover in recent years, the membership requirements related to actual physical time commitment cannot be dismissed. This requirement and impact on our membership's personal life, family life and careers outside of our organization's needs is always increasing and then becomes an unachievable realization that they can no longer meet our demanding needs. For some it is manageable and, with their passion, they continue to make the sacrifice. For the majority, it is a struggle to maintain the requirement for a prolonged period of time and they reluctantly retire and move on.

For the last two years, the department has streamlined recruiting to separate the "community" recruiting drive which is held annually or bi-annually based on needs, from the JIBC applicants, which are accepted throughout the year. In both cases the numbers of applicants received had dropped significantly. In years or decades past, recruiting was sporadic and highly selective and the pool to draw from was significant. In recent history however, the recruit class size is determined by the number of applications received. This does not always allow for a highly selective intake to ensure the department and the community are getting the best person for the paid on call position.



To manage the budget impact associated with transitioning to 44 POC member, this transition can be achieved over a four year period by increasing the POC budget to allow for the addition of two POCs each year from 2021 through 2024.

For more information on the Composite Model and Platoon System utilized by PMFRS, please see **Appendices 3 and 4**.

RECOMMENDATION #3:

That PMFRS join the E-COMM radio system to allow full communication interoperability with other emergency agencies in Pitt Meadows and neighbouring municipalities.

Background and Reasoning

Current System

PMFRS currently utilizes a VHF Radio system. This system has a main repeater located at the Fire Hall and a backup repeater located at Surrey Fire Hall #5. The system also utilizes a Voice-Over-Internet IP Box, which is temporarily located at the residence of the Deputy Chief, Prevention, and will be relocated to the new fire hall radio room once completed. This is generally providing good coverage for our community but there are some areas where communications are not as strong, especially North of Old Dewdney Trunk Road. Surrey Fire Dispatch is contracted to provide emergency dispatch and would remain our dispatch centre on the E-COMM radio system.

Regional Radio (E-COMM)

The PMFRS is one of only four fire departments in Metro Vancouver not currently utilizing the E-COMM regional 700 MHz radio system. This system is digital and fully encrypted and fully interoperable so that agencies attending emergencies can coordinate their response and activities for patient and first responder safety.

At the present time all police departments, the BC Ambulance Service and all fire departments with the exception of Sasamat, Maple Ridge, Pitt Meadows and Burnaby have deployed the system.

Lack of interoperability with our current VHF Radio system is becoming more of an issue for mutual aid with other fire departments as well as those with ambulance and police, including Air-One. In our immediate response area, Langley Township and Port Coquitlam have adopted the new system which provides seamless coverage from Lions Bay to Abbotsford. In particular the RCMP and BCAS in Pitt Meadows are already on the system.



The Pitt Meadows Fire & Rescue Service has been discussing moving to the E-COMM Radio system since 2018. Switching to the E-COMM system will provide a number of important improvements, including enhanced firefighter safety and full interoperability with other emergency agencies. The E-COMM radio system utilizes modern digital frequencies that provide enhanced security while also providing additional radio channels and increased network coverage.

A switch over to the E-COMM radio system comes at a significant cost that the City will need to consider. The estimated annual cost is \$200,000 (increasing by 3% annually). Due to the high cost of the ECOMM system, we have been putting off the changeover as long as possible. Should we decide to not switch to the E-COMM system, we will have to replace our current radio equipment as it is now nearing end-of-life. This would offer an immediate short-term solution with an approximate one time cost of \$70,000 to replace all of the portable and mobile radios on our apparatus.

The Fire Chief and CAO will monitor our mutual aid partner to the east, Maple Ridge for when they switch to the E-COMM radio system. Once they do so, we will want to follow suit expeditiously to ensure that we have communications interoperability with our regional emergency partners. At that time, staff will provide Council with the up-to-date E-COMM information and request authorization to proceed which may, in turn, cause postponement of other priorities to accommodate the significant annual E-COMM cost.

Fire dispatch and associated records management services for PMFRS are currently provided under contract by the Surrey Fire Service. The current five-year agreement expires at the end of 2025. It has a cost of approximately \$42,000 annually and neither party has a desire to end the relationship.

RECOMMENDATION #4:

That PMFRS retain the current Engine 1-2 as a spare / training apparatus, when the replacement apparatus arrives.

RECOMMENDATION #5:

That PMFRS retain the current Ford F-350 (Squad 1) when its replacement arrives.

Background and Reasoning:

The Department is continuing to modernize its fleet including replacement of its first line Engine which has been ordered in June 2020. The contract for this vehicle was awarded to Pierce. Once this vehicle is put into service, the current E1-1 will move to the 2nd line vehicle, replacing E1-2 in this role. The Fire Chief has recommended retaining E1-2 as a spare vehicle which could be used for wildfire deployment, filming standby, bylaws, and training purposes.

The current fleet as shown in Table 3 below includes two Engines, a Quint, a Rescue and a number of utility vehicles and trailers. The replacement schedule for these is determined in part at least by the requirements of the Fire Underwriters. One vehicle is typically out of service at any given time due to maintenance and repairs.

Designation	Status	Description	Make	Age
E1-1	1 st Line	Pumper	Pierce	2011
E1-2	2 nd Line	Pumper	Hub	1998
Q-1	1 st Line	75' Aerial	Smeal	2008
R-1	1 st Line	Rescue	Hub	2000
SQ.-1	1 st Line	Emergency Response Vehicle with Wildland Interface	Ford	2011
301	Staff/Command Vehicle	Duty Officer Emergency Response	Ford	2011
302	Staff/Command Vehicle	Duty Officer Emergency Response	Ford	2018
303	Staff/Command Vehicle	Duty Officer Emergency Response	Ford	2012

Table 3

When training, a front line apparatus is taken out of service and the wear and tear is hard on the engine and pump. Having an engine that the department could use for training purposes would

cut down on the maintenance and repairs to all other apparatus. The city mechanic fully supports this recommendation.

Having a backup apparatus would also assist with moving members during practices and calls. It is currently an issue only having seating for 33 members and especially if it is to strive towards 44 in the next few years. Many other departments keep their old apparatus for this reason. PMFRS has not had the opportunity in the past as there was not enough room in the fire hall to accommodate it. This will no longer be the case with the construction of the new hall (2022).

The benefit to this recommendation is that there will be no upfront purchasing cost, only an annual maintenance and insurance operating cost associated with it. Twenty year old apparatus generally sell for \$5 – 10,000 but the price will be the same in ten years so the City of Pitt Meadows will not lose on the resale by keeping it longer. We would replace this vehicle in ten years with our current Engine 1-1 so there would be no replacement costs associated in the capital budget. Furthermore, being a non-frontline apparatus, it will not affect the City's FUS rating for a pump over twenty-five years.

This apparatus will also be a source of revenue as it can be deployed to wildland fires throughout the province as needed as well as on location during local movie shoots requiring fire protection during pyrotechnic work as per the City's bylaw.

The Ford F-350 is coming to end of life in a frontline capacity but is still sufficient to be used as a transport / utility vehicle. This is one of the vehicles we currently use for cleaning and transporting dirty gear and equipment after a fire.

Resale value on this vehicle is minimal and the value of having another vehicle in our fleet would be extremely beneficial. This vehicle would be replaced by the current Ford F-150 (302) when it is due for replacement in 2027 so there would be no replacement cost associated with it in the capital budget.

RECOMMENDATION #6:

That PMFRS upgrade its medical responders to the Emergency Medical Responder (“EMR”) level.

Background and Reasoning

Emergency Medical Responder (EMR) is a higher level of service than the current First Responder program (FR) and is more in sync with BC ambulance service. EMR is anticipated to be the standard for the fire service in the next five years and PMFRS will likely need to change with the rest of the departments.



The timing in 2021 is opportunistic as there are changes coming to the First Responder program and re-certification that will be more expensive and time consuming. Also PMFRS has fifteen members needing to re-certify their FR licenses in 2021 which requires thirty-three hours of training, so the switchover would only require an additional eleven hours to certify to EMR. If PMFRS decided to wait until after the recertification timeframe, the full EMR program consisting of forty-four hours would have to be completed by all members. This transition would be achievable if the department had a dedicated full-time training officer.

Currently the career staff as well as the POC members are all trained to First Responder level 3 which is governed by the Province of BC Emergency Medical Assistant Licensing Board (EMALB). The management of the First Responder program related to licensing certification and required re-certification consumes a significant amount of man hours keeping licenses current while also ensuring skills that follow strict medical protocols set out by EHS are upheld. The individual members are provincially licensed and may be held liable for their medical interventions, and as such, continuous training is required.

Pitt Meadows has previously considered the viability of upgrading medical training to the next level, that of Emergency Medical Responder (EMR). In past years, the additional hours of training required was considered to be a significant hurdle. However, further review indicates that, although the upfront cost and hours of training would be significantly higher under the EMR program, the elimination of re-certification every three years together with the proposed changes to the FR program make EMR the more viable option overall.

RECOMMENDATION #7:

That the City of Pitt Meadows increase the Fire capital PPE budget to allow the current evergreen system to be maintained.

Background and Reasoning

In 2020, the cost for PPE increased by \$500 per set. PMFRS acquired multiple quotes from various manufacturers and the increase in costs was the same for all.

PMFRS replaces six sets per year; the increase in price would only allow us to purchase five.



RECOMMENDATION #8:

That the City of Pitt Meadows increase the annual budget to maintain and expand the fire training ground to meet current and future training needs.

Background and Reasoning

The current fire training ground facility located on Fraser Dyke Road is adequate size and functions well for training needs. Without this facility PMFRS would not be able to achieve current training standards.

The training facility is not considered a City of Pitt Meadows' facility and therefore has no maintenance or upkeep budget. The modest yearly operating budget does not allow for security fence repairs and upkeep or grounds maintenance for overgrown bushes and weeds. PMFRS purchases "props" such as concrete blocks, wood, rebar, tools, propane, diesel and gasoline fuels for training purposes. The structures at the training facility require constant maintenance and repairs to keep them in operational condition. An annual budget dedicated specifically to the training facility would allow for maintenance of the existing systems as well as planning for future expansions or improvements of this vital facility.

With the ever changing fire service, training is of the utmost importance. Adapting to changes in procedures and protocols happens continuously. With these changes PMFRS adapt new props and equipment to the training ground to allow in-house training to occur. The fire training ground is something that is always evolving and the annual costs are generally above the \$1,000 operational budget currently allotted.

Long Term Outlook (5-10 years)

Training Officer

Background and Concerns:

The turnover of POC members has required the department to run three recruit classes annually. Current members' weekly training, first responder certification / re-certification, driver training, officer training and provincial evaluations have collectively put excessive time demands on all of our chief officers and many of our senior POC firefighters. These training demands leave little to no time for the Deputy Chief to focus on lesson plans, training records or senior member succession. All of these are provincially mandated and will require more attention than we are current able to provide.

The Deputy Chief of Training is also responsible for all operational activities including apparatus maintenance and repair, equipment purchase and maintenance, organization of training with outside agencies, fire department emergency planning, and recruiting. Without dedicated training staff able to deliver sessions on evenings and on weekends, the POC model will be challenged and may not remain viable, unless structural changes are made. In reality, the Deputy Chief in charge of training is operating at a 45-55 hour workweek almost year round. It is not possible to maintain a healthy life balance while performing regular workweek duties and spending 300+ hours a year after hours at the department.

We will be making efforts to delegate appropriate duties to the FST's that fall within their qualifications and collective agreement provisions to alleviate some of workload of the Chief Officers. This will then necessitate a reclassification of FST ranks and corresponding rates of pay. In the intervening years, this situation will be monitored to determine if the delegation of duties is successful to lower the hours worked by the Deputy Chief, Training.



For reference, the cost to fully train one recruit is substantial and can be close to \$25,000, including recruit and instructor wages. Consideration will be given how these funds can be saved with the goal to redirect them to other priorities if any savings are realized.

Chief Officers

Background and Concerns:

The current Chief Officers provide many important roles to the department and officially work a 37.5-hour work-week during business hours. Outside of those hours, the chief officers are expected to attend every Tuesday night practice, additional meetings and functions, as well as many of the incident responses.

The chief officers currently utilize a 1-week on duty rotation where they are on call for 24 hours a day for 7 straight days for incident response/departmental administration and therefore cannot leave the general area of Pitt Meadows. Each Chief covers between 14 – 16 weeks annually. This level of participation is required under the current POC model to ensure the presence of a responsible decision-maker representing the City at emergency scenes, and recruit training and increasing number and complexity of fire inspections. The changing demographics of the community combined with the decreasing experience of the POCs/volunteers has also resulted in a significantly increased demand on all chief officers to assume lead instructor roles previously performed by highly experienced and trained POCs.

JUNE						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

The many hours outside of the regular workweek are stressful and restrictive for the Chief Officers and their families, as well as impactful to their social life. We will endeavor to alleviate some of this workload and improve work-life balance by delegating some of the current responsibilities to the proposed new hires. The CAO and Fire Chief will continue to monitor this issue and make recommendations in future business planning if the high work load persists and the need for additional resources become necessary.

Fire Inspector

Background and Concerns:

When the Prevention Chief was hired in 2005, Pitt Meadows had less than 400 properties requiring fire inspections. That number has more than doubled with the growth over the last 15 years, and therefore it is currently not possible to do everything required by provincial legislation. On average, a full time fire inspector (dedicated only to inspections) can inspect 350-500 properties depending on complexity. He has reached operational capacity in undertaking his responsibilities for performing and supervising fire inspections. Currently the Pitt Meadows Fire & Rescue Service has been able to maintain the established inspection frequencies but as our community continues to grow, this will soon prove to be increasingly difficult.

The Deputy Chief, Prevention performs almost an equal amount of after-hours work as the Deputy Chief, Training. His work week is also excessive and includes over 300 hours annually outside his regular work hours on behalf of the department performing fire inspections, acting as an instructor in multiple disciplines, performing public education programs and regularly responding as a duty officer to incidents. His responsibilities require significant flexibility in hours to accommodate business operations and community group schedules. In addition to these two primary roles he is responsible for pre-planning, communications, personal protective equipment, the driver training program, uniforms and departmental emergency planning.

With the addition of the existing FST positions, the Pitt Meadows Fire & Rescue Service has had more capacity to:

- Take on a larger role in the delivery of our school educational programs;
- Train City staff in fire extinguisher use;
- Inspect small/medium and less complex mercantile stores and offices (approximately 150-200 inspections per year). *Complex buildings' inspections are conducted by the Deputy Chief, Fire Prevention*

By potentially adding additional daytime FST's, the career staff will then be able to assist with approximately 350 inspections annually which will provide immediate relief to the Deputy Chief, Prevention, allowing him to focus on more important senior tasks. We will continue to make efforts to delegate appropriate duties to the FST's that fall within their qualifications and collective agreement provisions to alleviate some of workload of the Chief Officers. This will then necessitate a reclassification of FST ranks and corresponding rates of pay. In light of the delegation opportunities, the CAO and Fire Chief will continue to monitor this issue and will make recommendations in future business planning if the high work load persists and the need for additional resources becomes necessary.

Amend *Fire Protection & Life Safety* Bylaw to Include Cost Recovery and Fee for Services

Many departments in the Greater Vancouver area use cost recovery and fee for service as a source of revenue which can be applied to our fire investigations and plan reviews. This revenue can be used to offset the costs to implement proposed recommendations that are contained in this review.

Cross Training of Administration Pool to Backfill Fire Administration

The department currently employs one full-time unionized administrative assistant. This role is a member of the Canadian Union of Public Employees Local 622 (“CUPE”) and plays an integral part in the operation of Pitt Meadows Fire & Rescue Service. It is a multi-faceted position which requires the Administrative Assistant to be skilled in working both as part of a team, and independently when required. In addition, the assistant must have the ability to use a wide variety of software programs.

The fire administration assistant is a single individual with a wealth of information that is proprietary to the fire service. The city needs to work on a business continuity model that has other individuals train with the fire admin to learn some of this knowledge.

When the fire administrator is away on vacation, there is no coverage to answer phones or greet members of the public that come to the fire hall. With the fire fighters constantly out of the building, this renders the City building closed.

The Fire Chief and CAO will look at ways to find funds, within the existing Council approved budget, to provide absent coverage. If successful, any associated budget will be included in the *Financial Plan Bylaw*.

Purchase Mobile Filling Station and Rehab Apparatus Trailer

Background and Reasoning

Being a one hall fire department, we only have use of the air bottles we bring with us on apparatus during the initial response. Once used, members are needed to be released from scene to return to the fire hall to fill cylinders. This takes much needed manpower away from the emergency scene and is time consuming. To have the ability to fill cylinders on scene would be extremely beneficial. Currently rehab and recovery on scene for our members are done using Rescue 1, which is a frontline response vehicle that is usually located in close proximity to an emergency event. This is not ideal and rehab should be removed from the scene. Having a trailer that we use for rehab will allow the members to properly recover safely out of the scene. We are monitoring possible government grants to assist with the purchase of the trailer.

The Fire Chief and CAO will look at ways to find funds, within the existing Council approved budget, to purchase the trailer. If successful, any associated budget will be included in the financial plan bylaw.



Financial Implications

The following tables outline the costs by year associated with the eight (8) recommendations made throughout this report.

Operating Cost Increases *(Table 4)*

	2021	2022	2023	2024	2025	Total
Add 2 FST's per year for 3 years:						
Year 1	218,600					218,600
Year 2		218,600				218,600
Year 3			218,600			218,600
Increase fleet by not disposing of replaced vehicles:						
Apparatus	8,400					8,400
F-350 (Squad)		5,800				5,800
Add 2 POCs per year for 4 years:						
Year 1	32,600					32,600
Year 2		32,600				32,600
Year 3			32,600			32,600
Year 4				32,600		32,600
Tax Increase (\$)	259,600	257,000	251,200	32,600		800,400
Tax Increase (%)	1.08%	1.07%	1.05%	0.14%		3.34%

Capital Costs *(Fund Capital Costs from Future Capital Reserve) (Table 5)*

	2021	2022	2023	2024	2025	Total
Radio Equipment	70,000					70,000
Emergency Medical Response	40,000					40,000
Training Ground	2,500	2,500	2,500	2,500	2,500	12,500
PPE	3,500	3,500	3,500	3,500	3,500	17,500
Totals:	116,000	6,000	6,000	6,000	6,000	140,000

The Fire Chief and CAO will look at ways to find funds, within the capacity of existing reserves, to accommodate the capital requests in this table. If successful, any associated budget will be included in the financial plan bylaw.

APPENDICES

APPENDIX 1

Community Overview and Growth

Major growth in Pitt Meadows over 15 years is shown in Table 6, along with the changes in the Department over the same timeframe. Further to this development, the City of Pitt Meadows has also seen an expansion of the airport, an expansion of the CP Rail intermodal yard, a widening of Lougheed Highway, an expansion of the West Coast Express and construction of two additional bridges, which have substantially increased daily traffic on major routes and throughout the community.

Anticipated future growth consists of a major North Lougheed development, potential new multi-residential structures and high-rise towers, additional commercial and light-industrial developments and continued expansion of the airport. Future developments of densified housing units and complex structures will trigger the need for additional staffing resources at the fire department.

Images Clockwise, L to R: Nature's Walk Townhomes, Cedar Downs, Golden Ears Business Park



Year	Building Name	Size	NFPA 1710 Standard: Trained Personnel Required
2004	Meadowtown Centre Mall	423,000 sq ft.	26
2004	Loblaws Warehouse	353,000 sq ft.	26
2004	Cineplex Movie Theatre	40,710 sq ft.	26
2005	<i>Department hires an Assistant Chief, Prevention</i>		
2007	The Fairways	2 x 4 floor condo buildings / 268 units total	26
2007	The Keystone	4 floor condo / 85 residential + 10 commercial units	26
2008	Origin Apartments	4 floor condo / 70 units	26
2008	<i>Department acquires Quint apparatus</i>		
2009	<i>First Career FST is hired</i>		
2010	<i>Second Career FST is hired</i>		
2009- 2013	South Bonson Residential Community	Various	26
2010	Osprey Village Commercial	7 buildings with mixed residential + commercial	26
2010	Golden Eagle Blueberry Processing Plant	137,865 sq ft.	26
2010	Meadows Gate Towers	2 x 10 floor apartment towers with commercial units	36
2010	<i>Department Switches service model from volunteer to paid-on-call</i>		
2011- Present	Golden Ears Business Park Phases I and II (and future Phases 3 & 4)	Phase 1: 644,647 sq ft. / Phase 2: 1,194,288 sq ft.	26
2011	South Bonson Community Centre	7,922 sq ft.	26
2012	The Wesbrooke	4 floor seniors' supported living building	26
2013- 2014	Cedar Downs	5 buildings / 274 units total	26
2015	Liv 42	4 floor condo / 42 residential + 2 commercial units	26
2019	<i>Department hires two additional FST's and switches to 7 day a week 6am to 6pm coverage</i>		
2019	The Orion	4 floor condo / 82 residential + 6 commercial units	26
2020	Nature's Walk Townhouses	220 unit townhouse complex	26
2020- 2021	Bonson Townhouses	95 unit townhouse complex	26

Table 6

APPENDIX 2

Neighbouring Department Comparisons

Department	Suppression Staff	Chief Officers / Support Staff	Population ³	# of Career FF Per 1,000 population
Pitt Meadows	4 career firefighters 38 paid-on-call (includes 1 paid-on-call Assistant Chief)	1 Fire Chief 2 Deputy Chiefs 1 Admin Assistant	18,573	0.22
Port Coquitlam	70 career firefighters No paid-on-call	1 Fire Chief 2 Deputy Chiefs Operations 1 Deputy Chief FPS 1 Asst. Fire Chief Training 2 Captains, FPS 1 Inspector FPS 1 Information Officer 1 Emergency Program Officer 1 Receptionist 1 Administrative Assistant	58,612	1.19
Port Moody	40 career firefighters 20 paid-on-call	1 Fire Chief 2 Deputy Fire Chiefs 1 Fire Prevention Captain 1 Lt Community Outreach 1 Training Officer 2 Training Captains 1 Administrative Assistant	33,551	1.19
Langley City	23 career firefighters 20 paid-on-call	1 Fire Chief 1 Deputy Fire Chief 1 Assistant Chief 1 Fire Prevention Officer (Capt.) 1 Administrative Assistant 1 Fire Support Clerk (PT) 1 Emergency Program Clerk	25,888	0.89
Langley Township*	87 career firefighters 111 paid-on-call	8 Chief Officers 11 Admin Staff	117,285	0.74
Maple Ridge*	54 career firefighters 53 paid-on-call	6 Chiefs (+1 to be added) 1 Inspector 2 Training Officers 3 Admin Staff	82,256	0.66
Mission*	16 career firefighters 86 paid-on-call	4 Chief Officers 1 PT ESS Coordinator 2 PT Admin Staff	33,261	0.48

Table 7

* denotes current Mutual Aid Partner

³ Stats Can Census Profile, 2016 https://www.statcan.gc.ca/eng/subjects-start/population_and_demography

APPENDIX 3

Composite Model

PMFRS is a Paid-on-Call (“POC”) department – this means that members respond on an “as-needed” basis. This is achieved by the use of a pager that members carry. Calls can occur at any time of day or night. The system works exactly the same as a volunteer department model, however, with this model, members are compensated via an hourly wage for their time spent training and attending call outs. As volunteers prior to 2011, members received compensation by way of an annual “stipend” provided by the City.

In 2011, the department transitioned from a fully volunteer department to a paid-on-call department. The transition was virtually seamless with no impact to public or community services. This model provides a significant cost-savings versus a career-primary department model.

The POCs are extremely dedicated members of the community; last year the average member contributed between 350 and 400 hours of service. Those numbers do not include the vast number of hours spent volunteering for fundraising events such as the MD Boot Drive and at other community events including Pitt Meadows Day and Canada Day.

All POC firefighters are compensated an hourly wage for calls and training at rates which are the highest in the Metro Vancouver region. In addition, POCs are provided with a recreation center pass for gym use, comprehensive AD&D insurance coverage through VFIS, yearly hearing and lung capacity testing, Employee Family Assistance Program services and Critical Incident Stress Management training.

POCs are members of the Pitt Meadows Community and live here as part of their commitment to the department. Residing in Pitt Meadows is a requirement that provides for a timely response to emergency callouts.

Each POC has a full-time career to attend in addition to their time spent with the department. Calls and training are done outside of their normal career hours, oftentimes at the expense of family and leisure time. They choose to continue with the department due to their passion for the community, for the fire service and for their commitment to the safety of our citizens.

Platoon System

The department’s platoon system was initiated in 2011 in an effort to alleviate burnout of volunteer members. The model is comprised of two POC Platoons (A & B) which are each composed of one-half of the POC membership, with two teams per platoon. Chief Officers are not included in a platoon. Each team is comprised of one paid-on-call captain, one paid-on-call lieutenant, plus five to seven firefighters.

Platoons are dispatched to the following call types, per Operational Guideline 5.01.03, on a rotating week-by-week basis:

- First responder calls (“MESA”)
- Assist calls – all types
- Post-fire inspections & Investigations
- Lock outs & other miscellaneous calls
- Alarms ringing in commercial and multi-family equipped with fire sprinklers
- Brush/grass fires
- Burning complaints
- Hydro pole fire / wires down
- Gas/diesel spill & natural gas smells
- Carbon monoxide Alarms

The current platoon system is constantly under review due to frequent instances of low turnout to platoon calls due to, amongst other factors, long weekends, summer vacations and other occasions which may cause the POC membership to be away from the community. Procedures in place stipulate that inadequate turnout or delayed response to calls necessitates a subsequent all-call page out to all POC members for additional resources. Should the platoon system be found to no longer be viable, the move to dispatch all calls for service to the entire POC membership would come at a significant cost increase and risk of burnout to POC members.

APPENDIX 4

Flow of a Call for Service

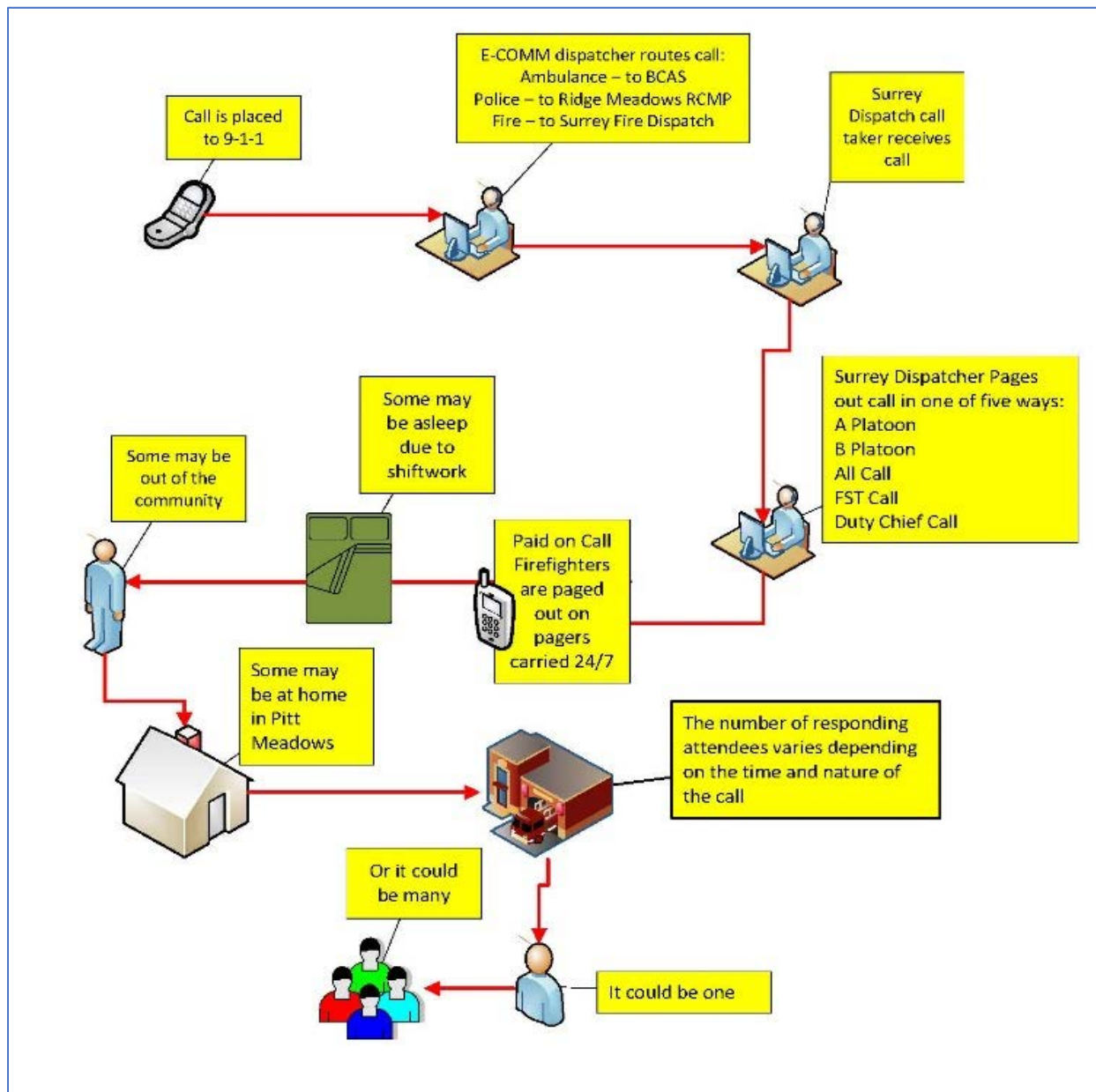


Figure 4